

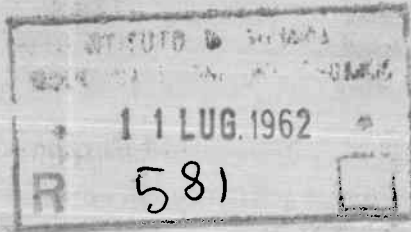
# MONTECATINI

Società Generale per l'Industria Mineraria e Chimica

AMMINISTRATORE DELEGATO

## PROMEMORIA

G/ra



*Ades*  
Data, 10 luglio 1962

*Cartella  
Fibre  
Fibridi*

per il Sig. **Ing. DE VARDA**  
**Ing. LARCHER**

p.c. **Prof. NATTA**  
↑

### FIBRIDI e TEXTRYLS - RAPPORTI CON DU PONT

Con riferimento all' esame della questione, condotto nella riunione di oggi, resta stabilito che :

1. la fabbricazione in Italia dei fibridi e dei textryls appare interessante
2. BREV sta conducendo una ricerca sulla validità in Italia del brevetto Du Pont relativo ai fibridi ed alle loro applicazioni.  
Se la validità è confermata è evidente che dobbiamo chiedere alla Du Pont una licenza non esclusiva, come del resto Du Pont si è dichiarata disposta a dare. Dovrà essere prevista, in ogni caso, la facoltà di sub-licenziare  
Se l' inchiesta sulla validità risultasse negativa, cade ogni rapporto con Du Pont su questo argomento per l' Italia.
3. Per gli Stati Uniti è indispensabile accertare - e qui dovrà intervenire Polymer - se le limitazioni alle caratteristiche della fibra polipropilenica che la Du Pont è pronta ad accettare possano veramente garantire la sola destinazione della fibra alla fabbricazione dei textryls. In caso diverso, infatti, noi non potremmo accettare che la Du Pont possa vendere fibre di polipropilene negli Stati Uniti.

Quanto precede, naturalmente, nella ipotesi che i claims dominanti per la fibra polipropilenica vengano negli Stati Uniti dati alla Montecatini.

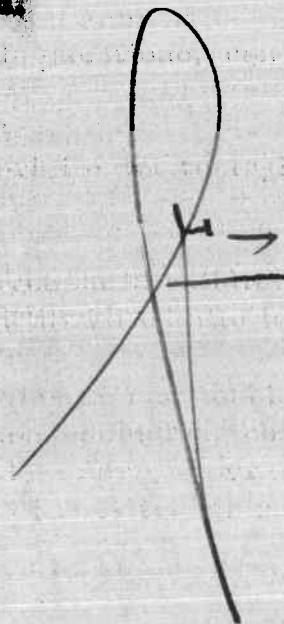
Dato quanto precede io ritengo che, per ora, si debba rispondere all' ultima lettera della Du Pont affermando che questa è oggetto del nostro migliore esame e che ci riserviamo di tornare sull' argomento al più presto possibile.

Intanto BREV da un lato per la ricerca e Polymer dall' altro per la valutazione delle possibilità di destinazione della fibra polipropilenica in USA più sopra accennate, faranno pervenire le loro

2)

**conclusioni in modo da completare l'analisi che nel frattempo RREV avrà fatto delle proposte Du Pont alla luce delle recenti comunicazioni.**

**Cordiali saluti.**

A handwritten signature in dark ink, consisting of a large, stylized loop at the top, a vertical line descending from it, and a horizontal line crossing the vertical line. There is a small mark resembling a checkmark or a stylized 'H' above the horizontal line.



ESTABLISHED 1802

E. I. DU PONT DE NEMOURS & COMPANY  
INCORPORATED  
WILMINGTON 98, DELAWARE

INTERNATIONAL DEPARTMENT

Please address reply to :

GENEVA OFFICE  
ETOILE BUILDING - 81, ROUTE DE L'AIRE  
GENEVA (SWITZERLAND)  
TELEPHONE 42 16 00 - TELEX 22 812 GENEVE  
TELEGRAMS : DUPONTINT-GENEVE

28 AGO 1962  
2124

August 23, 1962

27 AGO 1962  
0

Dr. G. de Varda  
Director, Patent Department  
Montecatini, S.A.  
Via Turati 18  
Milan, Italy

Dear Dr. de Varda:

Polypropylene Fibers and Fibrids

*recap here  
full letter*

With reference to Mr. Haon's letter to you of June 21 and your acknowledgment of July 24, we should like to inform you of certain organization changes that have taken place, and to ask for your reaction as soon as convenient to the proposed license exchange submitted to you with Mr. Haon's letter of June 21.

As you may have heard, Mr. Haon retires at the end of this month. The functions of the office in London have been moved to Geneva and the activities of the group are under my direction.

Dr. E. C. Kirkpatrick, whom you met a year or so ago, will be transferred to Geneva the middle of September as Assistant Director of the European Division, International Department of Du Pont. In effect, he exchanges positions with Mr. Carl R. Faust who visited you in Milan last fall.

Although there is still considerable doubt about who, if anyone, will obtain a polypropylene fiber claim in the United States, we should like to have written assurance of our ability to obtain a license from Montecatini along the lines outlined in the proposed agreement. Since this matter has been under discussion and review for some time and most of the problems have been resolved, we do hope that you can give us a reply within the near future. If there are additional questions, I shall be glad to visit you to discuss the situation further.

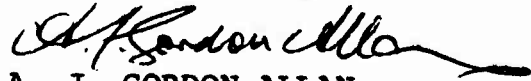
Dr. G. de Varda

August 23, 1962

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I look forward to hearing from you and to meeting you soon.

Yours sincerely,



A. J. GORDON ALLAN

Manager

Licensing & Special Studies

AJGA/rl

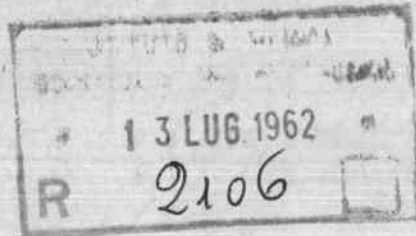
# MONTECATINI

SERVIZIO BREVETTI

AR/PA/er

**Sig.**  
**Ing. Piero GINSTEINIANI**  
**Amministratore Delegato**  
**Sec. Montecatini**  
**S e c e**

12 luglio, 1962.



Fibridi -  
Rapporti con du Pont -

In Italia la du Pont ha il seguente brevetto:

Nr. It. No. 605.550 - dt 22 gennaio 1958, nei priorità del  
23 gen. 1957 al 22 agosto 1957, USA.

"Masse simili alla pasta per carta, procedimento per la  
loro preparazione e loro impiego".

Il corrispondente brevetto U.S.A. sarebbe c.i.p. delle  
priorità succitate; potremo individuarlo appena ci perven-  
ranno i brevetti americani già richiesti.

Riguarda la preparazione di fibridi, particelle fibrillari  
anche nastriformi di polimeri sintetici, principalmente co-  
poliammide, copoliesteri tercioestralici, polimeri vinilici  
ed acrilonitrilici.

I fibridi hanno elevata capacità di trattenere acqua, si  
intrecciano tra loro e con le corrispondenti fibre in fice-  
ce, anche in percentuali elevate, per dare fogli tipo carta  
o "tessuti non tessuti".

La preparazione è effettuata per precipitazione del polimero  
in condizioni di energica agitazione in modo da sottoporre  
le particelle di polimero appena formatesi, ancora allo stato  
rigonfiato, ad una vigorosa azione di taglio e battitura.

Nei brevetti sono riportate le caratteristiche fisico-chimiche  
e dimensionali dei fibridi ottenuti.

La lavorazione successiva è quella nota nell'industria della  
carta.

\*\*\* \*\*

./.

Alle state iniziale della ricerca la tecnica nota disponibile è molto scarsa (la maggior parte dei documenti dove ancora pervenire); molto importante è la preparazione di fibridi da poliolefine del seguente:

Br. It. No. 540.661 - Ziegler, ns. "Ut.70" - dp. 5/8/1955, es. 12/3/1956 - pr. 7/8/1954 - Germania.

"Procedimento per la produzione di carta e fogli da poliolefine".

L'estensione in U.S.A. dovrebbe essere stata effettuata da Ziegler; sono in corso gli accertamenti relativi.

Riguarda la preparazione di paste per carta, lavorabili con i metodi noti per questa, a base di fibrille ottenute per esempio mediante precipitazione sotto agitazione di soluzioni di polimeri olefinici, specialmente polietilene ed anche polipropilene.

Il brevetto non riporta esempi operativi specifici e l'attuazione pratica, per la descrizione alquanto sommaria, abbisognerà forse di un abbondante "know-how".

Questo brevetto, pubblicato già da circa un anno all'epoca dei primi depositi da Font, sembrerebbe aver fornito l'idea della preparazione del tipo dei fibridi in esame.

\*\*\*      \*\*\*      \*\*\*      \*\*\*

In conclusione e in via preventiva preliminare è possibile dare la situazione seguente:

1. In Italia:

- a) La preparazione di carta e simili da fibrille di poliolefine (polietilene, polipropilene) è dominata da Ziegler ns. "Ut.70" e non da da Font.
- b) L'analoga preparazione di fibridi e derivati da polimeri non poliolefinici (copoliammidi, copoliesteri tere-isoftalici, ecc.) sarebbe dominata da da Font con il suo posteriore Br. It. No. 655.850, da ritenersi valide alle state attuale della ricerca, e non da Ziegler.
- c) La preparazione di tetryli (non woven structures) alle state attuale della nostra conoscenza sembra ancora (gran parte dei documenti da noi ordinati non sono però ancora arrivati) dominata da da Font (e anche da da Font).

**2. In U.S.A.:**

La situazione potrà essere considerata paragonabile a quella in Italia se risulterà che Kiegler ha ottenuto il brevetto corrispondente all' "St. 70" e che Kiegler non ha dato nessuna delle dette brevetti alla du Pont. Scriveremo subito a Don Kreisler per chiarire anche questo punto.

Con ossequio.

"BREVETTI"

*[Handwritten signature]*



**"POLYMER"**  
 INDUSTRIE CHIMICHE SOCIETÀ PER AZIONI  
 SEDE IN MILANO - CAPITALE SOCIALE L. 10.000.000.000 I. V.

MILANO - LARGO G. DONEGANI, 1-2  
5 luglio 1962

RIFERIMENTI	
NO	DIREZIONE COMMERCIALE
VS	AF/sg

Chiarissimo Prof. Natta  
 Rettore Istituto Chimica  
 Industriale del Politecnico  
 Piazza Leonardo Da Vinci, 32

M i l a n o

6 LUG 1962  
 R 562

Le inviamo in allegato copia di uno studio  
 eseguito dall'ing. Fior sulla "Ricerca Fi-  
 brids" per Sua opportuna conoscenza.

Distinti saluti.

*[Handwritten signature]* "Polymer"  
*[Handwritten signature]*

All/



p.e. Vice Direzione Generale  
Direzione Istituto Ricerche Terni  
→ Chiarissime prof. Natta.

### Ricerca Fibrida

Di seguito riportiamo i contatti che il nostro ing. Fior ha avuto in proposito:

#### 1. Contatti

##### Prof. Michie del Textil Institut di Manchester.

Il prof. Michie è lo specialista dei tessuti non tessuti ed è stato incontrato dal nostro ing. Fior in occasione di un viaggio che il Professore faceva in Europa per rendersi conto della produzione europea di tessuti non tessuti.

Il Professore ha confermato le conoscenze che noi avevamo in queste carte e cioè che esiste una produzione di tessuti non tessuti che vengono lavorati con i due seguenti cicli:

- a) carte normali con disposizioni di veli incrociati
- b) macchine Random Weber, che sono speciali carte a circolazione d'aria che forniscono un velo con le bavelle orientate nella direzione di un piano che è pertanto equivalente al velo incrociato delle carte normali.

Questi veli di carta possono essere di spessore molto variabile; i tipi più fini vengono compressi sotto dei cilindri e trattati con resine speciali che variano molto a seconda della casa produttrice.

Si ottengono dei fogli dello spessore di una carta che sono usati nell'industria tessile dell'abbigliamento per interni, per giacche ed in certi tipi di vestiti femminili.

I più noti in commercio sono quelli prodotti dalla Ditta Freudenberg (Germania) e sono sul mercato sotto il nome di "fliceline".

La produzione di questi tessuti è però molto limitata, perchè assomigliano molto ad una carta e sono molto lontani dalle caratteristiche di un tessuto vero e proprio.

Con veli di carta di spessore più grosso si fanno ovatte per imbottiture (es: imbottiture per giacche a vento), feltri e anche tappeti.

Per quanto riguarda i "fibridi" il prof. Michie era perfettamente al corrente dei brevetti Du Pont e conosceva gli articoli ottenuti.

Secondo il prof. Michie, nessuno in Europa produce questi tessuti che egli giudica ancora troppo simili alla carta

e troppo lontani dalle caratteristiche di un tessuto.

## 2. Contatto

Ing. Franceschini, direttore delle Cartiere di Brugherio del Gruppo Cartiere S. Cesario.

Secondo l'ing. Franceschini che era al corrente dei sistemi Du Pont, con le normali macchine della carta non è possibile produrre tessuti non tessuti partendo da materiale Du Pont ed occorre eseguire modifiche abbastanza sensibili alle macchine.

Sempre secondo l'ing. Franceschini l'applicazione non è interessante inquantochè il materiale che si ottiene è ancora troppo simile alla carta, mentre il prezzo risulterebbe sensibilmente superiore.

L'ing. Franceschini si è dichiarato disposto ad eseguire qualsiasi prova, provi accordi con la Direzione delle Cartiere San. Cesario.

## 3. Contatto

Nostra agenzia in Germania.

La nostra agenzia in Germania ha campionato la nostra fibra alla Ditta Freudenberg che ha fatto delle prove, però non ha voluto darci i campioni.

La nostra fibra in queste prove era stata lavorata secondo il sistema di carte Randon Weber.

Inoltre la ditta Freudenberg non intende usare per ora la nostra fibra Meraklon inquanto ha una stabilità alla luce troppo bassa.

Nessuno in Germania produce tessuti non tessuti con il sistema della Du Pont.

## 4. Contatto

Nostra agenzia di Francia.

La nostra agenzia di Francia ci ha comunicato che ivi nessuno produce tessuti non tessuti del tipo "fibrato", ma solo tessuti non tessuti del tipo falda sia con la tecnologia della Randon Weber che con carte normali.

In Francia esistono diverse ditte che conoscono i sistemi della Du Pont, ma nessuno fino ad ora ha preposto la realizzazione di tali articoli ai quali vengono mosse le solite critiche, cioè di essere troppo lontani dalle caratteristiche che un buon tessuto dovrebbe avere.

## 5. Contatto

Nostra agenzia in U.S.A.

Non ci hanno ancora risposto in merito.

**6. Contatto**

Nostra agenzia di Brescia.

Il mercato svedese è molto interessato a produrre tessuti non tessuti in Meraklon, ma solo nel campo delle falde e imbottiture.

**7. Situazione in Italia.**

In Italia vengono prodotti tessuti non tessuti con la nostra fibra Meraklon e Nevil nel tipo falde e nel tipo tessuti non tessuti (mequette).

Esistono complessi industriali interessati a produrre i tessuti non tessuti di tipo flicacelino e stanno apprevvigiando le macchine.

Non abbiamo ancora sentite dire di Ditte interessate a produrre tessuti non tessuti con il sistema della Du Pont.

**8. Conclusioni**

Non pensiamo sia attualmente possibile il collocamento di materiale tipo "fibriid" sul mercato europeo.

Noi siamo tenuti costantemente al corrente di tutto il lavoro che viene svolto nel campo dei tessuti non tessuti sia in Italia che in Europa e sarà nostra cura informare le superiori Direzioni di qualsiasi novità sorga in questo campo.

SEZIONE SVILUPPO E APPLICAZIONI

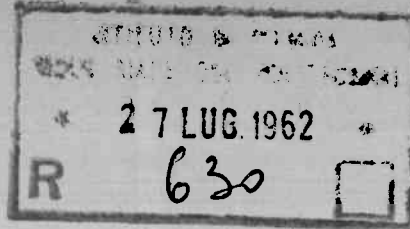
**MONTECATINI**

Società Generale per l'Industria Mineraria e Chimica

AMMINISTRATORE DELEGATO

PROMEMORIA

G/ef



Data 25 luglio 1962

per il Sig. Ing. DE VARDA  
Ing. LARCHER  
e p. c. Prof. NATTA

Fibridi

Dopo la mia nota del 10 luglio mi è arrivata la nota BREV del 12 che rimetto qui acclusa in copia.

Da questa nota risulta che:

1) In Italia:

- a) la preparazione di carta e simili da fibrille di polietilene è dominata da Ziegler e non da Du Pont -
- b) l'analoga lavorazione di fibridi e derivati da polimeri non polietilfinici è dominata da Du Pont -
- c) la preparazione di textryli sembra fino ad oggi dominata da Du Pont -

2) In U. S. A. la situazione è ancora sub judice.

In base a questi elementi, rimangono ferme le istruzioni date con la mia del 10 luglio con l'invito a BREV di accertare il punto c) del paragrafo 1) sopracitato e di precisare la situazione in U. S. A.

Quando saranno raccolti questi elementi me li sottoporrete per indire una riunione al riguardo.

Cordiali saluti.

A handwritten signature, possibly 'M.', is written above a large, hand-drawn cross mark that spans across the bottom right portion of the page.



# "POLYMER"

INDUSTRIE CHIMICHE SOCIETÀ PER AZIONI

CAPITALE L. 10.000.000.000 L. V.

SEDE IN MILANO - LARGO G. DONEGANI, 1-2

MILANO, 10 maggio 1962

Spett.le

Sec. Montecatini

BREV

Sede

o p.c. Sig. Ing. Giustiniani

o o o Sig. Ing. Grossi

o o o Sig. Prof. Natta

RIFERIMENTI

NS	DIREZIONE GENERALE	SL/la
VS		

All'attenzione del Sig. Ing. De Varda

Accordo con Du Pont in U.S.A. per fibre e ibridi di poliisopilene

Con riferimento alla lettera di/na del 20/4 u.s., diretta al Sig. Ing. Giustiniani, per quanto riguarda gli argomenti che competono la nostra Società possiamo precisare che concordiamo con la Vostra proposta il cui testo è trascritto alla seconda pagina della lettera sopraccitata.

Richiediamo opportuno chiarire che, per quanto concerne la definizione scritta nei seguenti termini "Le fibre vendibili a terzi dovrebbero essere di lunghezza limitata, tali da non poter essere filate" tale definizione non è sufficientemente univoca ed inequivoca in quanto a fronte di filame fibre anche molto corte potrei rimpugnare trattando da altre fibre più lunghe costituenti la massa.

Desidero, tuttavia che, forse, potrebbe essere conveniente specificare che le fibre dovrebbero avere una lunghezza massima di 4 m. e, in ogni caso, non superiore come tolleranza ai 5 m. Ripetiamo che, anche con questa precisazione, potrebbero verificarsi ed utilizzazioni di queste fibre, ma, se non altro, non essere delle esistenti maggiori qualora come fibre non filabili intendessero anche quelle superiori ai 5 m.

Distinti saluti.

*Polymer*

POLYMER

# "POLYMER"

INDUSTRIE CHIMICHE SOCIETÀ PER AZIONI

CAPITALE L. 10.000.000.000 I. V.

SEDE SOCIALE: MILANO

TERNI, 5 maggio 1962  
PIAZZA G. DONEGANI, 4

- Chiarissimo  
Prof. Giulio Natta
- Istituto di Chimica Industriale  
del Politecnico di
- Milano

ISTITUTO RICERCHE

CV/pz

0319

p.c.: POLY/DIRF = Milano

Chiarissimo Professore,

unita alla presente Le inviamo

la Nota SU.At.53/62:

"Fibrids e Textryls di polietilene, polipropilene e cloruro di polivinile".

Voglia gradire i nostri deferenti saluti.

Istituto Ricerche  
"Polymer" - Terni

all/

\*

20 Aprile, 1962

dv/na

Sig.  
Ing. Piero GIUSTINIANI  
S E D E

e p.c. Sigg.ri Ing. ORSONI  
Prof. NATTA  
Ing. LARCHER

26 APR. 1962

R 2060

Cartelle

Re: Accordo con du Pont in U.S.A. per fibre e fibridi di polipropilene -

Mr. Naon.

Ricevo e trasmetto quanto mi scrive

Rispetto alle proposte discusse nel corso dell'incontro di Milano del 2 e 3 m.c., come riportato nel ns. resoconto già trasmessole, noto:

- 1) la du Pont ha introdotto una ulteriore limitazione al campo delle fibre limitandolo a quelle a sezione essenzialmente circolare.

Questa limitazione si aggiungerebbe all'altra (già da noi in linea di massima respinta), per cui il reciproco scambio delle lettere "of intent" si riferirebbe esclusivamente alle fibre di omopolimeri di propilene modificate solo da stabilizzanti con esclusione di qualsiasi modificazione fisica;

- 2) la licenza Montecatini per l'Italia si riferirebbe soltanto al brevetto italiano du Pont No. 605.850. Stiamo accertando se non esistano altri brevetti o domande du Pont nel campo.

A quanto sembra la du Pont ha ora rinunciato a voler limitare il campo dell'accordo ai soli claims risultanti da una interference Montecatini-du Pont. Tuttavia la formulazione del campo 1) permane poco chiara e gradirei ulteriori osservazioni e precisazioni da parte dell'ing. Orsoni, del prof. Natta e dell'ing. Larcher.

C'è da sospettare qualche trabocchetto che ci sarà dato di scoprire forse solo in un futuro prossimo o lontano.

Credo si convenga insistere invece sulle nn. proposte definendo il campo dell'accordo, e cioè:

"Montecatini si impegna a dare alla du Pont licenze  
"non-esclusive a condizioni ragionevoli su tutti i  
"brevetti americani che essa ottenga in base a priorità  
"anteriori alle scambie di lettere e che dominino in  
"qualunque modo il campo delle strutture non tessute;  
"tali licenze riguarderebbero pure la produzione di fi-  
"bre polipropileneiche al solo scopo di fabbrica 'non-  
"woven fabrics', e comprenderebbe il diritto di vendere  
"a terzi tali fibre sempre allo scopo esclusivo di fab-  
"bricare 'non-woven fabrics'. Le fibre vendibili ai ter-  
"zi dovrebbero essere di lunghezza limitata, tali da non  
"poter essere filate."

"La du Pont concede a condizioni ragionevoli a Monteca-  
"tini e ai suoi licenziatari licenze non esclusive su  
"claimi dominanti che essa eventualmente ottenga negli  
"Stati Uniti sulla produzione di fibre di polipropilene.  
"Tale licenza riguarderebbe la produzione e la vendita  
"di fibre per qualunque scopo, ma non includerebbe alcun  
"diritto sui brevetti du Pont relativi alle strutture non  
"tessute."

in modo possibilmente ancor più chiaro e dettagliate.

Comunque, nei due campi dovrebbero essere compresi tutti i brevetti, anche quelli di stiro, finissaggio, ecc., con la sola esclusione, almeno per quanto riguarda Montecatini dei pretrattamenti del polimero per renderlo tingibile e con una esclusione chiara e dettagliata da parte du Pont di quei trovati altrimenti ricadenti nel campo dell'accordo che però du Pont intenderebbe escludere dall'accordo.

Con ossequio,



all/



E. I. du Pont de Nemours and Co.

(Correspondence varied)

Nov 21 1953



**E. I. DU PONT DE NEMOURS & Co.**

INCORPORATED WITH LIMITED LIABILITY IN THE U.S.A.  
WILMINGTON 98, DELAWARE, U.S.A.

EUROPEAN OFFICE:

**BUSH HOUSE,**

**ALDWYCH,**

**LONDON, W. C. 2.**

TELEPHONE: COVENT GARDEN 1766.  
TELEGRAMS: NEMOURS, ESTRAND, LONDON.  
TELEX: 21430

April 16, 1962

Dr. G. de Varda,  
Director, Patent Department,  
Montecatini, S.A.  
Via Turati 18,  
Milan, ITALY

**MONTECATINI**

**18 APR 1962**

**BREV.**

Dear Dr. de Varda,

Polypropylene Fiber and Fibrids

First may I say how much Dr. Lawton Burrows and I enjoyed the opportunity of visiting with you and your associates on April 2-3. The friendly discussions of the various subjects of current interest between our companies was very much appreciated. In this letter I would like to deal only with the subject of polypropylene fiber and fibrids which had been last covered by your proposal of a draft agreement which I received with your letter of December 22, 1961.

On April 2 we presented for your consideration a counter proposal in the form of a draft agreement with the reference (a-1- 3/23/62). A copy of this is attached as confirmation for your records.

After considering this counter proposal, you informed us on April 3 that you had not fully appreciated from the earlier discussions that we, Du Pont, would wish to have a license in the United States for use in the non-woven structure field which would include the making of polypropylene fibers in monofilament and multifilament forms by spinning and that we would wish to use these products in such forms as well as in staple form for making non-woven structures, and that we would wish to sell the staple form to others for the making of non-woven structures. It was evident, I believe, to all present on April 2 and 3 that the confusion had arisen because of the possible prominence given in earlier discussions to the fibrids as a constituent in the non-woven structures of interest to us.

In any event, you also informed us on April 3 that you had decided it is too early, from Montecatini's viewpoint, to define any royalty terms in the proposed agreement which would be applicable in the event your company were to be successful in obtaining a polypropylene fiber claim in the United States.

April 16, 1962

Following a thorough discussion on April 3 of the general character of non-woven structures of the types we may wish to exploit (assuming we are successful in the research and development program we have underway) it was possible to reach agreement that the entire matter might be dealt with at this stage by an appropriate exchange of Letters of Intent.

Both sides had an opportunity to present their views as to the content of the proposed Letters of Intent and I agreed to attempt to crystallise the matter in this letter to you covering our understanding of what the Letters of Intent should say. Always, of course, subject to formal approval by our Executive, my understanding is as follows:-

1. Montecatini to agree by a Letter of Intent that, assuming Montecatini is awarded a dominating polypropylene fiber claim in the United States, Montecatini will grant Du Pont a non-exclusive license at reasonable terms to make fibers of homopolymers of propylene (modified only by stabilizers and excluding all physical modifications) for use in making and selling non-woven structures. The license so granted would include the right to Du Pont to sell such polypropylene fibers as short length staples only for non-woven structures to be made by others. The commitment would cover all polypropylene fiber patents filed by Montecatini prior to the exchange of Letters of Intent, but would be limited to conventionally spun and drawn polypropylene fibers of essentially round cross section.
2. Du Pont to agree by a Letter of Intent that, assuming Du Pont is awarded a dominating polypropylene fiber claim in the United States, Du Pont will grant Montecatini, and its licensees in the United States, a non-exclusive license at reasonable terms to make fibers of homo-polymers of propylene (modified only by stabilizers and excluding all physical modifications) and to use them and to sell them broadly but not including use or sale for non-woven structure purposes. The commitment would cover all polypropylene fiber patents filed by Du Pont prior to the exchange of Letters of Intent, but would be limited to conventionally spun and drawn polypropylene fibers of essentially round cross section. In addition, Du Pont would agree to grant to Montecatini a non-exclusive license at reasonable terms under Italian Patent 605,850 for any fibrid or structures from polymers which Montecatini already have the right to make.

I realise that the foregoing definitions of the proposed Letters of Intent may not cover all of the variants which might be envisaged by one side or the other. However, I trust that they do convey with sufficient clarity what our two companies are trying to do to their mutual benefit in this matter.

Dr. G. de Varda

- 3 -

April 16, 1962

If you agree with this approach and so signify to me we will arrange to have an appropriate Letter of Intent in draft prepared from our side and will be glad to receive a draft of the letter you would propose to send to us. The drafts can be exchanged and when found acceptable to both parties the matter can then be finalised by the official letters.

I will be writing to you shortly on the other matters we discussed.

Again many thanks for your cooperation and with kindest personal regards,

I am,

Sincerely,



Harry J. Haon  
European Manager

Enc: Draft Agreement

HJH:dit

January 29, 1973

*Carbella*

Dr. A. von Bézard  
European Scientific Associate  
Du Pont de Nemours Intern.S.A.  
50-52, Route des Acacias

CH-1211 GENEVA 24 -Svizzera)

our ref.N.130/r1

Dear Doctor von Bézard,

thank you very much for kindly sending  
me the Volume XX of your "Contributions to the Scientific Literature"  
containing the papers published in 1971 by your Central Research  
Department.

Reciprocating kindest regards and best Season's Greeting  
I am,

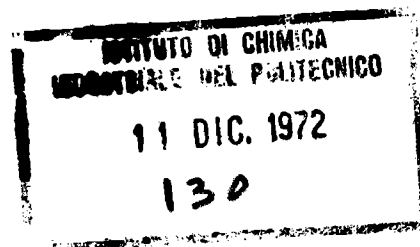
Sincerely yours,

Giulio Natta



DU PONT DE NEMOURS INTERNATIONAL S.A.  
50-52, ROUTE DES ACACIAS  
CH-1211 GENEVA 24, SWITZERLAND

EUROPEAN ADMINISTRATION



Prof. G. NATTA  
Istituto di Chimica Industriale  
Politecnico di Milano  
M I L A N O - Italia  
Piazza L.da Vinci 32

Geneva, December 4, 1972

Dear Prof.Natta,

By separate mail I am sending you the newly edited  
Volume XX of our "Contributions to the Scientific  
Literature", containing the papers published in 1971  
by our Central Research Department.

With best Season's Greetings an kind regards I remain

sincerely yours

Dr.A.von Bézard  
European Scientific Associate

Castella  
Du Pont

22.12.1971

Dr. A von Bézard  
European Scientific Associate  
Du Pont de Nemours Intern.  
50-52, Route des Acacias

G E N E V A  
(Switzerland)

Dear Doctor von Bézard,

thank you very much for kindly sending me  
Volume XIX of your "Contributions to the Scientific Literature" con-  
taining papers from your Central Research Department.

I reciprocate kindest regards and best Season's greetings.

Sincerely yours,

Giulio Natta



DU PONT DE NEMOURS INTERNATIONAL S. A.

50-52, ROUTE DES ACACIAS

GENEVA

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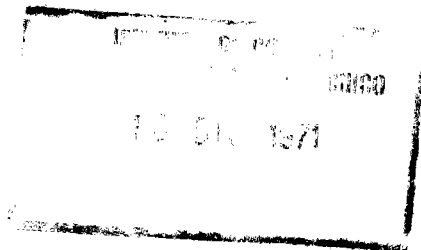
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TELEGRAMS : DUPONTINT-GENÈVE

EUROPEAN ADMINISTRATION



Prof. Dr. G. NATTA

Istituto di Chimica Industriale  
Politecnico di Milano

M I L A N O - Italia

Piazza L. da Vinci 32

Geneva, December 3, 1971

Dear Professor Natta,

As in the past years I have the pleasure of sending you today the newly edited Volume XIX of our "Contributions to the Scientific Literature", containing the papers published in 1970, by coworkers of our Central Research Department.

With my best wishes for the coming Season I remain

*Impressione  
preziosa  
arriva*

sincerely, yours

Dr. A. von Bézard  
European Scientific Associate

NOTE: Mailing of book delayed due to U.S. dock strike.



Carbello  
Du Pont

Milano, Dec.16, 1970

Our ref. No. 249/r1

Dr. A. von Bézard  
European Scientific Associate  
European Administration  
Du Pont de Nemours Int. S.A.  
50-52 Route des Acacias  
CH-1211 Geneva 24 (Svizzera)

Dear Doctor von Bézard,

thank you very much for kindly sending me Vol. XVIII  
of your Contributions to the Scientific Literature, which I will read with much  
interest.

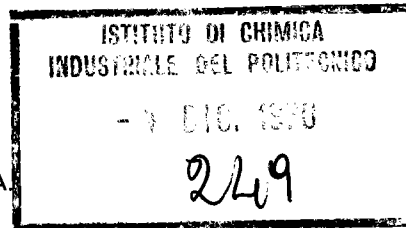
I sincerely reciprocate your Season's Greetings . Kind personal  
regards,

Sincerely,

Giulio Natta



DU PONT DE NEMOURS INTERNATIONAL S.A.  
50-52, ROUTE DES ACACIAS  
CH-1211 GENEVA 24, SWITZERLAND



EUROPEAN ADMINISTRATION

Prof. Dr. G. NATTA  
Istituto di Chimica Industriale  
Politecnico di Milano  
M I L A N O - Italia  
Piazza L. da Vinci 32

Geneva, December 3, 1970

Dear Professor Natta,

I have the pleasure to send you today by separate mail the newly edited Volume (XVIII) of the "Contributions to the Scientific Literature", containing the papers published during 1969 by scientists of our Central Research Department.

With best Season's Greetings and kind personal regards I remain

sincerely yours

Dr. A. von Bézard  
European Scientific Associate

Dec. 10, 1969

*Cartella  
Du Pont*

Dr. A. von Bézard,  
Du Pont de Nemours International S.  
81, Route de l'Aire  
CH-1211 Geneve (Svizzera)

Dear Doctor von Bézard,

Thank you very much for kindly sending to me Vol. XVII of your Contributions to the Scientific Literature, which I will read with much interest.

I sincerely reciprocate your wishes for Xmas and the New Year.

Sincerely,

Giulio Natta



DU PONT DE NEMOURS INTERNATIONAL S. A.

81. ROUTE DE L'AIRE  
CH-1211 GENEVA 24 (SWITZERLAND)

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Prof. Dr. G. NATTA  
Istituto di Chimica Industriale  
Politecnico di Milano  
M I L A N O /Italia  
Piazza L. da Vinci 32

Geneva, December 8, 1969

Dear Professor Natta,

As in the past I am pleased to send you by separate mail the newly edited Volume (XVII) of our "Contributions to the Scientific Literature", containing the papers published by coworkers of our Central Research Department during the period of June 1st through December 31st, 1968.

With best wishes for Christmas and the New Year and kind personal regards I remain

sincerely yours

A handwritten signature in cursive script, appearing to read "Bézard".

Dr. A. von Bézard  
European Scientific Associate

Carballe  
Du Pont

Milano, Dec. 17, 1968

our ref.494/lmv

Dr. A. von Bézard,  
Du Pont de Nemours International S.A.  
Post Office Box CH 1211 Geneva 24

Dear doctor von Bézard,

Thank you very much for kindly sending me Volume XVI  
of the Contributions to the Scientific Literature.

I reciprocate kindest regards and best season's  
greetings.

Sincerely yours,

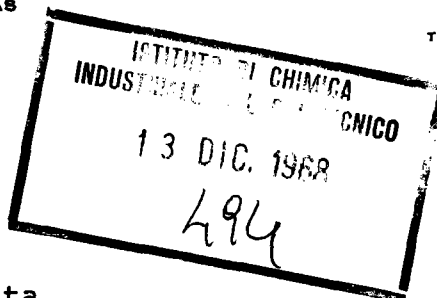
Giulio Natta



## DU PONT DE NEMOURS INTERNATIONAL S. A.

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EUROPEAN ADMINISTRATION



December 10, 1968

Prof. Dr. G. Natta  
Istituto di Chimica Industriale  
Politecnico di Milano  
M I L A N O/Italy  
Piazza L.da Vinci 32

Dear Professor Natta,

I am pleased to send you the newly edited Volume XVI of the "Contributions to the Scientific Literature" containing the papers published by co-workers of our Central Research Department during the period of June 1st, 1967 through May 31, 1968.

With kind personal regards and my best wishes for Christmas and the New Year I remain

very sincerely yours

Dr. A. von Bézard  
European Scientific Associate

Jan. 8, 1968

*Carbella*

Dr. A. von Bézard,  
Du Pont de Nemours International S.A.  
Post Office Box  
CH 1211 Geneva 24 (Svizzera)

Dear doctor von Bézard,

Thank you for kindly sending me Volume XV of your  
"Contributions to the Scientific Literature", which interests  
me very much.

With my best regards, I send you sincerest wishes  
for the New Year.

Sincerely,

Giulio Natta

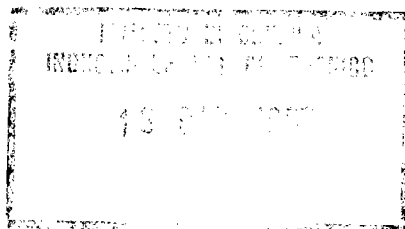


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**EUROPEAN ADMINISTRATION**

Professor G. Natta  
 Istituto di Chimica Industriale  
 Politecnico di Milano  
 Piazza Leonardo da Vinci 32  
 M i l a n o



December 14, 1967

*Impressario*

Dear Professor Natta,

I am sending you by separate mail the last Volume XV of *(a Pom)* our "Contributions to the Scientific Literature" which contains the papers published by the co-workers of our Central Research Department during the period of June 1st, 1966 through May 31st, 1967.

With very kind regards and my best wishes for Christmas and the New Year I remain

very sincerely yours,

*Bézar*  
 Dr. A. von Bézar  
 European Scientific Associate



February 20, 1967

*Carbotta*

Dr. A. von Bézard  
European Scientific Associate  
Central Research Department  
DuPont de Nemours Intern. S. A.  
30, rue de Vermont

1202 Geneva - Svizzera

Dear Dr. Von Bézard,

I have received the latest volume of the "Contributions to the Scientific Literature" which you kindly sent to me, and I thank you very much.

Kindest personal regards,

Giulio Natta



DU PONT DE NEMOURS INTERNATIONAL S.A.

CENTRAL RESEARCH DEPARTMENT  
EUROPEAN OFFICE

30, RUE DE VERMONT  
TEL. (022) 34 07 82  
1202 GENEVA, SWITZERLAND

December 5, 1966

Prof.G. NATTA  
Istituto di Chimica Industriale  
Politecnico di Milano  
M I L A N O  
Piazza Leonardo da Vinci 32

Des Professor Natta,

I have the pleasure to send you today as in the past the newly edited Volume XIV of the "Contributions to the Scientific Literature", containing the papers published by our Central Research Department during the period of June 1st, 1965, to May 31st, 1966.

With my best wishes for Christmas and the New Year and kind personal regards I remain

sincerely yours

A handwritten signature in cursive script that reads "Bézard".

Dr.A.von Bézard  
European Scientific Associate



DU PONT DE NEMOURS INTERNATIONAL S.A.

CENTRAL RESEARCH DEPARTMENT  
EUROPEAN OFFICE

30, RUE DE VERMONT  
GENEVA, SWITZERLAND

December 3rd, 1965

Prof. Dr. G. NATTA  
Istituto di Chimica Industriale  
Politecnico di Milano  
M I L A N O  
Piazza Leonardo da Vinci 32

Dear Professor Natta,

As in the past years, I am sending you today again the recently edited volume XIII of the "Contributions to the Scientific Literature", containing the papers published by our Central Research Department during the period of June 1st, 1964 to May 31st, 1965.

Will you please accept already now my best wishes for Christmas and the New Year. With kind personal regards I remain

very sincerely yours

Dr. A. von Bézard  
European Scientific Associate

*Castelle  
DuPont*

December 11, 1964

our ref. 846/eg

Dr. A. von Bézard  
DuPont de Nemours International S.A.  
Central Research Department  
30, rue de Vermont  
Geneva, Svizzera

Dear Doctor von Bézard,

I have received the latest volume (XII)  
of the "Contributions to the Scientific Literature" which you  
have kindly sent to me, and I thank you very much.

My best wishes for Christmas and the  
New Year.

G. Natta



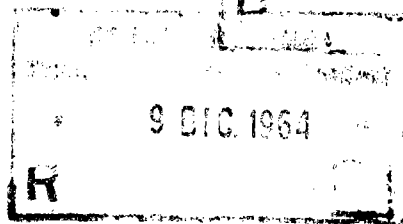
DU PONT DE NEMOURS INTERNATIONAL S. A.

CENTRAL RESEARCH DEPARTMENT  
EUROPEAN OFFICE

30, RUE DE VERMONT  
GENEVA, SWITZERLAND

December 3rd, 1964

Prof. Dr. G. NATTA  
Istituto di Chimica Industriale  
Politecnico di Milano  
M I L A N O  
Piazza Leonardo da Vinci 32



Dear Professor Natta,

It is a pleasure for me to send you today as in the past years the latest volume (XII) of the "Contributions to the Scientific Literature" containing the papers published by our Central Research Department during the period of June 1st, 1963 to May 31st, 1964.

With kind personal regards and my best wishes for Christmas and the New Year I remain

very sincerely yours

Dr. A. von Bézard  
European Scientific Associate

Oct. 28, 1968

Corbello  
Du Pont

Dr. I. A. Burrows  
Du Pont de Nemours & Co.,  
Textile Fibers Dept.,  
Wilmington 98, Delaware USA

Dear Mr. Burrows:

Although in delay, please accept my sincerest congratulations upon the marriage of your daughter Mary Jane. Please, extend my very best wishes for a lot of happiness to her and to her husband.

Kindest regards,

Giulio Natta

Carbells  
DuPont

Feb. 8, 1968

Dr. J. Mitchell, Jr., Manager  
Research & Development Division,  
Plastics Dept.,  
Experimental Station,  
E.I. DuPont de Nemours & Co.,  
Wilmington, Delaware 19898 (USA)

Dear doctor Mitchell:

Thank you for kindly sending me the reprints  
of your interesting paper on the "Determination of Hydro-  
peroxide Groups in Oxidized Polyethylene".

With kindest regards.

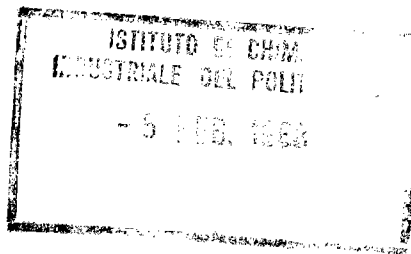
Giulio Natta



**E. I. DU PONT DE NEMOURS & COMPANY**  
INCORPORATED  
WILMINGTON, DELAWARE 19898

PLASTICS DEPARTMENT  
EXPERIMENTAL STATION

Incorporated With Limited Liability  
In the State of Delaware, U.S.A.



January 8, 1968

GTDP

Professor, Dr. G. Natta  
Istituto Di Chimica Industriale  
Del Politecnico  
Piazza Leonardo Da Vinci  
32 Milano, Italy

Dear Professor Natta:

We have enclosed two reprints of our paper on  
"Determination of Hydroperoxide Groups in Oxidized Polyethylene",  
which you requested.

We hope this information will be helpful to you.

Very truly yours,

J. Mitchell, Jr.  
Manager

Research & Development Division

jr



October 13, 1967

Dr. J. Mitchell  
Plastics Department  
DuPont Experimental Station  
E.I. DuPont de Nemours Co. inc.  
Wilmington, Delaware (USA)

Dear Doctor Mitchell:

I read in Polymer Previews a short description of a method for the determination of the hydroperoxide groups in polyethylene.

I would greatly appreciate your giving me a detailed description of the method.

Thanking you in advance, I send you kind regards.

G. Natta

*Detail  
to Beath  
5/2/68*



DU PONT DE NEMOURS INTERNATIONAL S. A.

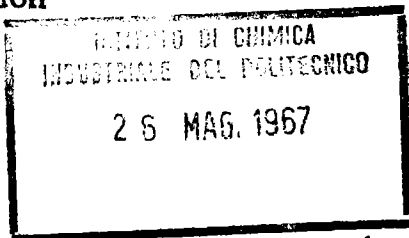
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EXPRESS

cc: W. Manz  
Du Pont U.K.  
London

Prof. G. Natta  
Istituto di Chimica Industriale  
del Politecnico  
Piazza Leonardo da Vinci 32



MILANO - Italia

YOUR REF. :

OUR REF. : EC/km

Genève, le 24 mai 1967

Monsieur,

Faisant suite à votre lettre du 19. 5. 1967 je vous confirme que nous vous rendrons visite le 30 mai 1967 dans la matinée, avec le Dr. Manz.

Veillez agréer, Monsieur, nos salutations distinguées.

E. Chapuis

*Manz &  
Parabols  
con Mangano  
& Jiffu*

19.5.1967

ns.rif.N.316/rl

Egr.  
Dott. E. Chapuis  
Du Pont de Nemours Intern. S.A.  
81, Route de l'Aire  
Geneva 24 (Switzerland)

Egregio Dottore,

La ringrazio della Sua gentile lettera del 16 maggio, relativa alla Sua prossima visita presso il nostro Istituto per mostrarci l' "Analizzatore Termico Differenziale Du Pont 900". Purtroppo la data del 29 maggio da Lei indicata non è la più adatta in quanto il Prof. Moraglio non sarà a Milano in tale giorno. La pregherei pertanto di voler rimandare la visita o al 30 maggio, in mattinata, oppure al lunedì 5 giugno, sempre in mattinata. In attesa di una Sua conferma per una delle due date da me proposte, Le invio i migliori saluti.

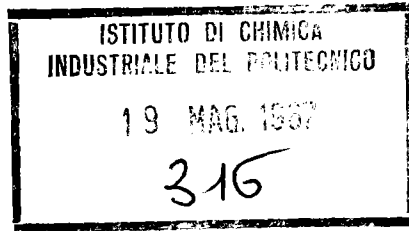
(Prof. G. Natta)



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Egregio Professore  
Giulio NATTA  
Istituto di Chimica Industriale  
del Politecnico  
Piazza Leonardo da Vinci 32

MILANO - Italie

YOUR REF.: N.125/r1

OUR REF.: EC/cm

Genève, le 16 mai 1967

Monsieur le Professeur,

Faisant suite à votre lettre du 7 mars 1967, je vous communique mon intention de vous rendre visite à Milan avec le Dott. W. Manz, le lundi 29 mai dans la matinée, vers les 9 heures.

J'aurai avec moi l'"Analyseur Thermique Différentiel Du Pont 900", pour une éventuelle démonstration auprès de vos laboratoires, sur les échantillons de votre choix.

Pour le cas où la date en question ne vous conviendrait pas, je vous saurais gré de bien vouloir me le faire savoir au plus vite.

Toujours à votre disposition je vous prie d'agréer, Monsieur le Professeur, mes salutations les meilleures.

Dott. E. Chapuis

*E. Chapuis*

*Seu Anil  
Piphe - si  
& Montoglio - (me deve  
arrivare a anche)*

*Carbelle  
Du Pont*

7.3.1967

ns.rif.N.125/r1

Egr.  
Dott. E. Chapis  
Du Pont de Nemours International S.A.  
81, Route de L'Aire  
GENEVA 24 (Switzerland)

Oggetto : Strumenti Du Pont

Egregio Dottore,

ricevo la Sua gentile lettera del 24 u.s. (EC/mlm) e desidero informarLa che i miei collaboratori Proff. Giuffré e Moraglio sono interessati a discutere con Lei le applicazioni degli strumenti di cui Lei ha inviato i prospetti. Le sarei pertanto grato di avvisarci con un certo anticipo circa la data della Sua prossima venuta in Italia.

Distinti saluti.

(Prof. Giulio Natta)



DU PONT DE NEMOURS INTERNATIONAL S. A.

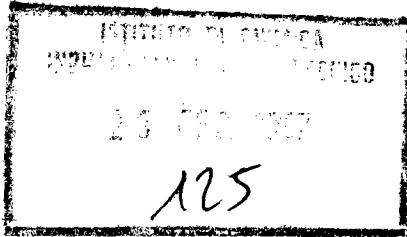
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Egregio Professore  
G. NATTA  
Facoltà di Meccanica  
Politecnico di Milano  
Piazza Leonardo da Vinci 32  
MILANO - Italia

YOUR REF. :

OUR REF. : EC/mlm

Ginevra, il 24 febbraio 1967

Oggetto : Strumenti Du Pont

*Sentire Guiffre  
e Moraglio  
est. mto  
eventuale  
date  
incontro  
RH*

Egregio Professore,

Abbiamo il piacere di inviarLe in allegato l'ultimo numero di "Thermogram", nonché alcuni prospetti illustrativi della produzione Du Pont nel campo dell'analisi termica differenziale.

Alleghiamo pure cataloghi su nuovi prodotti Du Pont di recente sviluppo, come :

310 Curve Resolver (calcolatore analogico per la risoluzione di curve sperimentali)

510 Moisture Analyzer (analizzatore di umidità).

Abbiamo inoltre il piacere di comunicarLe che il ns. consulente tecnico, il dott. E. Chapuis, sarà ben lieto, durante il suo prossimo viaggio in Italia, farLe visita sia per discutere con Lei le applicazioni di detti strumenti, sia per dimostrare su campioni di Suo interesse, le prestazioni dell'analizzatore termico differenziale Du Pont 900.

Qualora una visita in tale senso fosse di Suo gradimento, La preghiamo comunicarcelo, onde potere programmare un incontro in reciproco accordo.

In attesa di un Suo cortese cenno di riscontro, porgiamo distinti saluti.

*avvisi circa  
quindici  
anni  
fa  
(Moraglio  
e Guiffre)*

*E. Chapuis*  
Dott. E. Chapuis

Allegati

*via  
Geneve  
tempo*

*Guiffre  
Moraglio*

PROMEMORIA PER PASQUON E ZAMBELLI

*Amante*

Tra i prodotti nuovi di alto valore commerciale sintetizzati dalla Du Pont vi è una fibra elastica costituita da blocchi di catene di poliglicoli (ad esempio polibutilen-glicole 1-4) alternati con catene di lunghezza determinata di tipo poliuretano, ottenibile per reazione con diisocianati;

Il prodotto è amorfo ma per stiro ha luogo una specie di reticolazione fisica dovuta all'associazione di tratti di catena poliuretano probabilmente favorita dalla loro linearità e presenza di ponti di ioni idrogeno.

Tali prodotti presentano allungamenti sino a 700% reversibili. E' probabile che prodotti lineari di proprietà analoghe possano essere ottenuti se si costruiscono delle catene costituite da blocchi di lunghezza determinata di un polimero amorfo e di un polimero cristallizzabile. Proporrei per costruire tratti di catena stereoregolari e non stereoregolari di lunghezza media determinata, di polimerizzare il propilene facendo susseguire relativamente brevi tempi di reazione a temperature diverse, operando con catalizzatori che diano a bassa temperatura polipropileni sindiotattici e a temperatura più alta dei blocchi atattici.

Si dovrebbero poter ottenere così catene costituite da tratti di lunghezza media pre-stabilita alternativamente atattici e sindiotattici.

Non dovrebbe essere difficile realizzare delle condizioni per cui il polimero non stirato è amorfo e per stiramento fornisce delle zone cristalline o comunque associate di tratti stereoregolari, tali che il polimero non stirato si comporti come una gomma e quello stirato come una gomma vulcanizzata.

Si era discusso la possibilità di ottenere tali proprietà con i polimeri a blocchi isotattici ma ci mancava la possibilità di ottenere un solo tipo di catena costituito da tratti stereoregolari aventi lunghezza determinata.

Poiché il problema di ottenere materiali lineari filabili capaci di fornire fibre aventi proprietà elastomeriche presenta una notevole importanza pratica, gradirei che tale problema venisse seriamente affrontato sulle basi sopraindicate.

*10/11/65*

393/ep

Carbelle  
Dupont

May 26, 1964

Dr. L. A. Burrows  
DUPONT de NEMOURS & CO.  
Wilmington 98, Delaware  
(Textile Fibers Department)

Dear Doctor Burrows,

I would like to inform you Dr. Crespi will be in the U.S. in the first fortnight of June 1964. In this connection Dr. Crespi would like to have a discussion on topics of mutual interest with people of your research center.

Dr. Crespi is interested in problems of applications of polymers mainly in the field of ethylene-propylene rubbers and polypropylene fibers.

He could come to your laboratories in the morning of Tuesday June 9. Please let me know whether this date suits you and your associates.

With kindest regards.

G. Natta



*Barbelle  
Dupont*

January 15, 1964

Dr. A. von Bézard  
European Scientific Associate  
DUPONT de Nemours International S.  
30, rue de Vermont  
Genève, Svizzera

Dear Doctor Bézard,

Your letter of December 2 was very gratefully received. I wish to thank you very much for the kind words you wrote on having been chosen as recipient of the Nobel Prize, and for kindly sending me the latest volume of General Research Department's "Contribution to the Scientific Literature", which arrived here a short time ago.

I also wish to thank you for your wishes for the New Year I sincerely reciprocate.

Very truly yours,

G. Natta



DU PONT DE NEMOURS INTERNATIONAL S. A.

CENTRAL RESEARCH DEPARTMENT  
EUROPEAN OFFICE

30, RUE DE VERMONT  
GENEVA, SWITZERLAND  
December 2nd, 1963

Prof. Dr. G. NATTA  
Istituto di Chimica Industriale  
Politecnico  
M I L A N O  
Piazza Leonardo da Vinci 32

Dear Professor Natta,

First of all I would like to express to you our sincere congratulations to the Nobel Prize which certainly represents the finest award for the wonderful work you and your group in Milan have accomplished.

As in the past years I am sending you today our latest volume of Central Research Department's "Contributions to the Scientific Literature", containing the papers published during the period of June 1st, 1962 to May 31st, 1963.

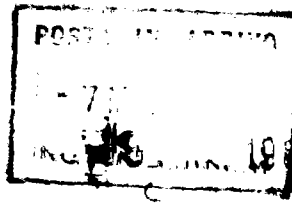
With my kindest personal regards and my best wishes for Christmas the the New Year I remain

very sincerely yours

Dr. A. von Bézard  
European Scientific Associate

7 Marzo, 1962

RP/na



Sig.  
Ing. Piero GIUSTINIANI  
S E D E

Ms. brevetto U.S.A. 2.882.263 richiestoci in li-  
cenza da du Pont -

Come da Sua richiesta La informiamo che si tratta di un brevetto (priorità italiana 16 dicembre 1954) sulla polimerizzazione del propilene (e altre olefine superiori) mediante catalizzatori da alogenuri di ferro e composti metallorganici.

Non risulta che il processo abbia interesse pratico. I rendimenti sono cattivi e il polimero è prevalentemente amorfo.

Con ossequio.

"B R E V"

*Handwritten notes:*  
Chiuso a Montecatini  
che con questa richiesta  
vedo in un MS  
a Montecatini  
con questa richiesta



E. I. DU PONT DE NEMOURS & COMPANY  
INCORPORATED  
WILMINGTON 98, DELAWARE

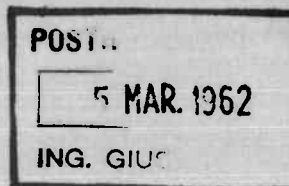
POLYCHEMICALS DEPARTMENT

7 MAR. 1962



March 1, 1962

Mr. Giuseppe de Varda  
Soc. Montecatini Generale per l'Industria  
Mineraria e Chimica  
Via Turati, 18  
Milan, Italy



Dear Dr. de Varda:

We have noted, in Volume 773, Number 2 of the Official Gazette of the United States Patent Office, a notification to the effect that Montecatini is willing to license a number of United States patents in the polyolefin field to United States manufacturers on a non-exclusive basis. Among the patents listed is U. S. 2,882,263, dealing with the polymerization of olefins using iron halide/metal alkyl polymerization catalysts. We would be interested in the terms on which you intend to offer these licenses to United States manufacturers and would be grateful for any information you could supply to us in this respect. Although at the present time we have made no decision to commercially employ the technology disclosed in this patent, it is of some interest to us.

In view of our friendly relations, I have taken the liberty to write to you personally in this matter, although the notice in the Official Gazette suggested a different address for inquiries with respect to the patents offered for licensing. If these inquiries are handled by Montecatini by a routine procedure, I would appreciate if my request could be forwarded to the proper authorities. Any information on licensing terms should be sent to me directly.

I would greatly prefer that this inquiry be handled separately from any other negotiations of our two companies, partly because our interests in this area are not completely defined at the present time, and partly because we are not seeking an exchange of patent rights here, but are considering a conventional non-exclusive license indicated to be available by your company.

With best personal regards,

Very truly yours,

*Allan R. Plumley*  
Allan R. Plumley, Manager  
Patents and Contracts Division



*Handwritten notes:*  
7  
de Varda  
de Varda



**E. I. DU PONT DE NEMOURS & COMPANY**  
INCORPORATED  
WILMINGTON 98, DELAWARE

POLYCHEMICALS DEPARTMENT

AIR MAIL

October 31, 1960

Dott. Ing. Giuseppe De Varda  
Direttore Tecnico Soc. Montecatini  
Via Turati, 18  
Milano, Italy



*Cartella  
DuPont*

Dear Doctor De Varda:

This will summarize the information conveyed by Mr. Plumley to Mr. Lucini on October 28, 1960.

Careful study has been given here to the problem of how to avoid unnecessary expense and delay in prosecuting interference No. 90,716. In particular, we have not found it possible to agree to permitting both parties to license the patent to an equal number of licensees after mutual agreement as to the party entitled to priority.

We have, however, this final proposal to make:

(1) the parties would exchange evidence to be relied upon to establish priority as to the present count under U. S. law;

(2) the parties would submit the evidence to the Patent Office within 30 days from the date of the exchange if any question remains between the parties as to who is entitled to said priority;

(3) the winning party would grant the loser a non-exclusive, non-transferable, royalty-free license under the ensuing patent, said license extending to any subsidiary which is at least 50% owned by the losing party.

We appreciate that this is not far from the proposal originally made by Dr. Burk, but we feel that it is the best way to save unnecessary expense and eliminate the adverse effect of unnecessary delays.

We would appreciate your comments on these suggestions.

Yours very truly,

*A McAlevy*

A. McAlevy  
Patents & Contracts Division

AMCA:gaf  
Copy to Mr. Lucio Lucini, New York

dv/ma

*Carlo Dufour*  
28 Ottobre, 1960

**Sig.  
Ing. Piero GIUSTINIANI  
S E D E**

**e p.c. Ing. ORSONI**

**Oggetto: Accordo con du Pont circa count polibutene**

Come da Sue istruzioni abbiamo fatto sapere a du Pont, a mezzo Lucini, le ns. controproposte basate sul principio che Montecatini avesse diritto di dare un numero di licenze uguale al numero di licenze date da du Pont.

Abbiamo discusso della cosa anche con Mr. Mortimer e Mr. Nelson, i quali hanno elaborato una proposta alternativa (probabilmente per noi meno favorevole) che allego.

Qualora questa proposta Le sembrasse accettabile, converrà telexarla a Lucini, lasciando la scelta a du Pont.

Con ossequio.

c

all/

F,<sup>to</sup> Ing. de Varda

October 27th, 1960.

Tentative suggestions for du Pont settlement of  
Interference on Poly-butene-1.

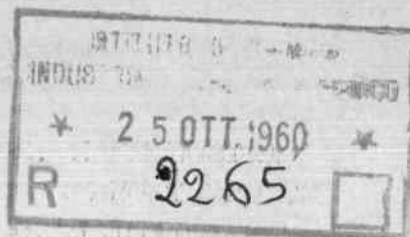
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- 1.- Exchange proofs of priority.
- 2.- Based on proofs, each party shall decide who should withdraw as to present count, other claims to be unaffected.
- 3.- If withdrawal of one party is agreed, withdrawing party receives free license for self or substitute under resulting patent.
- 4.- Both parties may grant licenses to others, but prevailing party may set same minimum royalty rate for both parties.
- 5.- All royalties received from others by both parties shall be shared two-thirds to prevailing party and one-third to withdrawing party.
- 6.- If agreement is not reached as to who shall withdraw, parties shall stipulate testimony, submit to Patent Office adjudication, and waive appeal.  
Resulting losing party shall receive free license for self and substitute without right to sublicense or share in royalty.

20 Ottobre, 1960

Sig.  
Ing. Piero GIUSTINIANI  
S E D E

e p.c. Ing. ORSONI  
Prof. NATTA



**Oggetto: Interferenza con du Pont per polibutene -**

Ha telefonato oggi il collega Plumley della du Pont per avvertirmi che la proposta già da loro elaborata era stata bocciata dai loro counsel a causa della legge antitrust.

Unica proposta accettabile da parte dei loro counsel, in quanto non pone restrizione alla facoltà di licenziare, sarebbe la seguente:

- 1) Montecatini rinuncia a proseguire l'interferenza nel caso polibutene;
- 2) Qualora il brevetto venisse concesso a una delle due parti, Montecatini avrebbe facoltà di attuare liberamente detto claim. Se Montecatini non intendesse attuarlo direttamente, avrebbe facoltà di concedere ad un solo terzo suo licenziatario una licenza gratuita non esclusiva su detto claim.
- 3) du Pont avrebbe facoltà di attuare liberamente in proprio detto claim.
- 4) du Pont avrebbe facoltà di concedere un numero illimitato di licenze non esclusive a terzi contro pagamento di una royalty.
- 5) Le royalties così introitate dalla du Pont andrebbero ripartire in ragione di 80% a du Pont e 10% a Montecatini.

La comunicazione transatlantica è stata molto disturbata, cosicché essa mi ha fornito un buon pretesto per insistere sul fatto che, a scampo di eventuali malintesi, du Pont ci mandasse conferma scritta di quanto telefonatomi.

Mr. Plumley si è però schermite col pretesto che il tempo era troppo ristretto e che era urgente decidere.

Gli ho allora proposto che facesse una analoga telefonata a Lucini a New York il quale, a sua volta, ci avrebbe confermato tale telefonata a mezzo telex.

*Invia per telex  
Prof. Natta*




2)

Non implicando questa procedura alcun documento scritto e firmato dalla du Pont, Mr. Plumley la ha senz'altro accettata.

Essendo vari interessati, non meglio precisati, ancora fuori sede (in realtà Mortimer e Nelson saranno a Milano i giorni 24 e 25 m.c.), ho detto a Mr. Plumley che avremmo dato una risposta il 26 p.v.

Mr. Plumley ha concluso che, in caso di non accettazione da parte Montecatini, non restava che proseguire con l'interferenza: la "motion period" scade il 14 novembre p.v.

Con ossequio.

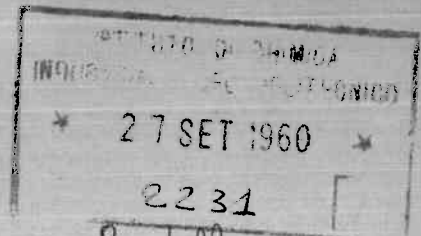


# MONTECATINI

SERVIZIO BREVETTI  
dv/ma

26 Settembre, 1960

Sig.  
Ing. Piero GIUSTINIANI  
S E D E



Oggetto: Visita Mr. Kirkpatrick della du Pont per loro polibutadiene -

Ho chiarito al sig. Kirkpatrick che il brevetto italiano du Pont sul butadiene, priorità 1954, era estremamente debole, sia dal punto di vista della mancata attuazione, sia dal punto di vista dominazione del polibutadiene 1,4 cis, in quanto descriveva solo prodotti bensì lineari ma prevalentemente a concatenamento 1-2.

Ho però soggiunto che avevamo interesse ad assicurarci i relativi diritti per l'Italia, purchè le richieste della du Pont fossero state ragionevoli.

Per l'estero (con esclusione di USA e Canada), avremmo potuto dire loro qualcosa di più preciso non appena ultimato il ns. esame paese per paese, e non appena ottenute le prese di posizione da noi richieste a eventuali altri interessati.

Non ho citato espressamente Shell e Goodrich per non indicare esplicitamente a du Pont la strada di un eventuale accordo preliminare con essi, anzichè con Montecatini.

Mr. Kirkpatrick ha dimostrato di aver capito molto bene gli argomenti da noi esposti. Da parte sua egli non ha potuto portare in campo dei validi argomenti per controbattere i ns. in merito alla debolezza intrinseca della posizione du Pont, con riferimento ad una eventuale pretesa di dominazione dei processi e dei prodotti polibutadiene-1,4 cis.

Mr. Kirkpatrick ha però ripetutamente affermato che il loro brevetto italiano era a disposizione della Montecatini e ha promesso di farci conoscere entro un mese (possibilmente prima) le richieste du Pont in merito alla sudetta transazione.

Con ossequio.

*D. Pomi*  
*In corso*  
*non restituisce*  
*G. de Carada*  
*Sp. Costa*



HOTEL DE L'EUROPE  
AMSTERDAM



Autour  
Amsterdam,  
N. Doelenstraat 2 - 4  
Wilmington

14th Oct., 1960.  
Esfrath aldenid

Mrs. Giulio Natta,  
Milano, Italy.

Dear Mrs. Natta,

It was kind of you to  
ask me to lunch. Please accept  
my best thanks. I particularly  
enjoyed meeting your daughter,  
who seems to have the intel-  
lectual spark which characterizes  
her father and her mother.

I left the reprints Prof.  
Natta gave me on the coffee-  
table. I would be most grateful  
if he would mail them to  
me in Wilmington. Again,  
many thanks!

yours sincerely  
Robert E. Burk

399

400

404

412

Winit  
24/10

7.10.1960

Prot.N.932/r1

Egr.Ing.Piero Giustiniani  
Amministratore Delegato  
Società Montecatini  
S e d e

p.c.Ing.G.deVarda - BREV

Oggetto : Brevetti duPont sulla poliacetaldeide

Desidero informarla che Mr.Burk, nella sua ultima visita a Milano, mi ha consegnato copia del brevetto belga No.580.553 (priorità U.S.A. 18.8.1958) sulla polimerizzazione delle aldeidi superiori alla formica ed un testo di brevetto in lingua inglese che però mi sembra la traduzione letterale del brevetto belga e che, perciò, probabilmente non è del tutto identico alla domanda di brevetto U.S.A. La priorità di questo brevetto è anteriore al brevetto Montecatini. Dall'esame di tali brevetti, risultano coperti i polimeri cristallini (sebbene non sia descritta la loro struttura isotattica), ma il procedimento differisce completamente dal nostro, in quanto la duPont impiega catalizzatori alcalini (in particolare alcolati) che sono meno efficaci dei nostri, mentre noi usiamo dei composti organometallici ed alcolati di metalli a valenza superiore (per e-sempio Al) molto più attivi.

Gradirei sapere se debbo scrivere qualcosa alla duPont in proposito alla differenza del loro brevetto dal nostro oppure lascia correre. Non vorrei che il non scrivere nulla fosse interpretato come un nostro riconoscimento di dipendenza completa dei nostri brevetti da quelli duPont.

Ho chiesto a Mr.Burk se le loro polialdeidi sono stabili come il Delrin (poliformaldeide). Burk mi ha risposto in modo evasivo ma ho avuto l'impressione che il problema della stabilizzazione delle polialdeidi superiori all'acetica non sia stato ancora completamente risolto. Nel caso della poliformaldeide mi ha detto che la stabilizzazione ha luogo sino a 180° per opera di una acetilazione completa dei gruppi terminali, mentre un'ulteriore stabilizzazione da 180° a 200° avviene per aggiunta di stabilizzanti.

Cordiali saluti.

# MONTECATINI

SERVIZIO BREVETTI

dV/ma

15 Ottobre, 1960

Sig.  
Ing. Piero GIUSTINIANI  
S e d e

*Castella*

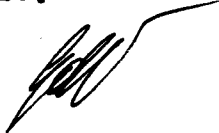
Oggetto: Brevetto polibutadiene du Pont -

Allego quanto scrive Mr. Kirkpatrick .

Come è noto, questo brevetto è di dubbia validità (per mancata attuazione) e anche la sua possibilità di dominazione tecnica di successivi procedimenti (Goodrich, Phillips, Montecatini) appare limitata.

Comunque, sarei del parere di tentare di acquistarlo, preferibilmente con poca moneta, anziché con una cross-licence (esclusiva per l'Italia e non esclusiva per l'America), a meno che noi disponessimo di un brevetto altrettanto marginale.

Con ossequio.



all/  
Lettera du Pont 11/10/60



**E. I. DU PONT DE NEMOURS & COMPANY**  
INCORPORATED  
 WILMINGTON 98, DELAWARE  
 U. S. A.



INTERNATIONAL DEPARTMENT

October 11, 1960

Dott. Ing. Giuseppe De Varda  
 Direttore Tecnico Soc. Montecatini  
 Via Turati, 18  
 Milano  
 Italy

Dear Dr. DeVarda:

CIS-POLYBUTADIENE

I want to thank you for the very pleasant reception and helpful discussions that I had with Dr. Giustiniani and you during my visit in Milan September 26. We were pleased to learn from these discussions that you have an interest in our Italian patent No. 549,009, and that you also believe that you may have some basis for suggesting an equitable exchange of licenses between our two companies.

We have not as yet had an opportunity to work out a basis for a specific proposal, but wish to confirm our willingness to consider licensing this patent on suitable terms. If you have any suggestions along this line, we shall be pleased to hear from you. In turn, we shall give further consideration to the matter, and you can expect to hear from us in due course.

Thanks again for your consideration.

Sincerely,

E. C. KIRKPATRICK  
 DIRECTOR, DEVELOPMENT DIVISION

ECK/mn

4 Ottobre, 1960

Curtello  
Du Pont

Sig.  
Ing. Piero GIUSTINIANI  
S E D E

INDU	5 OTT 1960	
R	926	

Oggetto: Telefonata a Mr. Burk della du Pont  
circa count su polibutene -

Secondo le Sue istruzioni ho telefonato oggi a Monaco a Mr. Burk.

Egli mi ha detto che in base ai suggerimenti da me datigli venerdì scorso, aveva già parlato con i suoi legali americani che non hanno difficoltà alcuna a chiedere una proroga di un mese alla data di scadenza della motion period (attualmente 14 ottobre, 1960).

Io ho chiesto due mesi di tempo per poter esaminare e discutere meglio le proposte du Pont e avanzare eventualmente nostre controproposte, ma Burk ha nuovamente sottolineato l'estrema urgenza che ha du Pont di concludere prima che Petrotex si metta a costruire l'impianto.

Ha telefonato a Mr. Plumley e ha saputo che l'interferenza polipropilene è molto differente da quella polibutene in quanto vari impianti sono già in piena produzione.

Ho risposto che questa era una ragione di più per valorizzare il count del polibutene di fronte a quello del polipropilene.

Mr. Burk ha soggiunto che inoltre i loro rapporti con la Phillips sono assai tesi, per cui avrebbero una difficoltà anche psicologica a rinunciare a una interferenza a quattro (polipropilene) che andrebbe, almeno in teoria, anche a favore della Phillips.

Ho detto che avrei dato istruzioni al ns. agente di non opporsi alla dilazione e ho chiesto quando ci avrebbe fatto sapere qualche cosa di definitivo.

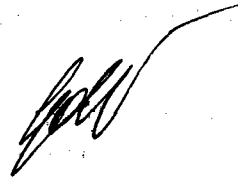
Mr. Burk ha promesso che Mr. Weigel entro una decina di giorni avrebbe preparato il draft dell'accordo Montecatini-du Pont, lo avrebbe sottoposto all'approvazione

- 2 -

del loro Patent Board e ce lo avrebbe fatto avere a Milano.

Stando così le cose, converrà attendere l'arrivo del famoso draft con lettera accompagnatoria di Mr. Weigel, anche per vedere le eventuali reazioni di du Pont ai contro-suggerimenti ventilati dal sottoscritto.

Con ossequio.





TELEX 472 OCTOBER 20, 1960

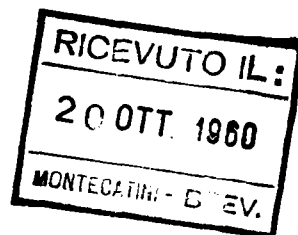
GABBROBREV ING DEVARDA

*Cartella  
du Pont*

PLUMLEY DELPONTE SPIEGATAMI PROPOSTA EGLI TELEFONOLLE

OGGI ASSICURANDOMI CHE TRATTASI DI MASSIMA CONCESSA DAI LORO

CONSIGLIERI LEGALI DOPO PROLUNGATA DISCUSSIONE



INVISTA EVITARE INCAPPARE NOTE

DISPOSIZIONI ANTIFIDUCIA STOP RIASSUMENDO TRATTASI RITIRIATEVI

INTERFERENZA ALFAPOLIBUTENE CON INTESA CHE SE CIO COMPORTERA

OTTENIMENTO PATENTE DELPONTE QUESTA VI CONCEDERA LICENZA

FREE NON ESCLUSIVA PER OPERARE IMPIANTO CON DIRITTO QUALORA

NON OPERIATE VOI STESSI DI SUBLICENZIARE A TERZO VOSTRA

SCELTA STOP DELPONTE SARA LIBERA OPERARE ESSA STESSA ET

LICENZIARE CHIUNQUE AT SUO ESCLUSIVO GIUDIZIO CON INTESA  
CHE NULLA VI EST DOVUTO QUANDO OPERA ESSA STESSA NONCHE  
SULLA PRIMA LICENZA CHE CONCEDESSE MENTRE SU ULTERIORI  
LICENZE CHE CONCEDESSE VI RICONOSCERA DIECI  
PERCENTO DELLE ROYALTIES CHE INCASSERA STOP PLUMLEY  
DICE CHE SAREBBE URGENTE AVERE VOSTRA RISPOSTA PERO AGGIUNGE  
CHE EGLI PREFERISCE ACCORDARSI E PERO SE ANCHE VOSTRA RISPOSTA  
ERA NEGATIVA NON SI ADONTERANNO IN QUANTO TRA LORO STESSI DI  
ILPONTE ESISTE DIVERGENZA DI OPINIONI SU OFPORTUNITA DI  
ACCORDARSI NEL CASO PARTICOLARE ALFAPOLIBUTENE

LUCINI



*Casella  
du Pont*

28 settembre 1960

Ing. P. Giustiniani  
Amministratore Delegato  
Soc. Montecatini  
S e d e

Caro Ingegnere,

ricevo la Sua lettera del 24 settembre relativa al programma di ricerche del gruppo Hubbard della Du Pont e desidero esprimerLe il mio pensiero in proposito.

Il fatto stesso che tale gruppo sbandieri tale programma dimostra che non si tratta (almeno per la massima parte) di argomenti che presentino grande interesse pratico di per sè. Infatti essi riguardano per lo più prodotti di interesse complementare ad altri già in sviluppo o già brevettati dalla Du Pont.

Ad es. nuovi composti di coordinazione organo-metallici, metalli chelati, ecc. possono interessare come catalizzatori. E' un campo questo di cui al Politecnico già ci occupiamo intensamente.

Pure la chimica dei metallo carbonili è già sviluppata da un gruppo (Ercoli, Calderazzo) al Politecnico, che ha, ad es. scoperto nuovi metallocarbonili, quali l'asacarbonile di vanadio.

Per quanto riguarda gli argomenti organici quali nitroso composti coniugati e percianocarbonati, si può sentire da Quilico notizie sulla loro sintesi, sulla loro possibilità di impiego e sulla possibilità di ottenerli a costi non proibitivi.

Eterofosfati di metalli di transizione possono interessare per la loro tendenza a dare composti inorganici macromolecolari ma non vedo ancora un interesse pratico definito.

Gli altri sono argomenti molto generici.

Cordiali saluti.

G. Natta

**"MONTECATINI"**

SOCIETÀ GENERALE PER L'INDUSTRIA MINERARIA E CHIMICA

AMMINISTRATORE DELEGATO

G/mm

RISERVATA

Telegrammi GABBRO MILANO

Telefono 6333

Telefoni Interurbani  
chiedere GABBRO MILANO

SEDE MILANO  
Largo G. Donagani, 1-2

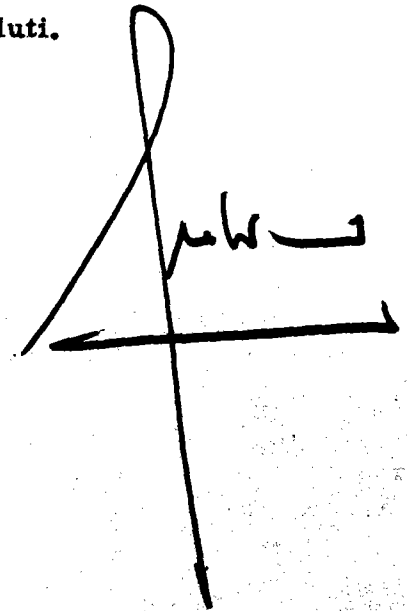
Milano, 24 settembre 1960

Caro Natta,

Le rimetto una nota degli argomenti che il dr. Hubbard del Gruppo Ricerche della Du Pont ha fatto avere al prof. Caglioti in attesa di parlargliene in un prossimo incontro.

Io vorrei esaminare con Lei l'importanza dei singoli argomenti per vedere se è il caso di inserirli in qualche nostro gruppo.

Cordiali saluti.



All.

Preg. mo Sig.  
Prof. GIULIO NATTA  
MILANO

*Carlo  
Dutoit*

Sept. 7, 1960

our ref. 812/1v

Dr. A. von Bézard,  
European Scientific Associate,  
E.I. DuPont de Nemours & Co.  
30, rue de Vermont,  
Ginevra - (Svizzera)

Dear Doctor von Bézard,

Thank you for your kind letter of September 2.

I shall be very glad to meet you in Milan on October 11. If, by chance, I am absent from Milan on that day, you will be able to discuss the topics you are interested in with some co-workers of mine. More precisely, Prof. Mazzanti will talk with you about the new organo-metallic coordination compounds, and about the heteropolyphosphates of transition metals; Prof. Ercoli, - about the chemistry of metal carbonyls; and both Prof. Mazzanti and Professor Ercoli, about the metal chelates.

With my kindest regards, I remain

very sincerely yours,

G. Natta

*for volume a l. l. l.  
Mazzanti, Ercoli  
for reference*

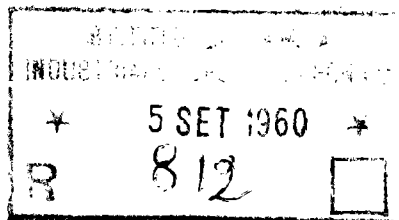


**E. I. DU PONT DE NEMOURS & COMPANY**  
 INCORPORATED  
 WILMINGTON 98, DELAWARE

CENTRAL RESEARCH DEPARTMENT  
 EUROPEAN OFFICE

30, RUE DE VERMONT  
 GENEVA, SWITZERLAND  
 2 September 1960

Prof. Dr. G. Natta  
 Istituto di Chimica Industriale  
 del Politecnico  
 Piazza Leonardo da Vinci, 32  
 Milano, Italy



Dear Professor Natta,

I will be in Milan on October 11th and would very much appreciate to have the honor and the pleasure of meeting you again.

At present I am concerned to set up a summarizing survey on the activity in Europe in the field of metallorganic compounds and it would, therefore, be very helpful for me to discuss with you or anyone of your collaborators the recent work of your institute in this field.

At the same time Dr. H.M. Hubbard, member of du Pont Company's Exploratory Research staff who will be in Milan early October, would like to join me on the occasion of this visit. I enclose a list of the research interests of his group of 15 scientists working in this field. From this list you will see that the research interests cover a wide field which, to some extent, is related to your work on metallorganic compounds. Dr. Hubbard would be glad to discuss his research interests and the research program of his group informally with you if you are interested.

I hope the state of your health will permit you to see us. If unfortunately you think that this visit would be too tiring for you I suggest that you give us the possibility to meet one of your close collaborators on Tuesday, October 11th, at 15.00 hrs.

I regret that I will probably not have the time to see your charming wife again but please give her my very best regards.

Hoping to hear from you if the proposed day and time of this visit are convenient to you and thanking you in advance for your kindness I remain as always

very sincerely yours,

Dr. A. von Bézard  
 European Scientific Associate

*Responder che non ha  
 di memoria il suo 11*

*20.10.1960*

*per la dimissione in Svizzera*

RESEARCH PROGRAM  
of  
Dr. H. M. Hubbard's Research Group

---

Organic Chemistry

Synthesis and chemistry of percyanocarbons  
Conjugated nitroso compounds

Organo-Inorganic Chemistry

New organo-metallic coordination compounds ———— *M. J. E.*  
New heterocycles of boron or phosphorus *E. Man.*  
Metal chelates  
Chemistry of metal carbonyls ———— *E.*

Inorganic Chemistry

Heteropolyphosphates of transition metals ———— *M. J. E.*  
Hydrothermal chemistry of minerals  
Chemistry in fused salts

Metal Winning

Geochemical prospecting for valuable metals  
New metal recovery processes

~~\_\_\_\_\_~~

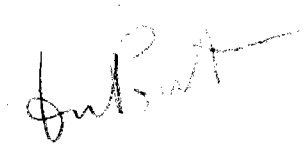
## **MONTECATINI**

SETTORE STUDI PROGETTAZIONI E BREVETTI

Servizio Studi e Progettazioni

Milano, 24 Agosto 1960.

Preg.mo Signore  
Ing. Piero Giustiniani,  
S e d e.



Il 30 Settembre saremo visitati da Mr. Burk, Associate Director Research and Development Div. della Du Pont, che fa il consueto giro annuale.

Vuole parlare fra l'altro di polimeri di olefine superiori al propilene.

Lto: Orsò

Or/sl.



*Carlette*



REG. U.S. PAT. OFF.  
ESTABLISHED 1802

E. I. DU PONT DE NEMOURS & COMPANY

INCORPORATED

WILMINGTON 98, DELAWARE

POLYCHEMICALS DEPARTMENT

*Risposta conferenzi  
della  
Nicoletti  
appuntamento*

August 4, 1960

Professor G. Natta  
Isituto Chimica Inc. Politechio  
Piazza Leonardo de Vinci 32  
Milano, Italy

Dear Professor Natta:

I expect to be in Milano the 30th of September  
and would very much appreciate a discussion with you in the  
afternoon of that day. If this is agreeable to you, I will turn  
up at your office at such hour as you will designate.

Yours sincerely,

*Robert E. Burk*

Robert E. Burk  
Associate Director  
Research and Development Division

REB/ba

*copied  
Risposta della Prof. Natta, che mi è  
stata inviata a Chicago. E' un bel  
documento e che con molto interesse  
Tutte le informazioni sono state  
fornite a...*



E. I. DU PONT DE NEMOURS & Co.  
INCORPORATED WITH LIMITED LIABILITY IN THE U.S.A.  
WILMINGTON 98, DELAWARE, U.S.A.

EUROPEAN OFFICE:

BUSH HOUSE,  
ALDWYCH,  
LONDON, W. C. 2.

TELEPHONE: ██████████ COVENT GARDEN 1766  
TELEGRAMS: NEMOURS, ESTRAND, LONDON.

INDEX  
11 APR 1960  
R 385

April 7, 1960

*Carbelle  
du Pont*

Professor G. Natta,  
Politecnico di Milano,  
Piazza Leonardo da Vinci 32,  
Milan,  
Italy.

Dear Professor Natta,

During my recent visit to Milan we discussed elastic fibers and it was agreed that if I sent you technical information on our "Lycra" spandex fiber, you would in return send me corresponding data on the best polyolefin elastomer you have been able to prepare. Therefore, I am enclosing a stress strain curve on our fiber and data on its physical properties. I should appreciate your sending me corresponding data as soon as it is convenient for you to do so.

Mrs Burrows and I both thoroughly enjoyed our visit to Milan and the wonderful dinner at your home. Mrs Burrows will write to Rosita expressing her thanks for the dinner and the delightful trip to Como when she gets home.

Yours sincerely,

*Lawton Burrows*

Lawton A. Burrows  
Asst. General Director  
Technical Divisions  
Textile Fibers Department

*whata cofe  
dupl allegati  
all hyp. Smeraldi  
il 13/4/60*

*Mrs Burrows  
C. Burrows  
Riproduzione  
du*

*Carletta  
Du Pont*

February 16, 1960

Dr. R. E. Burk, Associate Director  
E. I. Du Pont de Nemours & Co.  
Wilmington 98, Delaware

our ref. 126/lv

Dear Dr. Burk,

thank you for your letter of February 11, 1960.

Mrs. Natta and I shall be very glad to meet you and Mrs. Burk during your trip to Italy. I wish to inform you that, most probably, during the Easter vacation, I shall be out of town, though I have not yet decided how long my holidays will last.

I hope you shall let me know the precise data of your arrival as soon as possible. Be sure that I shall do my best to be in Milan in that period.

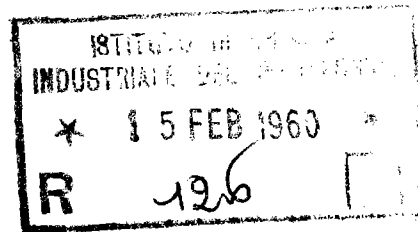
Hoping to meet you again soon, I send you my best regards.

Giulio Natta



E. I. DU PONT DE NEMOURS & COMPANY  
INCORPORATED  
WILMINGTON 98, DELAWARE

POLYCHEMICALS DEPARTMENT



February 11, 1960

Professor G. Natta  
Isituto Chimica Inc. Politechio  
Piazza Leonardo de Vinci 32  
Milan, Italy

Dear Professor Natta:

I was sorry I missed you at your laboratory in October, but I had a very pleasant talk with Dr. G. Mazzanti and Ing. G. Crespi. The latter requested a sample of "Delrin"\* granules, and I am asking that this be sent right away.

Mrs. Burk and I had an interesting though tiring trip through the Orient, from which we have recently returned. It is possible that I will be in Milano in April. If so, it would be a pleasure to see you again, although I will not ask you to reserve any time formally, since I am traveling with two other Du Pont men who are actually engineers.

Yours sincerely,

Robert E. Burk, Associate Director  
Research & Development Division

REB/ba

\* Du Pont Registered Trade-mark

*Culetta*

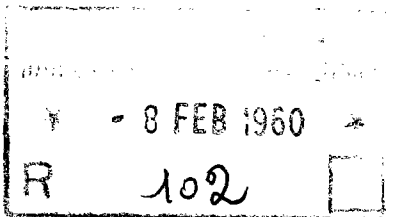


REG. U. S. PAT. OFF.  
ESTABLISHED 1802

E. I. DU PONT DE NEMOURS & COMPANY

INCORPORATED

WILMINGTON 98, DELAWARE



TEXTILE FIBERS DEPARTMENT

February 2, 1960

Prof. Dr. G. Natta  
Istituto di Chimica Industriale del Politecnico  
Piazza Leonardo da Vinci, 32  
Milan, Italy

Dear Professor Natta:

Thank you for your prompt reply to my letter of January 19.

Since I plan to see Dr. Larcher the morning of March 16, I suggest that I visit you at your Institute for perhaps an hour or so at about 2:30 p.m. if this will be a convenient time for you. If it is not, please send a note to my attention at the Palace Hotel to be there when I arrive late the evening of March 15. Otherwise, I will come to your Institute at 2:30 p.m. the 16th.

*102*

*My*

Jane and I are both looking forward to seeing you and Rosita again and would be delighted if you would join us for dinner that evening. I have also written to Professor Nasini suggesting that he and his wife join you, Rosita, Jane and myself for dinner as our guests that evening. If this is agreeable with you, the exact time and place for dinner can be settled when I see you during the afternoon.

*is intended  
drop file!*

Sincerely,

*Lawton Burrows*

Lawton A. Burrows  
Asst. Gen. Director  
Technical Divisions

LAB/rp

*invito a colazione  
e con la sua  
Natta  
help  
affare arriva*

*Cartella  
Dupont*

January 25, 1960

our ref. 65/1v

Dr. Lawton A. Burrows  
Ass't. Gen. Director  
Technical Divisions  
E. I. Du Pont de Nemours & Co.  
Wilmington 98, Delaware

Dear Dr. Burrows,

it was a real pleasure for me to learn from your letter of January 19 that you will come to Milan on March 16. I shall most like meeting you in that afternoon.

Also Rosita will be very glad to meet Mrs. Burrows: we both shall try to reciprocate all the kindnesses and courtesies you extended to ourselves on our visit to Wilmington.

Looking forward to hearing from you and to meeting you again soon, I send you and Mrs. Burrows my kindest regards.

Giulio Natta



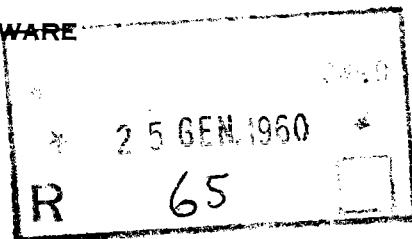
REG. U. S. PAT. OFF.  
ESTABLISHED 1802

E. I. DU PONT DE NEMOURS & COMPANY

INCORPORATED

WILMINGTON 98, DELAWARE

TEXTILE FIBERS DEPARTMENT



January 19, 1960

Prof. Dr. G. Natta  
Istituto di Chimica Industriale del Politecnico  
Piazza Leonardo da Vinci, 32  
Milan, Italy

Dear Professor Natta:

*si*

If suitable arrangements can be made, I expect to be in Milan on March 16 and possibly March 17. I should like to renew old acquaintances with you and discuss any problems of mutual interest that might arise. I suggest the afternoon of March 16 for the meeting since I hope to see Dr. Larcher that morning.

I should appreciate an air mail reply since I am now in the process of firming up my schedule.

*si*

Please give my regards to your good wife, Rosita. Incidentally, Mrs. Burrows is planning on coming with me and she hopes to be able at least to telephone Rosita while we are in Milan.

Sincerely,

*Lawton Burrows*

Lawton A. Burrows  
Asst. Gen. Director  
Technical Divisions

LAB/rp

*Cartella  
DuPont*

April 9, 1963

Dr. A. von Bézard,  
European Scientific Associate,  
E.I. DuPont de Nemours & Co.  
Central Research Dept.  
European Office,  
30, rue de Vermont,  
Genève (Svizzera)

our ref. 524/1v

Dear Doctor von Bézard:

I wish to thank you for kindly sending me Volume IX of the Contributions to the Scientific Literature, which has interested me very much.

In fact, I have noticed that in general the scientific contribution of the papers published by the technicians of DuPont is of high level.

Thanking you again, I send you kind regards.

Giulio Natta





ESTABLISHED 1802

E. I. DU PONT DE NEMOURS & COMPANY  
INCORPORATED  
WILMINGTON 98, DELAWARE

CENTRAL RESEARCH DEPARTMENT  
EUROPEAN OFFICE

30, RUE DE VERMONT  
GENEVA, SWITZERLAND  
June 18, 1962

Prof. Dr. G. NATTA  
Istituto di Chimica Industriale  
Politecnico  
MILANO  
Piazza Leonardo da Vinci 32

25 GIU. 1962  
R 524

Dear Professor Natta,

As in the past years, I am sending you today again the recently edited Volume IX of the "Contributions to the Scientific Literature", containing the papers published by our Central Research Department during the period of June 1st, 1960 to May 31st, 1961.

With my best personal regards I remain

sincerely yours

*Bézar*

Dr. A. von Bézar  
European Scientific Associate

*Handwritten notes in Italian:*  
Ho il piacere di  
farvi sapere che  
abbiamo per voi  
in allegato il  
volume IX della  
"Contributions to  
the Scientific  
Literature" per  
il periodo giugno  
1960 - maggio  
1961. Il volume  
contiene 12  
articoli di  
ricerca pubblicati  
dal nostro  
dipartimento di  
ricerca centrale  
durante il  
periodo in  
questo volume.

Carbello  
du Pont

29.3.1963

Spett. Società Montecatini  
Direzione BREVETTI

ns.rif.N.2072/r1

S E D E

c.p.c. Ing. P. Giustiniani

(Vedi 245)

Oggetto : Polipropilene - Brevetto DuPont

Ricevo la Vostra lettera del 22.3 (RP/eg).

Non ritengo che il brevetto della DuPont presenti particolare interesse pratico. Esso risulta dipendente da altri brevetti sulla polimerizzazione stereospecifica. L'aggiunta di un anti-ossidante quando si vuole terminare la polimerizzazione non presenta un vantaggio apprezzabile in quanto l'arresto della polimerizzazione può essere effettuato con sostanze meno costose quali gli alcoli alifatici. D'altra parte tale aggiunta non è vantaggiosa rispetto all'aggiunta successiva dopo la depurazione dal catalizzatore, in quanto la depurazione del polimero contenente l'antiossidante porta immancabilmente ad una certa perdita dello stesso antiossidante.

Può darsi che tale procedimento diventi utile quando si opera a pressioni comprese tra 30 e 3000 atm, nel caso che a tali pressioni siano favoriti dei processi di reticolazione che non avvengono a pressioni più basse. D'altra parte non vedo l'utilità di operare a pressioni così alte quando si può operare a pressioni molto più basse.

Cordiali saluti.

Gulio Natta

# MONTECATINI

DIIB/ESDO

Sede, 22 marzo 1963

Egr. Sig.  
Prof. G. Natta  
Istituto Chim.Ind.  
POLITECNICO di  
M I L A N O

25 MAR 1963

2072

RP/cg

e p.c. Sig.Ing.GIUSTINIANI

## Polipropilene - Brevetto Du Pont.

Ci riferiamo alla Sua del 12 corrente all'ing. Giustiniani, giuntaci in copia.

Non essendo in possesso dell'allegato non sappiamo l'origine della notizia : il prof. Mazzanti ci informa per altro trattarsi del brevetto inglese 898.053.

Questo brevetto, pubblicato nel giugno 1962, era da quell'epoca a conoscenza nostra e di SEID. Esso non si riferisce in realtà ad un processo per polimerizzare propilene sotto altissime pressioni : esso copre in realtà un processo per polimerizzare o copolimerizzare propilene a pressioni qualsiasi e a temperature fra 0 e 300°C, in presenza di catalizzatori di coordinazione, aggiungendo, prima di scaricare il polimero all'aria, un "deceleratore" di natura fenolica, che agirebbe come "chain transfer agent" ed eviterebbe possibile "long chain branching" o "cross-linking".

Non sembra che il brevetto, di cui Le alleghiamo copia, abbia particolare importanza pratica.

Distinti saluti.

B R E V E T T I

All.

# Montecatini and du Pont Reach Truce in Chemical Patent Fight

By PHILIP SHABECOFF

E. I. du Pont de Nemours & Co., Inc., and Montecatini Societa Generale, reached an armed truce yesterday in their long battle over patent rights in the United States for

polypropylene, one of the cheapest and most versatile of the new petrochemicals.

The American and Italian chemical companies jointly announced an agreement whereby each corporation obtains a non-exclusive license under United States patent rights of the other corporation for all polypropylene products and applications.

Both companies already have several polypropylene patents in the United States. But they and other American concerns have applications pending in the United States Patent Office for other patents, including one for the basic polypropylene resin.

### Agreement Outlined

Both du Pont and Montecatini will continue their efforts to obtain the patents now pending. But under yesterday's agreement, whichever company does obtain the patents must allow the other to manufacture and license products made under them. Existing polypropylene patents already have been exchanged under the new accord.

Montecatini holds polypropylene patents in a number of other countries besides Italy. It has been unsuccessful, however, in eight years of trying for the basic patent in the United States. Meanwhile, other American companies, including du Pont, the Standard Oil Company (Indiana) and the Hercules Powder Company among others, all have filed for the basic resin patent.

Montecatini has been manufacturing the polypropylene in this country since 1957 through its Novamont Corporation subsidiary in West Virginia. However, failure to obtain the basic patent has meant heavy losses to the company.

### Called Frontrunner

One observer in the chemical field commented yesterday that the fact du Pont entered the agreement means that Montecatini is the frontrunner in the struggle to obtain the basic patent.

No matter which company gets the patent, however, investments of both du Pont and Montecatini in polypropylene manufacturing facilities are protected by the agreement from infringement on the patent rights of the other.

Presumably the other companies in the field would be left out in the cold if either one of the parties to yesterday's

agreement does obtain the basic patent. However, both du Pont and Montecatini can license rights to other companies under their own patents.

Du Pont has been engaged in research and development work on polypropylene for a number of years and now is building a plant for polyolefin film which incorporates polypropylene. It is considering constructing a facility to make the basic resin.

The battle for the basic patent in the United States has been bitter because of the enormous commercial potential of polypropylene. A hydrocarbon distilled from the petroleum refining process, it is believed to be the cheapest and most versatile of all the polymers, or chains of hydrocarbon molecules.

Polypropylene has three major commercial applications. Plastics made of the polymer have the highest melting point of any known plastic, have the smoothest surface and are the most flexible. Synthetic textile fibers of polypropylene are said to be the most versatile of all the synthetics. Synthetic polypropylene rubber has a bright commercial future.

It has been said that whoever holds the patent for the basic substance will hold the key to all of the vast potential of polypropylene in these three industries.

Yesterday's announcement by du Pont and Montecatini said that it "realized that the polypropylene patent situation in the United States is extremely complex and as a result it was considered advisable to make such efforts as were practicable to remove as soon as possible uncertainties capable of jeopardizing further research development and production in the field by the two companies."

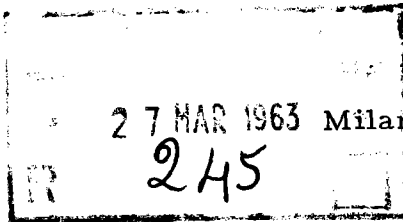
"MONTECATINI"  
SOCIETÀ GENERALE PER L'INDUSTRIA MINERARIA E CHIMICA

AMMINISTRATORE DELEGATO

*Carbella  
du Pont*

Telegrammi GABBRO MILANO  
Telefono 6333  
Telefoni interurbani  
chiedere GABBRO MILANO  
SEDE MILANO  
Largo G. Donegani, 1-2

G/bg



Caro Natta,

grazie per la Sua lettera del 12 marzo a proposito del brevetto Du Pont.

L'Ing. De Varda Le manderà certo il testo del brevetto.

Mi usi la cortesia di esaminarlo in modo da poterne riparlarne.

Cordiali saluti,

Preg.mo Signor  
PROF. GIULIO NATTA  
MILANO.

Vedi 2072

12.3.1963

*Carbello  
DuPont*

Egr. Ing. Piero Giustiniani  
Amministratore Delegato  
Società Montecatini  
S e d e

ns.rif.N.193/r1

c.p.c. Direzione BREV

Caro Ingegnere,

ricevo la Sua segnalazione del brevetto  
MUPONT sulla polimerizzazione del propilene ad altissima  
pressione.

Si deve trattare evidentemente di un processo di polime-  
rizzazione radicalica del tipo di quella del politene ad  
alta pressione.

E' noto infatti che la polimerizzazione del propilene da  
solo o in miscela con l'etilene fornisce dei polimeri trop-  
po bassi per avere interesse pratico. Le aggiunte indicate  
nel brevetto DuPont dovrebbero ridurre la velocità di polim-  
erizzazione radicalica e consentire così l'ottenimento di  
polimeri e copolimeri di peso molecolare più alto.

La polimerizzazione non dovrebbe perciò essere stereospe-  
cifica e quindi il polipropilene così ottenuto non dovrebbe  
avere interesse pratico mentre potrebbero presentare inte-  
resse i copolimeri etilene-propilene, nel caso che potessero  
essere ottenuti con un peso molecolare sufficientemente alto.  
Gradirei avere da BREV copia del brevetto DuPont.

Cordiali saluti.

All/ in restituzione

March 12, 1963

*Corbella  
du Pont*

Dr. Lawton A. Burrows, General Director  
Technical Division,  
Textile Fibers Dept.  
E. I. DuPont de Nemours & Co.  
Wilmington 98, Delaware (USA)

Dear Doctor Burrows:

Thank you very much for the kind words expressed to me at having been chosen for the 1963 S.P.E. Award.

Beside that for the great honour, I feel deeply moved for the expressions of friendship received on this occasion.

With my kindest regards,

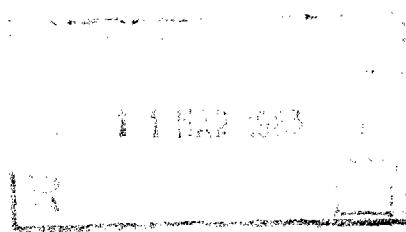
Giulio Natta



E. I. DU PONT DE NEMOURS & COMPANY  
INCORPORATED  
WILMINGTON 98, DELAWARE

TEXTILE FIBERS DEPARTMENT

March 6, 1963



Professor G. Natta  
Istituto di Chimica Industriale del Politecnico  
Piazza Leonardo da Vinci, 32  
Milan, ITALY

Dear Professor Natta:

I have just seen a notice that the Society of Plastics Engineers has given you the 1963 International Award in plastics science and engineering for your fundamental contributions to the science of macromolecular chemistry and the development of new high polymers which have greatly influenced the present course of the plastics industry.

I want to add my congratulations to those of the rest of the scientific world for this award which you so richly deserve for your work in the field of olefin polymerization.

With kindest regards to you and your good wife, Rosita.

*impressione  
sentimentale*

LAB:rsd

Sincerely,

*Lawton Burrows*

Lawton A. Burrows  
General Director  
Technical Divisions



*Cartella  
DuPont*

Feb.4, 1963

Dr.A.von Bézard,  
European Scientific Associate,  
E.I.DuPont de Nemours & Co.  
30, rue de Vernant,  
Genève (Svizzera)

Dear Doctor Bézard,

I wish to thank you very much for the interesting  
Volume X of the contributions to the Scientific Literature of  
your Central Research Department, you kindly sent to me.

Sincerely yours,

G.Natta



ESTABLISHED 1802

E. I. DU PONT DE NEMOURS & COMPANY  
INCORPORATED  
WILMINGTON 98, DELAWARE

CENTRAL RESEARCH DEPARTMENT  
EUROPEAN OFFICE

30, RUE DE VERMONT  
GENEVA, SWITZERLAND

January 24, 1963

Prof. Dr. G. NATTA  
Istituto di Chimica Industriale  
Politecnico  
MILANO  
Piazza Leonardo da Vinci 32

Dear Professor Natta,

As in the past years, I am sending you today again the recently edited Volume X of the "contributions to the Scientific Literature", containing the papers published by our Central Research Department during the period of June 1st, 1961 to May 31st, 1962.

With my best personal regards I remain

sincerely yours

Dr. A. von Bézard  
European Scientific Associate

Antella du Pont -

Milano, 4.12.1962

Punti salienti delle 5 proposte di accordo DUPONT allegate  
a lettera 13.10 dell'Ing. DEVARDA

I) Accordo su tutti i brevetti, rispettivamente DuPont e Montecatini,  
precedenti alla firma d'accordo.

Osservazioni :

Difficoltà di valutazione del valore dei brevetti al di fuori del  
brevetto di predetto.

II) Entrano nell'accordo solo i brevetti contenenti almeno un claim  
che deriva da un count.

Osservazioni :

Non è chiaro se si limita ai brevetti derivati da interferenze sorte  
dopo la firma dell'accordo

III) Si limita a claims derivati da counts - Sono esclusi gli usi e le  
trasformazioni

Osservazioni :

E' difficile prevedere oggi il valore delle rivendicazioni negli usi  
e nelle applicazioni - E' molto probabile che la frazione che riusci-  
rà a raccogliere la DuPont, data la sua conoscenza delle situazioni  
brevettuali americane, possa prevalere.

IV) Come II, ma è previsto il pagamento della royalty, e la disponibilità,  
solo limitatamente alle claims derivate da un count.

V) Aggiornamento vecchio accordo al nuovo count di prodotto e richiesta  
di precisazione certe royalty indicate solo come ragionevoli.

Milano, 4.12.1962

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di precisazione certe royalty indicate solo come ragionevoli.

*Carbella  
Du Pont*

*→ de Du Pont USA  
in pt*

AV/na

18 Ottobre, 1962

Fig.  
Ing. Piero GIUSTINIANI  
E E D E

Copie a Sigg.ri: Sig. LUCINI  
Ing. OTTOLENGHI  
Ing. ORSONI  
Ing. BUZZULINI  
Avv. FERRARI

21 NOV 1962  
879

*B. Carbelli  
D. N. Carbelli  
H. Carbelli*

Oggetto: Viaggio U.S.A. Ing. de Varda -  
Cinque proposte Du Pont -

Dopo la mia telefonata e lettera a Mr. Plusley del S. n. c., Mr. Plusley, Mr. Barrows e Mr. Sandt della Du Pont sono venuti a trovarmi a New York il giorno 8 n. c.

Si dissero che avevano ulteriormente riflettuto sulla situazione e che, pur preferendo di gran lunga arrivare con la Montecatini ad un accordo generale (Proposta Uno, già ventilata il 26 settembre in occasione della mia visita a Wilmington), si sottoponevano in ordine di interesse decrescente per la Du Pont altre quattro proposte di accordo brevettuale Montecatini/Du Pont sul polipropilene, limitatamente agli Stati Uniti d'America, affinché il sottoscritto le potesse poi riferire a Milano.

Le proposte furono inizialmente formulate in maniera piuttosto sfuocata, tanto che ritenni necessario porre una serie di domande per ottenere ulteriori opportune precisazioni.

Queste precisazioni mi vennero date, almeno in un primo momento, in modo un po' confuso (per non dire contraddittorio), tanto che il sig. Lucini, presente ai colloqui, ebbe l'impressione di un certo disaccordo fra gli stessi rappresentanti della Du Pont.

Personalmente sarei piuttosto propenso a spiegare il fatto con una elaborazione troppo affrettata da parte Du Pont delle loro proposte che, almeno in un primo tempo, si erano mantenute su un piano troppo generico.

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PROPOSTA UNO

- Campo chimico: Catalizzatore + polimerizzazione + polimero: in analogia al "field" definito nell'accordo di cross-licenze (sul count di prodotto) concluso fra le parti nel 1959.  
Dovrebbero ora essere inclusi in detto campo anche (e solamente) quegli articoli finiti che fossero rivendicabili unicamente in base al nuovo prodotto (polipropilene) in quanto ottenuti da processi di trasformazione di per se noti del polipropilene (per esempio claims di uso del polipropilene nel campo plastico, oppure claims di fibre da polipropilene). ?
- Estensione nel tempo: trovati aventi priorità anteriore alla firma dell'eventuale accordo Montecatini/Du Pont.
- Brevetti dell'accordo: tutti i brevetti USA concessi nel campo a una delle due parti (quindi anche brevetti che non sono mai stati posti in interferenza). Quindi un brevetto che rivendicasse e caratterizzasse per esempio l'operazione di stiro della fibra di polipropilene sarebbe escluso da un accordo secondo la proposta uno. Non così forse un articolo in polipropilene stampato secondo procedimenti noti prima del 1965. } ?
- La considerazione dovuta dai due contraenti per questa licenza sarebbe dell'1% sul brevetto di prodotto con un ceiling di un 3% globale per tutto il pacchetto di brevetti, ivi compreso quello di prodotto. I licenziatari dei due contraenti dovrebbero pagare all'altro contraente non meno di quanto dovuto dai due contraenti.

PROPOSTA DUE

Se la proposta uno non dovesse risultare realizzabile, la Du Pont patrocinerebbe, mantenendo invariato il campo chimico (della proposta uno), l'adozione della sua proposta due.

I brevetti dell'accordo si limiterebbero invece esclusivamente ai brevetti contenenti almeno un claim derivato da un interference count. Farebbero così parte dell'accordo tutti e soltanto i claim di un determinato brevetto che ricadessero nel campo chimico dell'accordo purché fra questi claims ce ne fosse almeno uno che avesse dato luogo a un interference proceeding.

Gli altri brevetti posseduti dalle parti nel campo dell'accordo (cioè brevetti privi di counts) resterebbero quindi esclusi dall'accordo senza obbligo alcuno né di licenziarli, né di licenziarli "at reasonable terms".

Considerations- Alternativa alfa

Royalty corrente globale not more and not less than 1% per quanto riguarda la cross-licence fra Montecatini e Du Pont, con un ceiling del 3% globale for any licensee of the party (Montecatini o Du Pont) to be collected by the other party (Du Pont o Montecatini).

- Alternativa beta

Royalty corrente dell'1% per ogni singolo brevetto dell'accordo (con ceiling del 3%) valevole sia per le parti contraenti, sia per i loro licenziatari.

PROPOSTA TRE

- Campo chimico: il campo qui è quello definito all'articolo 1, paragrafo 4 dell'accordo Montecatini/Du Pont del 3/9/59. Come campo è più ristretto del campo chimico delle proposte uno e due in quanto non comprende alcun uso del polipropilene, né alcun articolo finito prodotto da polipropilene.
- L'accordo non contempla brevetti completi ma si limita solamente ai singoli counts che hanno dato luogo a dei claims in un brevetto concesso a una delle due parti contraenti, counts relating to the field of the Montecatini/Du Pont Agreement of Sept. 5, 1959.
- Modalità dell'accordo e considerations:
  - a) mantenere inalterato e valido l'accordo del 1959;
  - b) stabilire che per "reasonable royalty" si intende (indifferentemente se saranno date licenze su uno solo o su parecchi counts) una royalty globale non inferiore e non superiore all'1% quando trattasi di licenza da concedere alle parti contraenti, con un ceiling del 3% per quanto riguarda i terzi licenziatari di entrambe le parti;
  - c) identico impegno a quello precisato al paragrafo b) dovrebbe venire sottoscritto dai contraenti anche per quanto riguarda i counts concessi nel campo delle fibre di polipropilene, campo che però non è stato meglio definito.

Ho però chiarito che in questo caso la royalty dell'1% e il ceiling del 3% si applicherebbero al valore delle fibre e sarebbero da pagarsi in aggiunta alle royalties da pagarsi per i counts (catalizzatore e/o polimerizzazione e/o polimero) di cui al punto b).



Nel caso che le proposte uno, due e tre non incontrassero l'approvazione di Montecatini, la Du Pont ha ritenuto opportuno sottoporci anche le seguenti due proposte (quattro e cinque), sempre in ordine decrescente di preferenza:

PROPOSTA QUATTRO:

- Campo chimico: quello largo delle proposte uno e due.
- Brevetti: analogamente alla proposta due, farebbero parte dell'accordo tutti e soltanto i claims di un determinato brevetto che ricadessero nel campo chimico dell'accordo, purchè fra questi claims ve ne fosse almeno uno che avesse dato luogo ad un interference proceeding (count).
- Modalità dell'accordo e considerations:
  - a) mantenere inalterato e valido l'accordo del 1959;
  - b) estendere l'applicabilità della royalty globale dell'1% (anzi meglio non meno e non più dell'1%) pagabile sia dalle parti contraenti, sia dai loro licenziatari, a tutti i brevetti dell'accordo, limitatamente ai claims applicabili al campo dell'accordo.

Non è forse inutile qui ricordare che un claim, formulato per esempio: "fibra di polipropilene", se venisse a trovarsi nello stesso brevetto contenente un count di prodotto ricadrebbe sotto detto accordo.

Invece, un claim per esempio così formulato: "fibra di polipropilene caratterizzata di fronte al polimero dalle seguenti caratteristiche differenziali ...." non ricadrebbe sotto questo accordo anche se si trovasse in un brevetto contenente un "relevant count".

PROPOSTA CINQUE

- Campo chimico: quello ristretto della proposta tre (V. Field dell'accordo Montecatini/Du Pont del 1959).
- Brevetti: solo i counts presenti e futuri dell'accordo Montecatini/Du Pont del 1959, nonché i brevetti relativi al "Proposed Textile Fiber Agreement" di cui alla lettera (con allegato schema) di Mr. Haon del 21/6/62.
- Modalità dell'accordo e considerations:
  - a) sostituzione pura e semplice nell'accordo 1959 del wording del nuovo count di prodotto al wording del vecchio count;
  - b) definizione del significato preciso di "reasonable royalty" per tutti i counts previsti nell'accordo del 1959;
  - c) definizione di una "reasonable royalty" anche per quanto riguarda il "polypropylene fiber agreement" propositoci dalla Du Pont (Mr. Sandt ritiene che per la fibra l'1% sia una royalty ragionevole fra le parti contraenti, mentre proporrebbe il 3% per i loro licenziatari).

Alla mia richiesta se questa royalty si applicava al singolo claim (claim either in terms of product or product by process to a fiber of propylene homo-polymer), o all'intero brevetto, la risposta fu: all'intero brevetto.

Alcuni ulteriori chiarimenti e conclusioni

A) Diritti brevettuali di Sieglor

I signori della Du Pont hanno dichiarato che questo accordo farebbe astrazione completa dagli eventuali diritti brevettuali di Sieglor.

Se contrariamente alle aspettative Du Pont, a Sieglor venissero concessi dei brevetti di una certa importanza, Du Pont tratterebbe con Sieglor (in pratica con noi). Hanno fatto capire di avere contro-partite sufficienti da far valere in quel momento.

*(Includere in P.)*

Questa risposta mi ha piuttosto sorpreso in quanto non vedo di quali contro-partite possa servirsi Du Pont, specialmente dopo aver già concluso un accordo generale con Montecatini.

Comunque, le indagini andranno subito approfondite:

- a) sia in direzione Sieglor per accertare se esistono o meno degli accordi in tal senso già stipulati fra Sieglor e Du Pont. In caso affermativo bisognerà vedere quali e furono stipulati e che cosa contengono;
- b) sia in direzione Du Pont, giacché i signori della Du Pont si sono lasciati scappare (oppure hanno volutamente lasciato capire) che non era ancora detto che la Du Pont sarebbe entrata nel campo di produzione del pollicero. Nel qual caso Du Pont poteva, almeno fino a un certo punto, disinteressarsi di eventuali brevetti Sieglor concernenti i catalizzatori di polimerizzazione.

B) Diritti brevettuali di nostri concorrenti in U.S.A.

A questa mia domanda dettata dal proliferare di brevetti concessi ai nostri concorrenti negli U.S.A., e di variati diritti brevettuali (da parte di Eastman, Hercules, Koso, Phillips, Sun Oil, ecc.), Mr. Sandt ha risposto prontamente che si sarebbe potuto facilmente prevedere uno sconto massimo del 50% sulle royalties dovute ai due contraenti in base ad uno dei cinque schemi proposti da Du Pont, qualora fosse sceso la necessità di pagare delle considerations ai suddetti concorrenti per loro brevetti dominanti.

3)

C) Assertion of Du Pont Patents

I signori della Du Pont ci hanno fatto graziosamente sapere che preferivano un overall agreement (proposta uno) anche perchè dovevano decidere, entro un periodo di tempo ragionevole, se procedere alla assertion dei brevetti a loro già concessi.

L'allegato 2 riporta le successive battute del dialogo.

I brevetti che potranno per ora essere contestati a Novamont sono:

- 1'U.S.P. No. 3,050,471, concesso il 21 agosto 1962, dal titolo "Polymerization Catalyst" (catalizzatore contenente  $TiCl_3$  e  $TiCl_2$ ), •
- 1'U.S.P. No. 3,012,023, concesso il 5 dicembre 1961, dal titolo: "Production of Olefin Polymers" (eliminazione con acqua, od alcool, od  $O_2$ , del catalizzatore dal polimero).

Per il primo non si nutrono preoccupazioni.

Per il secondo l'indagine è in corso sia presso SKID, sia presso BREV.

D) Accordi Du Pont con nostri concorrenti?

E' presumibile che la Du Pont abbia stretto già da tempo dei cross-license agreements (almeno per quanto riguarda il primo count di prodotto) con Hercules, con Standard Oil of Indiana e con Phillips.

Il repentino capovolgimento delle tesi finora sostenute dalla Du Pont nelle varie prosecutions delle interferences in corso con Montecatini fa sorgere il legittimo sospetto che Du Pont abbia raggiunto un accordo supplementare, forse anche abbastanza ampio, con Phillips.

E' pure probabile, anche se per nulla provato, che Du Pont abbia in corso almeno delle trattative con la Eastman Kodak che a sua volta sembra già legata da accordi con la Standard Oil of Indiana.

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**E) Antitrust**

Ritengo che le cinque proposte più sopra riportate (purché ne venga opportunamente curata la forma) non prestino il fianco a serie obiezioni dal punto di vista delle leggi antitrust.

**F) Conclusioni**

Entro il 15 novembre dovremo rispondere alla Du Pont. Credo che ci converrà formulare delle contro-proposte obiettive e costruttive senza però lasciarsi troppo influenzare né dalle affermazioni di forza (Du Pont ritiene che la sua posizione brevettuale sia forte) né dalle velate minacce (Du Pont may decide to assert its patents) finora fatteci, né dall'ammontare delle considerations (royalties dell'1% e del 3%), né dagli schemi di accordo (comprendenti fiber claims, escludenti down payments, ecc.) finora proposti da Du Pont.

Con ossequio.

**Allegato 1**

Schema Mr. Haon del 21/6/33 per accordo fibre e fibridi.

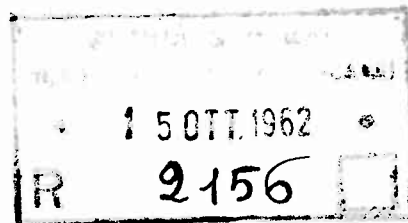
Allegato 2: segue

dV/cr

Sig.  
Ing. Piero GIUSTINIANI  
Amministratore Delegate  
Soc. Montecatini  
S e d e

*[Handwritten signature]*  
12 ottobre, 1962.

e p.c. sig. ing. B. ORSONI -



Viaggio U.S.A. ing. de Varda -  
Primo colloquio con DU PONT -

*Carbello  
Du Pont*

In occasione della visita a Wilmington effettuata il 26 m.sc. il sottoscritto ha avuto, assieme con il sig. Lucini e l'ing. Ottolenghi, un primo colloquio con Mr. Plumley, Mr. Burrows e Mr. Sandt su cui ha già riferito sommariamente nel cavo da New York avente la stessa data.

Per una migliore comprensione di come si è svolto questo primo importante colloquio allego una breve relazione dell'ing. Ottolenghi ed una mia ricostruzione approssimativa e schematica dei punti essenziali del dialogo.

Preparerò nei primi giorni della settimana prossima la relazione del secondo colloquio avuto con du Pont a New York.

Con ossequio.

*(f. Vo: ing. de Varda)*

All/ 2

October 1, 1962.

RELAZIONE ING. M.L. OTTOLENGHI

Visit to E.I. DU PONT DE NEMOURS & CO., INC. in their  
Wilmington, Del. offices on September 26, 1962.

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Mr. Lucio Lucini, dr. Giuseppe de Varda and dr. Mario L. Ottolenghi went to see Mr. Russel C. Weigel at his office in the Textile Fiber Division instead of the Polychemical Division where he was formerly. Mr. Weigel introduced Mr. A. Burrows also of the Textile Fiber Div. and invited Mr. Allan R. Plumley, Manager - Patents & Contracts Division, Prospects Dept., and Mr. Bernard W. Sandt, Patent Attorney - Prospects Dept., to discuss the matter of the status of the existing agreement since it was under their jurisdiction.

Dr. de Varda said that since he was in the U.S. he welcomed the opportunity of a visit to greet du Pont people and that he would like to know whether du Pont was considering renewing the existing agreement substituting the new wording of the count in interference for the old one.

Mr. Plumley answered that last April he wrote a letter proposing an overall settlement (to which apparently Montecatini had not answered). He wanted to say that said letter had been written in good faith. He repeated that he would like to consider the whole situation rather than one aspect only in order to simplify matters for both parties and also to avoid excessive expenses and loss of time. He was convinced that du Pont has a very strong position and he knew that Montecatini had a similar conviction.

Dr. de Varda said that it had been difficult to put in writing his opinions, which were strongly in favor of Montecatini's position. When the gap between the two parties is very wide (for instance if each party believes that it is going to have control of 80% of the patent picture) it is very difficult to talk about a general agreement.

Mr. Plumley answered that although he thought that du Pont had a chance higher than 50% he was willing to put the negotiations on a 50/50 basis and that du Pont and Montecatini should sit at a table as equal partners. He was convinced that Montecatini and du Pont together would dominate, from a patent point of view, the whole field of polyolefins.

Dr. de Varda started to analyze the situation: he considered a 50/50 basis suitable for the composition of matter, but not for the process where the Galley-Robinson application had a late date.

Mr. Sandt stated that du Pont had in its hands its recent patent on catalyst which gave a dominant position in the process.

Dr. de Varda observed that he thought that it would be difficult to assert the mentioned patent and that his opinion was much more strongly in favor of the Montecatini position.

Mr. Sandt also tried to score a moral point for du Pont, considering that the invention had started about simultaneously on both sides, but dr. Ottolenghi observed that it was better to stick to a practical business point of view and dr. de Varda stated that the issue concerned not only the date but also how far the invention had been developed by each party.

Mr. Sandt said that he considered the "composition of matter" problem the most important factor because process methods and catalysts could change in the future and that the existing agreement on the basis of 1% could be kept (provided that all the other patents would be shared on a 50/50 basis). Furthermore the total of the royalties requested from licensees should not exceed 3%, including said 1%.

Dr. de Varda objected that Montecatini pioneered the important developments and did not operate in the U.S. and therefore the reciprocal position in this country should be considered in some way. Montecatini should license du Pont only; du Pont should license all Montecatini licensees. He did not consider the proposed sharing fair to Montecatini. However, the ideas exposed will be referred to Milan and careful consideration would be given to all existing and future circumstances. Something will be communicated at a later date by Montecatini to du Pont.

(Ing. M.L. Ottolenghi)

P.S. - During the discussion at a given point Mr. Plumley, considering the possibility of litigation, said that Montecatini should consider the position of a foreigner in the U.S. courts as a factor although he was convinced that the American judges were not biased.



October 1, 1964.

- RELAZIONE ING. G. de VARDA

Punti essenziali del dialogo del primo incontro con du Pont -

(Il dialogo non è da prendersi alla lettera ma rispecchia bene quanto è stato detto e si è svolto in seguito alla proposta di un accordo generale avanzata da Mr. Plumley).

dV: Your idea seems interesting. We agree actually, there is a considerable waste of assets, money and time. But as long as du Pont claims it expects to achieve control of 80% of the overall patent situation, for instance, and Montecatini on its' own behalf is making a similar claim, there doesn't seem to be a sufficiently broad basis to start discussions on an agreement.

Pl: Du Pont, although fully conscious of having a position stronger than just 50%, would nevertheless be prepared to sit with Montecatini at a table and discuss the possibility of an overall patent cross-license agreement as equal partners, since Montecatini and du Pont will ultimately control the whole polypropylene field.

dV: In order to better understand what you have in mind, I would point out that by chemical and technological fields, Montecatini understands catalysts and polymerization processes and polymers as it has already been outlined in the first Montecatini-du Pont cross license agreement on our first product count.

(Notare che volutamente de Varda non ha incluso non solo i campi di applicazione ma nemmeno gli usi elastomerici e gli usi per fibre)

Pl: We would have preferred an even larger field of agreement, of course always limited to the U.S.A. only.

dV: As far as the controlling position is concerned, I think it would be more correct to state that, together with Iegler, Montecatini and du Pont expect they will hold a dominating position in the field referred to above. Anyway, it is known that Ziegler rights in that field may be licensed by Montecatini.

Pl: (His reply seems to agree, but it does not refer anymore to Ziegler)

dV: I wonder how you have arrived at your 50% figure. After, lets just have a glance at the outstanding and known aspects of the patent situation.

Pl: Well, on the product count our expectation is 50 to 50.

- dV: I'm agreeable, but on the Gall Robinson interference on process, your filing date is so late that your chances of winning seem very remote.
- Pl: On the other hand, we have an issued patent which controls the catalyst.
- dV: I think it will not be easy for you to assert that particular patent.
- Sandt: What really counts is the product claim. It is likely that different catalysts and different processes will come up, but the product claim will always be dominating.
- dV: Well, but in an overall evaluation of the two packages, it will also be important to establish not only if but also how many dominating patents will be granted to each of the parties concerned.
- Sandt: We think that our proposal could represent a fair solution taking in due account du Pont's moral rights.
- Ottolenghi: We should not shift our discussion from a business-line basis.
- dV: After all it is not only important to be able to rely on early dates but it is at least equally important to establish if and how far the inventive idea had progressed at those early dates. But I would like to come back to my first question. Is du Pont prepared to execute a substitute agreement for the new product count, and if so, how should we proceed?
- Pl: I think we are, but we would like to take care of the new count and of the general, overall agreement simultaneously.
- dV: I'm not authorized nor prepared to discuss your proposal today, but since it deals certainly with a matter of concern for both of us, I'll report carefully to my people as soon as I'm back in Milano. For this reason, I'd like to explore further your ideas on the matter. May I?
- Pl: Certainly. We think of a cross license for each issued patent in the field to the other party and to their licensees at reasonable terms. The ceiling for the whole package should be 3% and the royalty rate for the product count, 1%, to be comprised within said 3% ceiling.

dV: I cannot discuss your proposal but in order to further explore the practical implications of the proposed deal, there would be two competing licensors in the field licensing the same patent rights. This seems okay where you sell finished articles but not in the case of intellectual industrial property.

Burrows: I think he is right.

Pl: (Accenna a qualche combinazione ad intesa un po' nebulosa ma conclude che il punto andava ulteriormente esaminato in seguito).

dV: Even if one accepts the du Pont principle of equal partnership, and I have not at all accepted it, I do not see why there should be du Pont and its licensees on one side and on the other hand only Montecatini's licensees since Montecatini itself will not operate in the U.S.A. It would seem more reasonable to think of a cross-licensing scheme according to which Montecatini licenses du Pont only, and du Pont licenses Montecatini's licensees only.  
By the way, I submit, do you not think that an agreement as broad as the one proposed could be objected to by outsiders?

Pl: You may be assured, there is nothing wrong with our proposal.

# MONTECATINI

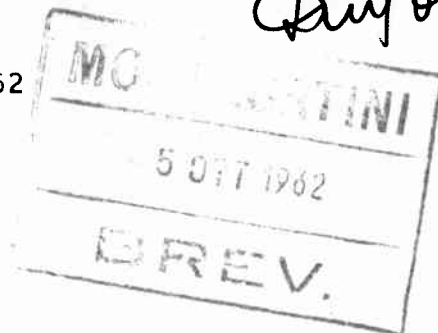
SOCIETÀ GENERALE PER L'INDUSTRIA MINERARIA E CHIMICA

ANONIMA · CAPITALE VERSATO L. 84.000.000.000

MILANO

*Carbella  
DuPont*

October 2, 1962



Mr. Allan R. Plumley  
Plastics Department  
E. I. du Pont de Nemours & Co., Inc.  
Wilmington 98, Del.

Dear Mr. Plumley:

I wish to thank you and Mr. Sandt, also on behalf of Mr. Lucini and Dr. Ottolenghi, for the kind reception we received at your offices in Wilmington on September 26, 1962. It was a good opportunity to examine verbally a complicated situation which would have been difficult to explain in writing.

In order to be able to give to my people in Milan a more complete account of the matter we discussed last week in Wilmington, I thought it would have been a good thing to call you over the telephone this morning. I took notice of your reply that you prefer to deal with our cross-licensing agreement over the new product count together with an overall patent cross-licensing agreement among the concerned parties.

However, in case the proposed overall agreement should be deemed to be unworkable or likely to require a long time to negotiate, I understand that du Pont would not object to begin to sign only a substitute agreement obtained by changing the wording of the count as written in the existing one.

I expect to be back in Milan within about three weeks and upon my arrival overthere I will immediately report our conversations to the top management of Montecatini. Careful consideration will certainly be given to your proposals in the light of all the existing circumstances and of the evaluation of what may happen in the future.

As soon as possible I shall let you know the position that Montecatini will have taken on the matters referred to above.

Please give my best regards to Mr. Weigler.

Kindest regards.

Very truly yours,

MONTECATINI

*Giuseppe de Varda*

Giuseppe de Varda

PATENTANWÄLTE

DR.-ING. VON KREISLER DR.-ING. SCHÖNWALD  
DR.-ING. TH. MEYER DR. FUES DR. EGGERT  
KÖLN

Firma  
Montecatini  
Brevetti  
1-2 Largo Guido Donegani  
Mailand / Italien

MONTECATINI  
14 SET. 1962  
BREV.

Deichmannhaus  
am Hauptbahnhof  
Telefon: 23 45 41  
Telegraphenadresse  
Demopolis Köln

Ihr Zeichen

Ihre Nachricht vom

Unser Zeichen

KÖLN 1

vK/Jo.

12.9.1962

BETRIFFT: Du Pont - Patent 3 050 471

18 SET 1962  
R 2142

*Antella  
Du Pont*

*Pirassi*

Sehr geehrte Herren!

Im Anschluß an die Besprechung in Mailand am 3.9.1962 übersende ich Ihnen anliegend eine Stellungnahme des Herrn Professor Ziegler zu diesem Patent, die Sie interessieren wird.

Zu Punkt 1.) der Stellungnahme bemerke ich, daß Herr Professor Ziegler übersehen hat, daß in Spalte 9, Zeile 3-5, die Tatsache, daß das Patent eine Cip-Anmeldung zur Anmeldung 450 243 vom 16.8.1954 ist, die inzwischen zum Patent 2 905 645 geführt hat, offenbart ist.

Mit freundlichen Grüßen

Ihr Dieses Schreiben ist von Herrn Dr. von Kreisler  
verfaßt und in seiner Abwesenheit unter-  
zeichnet von

*Jones*  
(Sekretärin)

*(sequitur tractus. nylis  
de quibus tunc)*

Anlage

*Handwritten notes and signatures at the bottom right of the page.*

# Polypropylene: DuPont Patent Doesn't Scare Novamont

The polypropylene patent rights granted to E. I. duPont de Nemours & Co. will not affect the plans of the Montecatini interests to go on making the material at Neal, W. Va., through their American arm, Novamont Corporation.

So says a joint announcement from Montecatini and Prof. Karl Ziegler.

Such a statement has been expected right along (OPD, 9/3/62, pg. 33). A week ago, Novamont announced that it planned to double its production capacity from 30 million to 60 million pounds a year at its plant near Huntington, W. Va. (OPD, 9/10/62, pg. 3).

The latest news from Montecatini Società Generale states the position of the company and Prof. Ziegler in these terms:

"After examination of the US patent No. 3,050,471, granted to duPont on August 21, 1962, on an application filed on July 21, 1959, as a continuation-in-part of an application filed on August 16, 1954, entitled 'polymerization catalyst,' Montecatini considers that said patent will not affect the manufacture of polypropylene in the Neal plant of Montecatini's US subsidiary, Novamont Corporation.

"Montecatini, which has pioneered since early 1954 the polymerization of

propylene to stereoregular high polymers, started commercial production in Italy in 1957.

"A number of major patents have been issued all over the world (even in many countries where patent applications are examined before grant) to Montecatini and to Ziegler. Montecatini has granted up to now manufacturing licenses under those patents in twelve industrial countries outside the US and Germany.

"Several other licenses have been granted by Ziegler to German manufacturers. Also a number of minor US patents have

been granted to Montecatini in this field and have been offered for licensing to American firms.

"Furthermore, Prof. Ziegler and Prof. Natta (assignor to Montecatini) have numerous relevant patent applications still pending in the United States which have priority dates of 1953 and 1954 prior to August 16, 1954, and several of which are considered to be of basic importance for the commercial production of polypropylene in the United States.

"These applications are being actively prosecuted and therefore Montecatini and Ziegler feel it preferable to refrain from further comment on the duPont patent at least for the time being. Most of the US polypropylene producers have asked for and obtained from Montecatini an assurance to license them at reasonable terms after issuance of the patents on said applications."

*Carbelle  
du Pont*

# TECHNOLOGY Newsletter

CHEMICAL WEEK SEPTEMBER 15, 1962

Watch for a major announcement soon concerning glass. Corning Glass is planning a disclosure for next week or the week after. The word in financial circles is that it's a "flexible glass." Actually, it's probably "muscle glass" that bends easily when cold. Corning has been working on such a material in its laboratories. The main market is expected to be in specialized applications—e.g., chemical processing. Corning is also believed working on a glass for applications such as automotive windows and store fronts. The new twist: it is clear when the sky is overcast, becomes tinted when exposed to light.

Pittsburgh Plate Glass will use the new float-glass process that eliminates grinding and polishing of glass (*CW Technology Newsletter*, April 2, '60). Location of the first installation is yet to be decided. A licensing agreement with Pilkington Brothers Ltd. (St. Helens, England), developer of the process, had already given PPG rights to become the first manufacturer to use the process in this country.

The method works like this: glass flows across a bed of molten tin, which is said to impart a flawless bottom surface to the glass. The top surface is also flattened, as a result of gravity and a carefully regulated high-temperature atmosphere. The glass is then fed to the lehr (annealing oven) and sliced. Elimination of rollers used in ordinary plate-glass manufacture means that polishing and grinding are not required.

Pilkington believes that the process may supplant the traditional sheet and plate routes in flat-glass manufacture, bring the price of plate glass (now six to eight times as expensive) down to that of sheet glass. It may even eliminate the distinction between plate and sheet glass, according to Pilkington. However, PPG is more reserved in its opinion, feels that float-glass quality will be better than sheet but not as good as plate-glass quality.

A joint statement on polypropylene patents was made this week by Montecatini and Karl Ziegler. Regarding Du Pont patent 3,050,471 (*CW*, Sept. 1, p.15): Montecatini feels that Novamont's Neal, W. Va., plant will not be affected by it. Both Ziegler and Montecatini's G. Natta have been diligently prosecuting applications for patents with dates prior to Aug. 16, '54. They consider several of these to be of "basic importance for the commercial production of polypropylene in the U.S." They add that most U.S. polypropylene producers have sought—and obtained—assurance from Montecatini that it would grant licenses on a reasonable basis if and when the patents issue.

Free translation: the Montecatini-Ziegler-Natta group is not conceding an inch in the patent struggle. More lengthy, involved negotiations seem certain, and it's probable that court actions will be taken before it's settled.

August 30, 1962

*Perkins  
du Pont*

Montecatini's and Prof. Ziegler's Press Release

With reference to du Pont's press release of August 23, 1962, Montecatini and Prof. Ziegler wish to make the following statement:

After examination of the U.S. Patent No. 3,050,471 granted to du Pont on August 21, 1962 on a continuation in part application filed on July 21, 1959 and concerning a "Polymerization Catalyst", Montecatini considers that said patent will not affect the manufacture of polypropylene in the Neal Plant of Montecatini's U.S. subsidiary Neovmont Corporation.

Montecatini feels it is preferable not to make further comments on this patent at least for the time being.

*The beginning of*  
Montecatini, which has pioneered since 1954 the polymerization of propylene to stereoregular high polymers has started commercial production in Italy in 1957. Montecatini has granted since then 12 licenses in 8 industrial countries other than the U.S. Several other licenses have been granted by Prof. Ziegler to German manufacturers.

In this field several minor patents have at this date been granted to Montecatini also in the U.S. and already been offered by Montecatini for license.

Furthermore Prof. Ziegler and Prof. Natta (assignor to Montecatini) have numerous relevant patent applications claiming priorities of 1953 and of 1954 still pending in the U.S. which are actively prosecuted. Some of these applications are considered to be of basic importance for the commercial production of polypropylene in the U.S.

Most of the U.S. polypropylene producers have asked for and obtained from Montecatini an engagement to license them at reasonable terms when said patents will be granted.



PATENTANWÄLTE  
DR.-ING. VON KREISLER DR.-ING. SCHÖNWALD  
DR.-ING. TH. MEYER DR. FUES DR. EGGERT  
KÖLN

Firma  
Montecatini  
Brevetti  
  
1-2 Largo Guido Donegani  
Mailand / Italien

Herrn Professor  
Dr. Karl Ziegler  
z.Zt. Hotel Waldhaus  
Sils Maria / Engadin  
Schweiz

Deichmannhaus  
am Hauptbahnhof  
Telefon: 23 45 41  
Telegrammadresse  
Dampfen Köln

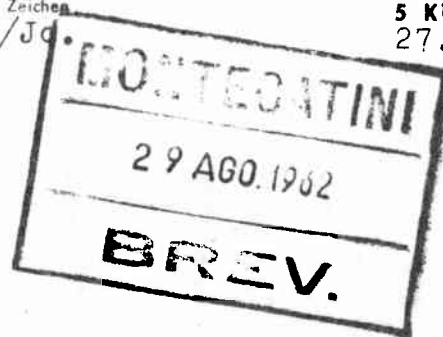
*Bankle Du Pont*

Ihr Zeichen Ihre Nachricht vom

Unser Zeichen  
vK/Jd.

5 KÖLN 1  
27.8.1962

BETRIFFT: Du Pont - Patent 3.050.471



Sehr geehrte Herren!

Ich beziehe mich auf meine Schreiben vom 24.8.1962 und habe soeben sowohl Kopien dieser amerikanischen Patentschrift als auch Kopien der Pressemitteilungen in der "THE NEW YORK TIMES" und "NEW YORK HERALD TRIBUNE" erhalten, die ich Herrn Professor Ziegler beifüge. Ich nehme an, daß die Firma Montecatini bereits im Besitz beider Unterlagen ist. Ich bin auf das Patent heute gleichzeitig von Herrn Dr. Dinklage und der Firma Hercules aufmerksam gemacht worden.

Meine Vermutung im Schreiben vom 24.8.1962 hat sich bewahrheitet. Es handelt sich um eine Cip-Anmeldung aus der Anmeldung 450.243 vom 16.8.1954, die zum Patent 2.905.645 geführt hat (siehe Patentschrift 3.050.471, 9. Spalte, Zeile 3-5).

Die neue Patentschrift ist das Schlimmste, was wir bisher von der Firma Du Pont kennengelernt haben. Sie beansprucht ein Katalysatorsystem bestehend aus Titaniumtrihalogenid und einer metallorganischen Verbindung, die mindestens eine Metall-Kohlenstoff-Bindung hat und in Mengen verwendet wird, die die Titaniumverbindung mindestens zum Teil zu einer Wertigkeit unter 3 reduzieren.

Im Gegensatz zu den bisherigen Patenten der Firma Du Pont werden als metallorganische Verbindungen ausdrücklich aluminiumorganische Verbindungen, und zwar sowohl Aluminiumtrialkyle\* als auch Alkyl- und Arylaluminiumhalogenide, schließlich auch Alkylaluminiumhydride beansprucht (siehe Ansprüche 4, 6, 8, 9 und 13). Die Beispiele beziehen sich sowohl auf die Polymerisation von Äthylen als auch auf die von Propylen.

Sämtliche Grundpatente von Professor Ziegler sind älter als das Patent von Du Pont. Das älteste geht bekanntlich auf eine Priorität vom 17.11.1953 zurück. In keinem der älteren Patente hat Professor Ziegler aber Titantrihalogenid genannt, wenn diese Verbindung im allgemeinen auch unter die Titanverbindungen fällt. Andererseits beschreibt aber gerade dieses älteste Patent recht gut die Reduktion der höherwertigen Schwermetallverbindungen zu niedrigerwertigen, allerdings am Beispiel des Zirkons (Seite 4, Abs. 3).

Auch die Katalysatoranmeldung 692 020, die ich besonders gern zum Gegenstand eines Interference-Verfahrens gemacht hätte, enthält zwar auf Seite 5, letzter Absatz bis Seite 6, erster Absatz die Beschreibung des Reduktionsvorganges bei der Katalyse, wobei am Beispiel des 4-wertigen Zirkonchlorids gezeigt wird, daß es bei der Reduktion in 3-, 2- und sogar einwertiges Zirkon übergeht. Es ist aber kein Beispiel vorhanden, das von Titantrichlorid oder von Zirkontrihalogenid ausgeht.

Nicht anders ist die Situation für die USA-Anmeldung 514 068 (Z IV), wo es lediglich auf Seite 5 in Verbindung mit Seite 6, 1. Satz Abs. klar hervorgeht, daß die Leichtmetallverbindung ein Reduktionsmittel für die Schwermetallverbindung darstellt, so daß der katalytische Vorgang eine Reduktion zur Voraussetzung hat.

\* und -triaryle

In nahezu jedem Beispiel der drei angeführten Anmeldungen wird der braun-schwarze Katalysator erwähnt, der sich bei dem Vermischen beider Komponenten bildet, wobei in der Mehrzahl der Beispiele zwar diese Mischung als Katalysator benutzt wird, aber der Niederschlag in einigen Beispielen abgetrennt und als solcher verwendet wird. Dieser <sup>Niederschlag</sup> ~~Beispiel~~ enthielt aber zweifellos dreiwertiges Titan.

Ich glaube, daß es Herrn Professor Ziegler nicht ganz leicht fallen wird, ein Interference-Verfahren einzuleiten, gerade weil das amerikanische Patent von Du Pont erteilt wurde und in diesem Fall grundsätzlich die Ansprüche des erteilten Patentes für das Interference-Verfahren kopiert werden müssen. Meines Erachtens wird man es so probieren müssen, daß man neben einem Count, der auf Titantrichlorid als Ausgangsstoff abgestellt ist, einen weiteren auf Titan-tetrachlorid und einen dritten im Sinne der Waldeck-/Lewis-Entscheidung auf Titantrichlorid und Titan-tetra-~~chlorid~~ chlorid aufstellt.

Dazu wird sich aber noch Herr Dr. Dinklage zu äußern haben.

Leider mußte ich feststellen, daß die drei einzigen USA-Anmeldungen der Firma Montecatini, die ich kenne, und zwar die Anmeldungen 514 097, 514 098 und 514 099, die alle mit italienischen Prioritäten vom 8.6. und 27.7.1954 angemeldet wurden und daher den Daten nach älter als das Du Pont - Patent sind, ebenfalls kein Titantrichlorid wörtlich anführen, vielmehr ebenfalls von Titan-tetrachlorid oder anderen Schwermetallsalzen in der höchsten Wertigkeit ausgehen. So enthält die Anmeldung 514 099 13 von 18 Beispielen auf Titan-tetrachlorid und je ein weiteres auf Titan-tetrabromid und Titan-tetraiodid. Auch in diesen Anmeldungen ist aber der Gedanke der Reduktion klar beschrieben, so daß die Firma Montecatini mit der gleichen Argumentierung einen Count aufstellen kann, wie ich sie für Professor Ziegler angeführt habe.

Ich befürchte aber, daß die Firma Montecatini zwar zahlreiche jüngere Anmeldungen als das Patent von Du Pont besitzt, die von Titantrihalogenid ausgehen, aber keine älteren.

Ich nehme an, daß die Firma Montecatini ebenfalls ein Interference-Verfahren beantragen wird. Es wird dann darauf ankommen, ob die Firma Du Pont auf einen Zeitpunkt vor dem 8.6.1954 zurückschwören kann.

Wir haben die Überzeugung, daß die Firma Du Pont unter keinen Umständen bis in das Jahr 1953 zurückschwören kann, so daß Professor Ziegler die besseren Daten haben wird.

Für das weitere taktische Vorgehen ist es sehr günstig, daß das Du Pont-Patent sich sowohl auf Äthylen als auch auf Propylen bezieht, denn so können die Firma Montecatini und Professor Ziegler getrennt um die Einleitung eines Interference-Verfahrens bitten, aber in diesen Interference-Verfahren gemeinsam gegen die Firma Du Pont vorgehen, denn es handelt sich nicht primär um die Polymerisation von Olefinen, sondern um eine Katalysatorzusammensetzung.

Die Angelegenheit wirft eine ganze Reihe von Problemen auf, die eine Besprechung zwischen Herrn de Varda und mir sehr günstig erscheinen lassen. Der beste Termin wäre für mich Montag, der 3.9.1962; weniger gern wäre ich aber auch bereit, am 31.8.1962 zu einer Besprechung zu kommen. Bei diesem Termin würde ich allerdings Herrn de Varda bitten, daß wir uns auf halbem Wege in Zürich oder Basel treffen. Zum 3.9.1962 könnte ich auch nach Mailand kommen.

Ich bitte die Firma Montecatini um telefonische Stellungnahme.

Mit freundlichen Grüßen

Ihr

*F. v. Kuebler*

*per gli. Al  
albi. la  
Du Pont um  
jstia p...  
bluante  
"super lach"  
moment  
el 1954*

*o.k.*

*o.k.*

*pie combinato  
per il 3.9.62 a Milano  
*[Signature]**

DR.-ING. VON KREISLER DR.-ING. SCHÖNWALD  
DR.-ING. TH. MEYER DR. DR. EGGERT

KÖLN

Firma  
Montecatini Brevetti  
(134) Milano  
1-2, Largo Guido Donegani

MONTECATINI  
27 AGO. 1962  
BREV.

Leichmannhaus  
im Hauptbahnhof  
Telefon: 23 45 41  
Telegrammadresse  
Dompapier Köln

*Carole Du Pont*  
*face cartella*

Ihr Zeichen

Ihre Nachricht vom

Unser Zeichen  
v.K./Ru.

BETRIFFT:

DuPont-Patent 3.050.471.

5-KÖLN 1  
24. August 1962  
28 AGO 1962  
R 2126

Sehr geehrte Herren!

Ich bestätige die soeben geführte telefonische Besprechung mit Herrn Dr. Buzzulini, in der er mir im freundlichen Auftrag von Herrn Dr. Giustiniani mitgeteilt hat, daß Sie aus New York die Nachricht bekommen haben, daß der Firma DuPont am 21. August 1962 das Patent 3.050.471 erteilt wurde, das ein Katalysatorsystem zum Gegenstand hat, das aus Titaniumtrichlorid und metallorganischen Verbindungen gewonnen wird. Einer der Erfinder ist Anderson.

Die Firma hat aus Anlaß der Erteilung dieses Patents eine Pressebesprechung abgehalten, in der sie mitgeteilt hat, daß dieser Katalysator die Grundlage jeder Propylenpolymerisation darstellt und daß DuPont eine Großanlage zur Polymerisation von Propylen mit diesem Katalysator baut.

Die Nachricht wirkt zunächst sehr sensationell. Ich möchte aber, bevor man das Patent kennt, zur Vorsicht mahnen.

Ich möchte annehmen, daß es ein Parallelpatent zum Patent 2.905.645 ist, das am 16. August 1954 angemeldet und am 22. September 1959 erteilt wurde. Auch in diesem Fall ist Anderson Miterfinder. Die anderen heißen Bruce, Mercklin und Truett. Der Anspruch dieses Patents lautet:

27. AUG 1962

+ )medium

"Stoffkombination, die zur Polymerisation von äthylenisch ungesättigten Verbindungen geeignet ist, enthaltend ein feuchtigkeitsfreies inertes flüssiges Kohlenwasserstoff~~flüssig~~ und einen Polymerisationskatalysator, bestehend im wesentlichen aus einer Mischung, die erhalten wurde durch Behandlung im genannten Medium eines Titan-tetrahalogenids mit einem Reduktionsmittel aus der Klasse bestehend aus Lithiumphenyl, Verbindungen  $LiAlR_4$ , in denen R ein Kohlenwasserstoffrest ist, Zinntetraalkyl und Cadmiumdialkyl, wobei die Menge des Reduktionsmittels genügt, um die Wertigkeit des Titans teilweise unter 3 zu senken".

Von diesem Patent unterscheidet sich offenbar das neue dadurch, daß es statt von Titaniumtetrahalogenid vom Titaniumtrihalogenid ausgeht. Wichtig sind natürlich die metallorganischen Verbindungen.

Wir haben gegen das Patent 2.905.645 nichts unternehmen können, da alle dort genannten metallorganischen Verbindungen von Prof. Ziegler vor dem 16. August 1954 nicht erfunden oder offenbart wurden. Handelt es sich bei dem neuen Patent um die gleichen metallorganischen Verbindungen, so würden wir die Angelegenheit nicht als gefährlich ansehen. Dennoch würden wir empfehlen, unser möglichstes zu tun, um ein Interference-Verfahren herbeizuführen.

Ich glaube, daß vor allem Ihre Firma in Ihren Anmeldungen M1 bis M3 wirksame Angriffsmittel haben wird.

Selbstverständlich wäre auch Herr Professor Ziegler bereit, alles zu tun, um die Anmeldung zu bekämpfen.

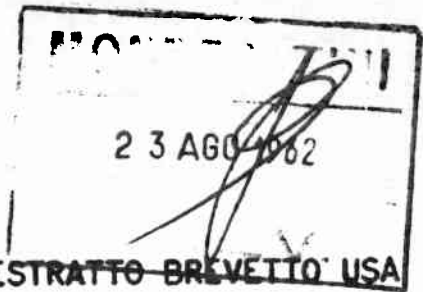
Ich habe bereits Herrn Dr. Buzzulini mitgeteilt, daß ich sogleich nach Erhalt der Patentschrift, wenn sich hierbei unsere Sorge bestätigt, bereit bin, nach Mailand zu kommen oder mich mit Herrn Dr. deVara auf halbem Wege zu treffen, um diese wichtige Angelegenheit zu besprechen.

Mit freundlichen Grüßen

*Dr. v. Kuefer*

LEX N. 6065

AUGUST 22 1962



IERI 21 AGOSTO OFFICIAL GAZETTE PUBBLICATO ESTRATTO BREVETTO USA

3.850.471 ASSEGNATO AT DUPONT INVENTORE ANDERSON PER UN SISTEMA

CATALITICO COMPOSTO DI TRICLORURO TITANIO COMBINATO CON SUFFICIENTE

QUANTITA DI COMPOSTO METALLURGANICO DA RIDURRE LA VALENZA DEL

TITANIO ALMENO PARZIALMENTE AL DISOTTO DI TRE STOP IL BREVETTO

EST UL SISTEMA CATALITICO INDIPENDENTEMENTE DA REAZIONE OVER

ADOOPERATO STOP MRS PEAKE INVIERA RAPPORTO DOPO ESAMINATO TESTO

COMPLETO ET FILE WRAPPING STOP UFFICIO PUBLIC RELATIONS DU PONT

DIRAMATO SEGUENTE COMUNICATO ALLA STAMPA: ,

XX

"DUPONT PATENT NO. 3,050,4)

71

- CONSISTS OF A SYSTEM OF CATALYST

INVOLVING THE USE OF TITANIC TRICHLORIDE REACTED WITH FAMOUS ORGANIC

M

ALLIC COMPOUNDS AS CATALYST. ALL PRESENT METHODS EMPLOYED IN THE

MANUFACTURE OF POLYPROPYLENE ARE BELIEVED TO USE THE CATALYST CLAIMED

IN THE DUPONT PATENT. DUPONT'S PROGRAM IN THE FIELD OF POLYPRO-

PYLENE INCLUDES ACTIVE RESEARCH AND MARKET DEVELOPMENT EFFORTS

THE

THE COMPANY IS BUILDING A PLANT WHICH WILL PRODUCE POLYOLEFIN FILMS

INCLUDING POLYPROPYLENE AND IS COMPLETING ENGINEERING AND DESIGN

STUDIES PRELIMINARY TO CONSTRUCTION OF A POLYPROPYLENE RESIN

PLANT".

OTTOLENGHI



# MONTECATINI

SOC. GEN. PER L'INDUSTRIA MINERARIA E CHIMICA  
ANONIMA - CAPITALE VERSATO L. 150.000.000.000  
MILANO

*Carbelle  
Du Pont*

SETTORE STUDI PROGETTAZIONI E BREVETTI  
SERVIZIO BREVETTI

MILANO, 25/8/1962

Chiar.mo  
Sig. Prof. GIULIO NATTA  
Villa Beati  
CHAMPOLUC  
(Aosta)

Si prega indirizzare a: Montecatini BREV  
Please reply to: Largo G. Donegani, 1-2  
Milano, Italy  
Phone: 6333 MILANO  
Cables: GABBROBREV MILANO  
Telex: MI-085 GABBRO-BREV

Vs. rif.:

Na. Rif.: **AMF/pm**

Your ref.:

Our ref.:

Chiarissimo Professore,

Le trasmettiamo le  
rivendicazioni finora pervenuteci del brevetto  
Du Pont recentemente concesso. La trasmissione  
per telex è stata interrotta e quindi Le  
potremo far avere il resto delle rivendicazioni  
solo con il corriere successivo.

Voglia gradire, chiarissimo Professore, i  
nostri migliori saluti.

"MONTECATINI"

*Amati* *AF*

all.

\*

C. C. postale 3/3711 - Cam. di Comm. 524 - Casella postale 3596 - Telefoni 6333 - 6334  
Telefoni Interurbani chiedere GABBRO-MILANO

RIVENDICAZIONI DEL BREVETTO DU PONT U.S. No. 3.050.471  
CONCESSO IL 21 AGOSTO 1962

---

1. A catalyst composition consisting essentially of the reaction product obtained on admixing a titanium trihalide with an organometallic compound containing at least one hydrocarbon radical bonded to metal, the quantity of the organometallic compound being sufficient to lower the valence state of the titanium, at least in part, to below three.
2. The catalyst composition as set forth in claim 1 wherein the titanium trihalide is titanium trichloride.
3. The catalyst compositions set forth in claim 1 wherein the titanium trihalide is titanium tribromide.
4. The catalyst composition as set forth in claim 1 wherein the organometallic compound is an alkyl metal halide.
5. The catalyst composition as set forth in claim 4 wherein the alkyl metal halide is alkyl magnesium halide.
6. The catalyst composition as set forth in claim 4 wherein the alkyl metal halide is an alkyl aluminum halide.
7. The catalyst composition as set forth in claim 1 wherein the organometallic compound is an alkyl metal hydride.
8. The catalyst composition as set forth in claim 7 wherein the alkyl metal hydride is an alkyl aluminum hydride.

9. The catalyst composition set forth in claim 1 wherein the organometallic compound is an aryl metal halide.

10. The catalyst composition of claim 1 wherein the molar ratio of the organometallic compound to the titanium trihalide varies from 0.3 to 10.

M R<sub>N</sub>  
11. A catalyst composition consisting essentially of the reaction product obtained on admixing a titanium trihalide with an organometallic compound having the general formula MR<sub>N</sub> where M is a metal, R a hydrocarbon radical, and N the valence state of the metal, the quantity of the organometallic compound being sufficient to lower the valence state of the titanium, at least in part, to below three.

12. A catalyst composition consisting essentially of the reaction product obtained on admixing a titanium trihalide with a metal alkyl, the quantity of metal alkyl being sufficient to lower the valence state of the titanium, at least in part, to below three.

13. The catalyst composition as set forth in claim 12 wherein the metal alkyl is aluminum trialkyl.

14. The catalyst composition as set forth in claim 12 wherein the metal alkyl is a magnesium dialkyl.

?  
15. The catalyst composition as set forth in claim 12 wherein the metal alkyl is a tin tetraalkyl.

16. The catalyst composition as set forth in claim 12 wherein the metal alkyl is an alkali metal alkyl.

17. The catalyst composition as set forth in claim 16 wherein the alkali metal alkyl is a lithium alkyl.

18. The catalyst composition as set forth in claim 12 wherein the metal alkyl is an alkali metal aluminum alkyl.

19. The catalyst composition as set forth in claim 18 wherein the alkali metal aluminum alkyl is a lithium aluminum alkyl.

20. A catalyst composition consisting essentially of the reaction product obtained on admixing a titanium trihalide with a metal aryl, the quantity of the metal aryl being sufficient to lower the valence state of the titanium, at least in part, to below three.

21. The catalyst composition as set forth in claim 20 wherein the metal aryl is aluminum triaryl.

22. The catalyst composition as set forth in claim 20 wherein the metal aryl is magnesium diaryl.

23. A catalyst composition consisting essentially of the reaction product obtained on admixing a titanium trihalide with a metal hydride, the quantity of said metal hydride being sufficient to lower the valence state of the titanium, at least in part, to below three.

24. The catalyst composition as set forth in claim 23 wherein the metal hydride is an alkali metal aluminum hydride.

25. The catalyst composition as set forth in claim 24 wherein the alkali metal aluminum hydride is lithium aluminum hydride.

26. A catalyst composition consisting essentially of the reaction product obtained on admixing a titanium trihalide with a metal selected from the group consisting of alkali

metals, alkaline earth metals and aluminum, the quantity of said metal being sufficient to lower the valence state of the titanium, at least in part, to below three.

27. The catalyst composition as set forth in claim 26 wherein the metal is aluminum.

28. A catalyst composition consisting essentially of catalytic quantities of an amine selected from the class consisting of tertiary and secondary amines containing from 6 to 18 Carbon atoms and the reaction product of titanium trihalide with a organometallic compound having the formula MRN wherein M is a metal, R a hydrocarbon radical, and N the valence state of the metal, the molar ratio of the organometallic compound to the titanium trihalide being from 0.3 to 10, and the molar ratio of the said amine to the organometallic compound being from 0.5 to 10.

29. The catalyst composition as set forth in claim 28 wherein the organometallic compound is aluminum trialkyl.

30. The catalyst composition as set forth in claim 28 wherein the amine is a tertiary amine.

31. The catalyst composition as set forth in claim 30 wherein the tertiary amine is tri-N-butyl amine.

32. The catalyst composition as set forth in claim 30 wherein the tertiary amine is tri-alkyl amine.

33. A catalyst composition consisting essentially of the reaction product obtained on admixing titanium trichloride with an alkyl magnesium halide, the quantity of said alkyl magnesium halide being sufficient to lower the valence state of the titanium, at least in part, to below three.

34. The catalyst composition of claim 33 wherein the alkyl magnesium halide is ethyl magnesium bromide.



**E. I. DU PONT DE NEMOURS & COMPANY**  
 INCORPORATED  
 WILMINGTON 98, DELAWARE  
 U. S. A.

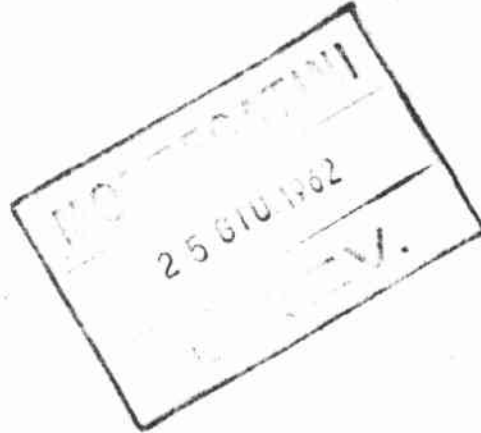
*Cartella  
du Pont*

June 21, 1962

INTERNATIONAL DEPARTMENT  
 CABLE ADDRESS "FORELPONT" WILMDEL

Via air mail

Dr. G. de Varda  
 Director, Patent Department  
 Montecatini, S.A.  
 Via Turati 18  
 Milan, Italy



Dear Dr. de Varda:

As a result of our recent pleasant discussions in Milan on polypropylene fiber and fibrils, we had agreed generally on an exchange of letters of intent, and you will recall my letter of April 16 covered the approach. We have been working on our letter of intent and in the course of doing so it became apparent that the understanding of both of our companies might be combined conveniently and suitably into one letter, rather than two. The attached draft is the result which we send to you for your consideration, with the thought that it might spare you the preparation of your letter of intent, and the hope that it finds approval with you.

In any event, we should appreciate having your comments as to whether this draft is satisfactory. Then we can proceed promptly to our final management approvals and transmission of signed copies to you.

It happens that I shall be here in Wilmington for the next few weeks and have some personal plans to work out of a nature that an early indication from you in response to the proposed draft submitted herewith would be appreciated. It would be best for me if you would write to me here, care of Dr. Paul R. Austin whom you will recall from an earlier visit to Milan. Dr. Austin and I can then give attention to your reply before I leave on my vacation.

With our negotiations having proceeded so satisfactorily thus far, we look forward to their early completion to the mutual benefit of our companies. Thanks for your attention, and, as always, we send you our kindest personal regards.

Sincerely,

*Harry J. Haon*  
 Harry J. Haon  
 European Manager

HJH m

27 JUN 1962

PROPOSED LETTER FOR MONTECATINI



MONTECATINI  
MILAN, ITALY

This letter is intended to provide a statement of intentions of MONTECATINI and DU PONT, setting forth terms and conditions upon which each will provide freedom of operation to the other, should either obtain a claim (either in terms of product or product-by-process) to a fiber of propylene homopolymer in a United States Patent which is based on an application filed in any country of the world prior to the date of this letter, or any division, continuation or continuation-in-part of such application. By a "fiber of propylene homopolymer" we would intend to include such structures containing stabilizers, but would exclude other chemically modified polypropylene fibers and fibers of propylene copolymers as well as novel fiber and yarn structures, novel after-treated fibers and yarns and modified physical forms or shapes of fiber when such structures, forms or shapes are independently patentable under United States law.

In the event that DU PONT is awarded a claim to a fiber of propylene homopolymer, as defined above, it shall grant to MONTECATINI (and/or its subsidiaries or licensees) on request of MONTECATINI, a non-exclusive license under the claim to permit manufacture, use and/or sale of propylene

*with U.S. patent*



homopolymer in the form of filament or staple for any use except non-wovens (as distinguished from woven, knitted or cordage structures) at a reasonable royalty rate applicable on the sales price of the relevant fiber dominated by the claim, beginning with the issuance of the claim in a patent assigned to DU PONT, which license shall be for the life of the patent.

In the event MONTECATINI is awarded a claim to a fiber of propylene homopolymer, as defined above, it shall grant to DU PONT (and/or its subsidiaries or licensees) on request of DU PONT, a non-exclusive license under the claim to permit manufacture, use and/or sale of propylene homopolymer in the form of non-woven structures and staple fibers no longer than one inch in length for use in non-woven structures (as distinguished from woven, knitted or cordage structures) at a reasonable royalty rate applicable on the sales price of the relevant fiber dominated by the claim, beginning with the issuance of the patent claim in a patent assigned to MONTECATINI, which license shall be for the life of such patent.

Should DU PONT grant to, or receive from MONTECATINI a license under a claim to a fiber of propylene homopolymer as defined above, it will upon written request from MONTECATINI grant MONTECATINI a non-exclusive license under Italian Patent 605,850 to permit manufacture, use and/or sale by MONTECATINI of fibrils from polymers which MONTECATINI has the right to make, at reasonable royalty rate applicable on the sales price of the fibrils which license shall be for the life of said patent.

*proposed*  
*change*  
*copy per M.S. Patent*  
*✓*

In the use of the word "licensee" above, we intend any and all the United States licensees of either MONTECATINI or DU PONT in the polypropylene field which have obtained a license under any claim of any patent or patent application of either party which is to be employed in the production of polypropylene fiber dominated by a claim to a fiber of propylene homopolymer as defined above of the other party. By the word "subsidiary" we intend any company in which either MONTECATINI or DU PONT owns or controls at least fifty per cent (50%) of the stock which is entitled to vote for directors. By "sales price" of the relevant fiber we intend the gross sales price to customers of the filament or staple fiber sold, or in case DU PONT sells non-woven rather than staple we intend the sales price of staple of the same filament denier as that of the filaments occurring in said non-woven, less quantity or prompt payment discounts, container costs, transportation, insurance and delivery expenses, allowances for return, and any duty, direct tax or governmental charge (excluding franchise and income taxes) assessed on the manufacture, sale or delivery of material produced under this agreement which is paid by a licensee of patent rights agreed to be licensed under this agreement.

The license we anticipate to be granted by DU PONT to MONTECATINI, its subsidiaries and its licensees, and by MONTECATINI to DU PONT, its subsidiaries and its licensees, shall be limited to any claim to a fiber of propylene homopolymer as defined above and shall not imply any license under any other claim or patent (e.g., claims to compositions of

*Proctor  
shian!*

*2.25 per quest  
about 100 lbs non-  
woven price? sales*

matter, processes of polymerizing, spinning, dyeing, processing, etc.). It is further intended that in the licenses provided above, no down payment or advance royalty is to be required. In each case the licenses may be terminated by the licensee upon reasonable notice, or may be terminated by the licensor upon failure of the licensee to pay royalties or to keep records or permit examination thereof.

If you concur and agree to this statement, will you please indicate by signing one copy of this letter and returning it to us, retaining the other for your file.

Very truly yours,

E. I. DU PONT DE NEMOURS AND COMPANY

By \_\_\_\_\_

Accepted:

By \_\_\_\_\_

Date \_\_\_\_\_

27. JUN. 1962

CAH:B

*Memorandum provisions license  
exclusive Italia brev. J.P.  
F. B. di*

*[Signature]*

ALLEGATO 1

P.P. Fiber Agreement

Corbello du Pont

PROPOSED LETTER FOR MONTECATINI

MONTECATINI  
25 GIU. 1962  
REV.

MONTECATINI  
MILAN, ITALY

This letter is intended to provide a statement of intentions of MONTECATINI and DU PONT, setting forth terms and conditions upon which each will provide freedom of operation to the other, should either obtain a claim (either in terms of product or product-by-process) to a fiber of propylene homopolymer in a United States Patent which is based on an application filed in any country of the world prior to the date of this letter, or any division, continuation or continuation-in-part of such application. By a "fiber of propylene homopolymer" we would intend to include such structures containing stabilizers, but would exclude other chemically modified polypropylene fibers and fibers of propylene copolymers as well as novel fiber and yarn structures, novel after-treated fibers and yarns and modified physical forms or shapes of fiber when such structures, forms or shapes are independently patentable under United States law.

pro  
chiaro  
cosa si  
esclude

In the event that DU PONT is awarded a claim to a fiber of propylene homopolymer, as defined above, it shall grant to MONTECATINI (and/or its subsidiaries or licensees) on request of MONTECATINI, a non-exclusive license under the claim to permit manufacture, use and/or sale of propylene

non U.S. subject

"License  
to U.S.A. &  
non export."

homopolymer in the form of filament or staple for any use except non-wovens (as distinguished from woven, knitted or cordage structures) at a reasonable royalty rate applicable on the sales price of the relevant fiber dominated by the claim, beginning with the issuance of the claim in a patent assigned to DU PONT, which license shall be for the life of the patent.

In the event MONTECATINI is awarded a claim to a fiber of propylene homopolymer, as defined above, it shall grant to DU PONT (and/or its subsidiaries or licensees) on request of DU PONT, a non-exclusive license under the claim to permit manufacture, use and/or sale of propylene homopolymer in the form of non-woven structures and staple fibers no longer than one inch in length for use in non-woven structures (as distinguished from woven, knitted or cordage structures) at a reasonable royalty rate applicable on the sales price of the relevant fiber dominated by the claim, beginning with the issuance of the patent claim in a patent assigned to MONTECATINI, which license shall be for the life of such patent.

Should DU PONT grant to, or receive from MONTECATINI a license under a claim to a fiber of propylene homopolymer as defined above, it will upon written request from MONTECATINI grant MONTECATINI a non-exclusive license under Italian Patent 605,850 to permit manufacture, use and/or sale by MONTECATINI of fibrils from polymers which MONTECATINI has the right to make, at reasonable royalty rate applicable on the sales price of the fibrils which license shall be for the life of said patent.

*U.S. Patent  
Montecatini U.S.A.  
for exports*

*any teacher:  
1 to 2 tufts  
S: pins more  
more some  
staple fiber*

In the use of the word "licensee" above, we intend any and all the United States licensees of either MONTECATINI or DU PONT in the polypropylene field which have obtained a license under any claim of any patent or patent application of either party which is to be employed in the production of polypropylene fiber dominated by a claim to a fiber of propylene homopolymer as defined above of the other party. By the word "subsidiary" we intend any company in which either MONTECATINI or DU PONT owns or controls at least fifty per cent (50%) of the stock which is entitled to vote for directors. By "sales price" of the relevant fiber we intend the gross sales price to customers of the filament or staple fiber sold, or in case DU PONT sells non-woven rather than staple we intend the sales price of staple of the same filament denier as that of the filaments occurring in said non-woven, less quantity or prompt payment discounts, container costs, transportation, insurance and delivery expenses, allowances for return, and any duty, direct tax or governmental charge (excluding franchise and income taxes) assessed on the manufacture, sale or delivery of material produced under this agreement which is paid by a licensee of patent rights agreed to be licensed under this agreement.

*price  
sales!*

*case per quest  
short of opt. & non.  
price, sales*

The license we anticipate to be granted by DU PONT to MONTECATINI, its subsidiaries and its licensees, and by MONTECATINI to DU PONT, its subsidiaries and its licensees, shall be limited to any claim to a fiber of propylene homopolymer as defined above and shall not imply any license under any other claim or patent (e.g., claims to compositions of

matter, processes of polymerizing, spinning, dyeing, processing, etc.). It is further intended that in the licenses provided above, no down payment or advance royalty is to be required. In each case the licenses may be terminated by the licensee upon reasonable notice, or may be terminated by the licensor upon failure of the licensee to pay royalties or to keep records or permit examination thereof.

If you concur and agree to this statement, will you please indicate by signing one copy of this letter and returning it to us, retaining the other for your file.

Very truly yours,

E. I. DU PONT DE NEMOURS AND COMPANY

By \_\_\_\_\_

Accepted:

By \_\_\_\_\_

Date \_\_\_\_\_

27. JUN. 1962

CAH:B Mainman provisions license  
exclusive Italia bet. D.P.  
f. b. di

*[Handwritten signature]*

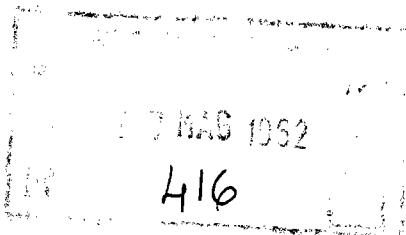


E. I. DU PONT DE NEMOURS & COMPANY  
INCORPORATED  
WILMINGTON 98, DELAWARE

*Carroll*

TEXTILE FIBERS DEPARTMENT

May 14, 1962



Professor G. Natta  
Istituto di Chimica Industriale del Politecnico  
Piazza Leonardo da Vinci, 32  
Milan, ITALY

Dear Professor Natta:

It was a great pleasure to see you and Rosita again and as always I very much enjoyed my visit to your home. Please thank Rosita for me for a delightful lunch.

I regret very much that the rush I encountered in Milan due to more extensive talks with Montecatini than I had anticipated prevented me from visiting your Institute. If I come again next spring, I shall be sure to leave enough time to visit there.

With kindest regards to you and your good wife,  
Rosita.

Sincerely,

*Lawton Burrows*

Lawton A. Burrows  
Asst. General Director  
Technical Divisions

LAB/rp



*Castella  
du Pont*

March 23, 1962

Mr. Lawton A. Burrows  
E.I. DuPont de Nemours & Co.  
Wilmington 98, Delaware (USA)

our ref. 167/eg

*Albergo Palace -*

Dear Dr. Burrows:

I wish to welcome you in Milan. During these few days I shall be in Rome for some meetings, but I foresee to be back at the latest on Sunday, April 1.

Resita and I shall be very pleased if you can come and have lunch with us at home on Tuesday at 1 p.m.

Looking forward to meeting you, I send you my kindest regards.

G. NATTA



E. I. DU PONT DE NEMOURS & COMPANY  
INCORPORATED  
WILMINGTON 98, DELAWARE

TEXTILE FIBERS DEPARTMENT

February 23, 1962

164

Professor G. Natta  
Istituto di Chimica Industriale del Politecnico  
Piazza Leonardo da Vinci, 32  
Milan, Italy

Dear Professor Natta:

Thank you very much for your recent letter.

I will be in Milan both Monday, April 2, and Tuesday, April 3. I will see Dr. Larcher the morning of April 2 and the Rhodiatoce people the morning of April 3. If April 2 would be a more convenient date than April 3 for me to visit your Institute, I can easily go there the afternoon of April 2. Unless I hear from you to the contrary, however, I shall plan to go there on April 3 after lunch to see you if you are available and if not to see Dr. Mazzanti.

I appreciate your kind invitation to have lunch or dinner with you and Rosita and shall be glad to do so if this will be no trouble to either of you.

Since I will be leaving this country before too long, I suggest that you send a note to the Palace Hotel to be held for my arrival there on March 31, giving me your preference of dates.

in enclosure  
=

Sincerely,

*Lawton Burrows*

Lawton A. Burrows  
Asst. General Director  
Technical Divisions

LAB/rp

**MONTECATINI**

Società Generale per l'Industria Mineraria e Chimica

AMMINISTRATORE DELEGATO

*Carlo*  
*D. M.*

Data, 19 febbraio 1962

**PROMEMORIA**  
G/SRO

per il Signor..... **PROF. NATTA**.....

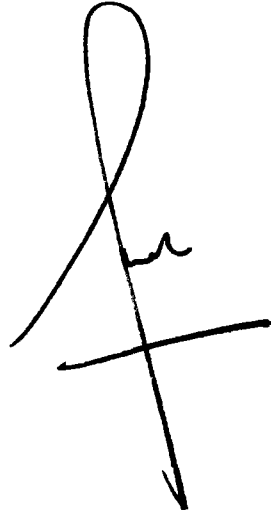
e p.c. **ING. ORSONI**  
**ING. LARCHER**

140

Ritengo che con il Sig. Burrows del Textile Fiber Department della Du Pont che sarà qui il 3 aprile, sia opportuno essere molto gentili ma al tempo stesso molto riservati per quanto concerne i nostri sviluppi in potenza. Potremo invece far constatare al Sig. Burrows i progressi realizzati nella fibra polipropilenica.

Cordiali saluti.

*Marshall*



*Carbelle  
DuPont*

Feb.15, 1962

our ref.60/1v

Mr.Lawton A.Burrows,  
Asst. General Director,  
Technical Divisions,  
E.I.DuPont de Nemours & Co. =  
Wilmington 98, Delaware (USA)

Dear Doctor Burrows:

Thank you for your kind letter of Jan.29.  
I do hope to be in Milan on April 3, when you have scheduled  
to come here. In this case, Rosita and I will be very glad  
to invite you for lunch or for dinner at home.

If by chance I am in Rome for university engagements,  
you will certainly meet Prof.Mazzanti. But I hope to be able to  
stay in town and meet you.

With my kindest regards

G.Natta

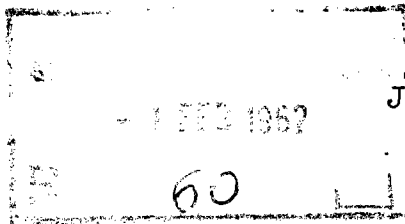


E. I. DU PONT DE NEMOURS & COMPANY

INCORPORATED

WILMINGTON 98, DELAWARE

TEXTILE FIBERS DEPARTMENT



January 29, 1962

Professor G. Natta  
Istituto di Chimica Industriale del Politecnico  
Piazza Leonardo da Vinci, 32  
Milan, Italy

Dear Professor Natta:

I hope that you have fully recovered from your operation and are back at work enjoying your research as always. If you will have some time to spare, I should appreciate an opportunity to stop by and chat with you for a short time some time during the day, Tuesday, April 3. If you will not be available, perhaps I can stop in to see Dr. Mazzanti for an hour or so.

Since I am in the process of firming up my schedule, I should appreciate it very much if you could let me know by air mail whether this date will be acceptable.

With kindest regards to you and Rosita.

Sincerely,

Lawton A. Burrows  
Asst. General Director  
Technical Divisions

LAB/rp

Dr. Reinhard Schmutzler



E. I. DU PONT DE NEMOURS & COMPANY  
INCORPORATED  
WILMINGTON 98, DELAWARE

Febr. 9, 1962

EXPLOSIVES DEPARTMENT  
EXPERIMENTAL STATION

Prof. G. N a t t a

Istituto di Chimica Industriale  
del Politecnico di Milano

Milano

ITALY

*Carlo  
DuPont*

Dear Dr. Natta ,

It was a pleasure to receive a number of your most recent papers, which are of great interest and assistance for me, and I wish to express my sincere thanks for your repeated kindness.

Very sincerely yours,

*Reinhard Schmutzler*

Reinhard Schmutzler

July 4, 1961

*Carbelle  
DuPont*

Dr. Lawton A. Burrows,  
Asst. General Director  
Technical Divisions,  
E.I. DuPont de Nemours & Co.  
Wilmington 98, Delaware (USA)

our ref. 645/1v

Dear Doctor Burrows:

On behalf of Professor Natta, I thank you for your letter of June 16.

Professor Natta left Milan a few days ago, went to Paris and has undergone another operation. Therefore he will be absent from this Institute for a long period of time - possibly 2 or 3 months.

That is why, it is very unlikely that I shall be able to leave Milan; in this case, I shall have to give up attending the Montreal Symposium and visiting your laboratories, which I most regret.

Dr. Crespi will come to the U.S.A. all the same; he will attend the Gordon Conference and participate in the Montreal Symposium where he will read the short communication I should have presented.

Dr. Crespi will be very glad to visit your laboratories. Considering the dates of the lectures he will attend, he thinks he will be able to arrive at Wilmington on July 24, late morning, and stay there until midday of July 25. The exact hour of his arrival will be communicated to you by Dr. Crespi himself next week, from New York.

With Dr. Crespi, also Dr. Ibrahim Dakli, director of one of Montecatini research laboratories (Resins Dept.) will come to the U.S.A. If you agree, also Dr. Dakli would be very pleased to accompany Dr. Crespi in his visit to your laboratories. If you consider it impossible, please, let me know your mind frankly.

I sincerely regret to miss the opportunity of visiting your Wilmington laboratories and discussing the many topics of common interest with your technicians. I do hope that another opportunity arises again in the future to visit you.

Looking forward to meeting you either in the U.S. or in Europe, I send you my kindest regards.

G. Mazzanti

*Carpella  
Du Pont*

May 31, 1961

Dr. Lawton A. Burrows,  
Asst. General Director  
Technical Divisions,  
E. I. DuPont de Nemours & Co.  
Wilmington 98, Delaware (USA)

our ref. 479/lv

Dear Doctor Burrows:

Thank you very much for your kind letter of May 4, 1961.

My wife and I were very pleased to meet you in Milan, and we warmly thank you for the Lycra bathing suit, which Rosita ~~will~~ received with great pleasure.

I regret I cannot come to the U.S. in the next months. Two coworkers of mine, Prof. Mazzanti and Dr. Crespi will participate in a few Conferences and are very glad to accept your kind invitation to come to Wilmington. Their visit might be scheduled for the 24th or 25th of July.

With my kindest personal regards,

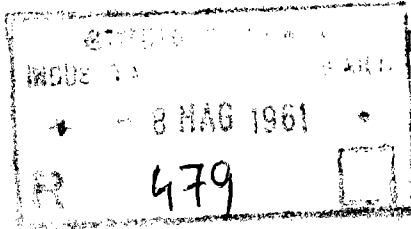
G. Natta





E. I. DU PONT DE NEMOURS & COMPANY  
INCORPORATED  
WILMINGTON 98, DELAWARE

TEXTILE FIBERS DEPARTMENT



May 4, 1961

Professor G. Natta  
Istituto di Chimica Industriale del Politecnico  
Piazza Leonardo da Vinci, 32  
Milan, Italy

Dear Professor Natta:

I want to thank you, Dr. Mazzanti and Dr. Crespi for a very interesting visit to your Institute. I also want to thank both you and Rosita for a very enjoyable dinner and evening at your home. I hope that the "Lycra"\* bathing suit gives her a great deal of pleasure.

We are looking forward to the visits of Dr. Mazzanti and Dr. Crespi if they decide to take the time to come to Wilmington. Our Pioneering Research people would be very glad to see them, and I have been advised that some of the research people in our Polychemicals Department and in our Elastomer Chemicals Department would also like to have an hour or two with them.

Sincerely,

*Lawton Burrows*

Lawton A. Burrows  
Asst. General Director  
Technical Divisions

LAB/rp

\* Trademark for Du Pont's spandex fiber.

Feb. 24, 1961

Dr. Lawton A. Burrows,  
E. I. Du Pont de Nemours & Co.  
Wilmington 98, Delaware (USA)

*Cordell  
Du Pont*

our ref. 129/lv

Dear Doctor Burrows:

With regard to your letter of Feb. 16, 1961, I inform you that I will do what I can to be in Milan on March 23, when you have planned to be here. In this case, I shall be very glad to invite you to lunch or to dinner at home.

Please, ring me up as soon as you arrive in Milan, either at home (telephone number: 486,308) or, during the office hours, at the Polytechnic (tel. Nos. 292,105 - 292,106) asking, if I am not there, for my secretary.

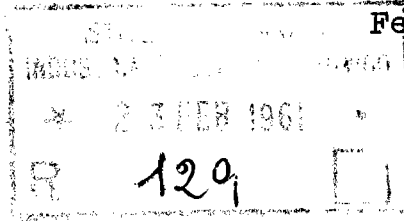
Hoping to meet you soon, I send you my kindest regards.

G. Natta



E. I. DU PONT DE NEMOURS & COMPANY  
INCORPORATED  
WILMINGTON 98, DELAWARE

TEXTILE FIBERS DEPARTMENT



February 16, 1961

Professor G. Natta  
Istituto di Chimica Industriale del Politecnico  
Piazza Leonardo da Vinci, 32  
Milan, Italy

Dear Professor Natta:

Thank you very much for your kind letter of January 31. I shall plan to go to your Institute after lunch on March 23 and ask for you or your assistant if you are not there.

I am looking forward to seeing you again.

Sincerely,

Lawton A. Burrows  
Asst. General Director  
Technical Divisions

LAB/rp

*Cartella  
Dupont*

January 31st, 1961

Dr. A. von Bézard  
DUPONT de Nemours & Co.  
Wilmington 98, Delaware  
(USA) *fine/m*

our reg. /72/eg

Dear Doctor von Bézard,

I wish to thank you very much for  
the volume VIII of the Contributions to the Scientific Literature  
Nos. 508-599 of your Central Research Dept.

It arrived here yesterday and was  
much appreciated.

Kindest regards

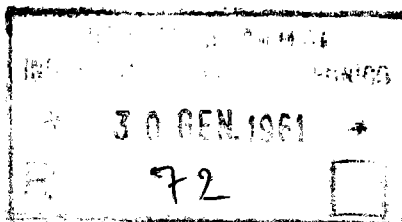
G.Natta



ESTABLISHED 1802

E. I. DU PONT DE NEMOURS & COMPANY  
INCORPORATED  
WILMINGTON 98, DELAWARE

CENTRAL RESEARCH DEPARTMENT  
EUROPEAN OFFICE



30, RUE DE VERMONT  
GENEVA, SWITZERLAND

27 January 1961

Prof. Dr. G. Natta  
Istituto di Chimica Industriale  
del Politecnico  
Piazza Leonardo da Vinci, 32  
Milan

Dear Professor Natta,

As promised last year I send you today the recently edited volume VIII of the Contributions to the Scientific Literature Nos. 508-599 of our Central Research Department for the library of your institute.

With my best personal regards,

very sincerely yours,

Dr. A. von Bézard  
European Scientific Associate

*W. H. ...*

*5-07A*

January 31<sup>st</sup>, 1961

*Carletta  
Dupont*

ur ref.83/eg

Dr.L.A.Burrows  
Asst.General Director  
E.I.DUPONT de Nemours & Co.  
Wilmington 98, Delaware  
(USA)

Dear Doctor Burrows,

Thank you for your letter of January 26,  
and for the kind wishes you and Jane addressad to my daughter  
and my son-in-law.

I shall be glad to meet you on March 23  
afternoon. If, by chance, I am out of town on that day, I  
shall charge some co-workers of mine to have a talk with you.  
Prof.Corradini will not be available since he has been appoint-  
ed Professor at the University of Cagliari.

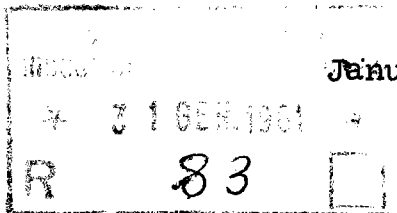
Rosita regrets that Jane is not going to  
come with you this year, and hopes to hear from her soon. She  
joins me in sending you and Jane our kindest regards.

G.Natta



E. I. DU PONT DE NEMOURS & COMPANY  
INCORPORATED  
WILMINGTON 98, DELAWARE

TEXTILE FIBERS DEPARTMENT



Prof. Dr. G. Natta  
Istituto di Chimica Industriale del Politecnico  
Piazza Leonardo da Vinci, 32  
Milan, Italy

Dear Professor Natta:

During the course of a forthcoming trip to Europe, I plan to be in Milan March 23. If you will have an hour or two available, I should like to have an opportunity to renew acquaintances the afternoon of that day and to talk with you briefly about any new developments you are free to discuss. If you will not be available, perhaps I can have a brief meeting with your assistant, whose name, I believe, is Dr. Corridini.

Since my time is limited, and I am anxious to firm up my schedule, an air mail reply to this letter would be appreciated.

Jane and I send best wishes for the happiness of your daughter and your new son-in-law. Since Jane is not coming with me this year, she plans to write to Rosita soon. Please give our regards to Rosita.

Sincerely,

Lawton A. Burrows  
Asst. General Director  
Technical Divisions

LAB/rp

*Cartella  
Du Pont*

Jan. 19, 1960

Dr. R. W. Saville, Research Chemist  
Du Pont Co. (U.K.) Ltd.,  
P.O. Box 15,  
Londonderry (Nord Irlanda)

cc. Mr. J. Thomas, Reader Service Dept  
Rubber and Plastics Age,  
Gaywood House,  
Great Peter Street,  
London S.W. 1 (Inghilterra)

Dear Doctor Saville,

Rubber and Plastics Age have communicated me  
that you are interested in the paper "Ketone-Ketene Polymers".

As soon as the reprints of that paper are avail-  
able, I shall send you a copy of it and of other papers we  
shall publish in the future.

Sincerely yours,

G. Natta

*inviare a  
Saville il 4.2.61  
M. 495*

4



# RUBBER & PLASTICS AGE

(Incorporating: Rubber Age & Synthetics Proprietors: Rubber & Technical Press Ltd.)

THE MONTHLY JOURNAL OF THE RUBBER AND PLASTICS INDUSTRY

GAYWOOD HOUSE, GREAT PETER STREET LONDON, S.W.1, ENGLAND

OUR REF.: Dec.5.

11th January, 1961.

**Professor Giulio Natta,  
Istituto di Chimica Industriale del  
Politecnico,  
Piazza Leonardo da Vinci 32,  
Milano,  
ITALY.**

Dear Sir,

The reference to your product on page 1553 of the December, 1960, issue of *Rubber and Plastics Age* has led to requests for further information from the companies listed below. We would respectfully suggest that their requests receive your earliest attention and trust that the enquires will result in firm orders in due course.

Yours faithfully,

*Jean Thomas*  
JEAN THOMAS, G.M.

Reader Service Department

Enquiry No.	Company	Action* Requested
1	Dr. R.W. Saville, Research Chemist, Du Pont Co. (U.K.) Ltd., P.O. Box 15, Londonderry, <u>N. IRELAND.</u>	A

\*A: Further Information.  
B: Technical Data Sheets.

C: Prices.  
D: Visit from Representative.

Castello  
Du Pont

Jan. 18, 1961

Dr. F.W. Billmeyer, Jr., Res. Associate  
Polychemicals Dept.  
Research and Development Division,  
E.I. DuPont de Nemours & Co.  
Wilmington 98, Delaware (USA)

our ref. 27/1v

Dear Doctor Billmeyer:

With regard to your letter of Jan 4, I am glad to give you my permission to use the figures appeared in the Journal of Polymer Science: i.e.

from J.P.S. 20 251 (1956); fig. 12, p. 265.

from J.P.S. 39 29 (1959); fig. 2.

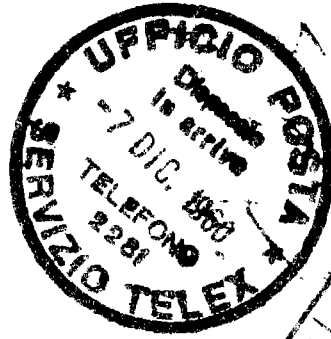
from J.P.S. 43 289 (1960); figs. 7-9.

With my best regards,

G. Natta

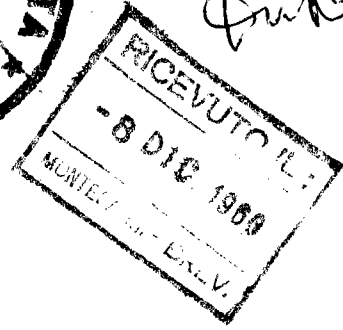
P.S. You should, however, quote the author and the original publication of each figure.

NE HO UNO IO POSSO?



*Carlihe  
Dunhaut*

TELEX 645 DECEMBER 7, 1960



GABBROBREV ING DEVARDA

LETTO AL TELEFONO AI SIGNORI BURCK ET PLUMLEY DI DELPONTE

TESTO DILEI TELEX 165 STOP INTERESSATI PRESONE NOTA

SENZA ENTUSIASMO STOP PREGOLA ISTRUIRMI SE DESIDERATE

CHE COMUNICAZIONE VENGA CONFERMATA PER ISCRITTO ET IN TAL

CASO SE PROVVEDETE VOI COME CREDIAMO PIU

OPPORTUNO TRATTANDOSI DI RISCONTRARE CORRISPONDENZA

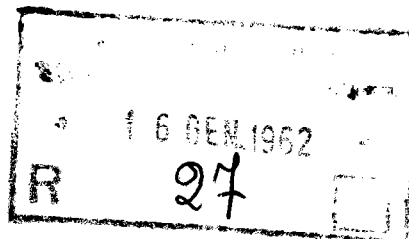
DELPONTE A VOI INDIRIZZATA OPPURE SE DOBBIAMO PROVVEDERE NOI

LUCINI



E. I. DU PONT DE NEMOURS & COMPANY  
INCORPORATED  
WILMINGTON 98, DELAWARE

POLYCHEMICALS DEPARTMENT  
RESEARCH AND DEVELOPMENT DIVISION  
EXPERIMENTAL STATION



AIR MAIL

January 4, 1962

Professor G. Natta  
Institute for Industrial  
Chemistry  
The Polytechnic University  
Milan, ITALY

Dear Professor Natta:

I will very much appreciate your permission  
to use the following Figures from your papers in my revised  
"Textbook of Polymer Science", to be published in 1962 by  
Interscience Publishers:

From J. Polymer Sci. 20 251 (1956), Fig. 12,  
p. 265.

From J. Polymer Sci. 39 29 (1959), Fig. 2.

From J. Polymer Sci. 43 289 (1960), Figures 7-9.

Thank you very much for your assistance.

Very truly yours,

*F. W. Billmeyer, Jr.*

F. W. Billmeyer, Jr.  
Research Associate  
Polychemicals Department  
Research and Development Division

sas

*d. w. m. c. c. c. c.*

December 12, 1960

Mr. Robert E. Burk  
Associate Director  
Research & Development Division  
E. I. du Pont de Nemours & Co.  
Polychemicals Department  
WILMINGTON 98, DELAWARE  
(U.S.A.)

*Carfella  
du Pont*

Dear Mr. Burk,

I thank you for your letter of December 2. Our reply to the latest communication of your Company in the matter of polybutene-1 was delayed pending consideration by the interested parties of the various issues involved. As Mr. Lucini told you over the phone the other day, the result of this very careful consideration was that at the present stage no sufficient evidence exists that an agreement along the lines last proposed would be desirable to our Company and that it would therefore seem preferable to proceed with the interference.

Developments will, however, be watched carefully, and should we at some later stage find that different orientation on our part is warranted, we will gladly reexamine the situation to see whether brighter prospects for renewed negotiations in view of a mutually satisfactory agreement will exist.

Prof. Matta underwent an operation last month and he is now convalescing in San Remo; some beneficial effects of the operation are noted.

With best regards,

Yours sincerely,

(Giuseppe de Varda)

original by air mail  
CC: by air mail two days later

December 12, 1960

Mr. A. McAlvey  
Patents & Contracts Division  
du Pont de Nemours & Co.  
Polychemicals Department  
WILMINGTON 98, DELAWARE  
(U.S.A.)

Dear Mr. McAlvey:

We regret that our answer to your letter of October 31, 1960, summarizing the information conveyed by Mr. Plumley to Mr. Lucini on October 28, 1960, was delayed for such a long time.

As Mr. Lucini told the other day over the phone to Mr. Plumley, we are now, after very careful consideration, come to the conclusion that it would seem preferable to us to go ahead further in the Patent Office following the official procedure.

This, however, does not exclude, in our opinion, that at some later stage, should developments point to an improved chance for a mutually satisfactory agreement, negotiations may be resumed.

Yours very truly,

"MONTECATINI"

original by air mail  
CC: by air mail two days later

*Castella  
Support*

6/12/60

2612 NY CHEMORRE PER LUCINI

PREGHIAMOLA COMUNICARE BURK RESEARCH DIVISION AND MCALEVY  
PATENT DIVISION THAT MONTECATINI HAVE VERY CAREFULLY  
CONSIDERED DU PONT'S COMMUNICATIONS OF OCTOBER 31 AND  
DECEMBER 2 ON POLYBUTENE AND HAVE COME TO THE DECISION  
TO GO AHEAD FURTHER IN THE PATENT OFFICE FOLLOWING THE  
OFFICIAL PROCEDURE STOP POSSIBLY THE SITUATION MAY BE  
REEXAMINED AT A LATER STAGE TO SEE WHETHER A BETTER  
CHANCE FOR A MUTUALLY SATISFACTORY AGREEMENT WILL  
EXIST REGARDS

DEVARDA

BREV/DIRE

2226

Nov. 7, 1960

Dr. A. von Bézard,  
E.I. du Pont de Nemours & Co.  
Central Research Dept.  
30, rue de Vermont  
Geneva - (Svizzera)

NR ref. 974/lv

Dear Doctor von Bézard,

Thank you for your letter of October 28,  
and for the volume containing the scientific literature published during the period January 1, 1958 through May 31, 1959 by the Central Research Dept. of E.I. du Pont de Nemours & Co., which arrived here safely a few days ago.

I appreciated your gift very much and I hope you will send us the forthcoming volumes.

With my best regards,

G. Natta



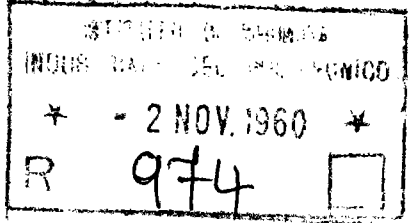


ESTABLISHED 1802

E. I. DU PONT DE NEMOURS & COMPANY  
INCORPORATED  
WILMINGTON 98, DELAWARE

CENTRAL RESEARCH DEPARTMENT  
EUROPEAN OFFICE

*Signature*  
*20*



30, RUE DE VERMONT  
GENEVA, SWITZERLAND

28 October 1960

Prof. Dr. G. Natta  
Istituto di Chimica Industriale  
del Politecnico  
Piazza Leonardo da Vinci, 32  
Milan, Italy

Dear Professor Natta,

Dr. H.M. Hubbard and myself were very sorry to hear during our visit to your institute that you were unable to come and see us. However, I can assure you that we enjoyed the very nice reception and fruitful discussion we had with Prof. Ercoli and Prof. Corradini, for which we want to thank you.

The purpose of my letter is to inform you that I will send you under separate cover the 7th volume of a series of contributions to the scientific literature originating in the laboratories of the Central Research Department of E.I. du Pont de Nemours & Co.

As you probably know, the Central Research Department is exclusively concerned with fundamental research in the field of organic, inorganic, physical, analytical and biochemical chemistry and with physics. This volume contains the contributions No. 427 to 507 published during the period January 1, 1958 through May 31, 1959.

We believe that these volumes which are edited periodically, can be a valuable contribution to the libraries of selected universities. If you agree and wish so, we will send you in the future automatically the forthcoming volumes. I would appreciate to hear from you if you are interested.

./.

With my best wishes for your health and my best regards  
to you and your coworkers Prof. Ercoli and Prof. Corradini,  
I remain

very sincerely yours,



Dr. A. von Bézard

# MONTECATINI

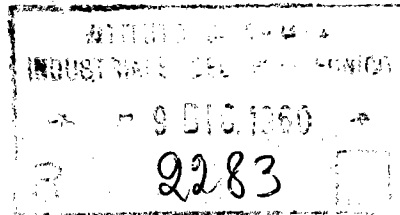
SERVIZIO BREVETTI

CV/ma

5 Dicembre, 1960

Sig.  
Ing. Piero GIUSTINIANI  
Sede

• P.C. Ing. ORSONI  
Prof. NATTA



*Carbelle  
du Pont*

**Oggetto: Proposta du Pont sistemare interference polibutene**

Allego lettera sollecite della du Pont circa una nostra decisione in merito alla interference polibutene.

Data limite: il 14 n.e.

Tutte sommate, viste le controposte du Pont del 21/10 e il parere nettamente contrario non solo della Peake ma anche dei professori, saremmo dell'avviso, se Ella è d'accordo, di rispondere a du Pont quanto segue:

"Re: Polibutene

"Abbiamo molto attentamente vagliate le Vs. contro-  
"proposte del 21 ottobre. Siamo però venuti alla con-  
"clusione che i nostri punti di vista sono troppo di-  
"versi l'uno dall'altro per poter arrivare a una con-  
"clusione di comune soddisfazione. Riteniamo perciò che  
"si debba procedere con il normale procedimento di in-  
"terference."

Con ossequio.

all/  
Lettera du Pont del 2/12/60.



**E. I. DU PONT DE NEMOURS & COMPANY**  
INCORPORATED  
WILMINGTON 98, DELAWARE

POLYCHEMICALS DEPARTMENT

December 2, 1960

**Dr. Giuseppe De Varda**  
Technical Director Soc. Montecatini  
Via Curati 18  
Milan, Italy

**Dear Dr. De Varda:**

On returning home from my rather lengthy trip I was informed of, and have been kept informed of, various steps in the polybutene-1 matter. However, on inquiring yesterday, I learned that Du Pont's latest communication has had no reply from Montecatini so that we do not know what your present attitude is. I learned also that our attorneys are not contemplating asking for another extension of time, i. e., beyond December 14, 1960.

I know nothing which has changed the background information which caused me to initiate this negotiation and I do hope that it can be consummated before it is too late.

I was very concerned about Professor Natta's health and do hope that it is not continuing to deteriorate.

With best personal regards,

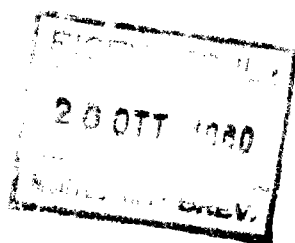
Sincerely yours,

*Robert E. Burk*

**Robert E. Burk**  
Associate Director  
Research & Development Division

REB/ba

*Castelli*



TELEX 494 OCTOBER 28, 1960

GABBORREV ING DEVARDA

PLIMLEY CONFIRMAMI CHE PONTE EST FAVOREVOLE SETTLING INTERFERENCE

PER RISPARMIARE TEMPO ET DENARO PERO NON PUOTE ACCETTARE

PROPOSTA DALEI TELEXATAMI 874 PERTANTO LE SCRIVERA INIZIO

SETTIMANA VENTURA SCOPO COMMENTARLE SEGUENTE LORO CONTRO-

PROPOSTA QUOTE PRIMO AN EXCHANGE OF EVIDENCES BY THE PARTIES AS TO THE QUESTION OF PRIORITY. THIS WOULD BE THE

EVIDENCES THE PARTIES WOULD RELY ON.

SECONDO THE PARTIES WOULD AGREE THAT THEY WOULD AGREE AS

28/10/60

2612 NY CHEMORE PER LUCINI

Suo 494 Pregola chiarire con Ponte se non exclusive li-  
sense to the other party without right to sub-license  
include oltre alla party itself anche il concetto  
or one substitute Stop  
Pregola inoltre comunicare Darby controproposta Ponte  
Saluti

DEVARDA

de VARDA Ing. Giuseppe BREV/DIRE

**MONTECATINI**

**RISERVATA**

zi

Società Generale per l'Industria Mineraria e Chimica

AMMINISTRATORE DELEGATO

ISTITUTO DI CHIMIE		Date
INDUSTRIALE POLITECNICO		24 gennaio 1959
* 26 GEN. 1959 *		
R	99	2074

**PROMEMORIA**

*Carbello  
Du Pont*

G/ab

per il ~~segretario~~

**SEPS**

**BREV**

→ **PROF. NATTA**

**Vi trasmetto copia di telegramma del Sig.**

**Lacini.**

**Nell'attesa della fissazione della data della visita dei Signori della Du Pont, sarà opportuno fare il punto di quanto sia possibile comunicare ai rappresentanti della Società sotto l'aspetto tecnico secondo quanto è indicato nel telegramma.**

**Ritornarò sull'argomento in una prossima riunione che mi propongo di convocare.**

**Cordiali saluti.**



Allegato



MONTECATINI  
Società Generale per l'Industria Mineraria e Chimica

Brevetti e Documentazione Tecnica

RP/ma

PROMEMORIA

*Aut. du Pont*

16 Febr. 1959

*rip*

per il Signor Prof. Giulio NATTA

e p.c. Prof. MAZZANTI

"Early disclosures" du Pont su poliolefine

Alleghiamo alla presente un prospetto delle "early disclosures" du Pont sulle poliolefine, preparato in vista della prossima visita dei signori di detta Società, con preghiera di esaminarlo e farci conoscere le Sue eventuali osservazioni ed aggiunte.

Completeremo al più presto detto prospetto con una tabella elencante le date di disclosure dei diversi prodotti.

PregandoLa di gradire i nostri migliori saluti.

"B E V"

*[Handwritten signature]*

all/



du Pont de Nemours

Possibili interferenze e dominazioni nel campo poliolefine -

A) Processi di omo-polimerizzazione di singole alfa-olefine

1) Polimerizzazione non stereospecifica

d) Senza frazionamento dei polimeri grezzi

Questo tipo di processo è coperto da una serie di domande depositate in U.S.A. fra il 16 Agosto 1954 e il Novembre dello stesso anno.

La polimerizzazione del propilene (sola alfa-olefina descritta il 16/8/54) "~~using a dry~~ solid catalyst" (preparato per reazione di  $ZrCl_4$  con bromuro di fenil-magnesio in cicloesano, filtrazione del precipitato, essiccamento e "storage" in azoto, sino al momento dell'uso, che avviene senza aggiunta di altro metallo alchile) è descritta nel S.N. 450,268 del 16 Agosto 1954, con produzione solo di tracce di polimero (non descritto). Questa domanda rivendica:

1. A composition of matter, suitable for use in the polymerization of ethylenically unsaturated compounds which composition comprises a zirconium compound containing zirconium in a valence state of 2 and an aliphatic ethylenically uncaturred compound,

Successivamente, nella domanda 451,064 del 19 Agosto 1954, viene descritta la polimerizzazione del propilene con catalizzatore non separato ottenuto da  $TiCl_4$  e  $LiAl$ (Alchile); i polimeri vengono descritti come "of linear structure ... and generally partially crystalline". Si insiste sull'assenza di "free radical polymers" specie se il catalizzatore è isolato "in solid form and stored in oxygen-free atmosphere, prior to use, rather than forming it in situ". In questa domanda si rivendica a "normally solid linear polypropylene ... being the polymer obtained by polymerization of propylene in the presence of a catalyst comprising divalent titanium, said catalyst comprising the mixture obtained by reducing a titanium compound having titanium at a valence greater than two with a reducing agent in which there is a hydrocarbon radical directly attached to a metal atom".

N.S. = numero 2011  
di domande del brevetto

A "limp, rubbery polypropylene" (paragonabile ai ns. peggiori grezzi) è descritto nella domanda 455,357 del 10 Sett,1954, come preparato con un catalizzatore da  $VCl_4$  e  $Li Al Bt_4$  in cicloesano. Le rivendicazioni di questa domanda sono analoghe a quelle della domanda 450,268 del 16 Agosto.

La possibilità di polimerizzare altri idrocarburi "having terminal methylene groups" (cioè alfa-olefine) "such as butene-1, styrene, ecc." è accennata nella domanda 459,547 del 30 Sett,1954 dove si opera con  $TiCl_2$  da solo o con  $TiCl_2 + AlCl_3$  (senza composti metallorganici) esemplificando solo etilene.

β) con frazionamento del polimero grezzo

Questo è descritto per la prima volta nella domanda 517,358 del 21 Gennaio 1955 che si riferisce a "propylene polymers and more particularly to solid crystalline homopolymers of propylene".

Si parla di una "mixture of two high molecular weight polymers of propylene which are believed to differ significantly in their structure". Si distingue un "amorphous" e un "crystalline" polypropylene.

La polimerizzazione avviene con  $TiCl_4$  e  $Li Al Bt_4$  in cicloesano, il polimero grezzo coagulato con metanolo<sup>4</sup> (cristallinità del grezzo 15-20%) trattato poi a ricadere con toluolo, la dispersione ottenuta raffreddata a temperatura ambiente e filtrata, recuperando sul filtro il polimero cristallino (> 30% cristallinità) e coagulando dal filtrato l'amorfo (contenente secondo du Pont da 0 a 5% di cristallinità). Non può essere "essentially" atattico. Ⓞ  
Le rivendicazioni comprendono:

- $d = 0,915$   
 $F_1 = 165$
- 1) A normally solid homopolymer of propylene ..... having a crystallinity essentially triclinic in structure of greater than 30% as measured by X-ray diffraction and being essentially insoluble in organic solvents at 25°C.
  - 4) The process which comprises extraction with an inert hydroxyl-free solvent a polymerization product consisting of normally solid polypropylene, whereby a residue of polypropylene which is more crystalline than the initial polypropylene is obtained.

Una prova di estraz. è in corso per stabilire esattamente la natura delle due frazioni così ottenute. Si presume che il polimero disciolto contenga un po' di blocchi e che il residuo insolubile sia "prevailingly isotactic".

- 8) Crystalline polypropylene in fiber form .....
- 9) " " " in film form .....

Nel testo si parla del "so-called amorphous organic-solvent soluble polypropylene" come di un "elastomer" (non rivendicato nel priority document).

## 2) Polimerizzazione stereospecifica

"A process for preparing solid crystalline homopolymers of propylene" è descritto nella domanda 561,679 del 26 Gennaio 1956.

Il processo consiste nel polimerizzare il propilene con un catalizzatore formato dalla reazione di un "reduced metal halide", es.  $TiCl_3$  "with an alkylating agent having at least one metal to hydrocarbon bond". Si suppone che quando si usa un "reduced metal halide" la reazione con l'alchile metallico non porti che ad un solo tipo di catalizzatore, mentre quando si riduce un composto come  $TiCl_4$ , si hanno due tipi di catalizzatore, uno dei quali dà polimero cristallino e l'altro polimero amorfo.

Si rivendica:

- 1) A process of preparing normally solid, crystalline polymers of propylene, which comprises polymerizing propylene in a liquid hydrocarbon medium in the presence of a catalyst, said catalyst being the reaction product of a reduced metal halide having the metal at a valence state of 3 and below 3, said metal being a transition metal of Group IV b, V B and VI b (gruppi identici ai nostri) and an organometallic compound having at least one metal - to - hydrocarbon bond, precipitating the polymer from the reaction medium and recovering a polymer having an X-ray crystallinity of 50 to 85%.

## B) Preparazione di copolimeri dell'etilene con alfa-olefine

La possibilità di ottenere "such copolymers as ethylene-propylene ethylene-butadiene and other ethylene copolymers in which the comonomer is a compound containing an ethylenic bond" è accennata già nella domanda 450,268 del 16 Agosto 1954. Tuttavia questa domanda non descrive, nè rivendica esplicitamente la preparazione di copolimeri.

La preparazione di copolimeri etilene-propilene è descritta però nella domanda 450,244 pure del 16 agosto 1954, Es. 4, dove si usa un catalizzatore da  $TiCl_4$  a  $Ph Mg Br$ : il polimero a maggiore tenore di gruppi  $-CH_3$  descritto ne contiene 3 per 100 atomi di C. (I copolimeri non sono rivendicati nella domanda originale).

Di copolimeri etilene-propilene, suitable for making films, molded articles etc. si parla anche nella domanda 451,064 del 19/8/54 su polipropilene, già citata. L'es. 1 di questa domanda è eguale all'esempio 4 della domanda 450,244 citata (del 16.8.54).

Copolimeri etilene-stirololo ed etilene-stirololi superiori sono descritti, come adatti per "molding, pressing into films or spinning into fibers or filaments" nella domanda 470,503 del 22 Nov. 1954.

La domanda 529,359 del 18 Agosto 1955, relativa alla clorosolfonazione di copolimeri specie di copolimeri  $C_2 - C_3$ , cita come materiali di partenza copolimeri preparati da miscele 1:1, 3:2 e 2:3 di etilene e propilene, con catalizzatori da  $TiCl_4$  e  $Li Al H_4$ : sono citati anche copolimeri  $C_2 - C_4$ ,  $C_3 - C_4$ ,  $C_2 - C_6$  e  $C_2 - C_3 - C_4$ . Si presume si tratti sempre di copolimeri presentanti cristallinità. (L'U.96 ns, ha priorità Dic. 1955).

La domanda 582,326 del 3 Maggio 1956 relativa a clorurazione di copolimeri, descrive la preparazione di copolimeri  $C_2 - C_3$  mediante catalizzatore da  $TiCl_4$  e  $Al AlK_3$ , partendo da rapporti nell'alimentazione 1:1. I prodotti sono presumibilmente in parte cristallini.

### C) Preparazione di copolimeri di mono-olefine con dieni

La possibilità di fare copolimeri etilene-butadiene con i catalizzatori descritti è già indicata nella domanda 450,243 del 16 Agosto 1954, già citata: nell'es. 5 si copolimerizza etilene con butadiene su catalizzatore da  $TiCl_4$  e  $Ph Mg Br$  (separato come solido dal cicloesano in cui è stato preparato). Il copolimero è detto contenere circa 10% di butadiene ed essere adatto per film (copolimeri etilene-butadiene sono indicati come già noti da U.S. 2,391,095 e 2,200,429).

La domanda 462,608 del 15 Ott. 1954 è specifica su copolimeri etilene-butadiene, preparati con catalizzatore da  $TiCl_4$  e  $Ph Mg Br$  oppure  $Li Al H_4$  o  $Li Al Bu_4$ : copolimeri adatti per film.

Copolimeri dell'etilene con isoprene sono descritti anche nella domanda 470,505 del 22 Nov. 1954.

mai

La natura copolimerica dei prodotti non è/dimostrata.

Non risulterebbe descritta in domande 1954-1955 della du Pont la preparazione di copolimeri di alfa-olefine superiori con dieni.

La ns. domanda U.73b su copolimeri (?) mono-olefine con dieni (butadiene, pentadiene 1-3, esadiene 1,5 (diallile) con butene e pentene) risale al 18/3/55.

D) Polimerizzazione diolefine

La <sup>preparazione</sup> ~~polimerizzazione~~ di omopolimeri di diolefine con catalizzatori di "coordinazione" è descritta in domande del Novembre-Dicembre 1954:

470,501 - Si riferisce alla polimerizzazione di dieni non (22 Nov. 1954) coniugati (1,5 esadiene in particolare)

470,504 - Si riferisce alla polimerizzazione del propadiene (22 Nov. 1954) (allene)  $\text{CH}_2=\text{C}=\text{CH}_2$  con catalizzatori da p.es.  $\text{TiCl}_4$  e composti contenenti legami metallo carbonio.  
Al polimero si attribuisce struttura 1,2.  
Si rivendica prodotto "normally solid, linear polypropadiene", processo e applicazione come fibra e filo.  
(noi non abbiamo brevetti su questo diene).

470,505 - Si riferisce alla polimerizzazione di dieni coniugati, specie isoprene, butadiene, cloroprene (anche copolimeri etilene-isoprene e etilene-cloroprene). Sulla struttura dei polimeri non si dice molto; per il polibutadiene si parla di presenza di polimero 1,2 e 1;4.

(Il ns. primo brevetto sulle diolefine 1,4 è del 12/3/55 - U.78).

472,736 - Si riferisce alla polimerizzazione dell'isoprene e (2 Dic. 1954) polimero sost. tutto 1,4-cis (come la gomma naturale) con catalizzatori da  $\text{TiCl}_4$  ecc. e alchili di alluminio. E' rivendicato processo e prodotto in cui "each of the isoprene units is a unit produced by 1,4 addition polymerization" e "A synthetic polyisoprene rubber having an all cis-1,4, head-to-tail structure".

Jup de Vardes  
 Sir Prof. G. ...

MOD. UGEN 82 - 80.000 - 12'57 - GG

RECEIVED  
 MAR 10 1950

MAR March 7th, 1950  
 2081

Cartella  
 Du Pont

Mr. H.A. TOULMIN, Jr.  
 Pennsylvania Building  
 WASHINGTON 4, D.C.  
 (U.S.A.)

Our ref. 103/47

Dear Col. Toulmin,

Conversations with du Pont people in Milan

With reference to your cable of the 3rd inst., we shall endeavour to give you hereunder the information which may be useful for your guidance in the forthcoming interference cases:

- 1) Du Pont's original proposal was for a reciprocal insurance (cross licence) at royalty rates equal for both parties, under the count at present in interference. They suggested, however, that neither party should assert against the other party or the other party's licensees any granted claim of its own which might be dominated by the count. In this way we would be bound not to assert against du Pont or its licensees any of the product claims on the stereospecific structures (f.i. on prevailing isotactic polypropylenes) which we trust will be granted to us even in case we lose the count. This proposal we rejected;
- 2) Since du Pont was hinting at some possible general cross-licensing agreement at royalty rates equal for both parties, we suggested that it would be convenient to explore this possibility, evaluating first the respective patent position as a whole, without any disclosure of still secret applications, but on the basis only of what has been published or patented abroad. Du Pont refused this proposal;
- 3) The only ground on which we agreed it would be possible to find an understanding for the time being was that of a cross licence, strictly limited to the claim, if any, which might be granted to the winning party, with exactly the same wording as the present count in interference. The licensee (losing party) would be free to sublicense under said claim its licensees under

its own patent rights on organo-metallic catalysis. Du Pont wanted to keep the cross-royalty ceiling high (up to a maximum of 3%) on the ground that it should be possible (without undue discrimination) to have those firms which do not employ organo-metallic catalysts (Phillips, Standard of Indiana) to pay more than said cross-royalty rate.

The sublicensees of the losing party would have been entitled to deduct up to 50% of said cross royalty if they were to pay additional royalties on dominating claims owned by any third party in the polypropylene field.

We have proposed on the contrary to keep the cross royalty rate as low as possible (a straight 1%), the winning party being obviously free to license third parties which are not licensed under any other process or product of the parties (that is Montecatini and/or du Pont) in this field, at the terms they wish.

- 4) The du Pont representatives were rather "cocky" as to the technical accomplishments and the position of their Company. They claimed that du Pont is working in the field of polypropylene "since 1951 or 1952" or even earlier; that we may not have the feeling of what they have done, as a consequence of a policy adopted by du Pont around those years to severely restrict publication of the results of their research; that their scientists have identified a polymer which they called "polymer x", corresponding to what we call "isotactic".

They have stated that they expect they will prevail in the current interference over Phillips, Standard of Indiana, and also over Montecatini. They reckon that the interference might take from 5 to 10 years to be settled; that's why they wish to find a way out with Montecatini, in order to start operating as soon as possible.

The du Pont people went on to say: "We have analyzed the material we first made and the material disclosed in your application, and they are the same. You may call it isotactic or whatever you want, but they are the same".

We have pointed out that Prof. Natta was the first to identify, isolate and produce directly polypropylenes having certain stereospecific structures; and that du Pont had published similar results at a very late date and then in a way scientifically not fully correct and rather incomplete from the technical point of view.

+ and no deduction

They wanted then to specify that du Pont's technical people "believe they have recognized" in their first reduction to practice a polymer of the type which Montecatini calls isotactic. "We are afraid" they have added "that you are misled by failing to hear or read about what we did".

We have not failed to remark that the du Pont patent which we know do not disclose anything of that sort: they may have isolated "polymer x" but they have most probably not recognized its true characteristics; or if they did, they have not shown "due diligence".

The du Pont people limited themselves to a denial of such assumption of ours and said: "We will be greatly surprised if during the next year or two we (meaning both du Pont and Montecatini) are not involved also in other interferences, and we are sure we will be in interference on polymer x, and on the process, and on catalysts. And then you will be surprised at our dates". We did not admit nor deny any dates, but stressed the point that it seems to be not so much a question of "when" but a question of "what" had been invented or discovered at a given time.

- 5) The du Pont representatives, at the end of their visit, have also been shown a choice of samples of plastic and textile articles.

Very truly yours,

"MONTECATINI"

original by air mail  
CC: by air mail 2 days later



Data, 6 Marzo 1959

PROMEMORIA

dV/gl

per il Signor Prof. NATTA

**URGENTE**

Le sottopongo bozza della lettera che invierei a Toulmin per comunicargli quei risultati emersi dalle conversazioni avute con Du Pont che gli possono essere utili nelle prossime interferenze.

La prego di gradire i miei migliori saluti.



All.

PERSONAL - CONFIDENTIAL

Mr. H.A. TOULMIN  
Pennsylvania Building  
WASHINGTON 4, D.C.

Our ref. 108/47 - dV/AM/g1

Dear Col. Toulmin:

Conversations with Du Pont people in Milan

With reference to your cable of the 3rd inst., we shall endeavour to give you hereunder the information which may be useful for your guidance in the forthcoming interference cases:

- (1) Du Pont's original proposal was for a reciprocal insurance (cross licence) at royalty rates equal for both parties, under the count at present in interference. They suggested, however, that neither party should assert against the other party or the other party's licensees any granted claim of its own which might be dominated by the count. In this way we would be bound not to assert against Du Pont or its licensees any of the product claims on the stereospecific structures (f.i. on prevailingly isotactic polypropylenes) which we trust will be granted to us even in case we lose the count. This proposal we rejected;
- (2) Since Du Pont was hinting at some possible general cross-licensing agreement at royalty rates equal for both parties, we suggested that it would be convenient to explore this possibility, evaluating first the respective patent positions as a whole, without any disclosure of still secret applications, but on the basis only of what has been published or patented abroad. Du Pont refused this proposal;
- (3) The only ground on which we agreed it would be possible to find an understanding for the time being was that of a cross-licence, strictly limited to the claim, if any, which might be granted to one of the parties, with exactly the same wording of the present count in interference. The licensee would be free to sublicense third parties. Du Pont wanted to keep the royalty ceiling high (up to a maximum of 3%)

./.

on the ground that it should be possible to have those firms which do not employ organometallic catalysts (Phillips, Standard of Indiana) to pay more. The licensees of the parties would have been entitled to deduct up to 50% (fifty percent) of said royalties if they were to pay additional royalties on dominating claims owned by third parties. We have proposed on the contrary to keep the royalty as low as possible (a straight 1%), the parties being obviously free to license third parties which are not licensed under any other process or product of the parties in this field, at the terms they wish.

- (4) The Du Pont representatives were rather "cocky" as to the technical accomplishments and the position of their Company. They claimed that Du Pont is working in the field of polypropylene "since 1951 or 1952" or even earlier; that we may not have the feeling of what they have done, as a consequence of a policy adopted by Du Pont around those years to severely restrict publication of the results of their research; that their scientists have identified a polymer which they called "polymer x", corresponding to what we call "isotactic".

They have stated that they expect they will prevail in the current interference over Phillips, Standard of Indiana, and also over Montecatini. They reckon that the interference might take from 8 to 10 years to be settled; that's why they wish to find a way out with Montecatini, in order to start operating as soon as possible.

The Du Pont people went on to say: "We have analyzed the material we first made and the material disclosed in your application, and they are the same. You may call it isotactic or whatever you want, but they are the same."

We have pointed out that Prof. Natta was the first to identify, isolate and produce directly polypropylenes having certain stereospecific structures; and that Du Pont had published similar results at a very late date and then in a way scientifically not fully correct and rather incomplete from the technical point of view.

./.

that is Montecatini and/or Du Pont

They wanted then to specify that Du Pont's technical people "believe they have recognized" in their first reduction to practice a polymer of the type which Montecatini calls isotactic. "We are afraid" they have added "that you are misled by failing to hear or read about what we did".

We have not failed to remark that the Du Pont patents which we know do not disclose anything of that sort: they may have isolated "polymer x" but they have most probably not recognized its true characteristics: or if they did, they have not shown "due diligence".

The Du Pont people limited themselves to a denial of such assumption of ours and said: "We will be greatly surprised if during the next year or two we (meaning both Du Pont and Montecatini) are not involved" also in other interferences, and we are sure we will be in interference on polymer x, and on the process, and on catalysts. And then you will be surprised at our dates". We did not admit nor deny any dates, but stressed the point that it seems to be not so much a question of "when" but a question of "what" had been invented or discovered at a given time.

- (5) The Du Pont representatives, at the end of their visit, have also been shown a choice of samples of plastic and textile articles.

Very truly yours

" M O N T E C A T I N I "

original by air mail  
copy by air mail two days later

PROF. NATTA c.p.c.

*Cartella  
outout*

G/ra

21 FEB 1959  
2065

Milano, 23 febbraio 1959

**Egregio Signor  
LUCIO LUCINI  
NEW YORK**

Mi riferisco anche alle Sue lettere n. 22 e 23.

Abbiamo avuto la gradita visita dei due esponenti della Du Pont e cioè il Signor R. C. WEIGEL - Assistant general manager Polychemicals Department - ed il Signor ALLAN R. PLUMLEY - Manager Patents & Contracts Division.

Dopo i primi assaggi abbiamo avuto subito l'impressione che il numero uno - e di gran lunga - sia il Signor Weigel: e, quel che più conta, egli stesso ci ha detto della sua attività e della sua appartenenza al Comitato Esecutivo.

Sarà bene quindi che Ella, nei Suoi ulteriori rapporti con la Du Pont per questa vicenda, si appoggi soprattutto a questo Signore.

E' stata del pari mia impressione che questi Signori siano venuti in Italia per concludere con noi un accordo della massima portata possibile.

Quali elementi notevolmente preparati alle trattative e di scuola, dirò così, educata, essi hanno cominciato molto alla larga, prendendo le mosse dall'interferenza esistente o, meglio, dal count - termine del quale ormai Ella è al corrente - che detta interferenza costituisce.

Noi, invece, avendo profondamente meditato la questione e tenendo anche conto, nei limiti del ragionevole, delle divagazioni del nostro amico Toulmin, siamo partiti da una concessione molto più limitata.

Per un po' di tempo, quindi, abbiamo condotto un'accorta schermaglia non solo perchè le due concessioni si appalesavano differenti, ma anche perchè i nostri amici, nell'impostare la cross-licence, puntavano su un tasso di redevance elevato mentre noi agivamo a tutt'uomo per riportarlo in basso.

Nel corso della discussione i Signori Weigel e Plumley ci hanno detto che nel campo che ci occupa si possono configurare, negli Stati Uniti, due campi opposti, e cioè Du Pont - Montecatini da un lato e Standard Oil of Indiana - Phillips dall' altro, soprattutto per quanto concerne i catalizzatori.

Secondo loro il gruppo vincente sarà senza dubbio quello Du Pont - Montecatini nelle eliminazioni: e nelle finali Du Pont vincerà certamente su Montecatini.

Noi abbiamo ribattuto di credere alla prima parte e di essere un po' meno creduli per quanto riflette la seconda.

Per non andare troppo per le lunghe, Le dirò che la discussione, sempre contenuta in un tono amichevole e di estrema gentilezza da ambo le parti, si è conclusa con la constatazione essere possibile, per il momento, la stipulazione di un accordo di portata limitata al count attualmente in interferenza.

I punti principali di tale accordo sono stati concordati tra le parti, pur senza stabilirne la dizione esatta, giacchè quei Signori non avevano molto tempo e noi abbiamo desiderato che essi potessero visitare Ferrara, sia pure a volo d' uccello, e raggiungere Roma per rimanere colà due giorni prima della loro partenza.

Si è cioè convenuto che noi avremmo provveduto a redigere il testo e lo avremmo fatto tenere per l' esame e l' eventuale approvazione definitiva negli Stati Uniti, a Suo mezzo.

Accluso, quindi, troverà già redatto in inglese il testo dell' accordo.

Per la migliore trattazione della vicenda e per maggiore Sua comprensione, commenterò punto per punto gli articoli:

- 1) I nostri amici volevano assolutamente che il tasso di royalty fosse il più elevato possibile e, in ultima analisi, si erano accontentati di fissare il 2% instaurando una procedura in virtù della quale Montecatini ed i suoi licenziati avrebbero finito con il pagare la metà - ed analogamente Du Pont con i suoi licenziati - mentre a quelli che, invece, avessero chiesto licenza del solo claim in questione, si sarebbe potuto applicare anche il 3%.

Noi, invece, abbiamo inserito nel testo l' uno per cento, seguendo una tesi che abbiamo sostenuto fin dall' inizio.  
 E' probabile che il punto dolente sia ancora costituito da questa divergenza di vedute. Ora a me non pare che la posizione desiderata da Du Pont cambi molto adottando la nostra soluzione. Infatti sia Montec che i suoi licenciati, quanto Du Pont ed i suoi licenciati, pagheranno sempre l' uno per cento, come Du Pont desidera : e nessuno vieta ad ognuno di noi di elevare al 3% la royalty ad uno che chiegga licenza solo per questo claim.

Sta di fatto - e questo dico a Lei riservatamente - che, avendo noi l' impressione che questo count sia :

- a) relativamente poco importante
- b) suscettibile di andare, in misura ridotta, alla Du Pont

convenga mantenere più bassa possibile la royalty : e che alla Du Pont, naturalmente, convenga il contrario.

Noi dobbiamo quindi insistere perchè venga adottata la nostra soluzione.

Per raggiungere questa finalità, tenendo al tempo stesso conto della impostazione lata che la Du Pont intende dare all' accordo, noi possiamo, a voce beninteso, aggiungere una considerazione che penso di peso notevole. Possiamo dire, cioè, che - come del resto appare al paragrafo 5 del draft - noi pensiamo che questo accordo sia il primo passo verso un' intesa più completa : e che al momento in cui passeremo ad esaminare l' estensione si potrà fissare il tasso di royalty ulteriore in modo da compensare la eventuale concessione - se diccon~~o~~ cessione si può parlare - che la Du Pont faccia nell' accettare la nostra attuale impostazione per quanto riflette la royalty.

2) Il testo è chiaro e non abbisogna di commento.

3) Si precida qui, in modo inequivocabile, che l' accordo attuale si riferisce solo al claim in interferenza e non può estendersi in alcun modo a qualunque altra concessione, anche se questa sia, per caso, in qualunque modo connessa con il claim in parola, dominata da

n. 23 al Sig. LUCINI

questo, ecc., ecc.

Si è dovuti arrivare a questa precisazione perchè da parte dei nostri amici per questo count e relativo claim si desiderava ripetere la storiella dell' allodola e del cavallo : il che vale quanto dire che essi desideravano di avere da noi una contropartita molto più vasta ed importante di quella corrispondente effettivamente al count in parola.

- 4) Questa precisazione appare necessaria in vista della famosa legge anti-trust e rispecchia i thollenti avvertimenti di Toulmin. Ella potrà dire però ai nostri amici che, per l' estetica; siamo disposti a trasferire questa precisazione in una lettera a parte. Non desideriamo però eliminare il concetto, e cioè nel reciproco interesse.
- 5) Questo, come Le dicevo più sopra, deve essere lo spunto dal quale Ella deve partire per testimoniare della buona volontà che anima la nostra Società di procedere oltre nel cammino intrapreso con la Du Pont e con la miglior salvaguardia degli interessi reciproci.

Io sono convinto, infatti, che non passerà molto tempo e noi torneremo da capo ad incontrarci per parlare, questa volta, di un nuovo "step". E ciò fornirà l' occasione per riprendere l' amichevole discussione ed arrivare all' impostazione di una nuova royalty da aggiungere a quella contemplata dall' accordo attuale ed eventualmente da corglobare in una sola.

Ritengo di averLe precisato bene i termini della questione per i Suoi colloqui con gli amici di Du Pont. Se Ella avesse qualche dubbio prima dell' incontro mi scriva o mi telepresi.

Cordiali saluti.

alleg/



Milan, February 23, 1959

- 1) The parties agree that in the event one of them is awarded a claim reading:

**"Normally solid polypropylene having a crystalline component"**

(that is a claim exactly corresponding, word by word, to the count being at present under interference No. ....), the party (hereinafter referred to as "the winning party") to which said claim (hereinafter called "the claim") has been granted will license under such claim the other party (hereinafter referred to as "the losing party"), as well as its own licensees (under other claims covering catalysts and/or processes and/or polymerizates in the field of propylene polymerization, hereinafter called "field"), at a royalty rate of 1%.

- 2) The winning party shall moreover grant, at the same royalty of 1% licenses under the claim to licensees of the losing party (licensed under patents of the losing party in the field).

- 3) All the licenses under the claim will cover only the claim itself and will not imply any license under any other claim in the field, even though said other claim is wholly or in part included in or dominated by the claim.

In other words, the winning party will by this agreement undertake

only not to assert the claim against the losing party and the licensees of the losing party, but both parties will be free to assert any other product and/or process claim which may have been granted to them in the field.

- 4) It is understood that the parties shall remain free to challenge or dispute in the courts the validity of the claims.

OPTIONAL

- 5) The parties agree that, in case any interference is declared in the future between the parties on a count covering an invention falling in the whole or in part in the field, they are willing to enter (insofar as the invention relates to the field) into agreements similar to the present one, at reasonable financial terms to be then agreed upon, with respect only to any claim, identical with the count in interference, that may be awarded to either of them.

# ITALCABLE

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TELEGRAMMA via Italcable via Italo Radio

GABBRO ING GIUSTINIANI

Soc. Montecatini  
Via Turati 18



MILANO  
(ore apertura xfd 1/2 tele)

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ET RISPETTIVI EVENTUALI COMPENSI CONSIDERANDO TUTTI POSSIBILI  
SVILUPPI +

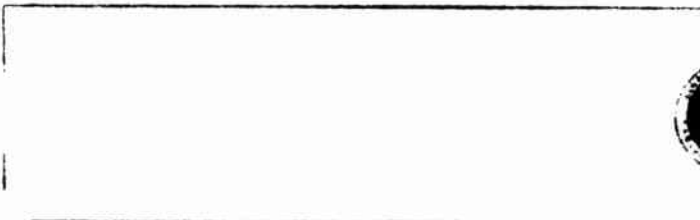
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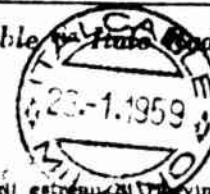
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PER LA RISPOSTA  
TELEFONATE AL N. 8838



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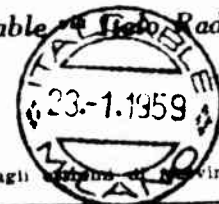
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PER LA RISPOSTA  
TELEFONATE AL N. 8838



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8/28 FEBBRAIO STOP DETTI ESPONENTI AVRANNO AUTORITA TRATTARE ET  
DEFINIRE SALVO RATIFICAZIONE COMITATO DIRETTIVO WILMINGTON ET  
DISCUTERANNO UNICAMENTE QUESTIONI BREVETTUALI STOP ALCUNI PERO  
SARANNO QUALIFICATI AVER CON VOI ANCHE CONVERSAZIONI TECNICHE  
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RIVELARE STOP +

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PER LA RISPOSTA  
TELEFONATE AL N. 8838



TELEGRAMMA via Italcable



Spazio riservato agli estranei al ricevimento

NEL CORSO DISCUSSIONI WILMINGTON FERO APPARIRE SENTIRSI SICURI  
OTTERRANNO BREVETTO COMPOSITION OF MATTER DOMINANTE QUALSIASI  
ALTRO EVENTUALE BREVETTO INQUANTO RIFERISCESI MATTER CONTENENTE  
PARTE CRISTALLINA IL CHE INCLUDERA SECONDO LORO QUALSIASI PP  
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ESSI SONO PALESEMENTE ANSIOSI RAGGIUNGERE UN ACCORDO CON  
MONTECATINI IL CHE +

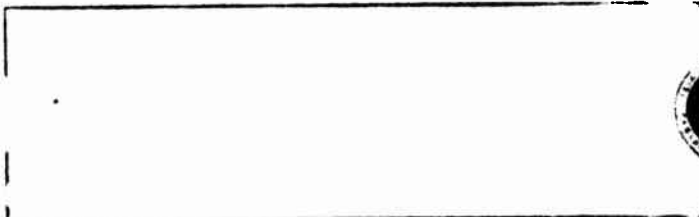
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PER LA RISPOSTA  
TELEFONATE AL N. 8838



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Spazio riservato agli  ricevimento



CONTRADDIREBBE LORO APPARENTE SICUREZZA CHE COMUNQUE CREDIAMO AVERE  
PARZIALMENTE SMONTATA MEDIANTE CONVINCENTI ARGOMENTAZIONI LUCINI  
OTTOLENGHI +

MOD. 100/MI.MLT/174 S.

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**MONTECATINI**

Società Generale per l'Industria Mineraria e Chimica

AMMINISTRATORE DELEGATO

28 gennaio 1959

Data.....

**PROMEMORIA**

G/bg

per il Signor.....

SEPS

BREV

SEID

→ PROF. NATTA

ISTITUTO DI CHIMICA INDUSTRIALE DEL POLITECNICO

\* 29 GEN. 1959 \*

R

*Cerelli*

*[Signature]*

*Brev.*

*Du Pont*

**I Signori Weigel e Plumley**

**arriveranno a Milano nella serata del 17 febbraio e saranno da noi alle 10 del mattino del 18 febbraio.**

**Contatti solati.**

*in attesa*

*[Signature]*

*[Large handwritten mark]*

*27-59*

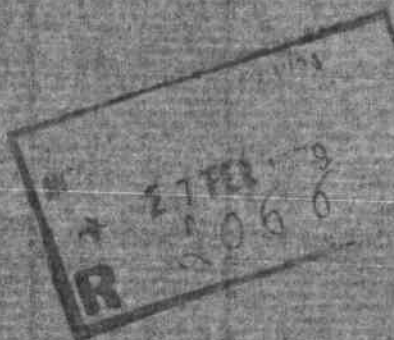


# MONTECATINI

SETTORE PROGETTI E STUDI

Milano, 21 Febbraio 1959.

Preg. mo Signore  
Ing. Piero Giustiniani,  
Sede.



## DU PONT.

Ho tratto la seguente impressione :

Un accordo fra Montecatini e Du Pont è desiderato da entrambe le parti. Per quanto concerne Du Pont, le sue idee sono :

1. L'accordo riguarda due posizioni a priori equivalenti, e quindi deve essere su basi paritetiche. E' perciò da escludere di attribuire valutazioni diverse agli apporti dell'una o dell'altra parte; occorrerà invece definire l'oggetto dell'accordo in maniera che esso sia eguale per le due parti in ogni caso.
2. Fissare un prezzo piuttosto elevato per i terzi che volessero accedere ai risultati acquisiti da Montecatini e/o da Du Pont.
3. Ciò secondo una formola che salvaguardi la legge anti-trust; vale a dire, i compensi da pagarsi dai terzi non devono differire troppo da quelli previsti reciprocamente fra Montecatini e Du Pont.

Non credo che un accordo che non rispetti questi punti sia possibile.

Itc. Orsoni

Or/sl.

Certella  
Du Pont <sup>uo</sup>

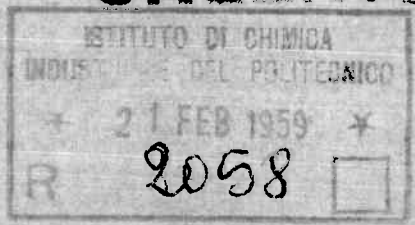
20 Febbraio, 1959

dV/AMF/ma

**IMPORTANTE!**  
**URGENTE**

Bozza

Egr.  
Sig. Lucio LUCINI,  
Presidente  
Chemore Corporation  
21 West Street  
NEW YORK 6, N.Y.



**Oggetto: Trattative du Pont**

Il Sig. Plumley e il Sig. Weigel della du Pont sono stati a Milano ieri e abbiamo avuto lunghe e, spero, fruttuose conversazioni.

Constatata l'inopportunità alle stadiie attuale di discutere accordi di vasta portata, ci si è concentrati sulla interferenza attualmente dichiarata sul count estremamente vasto:

**"Normally solid polypropylene having a crystalline component"**

L'importanza di questo count era naturalmente vista in modo diverso dai Signori della du Pont (che secondo noi la sopravvalutavano) e da noi.

Alla fine delle conversazioni si è constatata la possibilità di raggiungere un accordo limitato (che lascia eventualmente la via aperta a ulteriori accordi di questo genere nelle future interferenze) che è stato da noi redatto nella forma di cui alla bozza che Le allego in 3 copie.

Il "punctum dolens" sarà naturalmente la cifra della royalty, cifra che noi riteniamo però senz'altro ragionevole.

La prego per incarico dell'Ing. Giustiniani di voler consegnare a mano personalmente al Sig. Plumley la bozza in questione che costituisce le nostre pretese; e di farci cortesemente conoscere al più presto le reazioni della du Pont.

Con i migliori saluti.

(Ing. G. de Varda)

originale via aerea con allegati  
Copia conferma via aerea 2 giorni dopo

Milan, February 21, 1959

- 1) The parties agree that in the event one of them is awarded a claim reading:

**"Normally solid polypropylene having a  
crystalline component"**

(that is a claim exactly corresponding, word by word, to the count being at present under interference No. ....), the party (hereinafter referred to as "the winning party") to which said claim (hereinafter called "the claim") has been granted will license under said claim the other party (hereinafter referred to as "the losing party"), as well as its own licensees (under other claims covering catalysts and/or processes and/or polymerizates in the field of polypropylene polymerization, hereinafter called "field"), at a royalty rate of 1%.

- 2) The winning party shall moreover grant, at the same royalty of 1% licenses under the claim to licensees of the losing party (licensed under patents of the losing party in the field).
- 3) All the licenses under the claim will cover only the claim itself and will not imply any license under any other claim in the field, even though said other claim is wholly or in part included in or dominated by the claim.  
In other words, the winning party will by this agreement

undertake only not to assert the claim against the losing party and the licensees of the losing party, but both parties will be free to assert any other product and/or process claim which may have been granted to them in the field.

- 4) It is understood that the parties shall remain free to challenge or dispute in the courts the validity of the claim.

OPTIONAL

- 5) The parties agree that, in case any interference is declared in the future between the parties on a count covering an invention falling in the whole or in part in the field, they are willing to enter (insofar as the invention relates to the field) into agreements similar to the present one, at reasonable financial terms to be then agreed upon, with respect only to any claim, identical with the count in interference, that may be awarded to either of them.

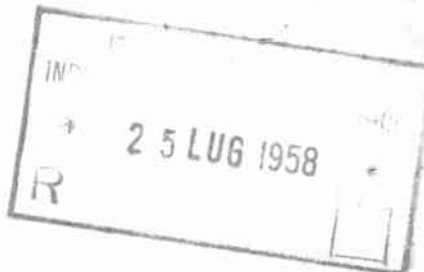


*Castella*

**E. I. DU PONT DE NEMOURS & COMPANY**  
 INCORPORATED  
 WILMINGTON 98, DELAWARE

POLYCHEMICALS DEPARTMENT  
 EXPERIMENTAL STATION

June 30, 1958



Professor Giulio Natta  
 Politecnico di Milano  
 Piazza Leonardo da Vinci 32  
 Milan, Italy

Dear Professor Natta:

Thank you for your letter of March 28, 1958.  
 I agree with you entirely that it would not be very  
 fruitful for me to visit you when your Institute is  
 closed. I think that your suggestion that we meet at  
 the Nottingham Conference is excellent and I shall  
 look forward to making your acquaintance then.

Very truly yours,

*N. G. McCrum*

N. G. McCrum  
 Polychemicals Department  
 Research Division

*Mc*

vhs

May 20, 1958

*Du Pont*

Ref.No. 617/rl

Mr. A. D. GILBERT

Manager Technical Division  
E. I. DU PONT DE NEMOURS & CO.

WILMINGTON 98 + Delaware - U.S.A.

Dear Mr. Gilbert,

I wish to thank you very deeply for all the kindnesses extended to me during my visit to Wilmington. As soon as I arrived to Milan I reported to Dr. Giustiniani about the talk I had with you, Mr. Church and Mr. Burk. At present, Dr. Giustiniani is away, but I am sure that at his return to Milan, Du Pont Company will receive some news directly from himself.

With my best thanks, I send you my best wishes.

Sincerely yours,

Giulio Natta

*Handwritten:*  
Mr. Carkella  
Subout

April 25, 1958

Dr. A.D. Gilbert, Manager  
Technical Division  
International Department  
E.I. Du Pont de Nemours & Co., Inc.  
Wilmington, Del.

Dear Dr. Gilbert:

Prof. G. Natta who is in New York for a short stop-over has asked me to let you know that he had received your letter of March 19th but not answered it at once as he had hoped to include in his program a visit to the Ohio State University and/or the Battelle Memorial Institute.

As you may imagine, his schedule was extremely crowded due to his short stay in this country. He not only was very anxious to go to Ohio but desired particularly to pay you a visit in Wilmington.

Unfortunately, due to an unforeseen number of circumstances, Prof. Natta could not carry out any of these plans. He is about to leave for Italy and has asked me to thank you most sincerely for your thoughtfulness and to express to you his real disappointment that it has impossible for him even to come to Wilmington.

He hopes that he can do so on any future trip to the States. In the meantime he asked me to send you and your associates his very best regards to which I add my own.

Sincerely yours,

Lucio Lucini

LL:it

March 28, 1958

Dr. A. D. GILBERT

Manager Technical Division  
E. I. du Pont de Nemours & Co.  
International Department  
Wilmington - Delaware - USA

Ref.No. 455/rl

Dear Mr. Gilbert,

many thanks for your kind letter of March 19,  
and for invitation to visit the Ohio State University and the  
Battelle Memorial Institute, in Columbus.

Unfortunately, I have a very tight schedule, and  
I believe not to have the necessary time to visit them, during  
my trip to the States.

In regard to my visit to Wilmington, I shall write  
you again on this matter, after my arrival to the States.

Thanking you again, I send you my best regards.

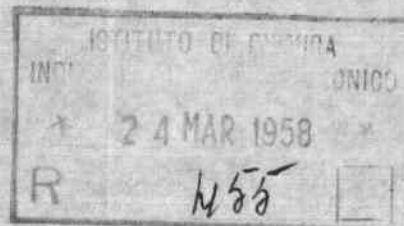
Sincerely yours,

G. Natta





E. I. DU PONT DE NEMOURS & COMPANY  
INCORPORATED  
WILMINGTON, DELAWARE



INTERNATIONAL DEPARTMENT

March 19, 1958

Prof. Giulio Natta  
Piazza Leonardo de Vinci 32  
Milan, Italy

Dear Prof. Natta,

Through Prof. Earl W. Malmberg, Associate Professor of Chemistry of Ohio State University, we have heard that Ohio State University and the Battelle Memorial Institute, both in Columbus, Ohio, would like to have you visit them during your trip to the U.S.A. We think you will wish to have this news and therefore send it to you promptly.

We also look forward to hearing just when it will be convenient for you to come to see us in Wilmington.

Yours sincerely,

*A. D. Gilbert*

DR. A. D. GILBERT, MANAGER  
TECHNICAL DIVISION

*conference  
signature  
3 invit!  
some  
in response*

GSG:jab



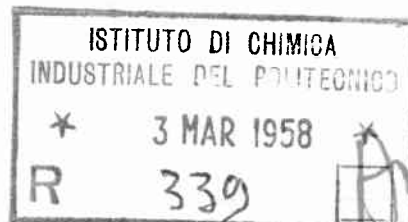
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**E. I. DU PONT DE NEMOURS & COMPANY**  
INCORPORATED  
WILMINGTON 98, DELAWARE

TEXTILE FIBERS DEPARTMENT

February 26, 1958

Prof. Dr. G. Natta  
Istituto di Chimica Industriale  
del Politecnico  
Piazza Leonardo da Vinci, 32  
Milan, ITALY



Dear Prof. Natta:

I was quite pleased to read this morning about your unanimous election as a Fellow of the New York Academy of Sciences. I congratulate you on this well deserved award.

Since you are leaving Milan on April 6 and I am arriving in Paris on April 7, we probably shall pass each other somewhere on the Atlantic Ocean. I will, of course, be sorry to miss seeing you, but we shall be very glad to have you visit Dr. W. H. Charch, at Pioneering Research, while you are in the United States.

I will plan to see Dr. Larcher, of "Polymer" I.C.S.p.a., although I have not heard from him as yet in answer to my letter about such a visit. If time permits, I will get in touch with Dr. Corradini, Prof. Danusso, or Dr. Mazzanti for a brief visit to your Institute on either April 15 or April 16.

Very truly yours,

*Lawton Burrows*  
Lawton A. Burrows

LAB:axc

*Qu. Burt*

February 17, 1958

Ref. NO. 255/E1

Dr. Lawton A. Burrows  
Director Research  
Textile Fibers Department  
E.I. du Pont de Nemours & Co.  
WILMINGTON 98 - Delaware - USA

Dear Doctor Burrows,

with reference to your letter of February 10,  
I am sorry not to be in Milan during your foreseen visit ~~in April~~.  
Most probably I shall leave Milan for the States on April 6; there-  
fore, if you may arrive in Europe at the end of March or in the  
beginning of April, I shall be glad to meet you.

Dr. Larcher of Polymer Co. will be in Milan in such a period.  
If you arrive during my absence, you may address yourself to Dr. Gerra-  
dini, Prof. Danusso, or Dr. Mazzanti, in my Institute, to visit our  
Laboratories.

With best regards,

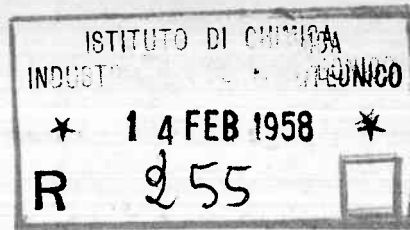
Very truly yours,

G. Natta



E. I. DU PONT DE NEMOURS & COMPANY  
INCORPORATED  
WILMINGTON 98, DELAWARE

TEXTILE FIBERS DEPARTMENT



February 10, 1958

Professor Giulio Natta  
Piazza Leonardo de Vinci 32  
Milan, ITALY

Dear Professor Natta:

I am now planning a trip to Europe, and I find to my sorrow that you probably will be in the United States at the time that I will be in Milan, which will be April 16. I should like very much to see you and Mrs. Natta again, so if my information on your visit here is incorrect, please let me know so that I can get in touch with you on April 16.

I plan to see Dr. Larcher, of "Polymer" I.C.S.p.A, on April 15. If you are going to be absent from Milan, would you suggest that I see anyone else in your institute or Montecatini on April 16 before I leave for Rome?

Very truly yours,

*Lawton Burrows*

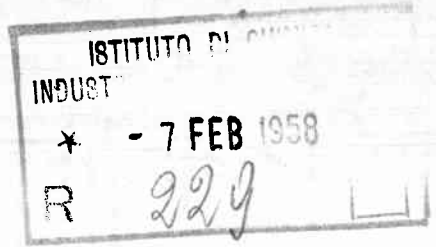
Lawton A. Burrows  
Director-Research

LAB:axc





E. I. DU PONT DE NEMOURS & COMPANY  
INCORPORATED  
WILMINGTON 98, DELAWARE



~~FOREIGN RELATIONS DEPARTMENT~~  
INTERNATIONAL DEPARTMENT

*response*  
*invite*  
*Am*

February 3, 1958

Prof. Giulio Natta  
Piazza Leonardo de Vinci 32  
Milan, Italy

Dear Prof. Natta,

Thank you for your letter of January 27th accepting our invitation to visit us at the end of April or the beginning of May. We look forward to seeing you and hope you will let us know, whenever your plans become definite, at what time it will be most convenient for you to come to Wilmington.

Yours sincerely,

*A. D. Gilbert*

DR. A. D. GILBERT, MANAGER  
TECHNICAL DIVISION

GSG:jab

*response after*  
*invite*  
*program*  
*Am*

Unit  
America  
April '58

January 27, 1958

Ref. No. 2175/rl

Mr. A. D. GILBERT, Manager  
Technical Division  
Foreign Relations Department  
E. I. DU PONT DE NEMOURS & COMPANY  
WILMINGTON - Delaware - U. S. A.

Dear Mr. Gilbert,

I wish to thank you very deeply for your kind letter of December 17, 1957. Please excuse my long delay in replying but till now I have not yet defined the schedule of my travel to U. S. A.

I appreciated very much your kind invitation to visit you in Wilmington, and I beg you to convey my kindest thanks also to Mr. Burk and Mr. Burrows.

Most probably, Mrs. Natta and myself will leave Milan immediately after Easter, to the East Coast through "Polar line"; then, I shall have to go probably to Canada. Before coming back to Europe, I should intend to visit you in Wilmington, that is, at the end of April or in the beginning of May.

As soon as I can do a precise travel schedule, I shall inform you.

With kindest regards, I remain,

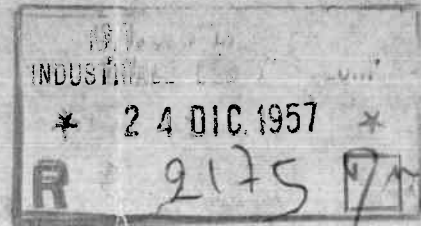
Sincerely yours,

Giulio Natta



E. I. DU PONT DE NEMOURS & COMPANY  
INCORPORATED  
WILMINGTON, DELAWARE

FOREIGN RELATIONS DEPARTMENT



December 17, 1957

Prof. Giulio Natta  
Piazza Leonardo de Vinci 32  
Milan, Italy

Dear Prof. Natta:

We are delighted to hear from Dr. W. M. D. Bryant that you have accepted an invitation to present a paper on "The Crystalline State in Polymers" at San Francisco next April. We recall, too, your visit to Wilmington in June, 1956 and hope you can again spend a few days with us, either before or after the San Francisco conference.

Dr. R. E. Burk, Associate Research Director of our Polychemicals Department, who had the pleasure of being your guest in Italy, would like to have you lecture to the research chemists of the Polychemicals Department at the Experimental Station. Dr. L. A. Burrows, Assistant General Research Director of our Textile Fibers Department, who also enjoyed your hospitality in Italy, would like to have you visit the Pioneering Research Laboratories of his Department at the Experimental Station in Wilmington and would like to see you again.

If you can accept these invitations, we will be glad to pay your traveling expenses from an East Coast U. S. city such as New York to Wilmington and return and to contribute \$200 to your transatlantic travel expenses for each day you are with us. We hope you can spare a day or two for us and look forward to hearing which day or days will be most convenient to you. Please also let us know whether Signora Natta will be coming with you.

I, too, look forward to seeing you again.

Yours sincerely,

*A. D. Gilbert*  
A. D. GILBERT, MANAGER  
TECHNICAL DIVISION

GSG:jab



**E. I. DU PONT DE NEMOURS & COMPANY**  
INCORPORATED  
WILMINGTON 98, DELAWARE



POLYCHEMICALS DEPARTMENT

September 12, 1957

Professor G. Natta  
Isituto Chimica Inc. Politechio  
Piazza Leonardo de Vinci 32  
Milan, ITALY

Dear Professor Natta:

I wish to express my hearty thanks for the cordial reception given me on the occasion of my visit to your laboratory July 29.

You are to be congratulated on your continued progress in the field of isotactic polymerization and for the extremely thorough manner in which your research is carried out.

Again, please accept the regrets of Mrs. Burk and myself that we were unable to have dinner with you. Perhaps that can be remedied on your next visit to the United States.

With very best regards.

Sincerely yours,

Robert E. Burk  
Associate Director of Research

REB:fjm



USA  
September 12, 1957

No. 1539/rl

Dr. Robert E. Burk

Associate Director of Research  
E. I. du Pont de Nemours & Co.

WILMINGTON 98 - Delaware - U.S.A.

Dear Mr. Burk,

I am sending you, under separate cover, a copy of the technical information Bulletin on MOPLIN, that I promised to you during your last visit.

I have been very glad to have met you in Milan, but I regret that your visit was so short and in a period in which my family was already in vacation. I do hope that Mrs. Burk and you have soon an other occasion to come to Europe. Also Mrs. Natta will be very pleased to meet you both.

I thank you very much for the manuscripts of the contribution from your Polychemical Department, that I read with great interest. Your experimental results in the field of ethylene polymerization agree with ours.

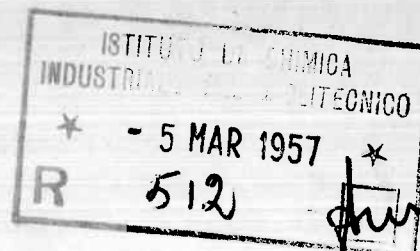
With my best personal regards,

Very sincerely yours,

Giulio Natta



**E. I. DU PONT DE NEMOURS & COMPANY**  
INCORPORATED  
**WILMINGTON 98, DELAWARE**



POLYCHEMICALS DEPARTMENT

February 26, 1957

Professor G. Natta  
Istituto Chimica Inc. Politechio  
Piazza Leonardo de Vinci 32  
Milan, ITALY

Dear Professor Natta:

I am traveling to Europe during July and would be appreciative of a discussion with you in the afternoon of July 29th if this is agreeable. At that time I can show you a new plastic which we have developed. I have an appointment for the morning of that day and if it is agreeable to you, will call in the afternoon at such an hour as would suit your convenience.

With best regards.

Sincerely yours,

Robert E. Burk  
Associate Director of Research

REB:fjm

March 6, 1957

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A

Mr. Robert E. Burk

Associate Director of Research  
Polychemicals Department  
E. I. DU PONT DE NEMOURS & Co.  
WILMINGTON 98, Delaware, U. S. A.

Dear Mr. Burk,

I am very glad to know from your letter of February 26, 1957 that you are coming to Europe during July, and that you will be in Milan on July 29, 1957.

I shall attend the I.U.P.A.C. Congress and Symposium that will be held in Paris from July 18 till 27, and therefore, I foresee to come back to Milan on July 28 in the evening or on July 29 in the morning. I shall be very glad to meet you in the afternoon of July 29, or during successive days, if you may stay in Milan. I shall appreciate to see the new plastic which you have developed. Also other people of my staff will be pleased to meet you.

Waiting the pleasure to meet you, I send you my best wishes.

Sincerely yours,

Giulio Natta

859  
July 27, 1956

Mr. Lewton Burrows, Director  
Research - Textile Fibers Dept.  
E. I. Du Pont de Nemours & Co.  
WILMINGTON 98, Delaware, U.S.A.

Dear Mr. Burrows,

My trip through the United States was very interesting but also so busy that I had no time to write to you before my coming back to Italy.

Mrs. Natta and myself thank very deeply Mrs. Burrows and you for all your kindness and the very pleasant time we spent together.

It has been also a great pleasure to visit your beautiful laboratories and to make the acquaintance of some people of Du Pont. Please, give to all them my best thanks for their kindness.

I received a deep impression from my visit to the Laboratories of Du Pont.

We do hope to meet again Mrs. Burrows and you in Italy. With my best thanks together with my wife's thanks and regards to Mrs. Burrows and you, I am,

Very sincerely yours,

Giulio Natta



E. I. DU PONT DE NEMOURS & COMPANY  
INCORPORATED

WILMINGTON 98, DELAWARE

June 21, 1956

FOREIGN RELATIONS DEPARTMENT

*su*

Professor Giulio Natta  
c/o Professor H. F. Mark  
Director, Polymer Research Institute  
Polytechnic Institute of Brooklyn  
99 Livingston Street  
Brooklyn 1, New York

Dear Professor Natta:

This check is our contribution to the expense of transatlantic travel of you and Mrs. Natta. We appreciated your coming to Wilmington and giving us so much of your time. You were very kind to offer to waive this contribution, but we are obligated because we asked you to come and talk with us.

It was a pleasure to become acquainted with you and Mrs. Natta and to share both technical and social times with you. We hope that you will return soon, and that we shall meet you again.

Sincerely yours,

*A. D. Gilbert*  
A. D. Gilbert, Manager  
Technical Division

*Professor Natta  
c/o Professor H. F. Mark  
Director, Polymer Research Institute  
Polytechnic Institute of Brooklyn  
99 Livingston Street  
Brooklyn 1, New York*

ADG m

353 A  
July 27, 1956

*Jim*

Mr. A. D. Gilbert, Manager  
Technical Division  
Foreign Relations Department  
E. I. Du Pont de Nemours & Co.  
WILMINGTON 98 - Delaware - USA

Dear Mr. Gilbert,

I am sorry that my busy trip through the States did not permit me to write to you before my coming back to Italy, and to thank you very much for your kindness.

Many thanks also for the check that Prof. Mark gave to me in New London, but you did not have to trouble yourself more.

I enjoyed very much in visiting the interesting laboratories of Du Pont in Wilmington, and I have been very pleased to have made the acquaintance of the fine people of Du Pont.

Hoping to have soon the pleasure to see you again, I send to Mrs. Gilbert and you our sincere thanks and wishes.

Very sincerely yours,

Giulio Natta



E. I. DU PONT DE NEMOURS & COMPANY  
INCORPORATED

WILMINGTON 98, DELAWARE

June 20, 1956

FOREIGN RELATIONS DEPARTMENT

Dear Professor Natta:

As we agreed, the expenses of your hotel room (\$15.00 per day) and breakfasts (estimated \$4.00 per day) for both yourself and Mrs. Natta are being reimbursed by this check. This covers your visit here, from Monday night through Friday noon. We hope that this reimbursement will not leave you with other expenses which we have forgotten to include here.

We understand that you do not wish to be reimbursed for expenses of your travel from New York, because you are stopping over in Wilmington while enroute to Washington.

We shall send to you our check for \$400.00 as a contribution to the expenses of your transatlantic travel. We had mentioned this in several letters to you. We want you to accept the check even though you kindly told me yesterday that you would not expect us to do this.

Sincerely yours,

ADG m



ESTABLISHED 1802  
INCORPORATED

E. I. DU PONT DE NEMOURS & COMPANY

WILMINGTON 98, DELAWARE

FOREIGN RELATIONS DEPARTMENT

June 18, 1956

Dear Professor and Mrs. Natta:

We are happy that you have come to Wilmington to visit us. You have friends here already, and we hope that you will meet many new ones during this visit.

We have made some arrangements for your time with us. Mrs. Natta will be entertained on both Tuesday and Wednesday, at luncheons and visits to Longwood Gardens and Winterthur, by Mrs. L. A. Burrows. Her note to Mrs. Natta will explain these plans.

Professor Natta's schedule will be as follows:

- Tuesday**
- 9:00 A.M.  
Meet Dr. L. A. Burrows, Dr. M. F. Sartori, and myself in the lobby of the Hotel du Pont.
  - Morning  
Visit Textile Fibers Department Research Laboratory at the Du Pont Experimental Station.
  - Afternoon  
Visit Polychemicals Department (Plastics) Research Laboratory at the Experimental Station.
  - 6:30 P.M.  
Meet Dr. and Mrs. Sartori at the Hotel du Pont; they will escort you both to a small dinner party at the Wilmington home of Mr. and Mrs. H. J. Haon (manager of du Pont's European office in London).
- Wednesday**
- 9:00 A.M.  
Meet Dr. H. W. Gray, Director of the Film Department Laboratory, and Professor Pino and Dr. Sartori, in the lobby of the Hotel du Pont.
  - 10:00 A.M.  
Seminar in the Conference Room of the Film Department Laboratory at the Experimental Station.



Wednesday - Afternoon  
(continued) Visit laboratories of the Textile Fibers Department;  
or of the Electrochemicals Department; or others,  
in accordance with our mutual interests as these  
develop.

- 6:00 P.M.  
Meet Dr. Sartori at the Hotel du Pont; he will  
escort both of you, with Professor Pino, to Dr.  
and Mrs. Sartori's home for dinner and the evening.

If you have any questions, please ask me, Dr. Sartori, or  
others.

Sincerely yours,

*A.D. Gilbert*



E. I. DU PONT DE NEMOURS & COMPANY  
INCORPORATED

WILMINGTON 98, DELAWARE

TEXTILE FIBERS DEPARTMENT

May 4, 1956

Dr. H. F. Mark, Director  
Polymer Research Institute  
Polytechnic Institute of Brooklyn  
99 Livingston Street  
Brooklyn 1, New York

*Please read  
his letter to Prof.  
Natta!*

Dear Dr. Mark:

Thank you very much for sending me your report on the Macromolecular Symposium and also for the additional information on Professor Natta's visit.

I believe you have been advised that plans for Professor Natta's visit to du Pont are being coordinated by our Foreign Relations Department because several of the departments are interested. I should like you to know, however, that during a discussion of antiques with Mrs. Natta, I suggested that she might like to see Winterthur Museum near Wilmington. She seemed quite interested in this and also in Longwood Gardens. As a result, Mrs. Burrows is arranging a trip through Winterthur and Longwood Gardens for Mrs. Natta and also for Professor Natta, if he wants to take the time for this. I suspect, however, that he will be more interested in discussing technical problems with some of our people.

When you see Professor and Mrs. Natta, will you please advise them of these arrangements, which Mrs. Burrows is handling personally. If Mrs. Natta decides that she would rather do something else, any arrangements which have been made can be readily cancelled.

Very truly yours,

*L. A. Burrows*

L. A. Burrows  
Asst. Gen. Dir. - Research

LAB:axc

54712  
May 17, 1956

*Am*  
Mr. L. A. Burrows  
Asst. Gen. Dir. - Research  
Textile Fibers Department  
E. H. du Pont de Nemours & Company  
WILMINGTON 98 - Delaware - USA

Dear Mr. Burrows,

Professor Mark let me have your very kind letter of May 4, and I thank you very much for your interest about our stay in Wilmington.

Mrs. Natta is very grateful to Mrs. Burrows for the very interesting trip she is arranging through Winterthur and Logwood Gardens and thanks her very much.

Mrs. Natta joins me in sending Mrs. Burrows and you the kindest regards and many thanks.

Very sincerely yours,

Giulio Natta



E. I. DU PONT DE NEMOURS & COMPANY  
INCORPORATED  
WILMINGTON, DELAWARE

Copy: Dr. H. F. Mark  
Director, Polymer Research Institute  
Polytechnic Institute of Brooklyn  
99 Livingston Street  
Brooklyn 1, New York

*Am*

FOREIGN RELATIONS DEPARTMENT

May 2, 1956

Via air mail

Professor Giulio Natta  
Istituto di Chimica Industriale del Politecnico  
Piazza Leonardo da Vinci, 32  
Milan, Italy

Dear Professor Natta:

Dr. R. E. Burk's letter of April 18, 1956 repeated his long-standing invitation to you to visit the du Pont Company when you are in the United States next month. We are pleased to learn from Dr. H. F. Mark that you will visit us in Wilmington on June 19 and 20. Unfortunately, Dr. Burk will be away at that time, but you will find a number of your acquaintances waiting here to see you.

Your visit has stimulated great interest among the various departments of the du Pont Company, including Dr. Burk's Polychemicals Department. We are co-ordinating their plans, which will include trips to the laboratories.

A number of persons have suggested a seminar in which you would discuss some phase of your work. We realize that this could be difficult for you because some of your information is of a rather critical importance at this time. If a seminar could be presented, however, we believe that many of our scientists here would find it very interesting and stimulating.

Dr. Mark may have informed you that we shall reimburse you for expense of travel between New York City and Wilmington, and also shall make our contribution to help defray the expenses of your transatlantic trip. We shall follow Dr. Mark's instructions on hotel reservations and other arrangements for you and Mrs. Natta during your stay.

I shall be pleased to assist you in any arrangements which you may wish to request directly to du Pont. One of your colleagues, Dr. M. F. Sartori, will be available to help escort you. We are looking forward to receiving you here next month.

Sincerely yours,

*A. D. Gilbert*  
A. D. Gilbert, Manager  
Technical Division

ADG m

May 9, 1956

*fu*

Dr. A. D. Gilbert, Manager  
Techhical Division  
Foreign Relations Department  
E. I. du Pont de Nemours & Co.  
WILMINGTON, Delaware, USA

Dear Dr. Gilbert,

Many thanks for your very kind letter of May 2, and I look forward to visiting your Company and to seeing again my acquaintanees in Wilmington.

I believe to be able to give a seminar during my visit on June 19/20.

Please ~~thank~~ for me dr. Sartoti for his kind offer of assistance.

Waiting the pleasure to meet you soon, I, send you my best regards.

Very sincerely yours,

Giulio Natta

COPIA

705 A

*Ami*

MARIO F. SARTORI  
62 NORTHSIDE DRIVE, NORTH HILLS  
WILMINGTON 3 - DELAWARE - USA

Wilmington, April 21, 1956

Egregio Professore,

con piacere ho appreso oggi che durante la sua permanenza in America, lei verrà a Wilmington ospite della Du Pont. Un programma di massima indica il 19, 20 e 21 giugno per visite in Wilmington.

Alcune settimane fa io accennai al Direttore del Jackson Laboratory la delusione da lei provata nel 1947 durante la visita alla Du Pont. So che questo mio accenno è stato trasmesso formalmente al Foreign Relation Dpt, l'ente che organizza il suo soggiorno in Wilmington e quindi mi auguro che quest'anno le sarà consentito di vedere qualcosa di veramente interessante. Tuttavia se lei desidera visitare qualche particolare impianto sarebbe mio avviso di farlo presente al momento di accettare l'invito della Du Pont.

Io spero che nonostante il pesante programma in Wilmington, lei potrà trovare un poco di tempo libero per venirci a visitare con la Sua Signora nella nostra casa. E per il caso che lei non abbia sperimentato nessuna estate in questa parte degli Stati Uniti, mi permetto di informarla che in giugno e specialmente in luglio in Wilmington e dintorni può essere molto caldo ed molto umido.

Per qualunque informazione lei desiderasse avere prima di venire qui, non esiti a scrivermi. Sarò ben lieto se potrò fare qualcosa per lei.

Cordiali saluti.

Mario Sartori

Ha scritto anche la signora Sartori alla signora Natta

558 A

9 Maggio 1956

Dr. Mario F. Sartori  
602 Northside Drive  
North Hills  
Wilmington 3 - Delaware - USA

Egregio Dottore,

La ringrazio molto della Sua gentile lettera del 21 Aprile e Le sono molto grato della Sua offerta di aiuto. Come Lei sa, il programma del mio soggiorno negli U.S.A. è veramente pesante, ma mia moglie ed io speriamo vivamente di avere anche l'occasione di stare un poco assieme alla Sua Signora ed a Lei. Mia moglie mi incarica di dirLe che scriverà direttamente alla Sua Signora e La prega intanto di ringraziarLa vivamente per il gentile invito.

Noi arriveremo probabilmente a New York un poco prima del previsto, probabilmente il 5 Giugno, perchè desidero, dopo l'intenso lavoro di questi ultimi mesi a Milano e con la corvée che mi aspetta negli Stati Uniti, di restare qualche giorno tranquillo a New York e raccogliere le idee.

In attesa di rivederLa presto, Le invio molti cordiali saluti

Giulio Natta



E. I. DU PONT DE NEMOURS & COMPANY  
INCORPORATED  
WILMINGTON 98, DELAWARE

POLYCHEMICALS DEPARTMENT

April 18, 1956

Professor G. Natta  
Isituto Chimica Inc. Politecnio  
Piazza Leonardo de Vinci 32  
Milan, ITALY

Dear Professor Natta:

As the time draws nearer I wish to repeat my invitation to you to visit the Polychemicals Department of du Pont on the occasion of your visit to the United States. As it happens, I have planned another visit to Europe, which I trust will include a visit to Milano June 5 and 6. As our London office have written you, I hope to see you in Milano on June 6. However, if your departure for the United States is before that or you are too rushed to do it, I should value a discussion with Professor Pino.

Our Research Director, Dr. J. S. Beekley will receive you here and will arrange that you will have a discussion of polymer chemistry with some of our scientists in this field. There will also be opportunities for you to visit with Dr. Sartori and other friends you may have in Wilmington.

Sincerely yours,

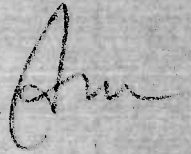
Robert E. Burk  
Associate Director of Research

REB:fjm



501A

May 9, 1956



Dr. Robert E. Burk  
Associate Director of Research  
Polychemicals Department  
E.I. du Pont de Nemours & Comp.  
WILMINGTON 98 = Delaware = USA

Dear Dr. Burk,

I have been unable to answer your kind letter of April 18 until this time, because of I was uncertain about the exacte date of my departure to the United States.

Unfortunately, I am obliged to leave Milan on June 2 and I am very sorry not to, be able to meet you in Milan. Most probably also Prof. Pino will leave Milan for the U.S.A. during the week from June 4 to 9.

As I shall state in the United States till the first days of August, I hope to be able to see you there. As you know, my visit in Wilmington is scheduled on June 19/20.

With best regards.

Sincerely yours,

Giulio Natta



E. I. DU PONT DE NEMOURS & COMPANY  
INCORPORATED  
WILMINGTON 98, DELAWARE

POLYCHEMICALS DEPARTMENT

October 10, 1955

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Professor G. Natta  
Istituto Di Chimica Industriale  
Del Politecnico  
Piazza Leonardo Da Vinci, 32, Milano  
Italy

Dear Professor Natta:

Enclosed you will find reprints of the publications  
requested in your letter of September 16, 1955.

One of them is missing - if, and when, it arrives we  
shall forward it as well.

With best regards.

Sincerely yours,

Robert E. Burk  
Associate Director of Research

REB:fjm

Enclosures

433  
America  
October 19, 1955

Professor Robert E. Burk  
Associate Director of Research  
Polychemicals Department  
E. I. du Pont de Nemours  
Wilmington 98, Delaware, U.S.A.

Dear Professor Burk,

I received your letter of October 10 with enclosed  
the reprints of your publications, you kindly sent to me, and  
I thank you very much for your kindness.

Please accept my best regards,

Very sincerely yours,

Giulio Natta



**E. I. DU PONT DE NEMOURS & COMPANY**  
INCORPORATED  
WILMINGTON 98, DELAWARE

POLYCHEMICALS DEPARTMENT

October 3, 1955

Professor G. Natta  
Isituto Chimica Inc. Politecnio  
Piazza Leonardo de Vinci 32  
Milan, ITALY

Dear Professor Natta:

We have just heard from Professor C. G. Overberger of the Polytechnic Institute of Brooklyn that he has asked you to speak at the Polymer week of the Gordon Research Conference during the first week of July, 1956.

We, in the Polychemicals Department of du Pont should be very glad to have you spend a day with us, in the event you accept the Gordon Research invitation. In fact, we shall be glad to have you visit us whenever you come to America.

We shall also be glad to provide you with an honorarium of \$ 200.00 for a day's visit, together with a portion of your expenses. There would be no obligations on your part in connection with such a visit, although it would be our sincere hope that you would be able to talk to a group of our research people who have been most interested in your work on "isotactic" polymers.

With reference to your request for reprints in your esteemed letter of September 16, I have requested that these be collected. They will be sent to you shortly.

Please give my best regards to Professor Pino and Piacenti.

Sincerely,

Robert E. Burk  
Associate Director of Research

REB: fjm

October 7, 1955 *America*

Dr. Robert E. Burk  
Associate Director of Research  
Polychemicals Department  
E. I. du Pont de Nemours & Company  
Wilmington 98, Delaware, U. S. A.

Dear Dr. Burk,

Many thanks for your your letter of October 3 and  
for your very kind invitation.

I have already accepted the Gordon Research invi-  
tation and, during my stay in U.S.A. I shall be glad to spend  
a day with you and to visit the Polychemicals Department of  
du Pont, *if possible*

Thank you also for your interest in sending me co-  
py of your reprints.

Prof. Pino and Dr. Piacenti join to me in sending you  
the best regards.

Sincerely yours,

Giulio Natta



E. I. DU PONT DE NEMOURS & COMPANY  
INCORPORATED  
WILMINGTON 98, DELAWARE

(364)  
America

POLYCHEMICALS DEPARTMENT

September 6, 1955

Professor G. Natta  
Istituto Di Chimica Industriale  
Del Politecnico  
Piazza Leonardo Da Vinci, 32, Milano  
Italy

Dear Professor Natta:

I have at last concluded a rather lengthy journey, during which I had the pleasure of calling at your Institute. Please accept my hearty thanks for your courtesy on this occasion. I think your work on "Isotactic" polymerization is of quite outstanding scientific interest. I would, of course, be interested in hearing more about it but understand that commercial considerations prevent you from saying more. I do hope that we can be kept informed of any scheduled lectures or exhibits which you plan to make public.

Sincerely yours,

Robert E. Burk  
Associate Director of Research

REB:fjm

289  
September 16, 1955  
*Amica*

Professor Robert E. Burk  
Associate Director of Research  
E. I. du Pont de Nemours & Company  
WILMINGTON 98, Delaware, U. S. A.

Dear Mr. Burk,

Thank you for your kind letter of September 6.

I am sending you, under separate cover, some reprints of our works on isotactical polymers, and, as soon as I receive the reprints of my communications, presented during the International Congress of Chemistry and the International Symposium on Macromolecular Chemistry in Zurich, I shall send you them.

Prof. Pino thanks you very much for the list of papers you kindly sent him: some of these papers were not yet known by us. They are very interesting, and we should be grateful to you, if you let us have a reprints of the papers listed in enclosure.

Thanking you in advance, Prof. Pino and I send you the best personal regards,

Very sincerely yours,

Giulio Natta

Encl.

September 16, 1955

Mr. Robert E. Burk

List of Papers

- "Chain-Branching in Polyethylene During Polymerization" by M. J. Roedel
- "Determination of Short-Chain Branching" by W. M. D. Bryant & R. C. Voter
- "Determination of Long-Chain Branching" by F. W. Billmeyer
- "Kinetic Calculation of Effect of Branching on Molecular Weight Distribution"  
by J. K. Beasley
- "Effect of Chain-Branching and Molecular Weight on Physical Properties"  
by C. A. Sperati, W. A. Franta, H. W. Starkweather, Jr
- "Densities of Polyethylene Solutions" by R. Roberts & F. W. Billmeyer
- "Cycloalkanone Peroxides. II. Nature of Peroxides Produced by Oxidation of  
Cyclopentanol" by N. Brown, A. W. Anderson, C. E. Schweitzer.
- "Cycloalkanone Peroxides. I. Preparation of Cyclohexanone Peroxide by oxida-  
tion of Cyclohexanol" by N. Brown, M. J. Martig, M. J. Roedel, A. W. Anderson, C.  
E. Schweitzer.
- "Use of Computers in Kinetic Calculations" by R. E. Gee, W. H. Linton, Jr. et al.
- "Gelation Reactions of Chlorosulfonated Polyethylene Solutions" by W. F. Busse  
and F. W. Billmeyer.
- "Nucleation and Growth of Crystallites in High Polymers" " Formation of  
Spherulites" by W. M. D. Bryant, R. H. H. Pierce, et al.
- "Condensation Products of Urea and Formaldehyde as Fertilizer with Control-  
led Nitrogen Availability" by R. D. Kralovec and W. A. Morgan
- " Polyethylene Pipe Flanging" by F. A. Pledger and D. J. Ryan





**E. I. DU PONT DE NEMOURS & COMPANY**  
INCORPORATED

WILMINGTON, DELAWARE

FOREIGN RELATIONS DEPARTMENT

*America*

Ritter's Park Hotel  
Bad Homburg, Germany  
May 22, 1955

Dott. Professor Giulio Natta, Director  
Istituto di Chimica Industriale  
del Politecnico  
Piazza Leonardo da Vinci, 32  
Milano, Italy

Dear Professor Natta,

It was most kind of you to see me when I was in Milan, and to share your precious time with me. Your views on polymeric chemistry were both interesting and advanced. It was good of you to have Dr. Pino go through the laboratory with us, and show us the types of equipment you have. He was very considerate and helpful.

I am looking forward to seeing your paper on catalysis when it is published this spring after the Milan symposium on high polymers.

I have been continually on the move since seeing you - having been in Rome, Naples, Holland, Munich and Frankfort among other places. I trust you received a thank-you letter from Mr. Lewis immediately after we saw you. I asked him to write for us both until I could stop my travels long enough to catch up with my correspondence.

If by any chance you should come to America when I am there I hope you will give me an opportunity to do something for you.

Please give my best regards to Dr. Pino.

Sincerely yours,

*George W. Rigby*  
George W. Rigby

June 1, 1955

Mr. George W. Rigby  
Foreign Relations Department  
E.I. du Pont de Nemours & Company  
W I L M I N G T O N - Delaware

Dear Mr. Rigby,

I thank you very much for your kind letter of May 22. I am very pleased to have made your acquaintance and to have spoken with you on polymeric chemistry.

On the end of April I received a very kind letter also from Mr. Lewis.

We are now working very hard and we hope to see you again on the end of the year, and to be able to give you, with the Montecatini, more detailed information on our works.

Prof. Pino and I send you our best regards.

Very sincerely yours,

Giulio Natta



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EUROPEAN OFFICE,

BUSH HOUSE,

ALDWYCH,

LONDON, W. C. 2.

April 27, 1955

Professor G. Natta,  
Institute of Industrial Chemistry,  
Polytechnic of Milan,  
Milan, Italy

Dear Professor Natta,

Before leaving Dr. Rigby on Saturday evening to return to England, I promised that I would write to you to express our appreciation of your kind reception when we visited you at the Polytechnic last Friday.

It was very kind of you to inform us of the fields of your activity and of the working of your Institute. When we were taken over the Institute by Dr. Piero Pino we were very impressed by the work which you are doing and with the equipment which you have already obtained. We feel sure that your new equipment will permit you to make further advances in a wide field of industrial chemistry.

Dr. Rigby is looking forward to visiting you again later this year.

With kind regards,

yours sincerely,

H. LEWIS

HL/mk



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EUROPEAN OFFICE,

BUSH HOUSE,

ALDWYCH,

LONDON, W. C. 2.

April 18, 1955.

Professor Dr. G. Natta,  
Istituto di Chimica Industriale  
del Politecnico,  
Piazza Leonarda da Vinci, 32,  
MILANO, Italy.

Dear Professor Natta,

Thank you very much for your letter of April 13 in which you expressed a willingness to see me on Friday, April 22. Since I do not want to interfere with your teaching schedule, please feel free to tell me the most convenient time of day for you. I expect to be staying in the Regina e Metropole Hotel beginning the evening of April 20. However, unless I hear from you to the contrary, I shall come to your Institute at about 9 o'clock in the morning, if this time is convenient with you.

I am looking forward with a great deal of pleasure to having the opportunity of meeting you and discussing polymerization and acetylene chemistry with you. I was particularly interested in your recent note to the Journal of American Chemistry Society on crystalline polystyrene and high molecular weight polypropylene and polybutylene. I should like to pursue this subject a little further, if you are free.

Thank you very much for your time and consideration.

Sincerely yours,

  
G.W. RIGBY

GWR/kb

\* of april 22,



E. I. DU PONT DE NEMOURS & COMPANY  
INCORPORATED  
WILMINGTON, DELAWARE

CC: Dr. Mario Sartori, Jackson Laboratory

VIA AIR MAIL: LONDON OFFICE

FOREIGN RELATIONS DEPARTMENT

VIA AIR MAIL

March 14, 1955

Prof. Guilio Natta, Director  
Istituto Chimica Industriale  
del Politecnico  
University of Milan  
Milan, Italy

Dear Prof. Natta:

On April 22nd, I expect to be in Milan and would greatly appreciate the opportunity of making your acquaintance. Our mutual friend, Dr. Mario Sartori has indicated that he would write to you expressing my desire to meet you and to discuss chemical problems with you.

A number of people in our Company have noted your interesting publications in the fields of catalysis and acetylene chemistry. As you possibly know, this Company has very considerable interest in catalysis and in the field of acetylene chemistry. We are also very much interested in polymerization and in polymeric materials. All of these subjects, we would like to discuss with you if you would be willing to see me at your laboratory.

During our visit to your University, we would also like to meet Prof. Adolfo Quilico whom we also understand has been interested in acetylene chemistry.

If this date is convenient with you, we would appreciate hearing from you. Please address your letter to our London Office:

Dr. G. W. Rigby  
E. I. du Pont de Nemours & Co.  
Bush House, Aldwych, W. C. 2,  
London, England.

Sincerely yours,

G. W. RIGBY

EUROPEAN TECHNICAL REPRESENTATIVE

GWR:HOB

April 13, 1955

Dr. G.W.RIGBY  
E.I. du Pont de Nemours & Co.  
Bush House; Aldwych, W.C.2  
L O N D O N , England

Dear Dr. Rigby,

Please excuse me for the delay in answering to your letter of March 14. As I wrote to Dr. Mario Sartori, I shall be glad to meet you during your visit in Milan and to discuss with you on the acetylene- and the polymer-chemistry.

Please let me know the exacte date of your arrival.

Sincerely yours,

G.NATTA

Champoluc, XXXIX 6 settembre 1958

Da Barb

Egr. Sig. Ing.  
Lorenzo Cenzato

/nb

Egregio Ingegnere,

rispondo con ritardo alla Sua gentile lettera del 10 agosto che è giunta a Milano in un periodo in cui ero assente per vacanze. Sono stato molto spiacente di apprendere la notizia dell'improvvisa morte del dr. Church che era tanto una cara persona. La notizia mi ha sorpreso tanto più che il suo aspetto non lasciava prevedere una fine così improvvisa.

Per quanto riguarda il polipropilene, la Soc. Montecatini sta concludendo dei contratti molto interessanti con diverse Società in Europa e fuori, ma sono convinto che per quanto riguarda gli Stati Uniti convenga aspettare lo sviluppo della situazione brevettuale. Nel frattempo le applicazioni del polipropilene isotattico si stanno sviluppando in modo molto favorevole e le richieste di prodotto sono molto superiori all'attuale possibilità di produzione della Soc. Montecatini.

Molti cordiali saluti.

Prof. G. Natta

Wilmington, 10 agosto, 1958.

Egregio Professore,

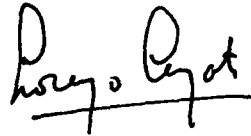
mi riferisco alla visita che con piacere feci a Lei lo scorso giugno al Politecnico e a casa sua.

A quel tempo Lei mi chiese di esprimere in modo ufficioso al dott. Charch che la Montecatini è aperta alle trattative sul Moplen, condizionate ben inteso ad un riconoscimento dei meriti derivanti dal vostro stato avanzato di ricerca sul prodotto.

Come Lei forse saprà, il dott. Charch è morto inaspettatamente alcune settimane fa. Ho comunque riportato le Sue parole al dott. Lawton Burrows, che Lei probabilmente ricorderà di aver conosciuto. Egli si è preso cura di comunicare il messaggio ai dirigenti del Polychemical Department, che sono i diretti interessati alla cosa.

A quanto pare, comunque le cose stanno così: entro qualche mese il Polychemical Dep. dovrà decidere, in base alle attuali ricerche, se il polipropilene isotattico è un prodotto conveniente da produrre alla Du Pont. Se sì, la Du Pont potrà cercare di riallacciare i contatti con la Montecatini. Comunque, un punto molto importante, a quanto pare, è questo: prima di iniziare trattative, la Du Pont richiede di esaminare campioni del Moplen per valutarne le qualità; ciò finora non si è avverato.

Lieto di poterLe essere utile, la prego disporre di me per qualunque cosa creda necessario. La ringrazio ancora per la Sua gentile accoglienza. Ricordandola con simpatia, invio a Lei e alla Signora i miei più cordiali saluti.



Lorenzo Cenzato  
1000 River Rd.  
Wilmington 3, Del.



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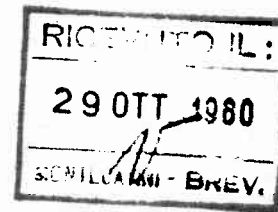


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*Carbelle  
Dupont*

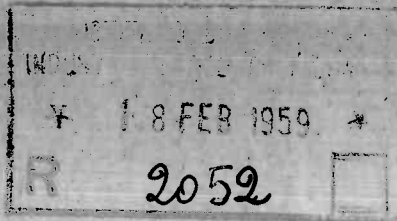


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(1858-1942)

H.S. Toulmin Jr.  
Herbert H. Brown  
Daniel J. Hanlon Jr.  
Folsom S. Drummond  
Edmund M. Fashewicz  
Hugo M. Wikstrom  
George H. Spencer

Patent Attorneys  
P.D. Peake  
M.A. Crosby



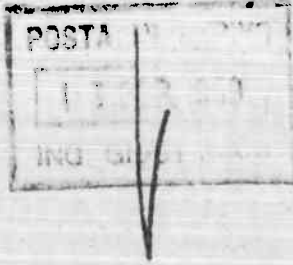
*Toulmin & Toulmin*  
*Attorneys at Law*  
*Corporation and Patent Law*  
*Dayton 2, Ohio*

*Cartello*  
*DuPont*

February 10, 1959

*Dayton, Ohio*  
*Toulmin Building*  
*308 West First Street*  
*Washington, D.C.*  
*Pennsylvania Building*  
*Springfield, Ohio*  
*Ohio Fuel Gas Building*  
*Brussels, Belgium*  
*27 Rue de la Loi*  
*Cable Address*  
*Toulmin, Dayton*  
*Toulmin, Washington*

AIR MAIL cc Boatmail



Dr. Piero Giustiniani  
Montecatini  
Brevetti  
Via F. Turati, 18  
Milan, Italy

Dear Dr. Giustiniani:

This is in answer to your letter of February 2, 1959.

I will answer your questions as follows:

1. I think the Standard Oil of Indiana has the stronger position as compared with DuPont by fully 30%.

2. I do not understand this question. A simple license agreement can be negotiated with either Amoco or DuPont. I would think it would be much easier to negotiate with Amoco and much safer.

3. As to question 3, I see no reason for you to make sacrifices in order to reach a contract with either Amoco or DuPont. The date records and your pending patent applications define your inventions, neither of which has been made by either DuPont or Amoco. DuPont merely has a general claim to polypropylene with some crystallinity, but that is not the Natta invention. Without the Natta invention, you do not have the benefits. Likewise, Standard Oil of Indiana does not have the Natta invention. The contests between you are based upon a non-commercial material covered by general claim from a patent which does not teach the isotactic-atactic structure and does not contribute the invention of Natta. There is a lot of pretense by DuPont and Amoco that they have the same thing because they have a broad, indefinite claim which is far from the Natta invention. I am afraid you give too much weight to their positions. A policy of weakness at

Dr. Piero Giustiniani  
Feb. 10, 1959  
page 2

this moment is most undesirable. You have a good case. You have an extraordinary set of inventions. You have very early dates. I think you have a strong hand from which to negotiate. I do not see any necessity for unusual concessions or for you to give away because of over-anxiety to either Amoco or DuPont. This is the time for firm and courageous negotiations.

4. With reference to paragraph 4, where you ask me what should be the factors included in any contract that would protect your interests, I would suggest that you follow the usual contract form of a patent license in the United States that is non-exclusive but carries with it rights to optionally take future inventions and to have the benefit of your research. This research alone is worth more than you will probably get from the license contract. Both these companies could greatly profit from the research data of Prof. Natta's accomplishments.

I feel very strongly that you can get good license contracts with these two fine companies if a firm policy is followed, and there is not any exorbitant request made for cash down payments. With big companies like this, you do not need the very large down payments, if you put a guarantee in the contract that they must go forward and accomplish certain defined objectives in production according to a time table which will protect you by bringing in early royalties. Basically, may I suggest that your licensing problems all come from this very heavy down payment. It is rare that that is ever demanded on the scale that you are asking for your polypropylene license.

In short, I think good, reasonable contracts of license that are non-exclusive can be worked out with DuPont and Amoco. You are not in a position where you are forced to make any concessions by reason of the legal situation, as I am of the opinion that ultimately you will get the Natta patents, and the Patent Office officials informally indicated that this will be the fact.

We have a lot of smoke and fire over the DuPont claim that is so broad as to be meaningless. Please do not let this deceive you, for DuPont purposely put this forward

Dr. Piero Giustiniani  
Feb. 10, 1959  
page 3

in its effort to get a place in the sun. Do not forget that the world-wide acclaim of Prof. Watta and his accomplishments have been a very sore point and one of great embarrassment to DuPont and others. The fact that they are now coming to you should be most significant that you are in the predominating position for negotiations.

I wish you the best of luck. I am sorry I am not with you, for I am sure that you will bring out of this thing a genuine success and still avoid the pitfalls covered in your letter of February 3.

Sincerely yours,

*H. A. Tausung*

*H. A. Toulmin*  
(1858-1942)

*H. A. Toulmin, Jr.*

*Herbert H. Brown*

*Daniel J. Hanlon, Jr.*

*Felsom E. Drummond*

*Edmund M. Jaskiewicz*

*Hugo M. Wikstrom*

*George H. Spencer*

*Patent Attorneys*

*P. D. Peake*

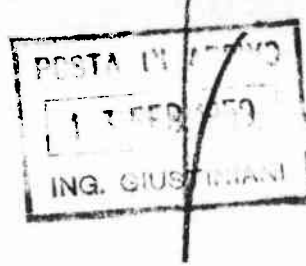
*M. A. Crosby*

*Toulmin & Toulmin*  
*Attorneys at Law*  
*Corporation and Patent Law*  
*Dayton 2, Ohio*

February 10, 1959

AIR MAIL cc Boatmail

Dr. Piero Giustiniani  
Montecatini  
Brevetti  
Via F. Turati, 18  
Milan, Italy



Dear Dr. Giustiniani:

I am attaching our answer to your letter of February 3 as to the DuPont visit.

Let me emphasize that ordinarily with ordinary people, this would be a workable arrangement. But for reasons stated in the attached letter, I think it would be unwise to carry out the suggested plan. It is difficult for executives not familiar with our laws and our politics to understand this distinction. But then you rely upon me to give you a practical answer, and I have endeavored to do so with the attached letter.

Since writing this letter, not only has there been the attack on General Motors to dissolve it and break it up into separate corporations, but it was announced this morning that the same thing is going to be tried by the Department of Justice against the United States Steel Corporation. Both companies have been closely affiliated with the house of Morgan.

In view of the present policies of the Department of Justice and the political atmosphere, I would recommend great caution.

I suggest that you look at the 7-volume set of "Toulmin's Anti-Trust Laws", Vol. 4, Ch. 23, Sections 23.1, 23.2 and 23.3, and also look at the recent decisions in the supplement. This may give you some background.

Sincerely yours,

*H. A. Toulmin, Jr.*

Enclosures  
Letter Feb. 9, 1959  
Clippings

*Dayton, Ohio*  
*Toulmin Building*  
*308 West First Street*

*Washington, D.C.*  
*Pennsylvania Building*

*Springfield, Ohio*  
*Ohio Fuel Gas Building*

*Brussels, Belgium*  
*27 Rue de la Limite*

*Cable Address*

*Toulmin, Dayton*

*Toulmin, Washington*

H. A. Toulmin  
(1858-1942)

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*Dayton 2, Ohio*

February 9, 1959

CONFIDENTIAL: NOT FOR PUBLICATION

*Dayton, Ohio*  
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*Cable Address*  
*Toulmin, Dayton*  
*Toulmin, Washington*

AIR MAIL  
cc Air Mail 2 days later

Dr. Piero Giustiniani  
Montecatini  
Brevetti  
Via F. Turati, 18  
Milan, Italy

- (A) In re: Settlement or License with  
DuPont of Patent Rights and Interferences
- (B) Reply to Dr. Giustiniani's letters of  
February 2 and February 3, 1959

Dear Dr. Giustiniani:

A partnership such as you propose in your letter of February 3, 1959, involves some very dangerous situations that could nullify all your efforts in the United States under its antitrust laws.

Before answering your specific questions, let me give you the necessary educational background here in the United States as to the attitude of the United States government and particularly its Department of Justice towards:

- (A) Patent licensee agreements between foreign Nationals and larger U. S. companies that affect international commercial and technical or patent agreements and opening of technical advances for promotion of domestic and international competition.

Montecatini  
Feb. 9, 1959  
page 2

(B) The attitude of the Department of Justice and the United States courts in dealing with antitrust and patent licensing contracts.

(C) The very influential attitude of the United States Senate Judiciary Committee and its antitrust and patent subcommittees.

(D) The attitude of the United States House of Representatives and its Judiciary and antitrust committees.

(E) The attitude towards DuPont and General Motors and their interlocking monopoly relationship, domestically and internationally.

The following summary of the DuPont-General Motors antitrust situation is of public record, as you will see from the attached Exhibit A.

These companies have been and are now subject to hearings before the antitrust committees of the U. S. Senate and the U. S. House of Representatives. I have been called to testify before committees of both the Senate and House of Representatives over some years in connection with patents and antitrust laws. Consequently, I speak with first hand knowledge of the attitude of the Legislative Branch of the United States government.

As to the U. S. Department of Justice, I anticipated you would ultimately negotiate with DuPont and therefore I had an informal talk with the Chief Trial Counsel in antitrust at the Department of Justice as to current policies and attitudes on the question of international licensing elsewhere reported to you.

The result of all the foregoing is this:

(1) DuPont (together with its partner General Motors, that it controls) has the worst reputation of any of the larger American corporations.

(2) It has been continuously in litigation with the United States government over its patent policies and alleged antitrust violations.

Montecatini  
Feb. 9, 1959  
page 3

(3) Anyone who makes a cross license agreement with DuPont must expect the probability of an investigation and litigation under the antitrust laws.

(4) If this litigation is lost (the chances are 75% to 25% it will be), then your patents will be thrown open to general license on modest terms fixed by the court.

(5) This would gravely injure your patent position.

(6) Finally, the probability of this is greatly enhanced by the fact that your size and world-wide operations make you a prime target for the Department of Justice that is looking for a chance to expand the effect of the U. S. anti-trust laws in international trade.

(7) The Department of Justice is just now resisting the merger of the J. P. Morgan and Company with Guaranty Trust Bank in New York, long controlled by the House of Morgan. For some twenty years I banked at Guaranty and was on close friendly terms with the presidents, top vice presidents and the board of directors, for I kept accounts there in total of a million dollars up. The Department of Justice will probably find some interesting things that may cause it to prohibit this merger. Now, you are identified by wide publicity with the House of Morgan in the United States.

(8) From the foregoing it is obvious that any contract you make with DuPont will be suspect in the minds of the Department of Justice in the United States.

(9) I conclude that any agreement with DuPont other than a straight license at a substantial price, will be suspect because of your size and the importance, nationally and internationally, of the polypropylene development. The chances of antitrust litigation will be not less than 60% that it will take place.

(10) Your paragraph 2 of your letter of February 3, 1959, states a partnership with DuPont, financial and patentwise, that could, because of the extent of the monopoly between two giant corporations, be construed as going outside the patent laws to insure for both a safe monopoly and a division of returns between partners.



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page 4

(11) I doubt that the Department of Justice or the courts will give the parties the benefit of the doubt as to legality; I believe it will be construed as a scheme to monopolize, and the good faith of this practical arrangement will be challenged by the U. S. Government.

This is because DuPont is so suspect in the Department of Justice. It is nothing against your company, but your size, your claims of priority upon which you now draw doubt (see comment later) by this arrangement, all contribute to this result. If I were counsel for the government, I would be quite confident I could sway a jury to a verdict of "guilty", in view of the public attitude towards DuPont due to the endless amount of publicity as to its violations of the antitrust laws. The public mind is saturated with this idea, and you would be the victim.

(12) The business wisdom of your proposal is obvious common sense. It would work with a partner who does not have a bad record.

(13) I must emphasize that no U. S. court will believe that this arrangement is a genuine, honest contest. I feel quite sure it will seriously hurt you in the Patent Office interference, for those officials are government officials and under the thumb of the Department of Justice. I doubt anyone in official authority will ever believe it is a deal that is above suspicion in view of DuPont's record.

#### The Patent Situation

The chances of DuPont being able to win over you are not great if we succeed in a matter now pending -- the meaning of the DuPont broad claim which would monopolize the isotactic structure even though the DuPont inventor had no concept of it. Informal talks with the Examiners in the last few weeks showed that they are beginning to realize that awarding this claim to DuPont would give it the benefit of a monopoly it did not invent. We have been quietly encouraging this point of view. The officials are now saying they think they can grant non-conflicting claims to several contestants. This is a strong indication of their thinking.

Montecatini  
Feb. 9, 1959  
page 5

Now, if it gets out that this deal is made with DuPont it will seriously impair winning this interference and you will, at best, be in an inferior position. If, however, you do not so agree and stand on your independent rights, you will have the respect of the Patent Office and the courts.

Even if you win in the DuPont matter, it will always be a threat to the validity of your patents and a challenge to the integrity of the transaction. That, I think, irrespective of all of the above, is the crux of the issue. In later litigations in the U. S. courts if you win and must bring infringement suits, sound lawyers can raise grave doubts as to inventorship and may succeed in litigating the interference issue by claiming the wrong inventor was granted the patent.

It has been my experience that short cuts like this are short cuts to cutting your own throat. DuPont tries this by saying, "Let us exchange proof and decide between ourselves who is first." This is illegal. It leaves a blot on the validity of the patent whoever gets it. It is such schemes, to avoid honest contests, that have caused the reputation of DuPont with the Courts and the Department of Justice and led them to take the action against DuPont that they do.

Very confidentially, I now have this issue before the Department of Justice in another interference with DuPont.

Please understand I am most friendly with DuPont. They have had a license from one of my companies. I have nearly one hundred thousand dollars of DuPont stock. They are delightful people of great personal charm and integrity. But in this practical world, it is wise to set aside friendship and personal feelings and look at the fact that DuPont and its partner, General Motors, have very bad reputations with the Department of Justice, the Courts, and the Congress.

Montecatini  
Feb. 9, 1959  
page 6

Recommendations: I would simply say verbally, We will give you a license on the same terms as anyone else, if you wish. If you win, we will ask you for a license. But it must be clearly understood there must be no cloud on the fact that we will contest at arms length with each other. No agreement should be made now. No financial arrangements should be settled. Both parties can state, as a matter of policy, that they will offer to license each other when the decision is reached, but until then it would be inadvisable to enter the agreement you outline.

Let me underscore one thing: no one will believe you and DuPont that your plan would be a fight at arms length if you made this "deal." Your partner's reputation would alone cast doubt, and I am quite sure any American jury or court would feel the same way. You are dealing with a company with a very bad record in the U. S. courts. I think this is not wholly justified, but it is a fact.

There is an old saying in the United States --  
"Don't pick up a dirty stick if you want to keep your hands clean."

May I commend to you the words of the Apostle Paul to the effect, "Abstain from all appearance of evil." I know this is a hard decision for you, but as a great French general once said to me in World War I, "The hard decision is the best decision."

In short, the answer is that this "deal" would be open to grave criticism and suspicion as to its legality and its ethics, in view of DuPont's record.

Sincerely yours,

*H.A. Toulmin*

132  
G/ra/Al

Milan, February 3, 1959

Dear Mr. Toulmin,

Following my yesterday's letter, I am submitting to your examination a new question which enters the framework of the talks I shall have with the Du Pont people.

At the conference table, one of the arrangements that might be considered is the following: Du Pont would undertake, in case it gets the interference count, to license under it Montecatini, which should be free to sublicense it against the payment to Du Pont of an agreed share of the financial returns of the sublicenses.

In this manner the licensing of a complete line of patents to the U.S. industry would be assured, while avoiding any possibility of a conspiracy to alter the results of the interference, since the U.S. company in question would still fight it out as best as it can, its sharing in the revenue being conditioned upon its being awarded the count.

I wonder whether an agreement of this kind, entered into during the pendency of an interference, would be open to criticism from the anti-trust point of view.

Thanking you in advance, I remain,

Yours sincerely,

(Ing. Piero Giustiniani)

Mr. H. W. TOULMIN  
DAYTON, Ohio.

G/ra/Al

Milan, February 2, 1959

Dear Mr. Toulmin,

As Mr. Lucini will tell you, the Du Pont people wish to have an exchange of views with us about the possibility of reaching an understanding in the patent field and have decided to send to Italy, on February 18th next, a mission headed by Mr. Plumley, head of the Patent Office.

Since you have already expressed your opinion with regard to eventual understandings with AMOCO, I consider advisable to know your opinion on the various aspects concerning the next meeting with the Du Pont people. In other words, I would like you to tell me - bearing in mind the present situation at the Patent Office, the next talks with AMOCO and the whole factors pertaining to our patent situation:

- (1) Whether in your opinion the Du Pont patent position in the field we are interested in is more or less strong than that of the Standard Oil of Indiana;
- (2) Whether, even before the meeting with the AMOCO people, we can along with the Du Pont people, lay the basis of an understanding in the patent field;
- (3) Whether the understanding as per point (2) is considered by you as advisable and worthy of some sacrifices by us in order to reach it;
- (4) Which are the modalities that in your opinion should characterize such understanding.

You would oblige me very much by kindly letting me know your opinion in this respect a few days before February 18th, in order that I may know how to behave.

While thanking you in advance, I remain,

Yours sincerely,

(Ing. Piero Giustiniani)

Mr. H. W. TOULMIN  
DAYTON, Ohio.

da tradurre in inglese con 5 copie

G/ra

Caro Signor TOULMIN,

come il Signor Lucini Le dirà, i Signori della Du Pont desiderano avere uno scambio di vedute con noi sulla possibilità di arrivare ad un' intesa nel campo brevettuale ed hanno deciso di inviare in Italia il 18 febbraio una missione capeggiata dal Sig. Plumley, capo dell' ufficio brevetti.

Poichè Ella ci ha già detto il Suo parere per eventuali intese con la AMOCO, ritengo opportuno conoscere il Suo pensiero su due aspetti che riguardano la prossima conversazione con i Signori di Du Pont. In altre parole Le sarei grato se Ella, tenendo conto della nostra situazione attuale, dei prossimi colloqui con la AMOCO ed infine di tutto il complesso dei fattori attinenti alla nostra posizione brevettuale, volesse dirmi :

- 1) se a Suo giudizio la posizione brevettuale di Du Pont nel campo che ci interessa è più o meno forte di quella della Standard Oil of Indiana.
- 2) Se ~~sarebbe~~ ancora prima di sentire i Signori della AMOCO, possiamo, con i Signori della Du Pont, concretare le basi di un' intesa nel campo brevettuale
- 3) Se l' intesa di cui al punto precedente è ritenuta da Lei opportuna sino al punto di fare qualche sacrificio da parte nostra pur di raggiungerla
- 4) Quali siano le modalità che, secondo Lei, dovrebbero caratterizzare queste intesa, tenendo presente che sappiamo anche noi che la sostanza dell'accordo deve essere una cross-licence.

Le sarò molto grato se Ella vorrà farmi conoscere la Sua opinione un po' prima del 18 in modo da potermi regolare.

La ringrazio e La saluto cordialmente.

copy of Prof. G. Vatta  
Cartello  
Dupont up

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FEDERAZIONE

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CHIEDERMI COLLOQUIO

GIUSTINIANI

**ERIC POTTER AND CLARKSON**

**CHARTERED PATENT AGENTS**  
ESTABLISHED 1889

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YOUR REF 107/226

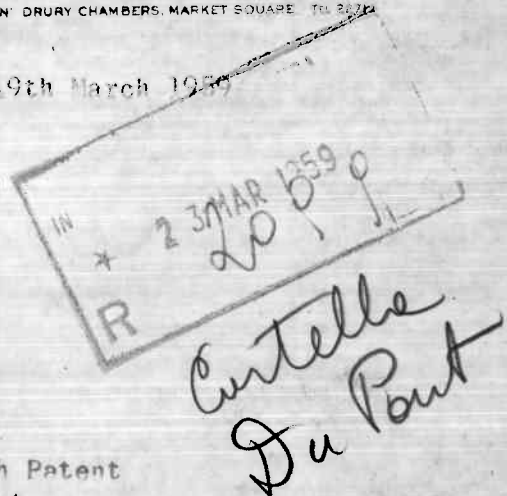
19th March 1959

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Messrs. Montecatini,  
Ufficio Brevetti,  
Via F. Turati 16,  
Milan,  
Italy.



Dear Sirs,

Re: Proposed Opposition to British Patent  
Application No. 808144 - Du Pont.

With further reference to your letter of the 4th February 1959, we have now received and have been able to consider a photocopy of the above specification.

In our opinion an opposition based on prior claiming in Application No. 810023 (Pool I) would be most unlikely to result in refusal of the Du Pont application, although we think it possible that at least some amendment of their claims could be forced upon them.

Claim 1 of Du Pont does conflict with Claim 23 at least of Pool I in that in the latter R is defined as being "alkyl, cycloalkyl or cycloalkenyl". The definition of R in Du Pont appears to fall within the broad Pool I definition, although, as you will appreciate, the case of R being a branched alkyl containing 3 to 7 carbon atoms or a cycloalkyl methylene group is not specifically claimed in Pool I. It might be possible to establish that claim 1 of Du Pont is at least prior claimed by Pool I in so far as the Du Pont claim covers the case where R is a cycloalkyl group. It would, at the same time, be necessary to assert that the basic characteristics specified in the Du Pont claim are equivalent to the basic characteristics of the Pool I claim. We should appreciate your comments on this point.

As far as Du Pont product claims 2 to 7 are concerned, none of the hydrocarbons featured in those claims are specifically referred to in any of the claims of pool I, and as such, we think it unlikely that their refusal on the grounds of prior claiming could be obtained.

As far as the main process claim (claim 8) is concerned, again we feel that there is overlap to the extent that R may be cycloalkyl in Du Pont and Pool I. There is, as you will no doubt agree with us, an

Cont'd...



Messrs. Montecatini,

-2-

19th March 1959

overlap between the catalysts which they define as "coordination catalysts" and the catalysts defined in Pool I.

The specific catalysts referred to in Du Pont claims 9 to 12 are, we believe, covered by Pool I claims 3 and 4 at least.

As far as claims 15 and 16 are concerned, we think that it is at least arguable that these are prior claimed to a certain extent by claim 43 of Pool I.

To sum up, therefore, our own view is that even though there is a case for lodging opposition against Du Pont on the basis of prior claiming in Pool I, such an opposition would be most unlikely to result in refusal of the Du Pont application. They could probably meet any opposition fairly simply by offering various amendments and we believe that you should give careful consideration to whether or not you should afford them an opportunity of improving their specification by amendment at this particular stage. As you probably know, provisions do exist for lodging belated oppositions under section 33 (i.e. within 12 months of the sealing of the patent), and within that period the overall position in the polymer field will be much more certain.

We look forward to receiving your further instructions. As you will no doubt appreciate, as the specification of Pool I has now been published, it is no longer possible to lodge more or less formal oppositions merely making reference to "Application No. 16362/55" - a fully amplified statement will have to be filed. As the preparation of such a document will take some time we shall be glad to hear from you in good time before the end of the opposition period, which is the 28th April 1959.

Yours faithfully,

*Eric Potter & Clarkson*

*Pizani  
in chimie di  
polimeri che  
1) Sono stati  
evitare che a  
venga messo in  
qualche modo  
che in parte  
catalizzatori  
2) vedere  
praticamente  
il campo di  
breve di Du Pont  
in un leg. di  
confine  
EPT*

23/3/59

23229 LBN GABROENG

Per Firani riferimento Potter 19 marzo nostra opposizio-  
ne du Pont Stop Chiarisca agli inglesi nostra policy  
prima soprattutto prevenire che a du Pont venga concesso  
un qualsiasi claim domini anche parte nostri catalinza-  
teri industriali aut processi aut prodotti aut applica-  
zioni Stop Secondo comprimere ove possibile campo coper-  
tura brevettuale du Pont entro legittimi confini Saluti  
DEVARDA

de Varda Ing. Giuseppe  
BREV/DIRE  
2326

DuPont

20 Ottobre 1958

Rif.n.1109/el

Ing. Piero GIUSTINIANI  
Amministratore Delegato  
Soc. Montecatini  
S e d e

Caro Ingegnere,

ho riletto attentamente la lettera di R.E. De Right della DuPont del 9 ottobre ed il telegramma di Toulmin.

Toulmin, come sempre sospettoso, pensa che l'azione della DuPont abbia lo scopo recondito di cercare di conoscere il lato inventivo delle operazioni della Montecatini e desidero raccogliere delle notizie che possono danneggiare la situazione brevettuale.

Se una visita della DuPont dovesse limitarsi ad una rapida visione dell'unità industriale di <sup>Ferrara</sup> Firenze, presentata come la prima in ordine cronologico, ma non come unica soluzione del problema della produzione industriale di polipropilene, non vedo come ciò possa danneggiarci. Non vi è nulla di inventivo in tale impianto che non sia già reso noto. Noi stessi siamo convinti che il processo attualmente usato nell'impianto industriale sarà superato in un prossimo futuro. I processi di polimerizzazione senza solvente sono destinati a soppiantare il processo con solventi. Mi auguro che il problema venga risolto a Ferrara prima che lo risolvono altri, ma ritengo che inevitabilmente si arriverà a tale soluzione. Non può perciò danneggiarci una visita rapida dell'impianto di Ferrara, se si esclude la visita degli impianti pilota.

D'altra parte lo stesso Toulmin ha sempre sostenuto che un accordo con una Società Americana sarebbe vantaggioso anche dal punto di vista della politica brevettuale. Non vorrei che la politica temporeggiatrice della Montecatini fosse giudicata negli Stati Uniti come contraria agli interessi superiori dello sviluppo dell'industria americana e venisse sfruttata per mettere la Montecatini in cattiva luce presso lo stesso "patent office". Anche Toulmin nel suo telegramma si dichiara favorevole ad un contratto di carattere preliminare.

Dipende da noi l'essere cauti ed evitare "disclosures" pericolose dal punto di vista brevettuale. Tutto il comportamento della DuPont, anche durante la visita di Lucini e mia a Willington

./.

seguito lettera per l'Ing. Giustiniani del 20/10/58

faceva apparire un sincero desiderio della DuPont di giungere ad un accordo con la Montecatini.

Comprendo come le trattative non siano facili, sino a che la situazione brevettuale non sia chiarita, ma ciò non dovrebbe impedire di cercare sin d'ora una soluzione che possa essere vantaggiosa per entrambi.

Ad es. io vedrei favorevolmente un accordo sul tipo di quelli fatti per l'Inghilterra; esso dovrebbe dare però alla Montecatini la possibilità di disporre di eventuali brevetti DuPont a condizioni eque, nel caso che la stessa Montecatini lo desiderasse. Si potrebbe inserire ad es. una clausola simile a quella proposta dall'U.S. Rubber per i suoi brevetti.

Un tale contratto dovrebbe inoltre consentire alla Montecatini di sviluppare una propria produzione di polipropilene negli Stati Uniti e di concedere licenze, almeno ai gruppi di licenziatari privilegiati di Ziegler.

Tali proposte potrebbero essere fatte a voce durante la visita delle persone della DuPont durante la quale si potrebbe sentire se la DuPont stessa avesse altre buone soluzioni da proporre.

Penso che si potrebbe per ora scrivere alla DuPont che se essa ritiene che la bozza di contratto del 1956 può essere presa come base per riprendere le trattative, la Montecatini è disposta a farlo. In tale caso, la Montecatini potrebbe proporre che la DuPont inviasse a Milano delle persone aventi i poteri di trattare ed in tale occasione la Montecatini potrebbe presentare dei campioni dei prodotti e dimostrare ai tecnici della DuPont attraverso una rapida visita a Ferrara come la produzione del polipropilene sia in una fase di sviluppo industriale.

Cordiali saluti.

G.Natta

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• GIUSTINIANI ORSONI REFERENCE DUPONT LETTER OCTOBER 9TH

● SPECTION YOUR OPERATION DANGEROUS IN VIEW PATENT OFFICE SITUATION INTERFERENCE WITH DUPONT/STOP EXTREME CAUTION DISCLOSURES RECOMMENDED /STOP/ SHOULD BE CONTRACT PRELIMINARY CHARACTER AT LEAST PROTECT YOU IN VIEW PATENT OFFICE CONTROVERSY/STOP/SUCH PRELIMINARY CONTRACT CAN HAVE ATTACHED FINAL CONTRACT +

DUPONT CAN TAKE IF PRELIMINARY STEP SATISFACTORY TO IT/STOP/ SOME FINANCIAL CONSIDERATION FOR PRELIMINARY CONTRACT ESSENTIAL /STOP/ EVERDA FAMILIAR MY CONTRACTS THIS BASIS BARBIDE AND OTHERS /STOP/ ALL

● WORK SATISFACTORILY /STOP/ SUGGEST ANY DISCLOSURE BE CONFINED TO PRODUCTION PERFORMANCE AND NO INFORMATION ON INVENTIVE AND SCIENTIFIC IDE /STOP/ UPON SUCH SHOWING COMMERCIAL PRODUCTION SUCCESS SUCH CONTRACTS IN ORDER TO PROTECT YOU /STOP/ HAVE SO ADVISED LUCINI =

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13 Ottobre 1958

*DuPont*

Egr. Ing. Piero GIUSTINIANI  
Amministratore Delegato  
Soc. Montecatini

Rif. n. 1079/el

S e d e

Caro Ingegnere,

ricevo la Sua lettera del 9 c.m., relativa alle fibre di cui si sta occupando la DuPont.

Si tratta di prodotti tutti molto costosi che certamente non possono fare concorrenza ai nostri polimeri ottenuti da alfa-olefine. Già nel 1956, durante la mia visita alla DuPont, avevo avuto occasione di vedere delle fibre elastomeriche di cui erano state vantate le proprietà, ma nulla mi era stato detto sulla loro composizione. E' molto probabile che esse fossero dei poliuretani e corrispondessero quindi a quelle di cui pure Lei ha avuto segnalazione.

Il vantaggio di tale fibre è quello di essere più resistenti all'ossidazione e quindi meno degradabili delle comuni gomme dielefiniche naturali o sintetiche. Tanto è vero che la DuPont aveva ottenuto delle fibre elastiche dal titolo di 1 den., tanto sottili da essere quasi invisibili ad occhio nudo. E' di tali fibre il busto per signora che può essere contenuto in una scatola di sigarette.

Ritengo che i nostri copolimeri etilene-propilene possono fornire prodotti analoghi ed a molto minor costo.

Lei ricorderà che già da tempo avevo proposto che Terni si occupasse della fabbricazione di fibre elastiche o partendo dai copolimeri vulcanizzabili, oppure da polipropilene a stereoblocchi che è elastico e non richiede vulcanizzazione.

Per quanto riguarda le fibre ad alta resistenza ed alto punto di fusione da adoperarsi per la fabbricazione di pneumatici, il nostro polipropilene è probabilmente da scartarsi a causa della sua bassa temperatura di fusione. E' da prendere in considerazione il dimero del propilene (il 4-metil-pentene-1 di cui la California Research Corp. ci ha fornito un campione) perchè tale polimero fonde a temperatura a circa 240°C. Purtroppo i polimeri fatti sinora presentano una relativamente bassa percentuale di prodotto cristallino e non sappiamo se attribuire tale bassa cristallinità alla limitata purezza del monomero oppure ad altre cause. Altri monomeri olefinici, quale

./.

seguito-lettera diretta all'Ing.P.Giustiniani del 13.10.58

il trimetil-butene-1, presentano alta temperatura di fusione, ma nessuno può essere tenuto a così basso costo come il 4-metil-pentene-1 contenuto nei dimeri del propilene usati come benzina. Infatti Mr. Shiffler della California Research Corp. prevedeva per tale olefina un costo di 2 ¢ superiore a quello del propilene.

Per quanto riguarda il terzo tipo di fibre di cui accenna nella Sua lettera, ossia gli esteri dell'acido piromelittico, ho visto recentemente diversi articoli sulla letteratura relativa a tali prodotti. Anch'essi, sia per il costo, sia per l'alta densità non dovrebbero poter fare concorrenza alle fibre ed ai films di polipropilene, potranno essere paragonabili come proprietà al terilene.

Cordiali saluti.

G.Natta

# "MONTECATINI"

SOCIETÀ GENERALE PER L'INDUSTRIA MINERARIA E CHIMICA

AMMINISTRATORE DELEGATO

G/tp



Telegrammi GABBRO MILANO

Telefono 6333

Telefoni interurbani  
chiedere GABBRO MILANO

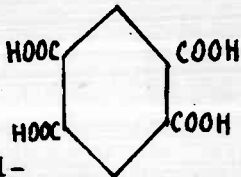
SEDE MILANO  
Via F. Turati, 18

Milano, 9 ottobre 1958

Caro Natta,

a quanto sembra, la Du Pont starebbe effettuando  
le seguenti ricerche :

- Fibra ad alta resistenza e ad alto punto di fusione, destinata alla fabbricazione dei pneumatici, costituita da diammina dell'acido para-azaleico
- Fibra elastomerica di poli-uretano (Fiber K)
- Fibre e films trasparenti di esteri dell'acido piromelittico



Gradirei conoscere il Suo pensiero in merito all'interesse di questi prodotti .

Cordiali saluti.

( Ing. Piero Giustiniani )

Egregio Signor  
Prof. Giulio Natta  
M i l a n o



Milano, 7 Ottobre 1958.

Preg.mo Signore  
Ing. Piero Giustiniani,  
Sede.



*Orsoni*

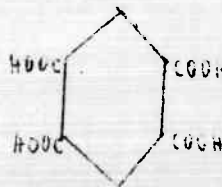
Ha avuto luogo la preannunciata visita di Mr. Shine, Techno-Commercial Director Central Technical Department della Celanese Corporation of America.

Mi ha dato l'impressione che questi Signori siano alla ricerca di qualche nuova profittevole produzione di fibre, e anche che manchi loro la capacità e la fantasia di trovarla.

Essi non sembrano attribuire importanza alla fibra polipropilenica, sopra tutto per il basso punto di fusione; non ho affatto insistito.

I campi di Du Pont di ricerca in materia sarebbero :

1. Fibra ad alta resistenza e ad alto punto di fusione, destinata alla fabbricazione dei pneumatici, costituita da diammina dell'acido para-azaleico.
2. Fibra elastomerica di poli-uretano (Fiber K).
3. Fibre e films trasparenti di esteri dell'acido piromelittico



vedi lett. 1079 del 13.10.58  
*Piero Giustiniani*

l.to: Orsoni

Or/sl.

*copla di risposta inviata a Orsoni*



ESTABLISHED 1802

E. I. DU PONT DE NEMOURS &amp; COMPANY

INCORPORATED

WILMINGTON 98, DELAWARE

INTERNATIONAL DEPARTMENT

Copy to: Mr. L. Lucini, President  
Chemore Corporation  
New York, N. Y.

October 9, 1958

AIR MAIL

Mr. P. Giustiniani, Managing Director  
Soc. Montecatini Generale per l'Industria  
Mineraria e Chimica  
Via Turati, 18  
Milan, Italy

Dear Mr. Giustiniani:

POLYPROPYLENE

You will recall that the possibility of acquiring United States know-how and patent rights in the polypropylene field from your company has been under active consideration between our companies for several years. Since so much time has elapsed it might be useful to review the chronology.

Immediately after your visit in June 1956 you submitted a draft of a license agreement which provided a September 15, 1956 deadline for acceptance, which deadline was waived, consideration including certain counter proposals by your company continuing via discussions with you, Dr. Orsoni and Mr. Lucini. Growing out of these continuing discussions, and in view of our inability, on the basis of limited knowledge of the economics of your process, to commit ourselves with respect to the very substantial option and initial down payment and continuing royalty obligation provided in your draft agreement, Dr. Orsoni suggested, in his letter of March 15, 1957, which Mr. Lucini delivered to us, that we postpone further discussion of terms until your first commercial unit would start production (then expected in May 1957) after which you would be prepared to receive technical representatives of our Company in Italy to obtain factual information to permit evaluation of our interest in product and process. That letter also indicated that it should be possible on the basis of such information to eliminate the proposed option payments and negotiate a simple agreement providing only for down payment and continuing royalty.



*Carbelle  
DuPont*

10/9/58

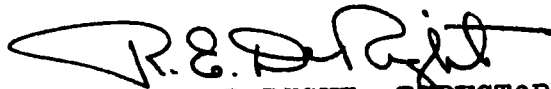
Dr. Orsoni's proposal was accepted by my letter of April 2, 1957 and acknowledged by his letter of April 10, 1957 confirming that Montecatini would inform us as soon as the meeting in Italy could take place.

In August 1957 Mr. Lucini visited us in connection with a letter from you relative to the possibility of a joint European venture. We replied that we are always ready to consider proposals but that we were concerned in the first instance with United States rights and felt that the next step should be the visit to Italy which had been suggested. Mr. Lucini advised that the start-up of your first commercial unit had been delayed but that we would be advised as soon as you had developed the experience and information required.

Periodically since then we have had a number of occasions to see Mr. Lucini, or other Montecatini personnel, and have confirmed our continuing interest in the discussion of polypropylene rights, merely awaiting notice from you that you were ready to receive our technical people. In each instance we have been advised that your original schedule of commercial development had been delayed but that we could expect advice as soon as the necessary information was available for discussion with our mission.

During the intervening period our research and development activities on polymers and copolymers of unsaturated hydrocarbons has proceeded and there have been certain developments in the patent picture. We are currently reviewing the various candidates on the basis of our own research efforts and the rights which we might acquire from others. It is, therefore, very timely and we would very much like to proceed promptly with a visit to Italy as proposed in 1957. I would appreciate knowing whether you would be in a position to receive a mission and if so when it would be most convenient.

Yours very truly



R. E. DeRIGHT, DIRECTOR  
TECHNICAL AND ADMINISTRATIVE DIVISION

RED:ec

# MONTECATINI

SETTORE PROGETTI E STUDI

Milano, 1 Ottobre 1959.

Preg. mo Signore  
Ing. Piero Giustiniani,  
S e d e.

*1064*

*1064*

*↓*

## Visita odierna del dr. Burk della Du Pont.

1. Ha cominciato esprimendo soddisfazione per il raggiunto accordo. Du Pont non ha ancora programmi industriali per la produzione di polipropilene; ha impianto pilota a polimerizzazione continua.
2. Du Pont considera con particolare interesse le fibre di polipropilene, benchè non abbia ancora svolto molto lavoro in questa direzione. Crede di poter partecipare alla produzione di fibre negli Stati Uniti, e chiede se noi saremmo interessati a un accordo; ho risposto di sÌ; scriveranno all'ing. Giustiniani.
3. Il campo dell'industria chimica sta diventando cosÌ complesso, che è impossibile a una sola industria per quanto potente di svolgere ricerche in tutte le direzioni importanti. Du Pont stima che la propria partecipazione al complesso delle ricerche sulle materie plastiche non supera il 5%.
4. Le invenzioni risultanti dalle ricerche hanno tale valore, da poter essere scambiate solo con altre invenzioni. Perciò Du Pont è interessato a collaborare con Montecatini in diversi campi. Du Pont vede un grande futuro nel campo delle poliolefine, ma finora produce solo polietilene e Hypalon.
5. Fino ad ora Du Pont acquista le olefine, compreso il butadiene per nylon. Sta considerando la convenienza di produrre le olefine in occasione dell'estensione del proprio campo di produzione.
6. Shell intende produrre polietilene negli Stati Uniti, ma trova difficoltà perchè il know-how Badische che può avere da Wesseling non dà un prodotto accettabile dal mercato americano. Burk domanda se Shell ci ha chiesto licenza per il polipropilene negli Stati Uniti. Risposta : fino ad ora non se ne è parlato.
7. La Ditta Zimmer di Francoforte che offre impianti di polipropilene non è di entità trascurabile; sono circa 300 tecnici; hanno progettato fra l'altro l'impianto di filatura del nylon per la Bayer, e anche diversi impianti oltre-cortina.
8. Avisum aveva chiesto una licenza per il polipropilene a Du Pont ; risposta negativa.
9. Du Pont ha trovato che il polipropilene "Escon" fabbricato nell'impianto pilota della Esso contiene dal 4 al 50% di polimero estraibile con esano.
10. Du Pont chiede campione di 2 kg di Moplen in granuli non colorato; viene spedito (dopo attenta selezione con SEID).
11. Du Pont chiede di essere informato se noi abbiamo un procedimento o brevetti per ridurre in polvere il polietilene AP. Pur conoscendo quanto aveva fatto

# MONTECATINI

SETTORE PROGETTI E STUDI

2.

Castellanza, ho risposto che avremmo scritto.

12. L'impianto per la produzione industriale di Delrin è entrato in funzione. Prezzo iniziale del prodotto 90 cent/lb. Nonostante il basso costo della materia prima, il costo del polimero riesce elevato; l'impianto sarebbe complesso. La polimerizzazione della formaldeide era stata tentata invano da 30 anni.
13. Il dr. Burk ha fatto parte di una commissione americana che è stata in Russia per vedere l'industria delle materie plastiche. Situazione molto arretrata; fanno resine fenoliche, cellulose, etc., di mediocre qualità. Hanno 14 impianti pilota per il polietilene, e non sono riusciti a realizzare una produzione industriale. Analoga commissione russa è stata poi negli Stati Uniti: stesso numero di componenti, di giorni di permanenza, di impianti visitati. Sono stati mostrati impianti di resine fenoliche, cellulose, etc., analoghi a quelli russi.
14. Due giorni prima dell'arrivo di Khrushchew in America, il dr. Burk è stato interpellato dal Department of Commerce di Washington sulla politica da seguire in materia di scambi con la Russia. Il dr. Burk ha consigliato di non cedere know-how a nessun prezzo, bensì eventualmente solo in cambio di know-how russo interessante per gli Stati Uniti.
15. Nell'accennare alle posizioni brevettuali di Du Pont e nostra negli Stati Uniti, Burk si esprimeva in modo "paritetico". Avendo presente il nostro accordo, non ho ritenuto il caso di contraddirlo.  
Ho anche capito che Du Pont considera che la posizione brevettuale Du Pont-Montecatini sia superiore a quella di tutti gli altri negli Stati Uniti.
16. La nostra mostra a Chicago nel novembre 1958 ha suscitato impressioni notabili.
17. Il dr. Burk sta visitando Europa e Giappone e rientrerà a Wilmington il 3 Dicembre.

lto: Orsoni

Or/sl.

Champoluc,XXXXXX 6 settembre 1958

*Du Pont*

Egr. Sig.Ing. PIERO GIUSTINIANI  
Amm.re Delegato  
Soc. Montecatini  
Via F. Turati 18  
Milano.

/mb

Caro Ingegnere,

Credo di averLe accennato nel luglio scorso ad una visita dell'Ing. Lorenzo Cenzato, mio ex-allievo, il quale attualmente lavora presso la Dupont. Durante la stessa visita si era parlato del più e del meno riguardo al Moplen e gli avevo detto che mi sembrava che la Dupont dimostrasse scarso interesse per il polipropilene.

Ho ricevuto ora una lettera di Cenzato da Wilmington nella quale mi comunica l'improvvisa morte del Dr. Charch che avevamo incontrato a Wilmington nel maggio scorso insieme al Dr. Lucini e con il quale si erano avuti i noti colloqui di cui sia io che il Dr. Lucini avevamo riferito. Nella stessa mi scrive che il Polychemical Dept. della Du Pont dovrà decidere entro qualche mese, in vista delle attuali ricerche, se il polipropilene isotattico è un prodotto conveniente da produrre alla Du Pont. Se sì, la Du Pont potrà cercare di riattivare i contatti con la Montecatini. Sembrerebbe che tale Società dia molta importanza al fatto di poter esaminare campioni di Moplen per valutarne la qualità. Mr. Burrows, che era uno dei partecipanti al colloquio del maggio scorso, avrebbe detto a Cenzato che la Du Pont non ha ancora ricevuto i campioni di Moplen da esaminare dalla Montecatini. Personalmente penso che convenga, prima di intraprendere trattative, vedere lo sviluppo della situazione brevettuale.

Cordiali saluti.

G. Natta

*Cart.*



**E. I. DU PONT DE NEMOURS & Co.**  
INCORPORATED WITH LIMITED LIABILITY IN THE U.S.A.  
WILMINGTON 98, DELAWARE, U.S.A.

30, rue de Vermont, Genève

EUROPEAN OFFICE:

**BUSH HOUSE,  
ALDWYCH,  
LONDON, W. C. 2.**

TELEPHONE: HOLBORN 0461.  
TELEGRAMS: NEMOURS, ESTRAND, LONDON.

Genève, le 5 août 1959

Monsieur le Professeur G. Natta  
Département de Chimie Industrielle  
Politecnico di Milano  
32, Piazza Leonardo da Vinci  
M I L A N

Cher Monsieur,

Je vous remercie vivement de votre lettre du 16 juillet et regrette beaucoup de n'avoir pas eu le temps de vous rendre visite lors de mon dernier passage à Milan.

Il me sera également impossible de vous rencontrer à Champoluc comme vous me l'aviez si aimablement proposé dans votre lettre. J'espère toutefois avoir la possibilité de vous revoir lors de mon prochain séjour à Milan qui aura probablement lieu en octobre ou novembre.

En vous remerciant de votre amabilité et en vous souhaitant un prompt rétablissement de votre santé, je vous prie d'agréer, cher Monsieur, mes salutations les meilleures.

*Bézard*

A. von Bézard  
European Research Associate

*N*

*Giordano  
DuPont*

16th July 1959

Robert E. Burk, Associate  
Director Research and Dev. Div.  
E.I. du Pont de Nemours & Co.  
Wilmington 98, Delaware  
U.S.A.

our. refs. 807/eg

Dear Dr. Burk,

Please, excuse the delay with which I answer your letter of July 1, 1959 which depends on a week's journey I took abroad.

I shall be very glad, to meet you in Milan. Even if, during the week Sept. 28 to Oct. 2, I am away from Milan because of a Meeting, I shall try to come back on October 1, in order to meet you.

I expect you will attend at the Weisbaden Conference where I am going too.

With my best regards,

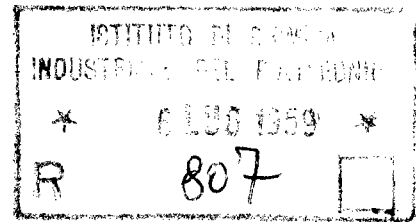
G. Natta





E. I. DU PONT DE NEMOURS & COMPANY  
INCORPORATED  
WILMINGTON 98, DELAWARE

POLYCHEMICALS DEPARTMENT



July 1, 1959

Professor G. Natta  
Istituto Chimica Inc. Politechio  
Piazza Leonardo de Vinci 32  
Milan, Italy

Dear Professor Natta:

I am planning a trip abroad this Autumn and would value greatly a discussion with you. If this is agreeable, would the afternoon of October 1 be a suitable time?

With best regards to yourself and Mrs. Natta,

Yours, sincerely,

*Robert E. Burk*

Robert E. Burk, Associate Director  
Research and Development Division

REB/cpm

*Copia a P. Natta*

*Carfella  
Du Pont*

le 16 juillet 1959

Dr. A. von Bézard  
~~DUPONT E.I. Du Pont de Nemours~~  
~~Wilmington 98, Delaware,~~  
~~(U.S.A.)~~

*30, rue de Vermont  
Genève*

nos réfs 819/eg

Cher Monsieur,

Je vous prie de m'excuser si je répons en retard à votre aimable lettre du 9 juillet, mais je viens de la recevoir seulement maintenant à mon retour d'un voyage en Angleterre.

Pendant le 28 et le 29 juillet, je serai très occupé pour les examens des doctorats de l'Ecole Polytechnique et aussitôt terminé je prendrai mes vacances.

Si vous êtes à Milan dans ces jours, je vous prie de me téléphoner dès votre arrivé et je chercherai de trouver quelques minutes pour vous saluer. Au cas contraire, puisque je me trouverai, à partir du 1 août jusqu'au 7 août à Champoluc (Vallée d'Aoste), si vous voulez profiter pour faire une excursion en voiture de Genève à Champoluc, je serai vraiment heureux de vous rencontrer là-bas. Vers les premiers jours d'octobre je rencontrerai à Milan Mr. Burk auquel j'ai écrit aujourd'hui.

Dans l'attente de vous revoir, je vous prie d'agréer, Monsieur, mes salutations les meilleures.

G.Natta

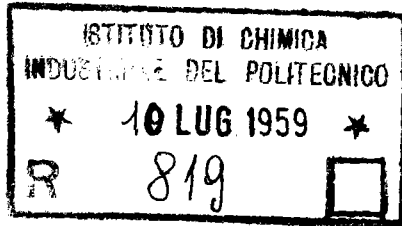


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TELEPHONE: HOLBORN 0461.

TELEGRAMS: NEMOURS, ESTRAND, LONDON.

Genève, le 9 juillet 1959

Monsieur le Professeur G. Natta  
Département de Chimie Industrielle  
Politecnico di Milano  
32, Piazza Leonardo da Vinci  
M I L A N

Cher Monsieur,

Il se peut que je serai à Milan entre le 27 et 28 juillet et j'aimerais bien saisir cette occasion pour vous revoir. Je vous serais donc très reconnaissant de me faire savoir si ma visite vous est agréable ou le 27 ou le 28 juillet. Si oui, je vous prie de bien vouloir également m'indiquer l'heure qui vous conviendrait le mieux.

Le but de cette visite n'est pas très spécifique; j'aimerais simplement renouveler notre connaissance et m'entretenir avec vous des derniers événements dans le domaine de votre activité.

J'espère donc vivement avoir le plaisir de vous revoir sous peu et, dans l'attente de votre réponse, je vous prie d'agréer, cher Monsieur, l'expression de mes sentiments distingués.

Dr. A. von Bézard  
European Research Associate

*Ju Pont*

10 luglio 1958

Aggr. Sig. Ing. Piero Giustiniani  
Amministratore Delegato  
Sada

619/mb

e p.c. Ing. Orsoni  
Ing. Lercher  
Ing. Ballotio  
Ing. Saveri

Caro Ingegnere,

Ieri ho avuto la visita di Mr. Cobbs della Dupont, il quale ha iniziato una conversazione molto interessante nel campo dei film.

Purtroppo ho dovuto interrompere il colloquio a causa dell'appuntamento con Lei e con Astury, ma forse è stato meglio così poiché ciò ha evitato che rimanesse il tempo a Mr. Cobbs di farti delle domande la cui risposta avrebbe potuto essere imbarazzante.

Mr. Cobbs ha parlato prima su alcuni film di poli-eteri carboni fluorurati, tra cui dei polimeri del fluoruro di vinile, che fonde a 200°; essi presentano un'altissima resistenza alla luce solare (alcuno 10 anni al sole della Florida). Il solo inconveniente di tali polimeri è che costano 25 lb/lb.

Si è poi intrattenuto sui copolimeri tra tetrofluoroetilene ed etilene-propilene nel rapporto 50:50. Questi ultimi film, estremamente trasparenti, resistono anche a 400° anche, ed è possibile che siano buoni per i raggi UV. Il interesse è pure un'alta resistenza alla luce solare. Vorrebbe essere il fatto che tali polimeri, che dopo un solo fatto di anni, fondono a temperature così alte hanno proprietà del tipo particolari come applicazioni su filmari etilene-propilene.

Si ha poi fatto vedere un film di Mylar, stabilizzanti di-antrossilbenzodiphenone. Lo stabilizzante usato è un lieve sfumatura giallo-verde. Il Mylar usato una volta della Florida, mentre il Mylar dopo 1/4 anni al sole porta tale luce più di 2/3 mesi. Stabilizzante non sono ancora stati una lunga tabella di Cobbs ha poi dati sui film

./.

Seconda lettera a Ing. F. Giustiniani in data 10/7/58  
G. Natta

di polipropilene, dati che si riferiscono a prodotti della Minnesota Co. Si tratta di films stirati nei due sensi, dei quali noi avevamo già avuto un esemplare. Al nostro esame con i raggi X, era risultato che tali films presentano un doppio orientamento ma quello in un senso leggermente maggiore che l'altro.

Interessanti sono stati alcuni lavori teorici sulla permeabilità dei films ai gas e all'umidità che mi ha mostrato ma non mi ha lasciato. Da essi risulta esplicito in modo molto chiaro la relazione tra permeabilità e cristallinità. Vi è inoltre discussa l'effetto sulla permeabilità di altri fattori indipendenti dalla cristallinità. In genere, molecole con alta simmetria presentano bassa permeabilità e da questo punto di vista il polietilene lineare differisce dal polietilene ad alta pressione. Per molti polimeri la permeabilità ai gas è proporzionale al contenuto di amorfia. Nel caso del cloruro di vinile, l'alta permeabilità ai gas si deve attribuire solo per il 40% agli effetti della cristallinità.

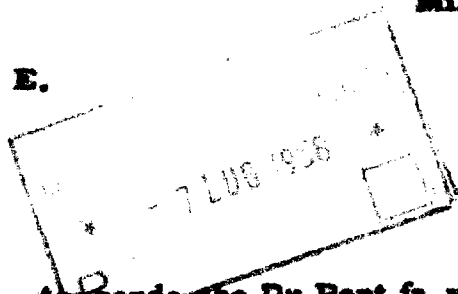
Cordiali saluti.

G. Natta

*sig. prof. Natta*

**MONTECATINI**  
SETTORE PROGETTI E STUDI  
Milano, 4 Luglio 1958.

**S E R E.**



Apprendo che Du Pont fa vernici a base di  
Nypalon (polietilene solfo-clorurato).

**Cordialmente :**

f.to: Orsoni

*Carpi visto*

**Or/sl.**

2 u Pont  
June 16, 1958

Ref. No. 722/x1

Mr. Lorton A. Burrows

Textile Fibers Department  
E. I. du Pont de Nemours & Co.

WILMINGTON 98 - Delaware - USA

Dear Mr. Burrows,

I am sorry that I have not had the opportunity to see you during your last visit in Milan, because I was in the United States.

As to your request of a sample of syndiotactic polyvinyl chloride, I wish to inform you that we have observed a crystallinity higher than that of conventional polyvinyl chloride, generally only in the case of polymers having low molecular weight, which show therefore a minor practical interest. We are still working in this field, but, at present we have not samples of particular interest to send to you.

With best regards.

Sincerely yours,

G. Natta

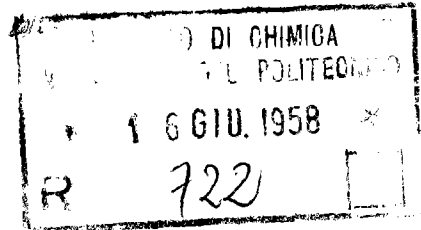


E. I. DU PONT DE NEMOURS & COMPANY  
INCORPORATED  
WILMINGTON 98, DELAWARE

TEXTILE FIBERS DEPARTMENT

June 9, 1958

Prof. Dr. G. Natta  
Istituto di Chimica Industriale  
del Politecnico  
Piazza Leonardo da Vinci, 32  
Milan, ITALY



Dear Prof. Natta:

I am very sorry that I missed seeing you while you were in the United States and while I was in Europe. I enjoyed very much my brief visit to your institute and the discussions with Professor Danusso, Dr. Corradini and Dr. Porri.

Their report that syndiotactic polyvinyl chloride of good crystallinity had been made was of particular interest. When and if you are free to do so, I would appreciate receiving a small sample of this production for examination.

I was quite impressed by the improvements that have been made in polypropylene yarns, as discussed by Dr. Larcher and as shown at the Milan Trade Fair. It seems to me that considerable progress is still being made on this new fiber.

Sincerely,

*Lawton Burrows*

Lawton A. Burrows

LAB:axc

*2 1/2 samples  
also in state  
with samples*

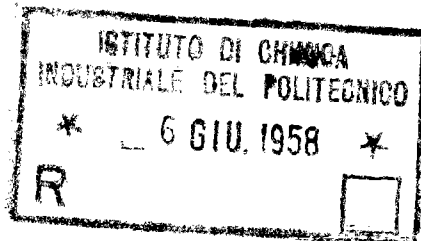
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Corradini*





E. I. DU PONT DE NEMOURS & COMPANY  
INCORPORATED

FILM DEPARTMENT  
RESEARCH DIVISION



Buffalo 7, New York  
June 3, 1958

AIR MAIL

Professor Dr. Guilio Natta  
Politecnico di Milano  
Piazza Leonardo da Vinci 32  
Milan, Italy

Dear Dr. Natta:

I am looking forward to an interesting discussion with you at our forthcoming meeting on July 8th at 14.00 hours, as previously arranged through our London Office.

This note will serve as final confirmation of my visit. Thank you for your kind attention to all the details you have considered on my behalf and I shall see you at the appointed time.

Very sincerely,

YERKES RESEARCH LABORATORY

  
W. H. Cobbs, Jr.  
Research Manager

WHC:hw



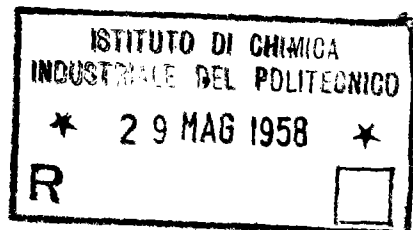
**E. I. DU PONT DE NEMOURS & Co.**  
INCORPORATED WITH LIMITED LIABILITY IN THE U.S.A.  
WILMINGTON 98, DELAWARE, U.S.A.

EUROPEAN OFFICE:

**BUSH HOUSE,  
ALDWYCH,  
LONDON, W. C. 2.**

TELEPHONE: HOLBORN 0461.  
TELEGRAMS: NEMOURS, ESTRAND, LONDON.

May 27, 1958.



Mrs. R. Lamma,  
Istituto di Chimica Industriale,  
Politecnico,  
Piazza Leonardo da Vinci, 32,  
Milano, Italy.

Dear Mrs. Lamma,

Thank you for your letter of May 22, concerning Dr. Cobbs's visit on July 8, and your information about the opening and closing times of your institute. Dr. Cobbs will call at 3 o'clock in the afternoon of July 8, and hopes this will be convenient.

Yours very truly,

*Emy von Bertele*

Emy von Bertele  
Technical Assistant

EvB/G

Du Pont

May 22, 1958

Mr. E. von Bertele

Technical Assistant

E. I. DU PONT DE NEMOURS & CO.  
Bush House - Aldwych

LONDON W.C.2 - England

Dear Mr. von Bertele,

with reference to your last letter of May 19,  
I wish to inform you that I have not noted the hour of the appointment  
for Dr. Cobbs; at 2 o'clock, our Institute is closed. Dr. Cobbs may  
come to visit us on July 8 from 3 o'clock till 7 o'clock, or in the  
morning, from 9 o'clock till 1 p.m. Please excuse me for this misun-  
derstanding.

With best regards.

Sincerely yours,

R. Lamma (secretary to Prof. Natta)



E. I. DU PONT DE NEMOURS & Co.

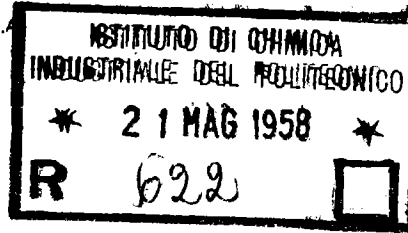
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EUROPEAN OFFICE:

BUSH HOUSE,

ALDWYCH,  
LONDON, W. C. 2.

TELEPHONE: HOLBORN 0461.  
TELEGRAMS: NEMOURS, ESTRAND, LONDON.



May 19, 1958.

Mrs. R. Lamma,  
Secretary to Prof. Natta,  
Istituto di Chimica Industriale  
del Politecnico,  
Piazza Leonardo da Vinci 32,  
Milano, Italy.

Dear Mrs. Lamma,

Thank you very much for your letter of May 13, 1958,  
saying that Prof. Natta will be pleased to meet Dr. Cobbs  
in his institute on July 8, at 2 o'clock in the afternoon,  
and that in case Prof. Natta should be called away, Dr.  
Crespi will receive Dr. Cobbs.

Please accept our thanks for your kind co-operation  
in this matter.

Yours sincerely,

*E. von Bertele*

E. von Bertele  
Technical Assistant

EvB/G

May 13, 1958

*Du Pont*

Ref.n.588/el

Mr. E. von Bertele

Technical Assistant

E.I. DU PONT DE NEMOURS & CO.

Bush House,

ALDWYCH - LONDON, W.C.2

Dear Mr. von Bertele,

with reference to your letter of April 1, I wish to inform you that Prof.Natta, who is just now came back from his travel through the States, will be pleased to meet Dr. W.H. COBBS, Research Manager of the Yerkes Laboratory of your Film Department, next July in Milan. Prof.Natta does hope to be himself in the Institute during the foreseen visit of Dr. Cobbs, but, till now he cannot assure it, as during the second week of July he has to be away. If Prof. Natta is not in Milan, Dr.Cobbs may address himself to Dr. Crespi at our Institute.

However, I wish to inform you that, in our Institute, there is not a Section on films productions. This particular field is developed by Polymer Company (a consociate of Montecatini Co.) in its plant in Terni (Italy). Ist Milan address is : Via F.Turati n. 18.

With best regards.

Sincerely yours

(Mrs.R.Lamma,  
secretary to Prof.Natta)



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WILMINGTON 98, DELAWARE, U.S.A.

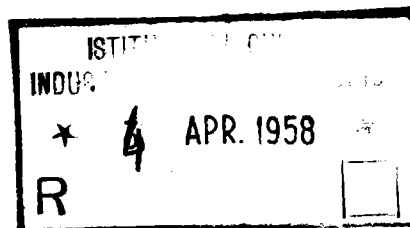
EUROPEAN OFFICE:

**BUSH HOUSE,  
ALDWYCH,  
LONDON, W. C. 2.**

TELEPHONE: HOLBORN 0461.  
TELEGRAMS: NEMOURS, ESTRAND, LONDON.

April 1, 1958.

Prof. Dr. G. Natta,  
Politecnico di Milano,  
Piazza Leonardo da Vinci 32,  
Milan, Italy.



Dear Professor Natta,

Dr. W.H. Cobbs, Research Manager of the Yerkes Laboratory of our Film Department will be in Milan on July 8, 1958, and would very much like to make your acquaintance, and also, if possible, to be shown your laboratories.

I write therefore to ask you whether your engagements would permit you receiving Dr. Cobbs at about 2 o'clock in the afternoon of July 8. He would greatly appreciate it.

Yours sincerely,

*E. von Bertele*

E. von Bertele  
Technical Assistant

EVB/SH

April 11, 1958

Mr. E. von Bertele

Technical Assistant  
E. I. DU PONT DE NEMOURS  
BUSH HOUSE

ALDWYCH - LONDON , W.C. 2

(England)

Dear Mr. von Bertele,

With reference to your letter of April 1,  
(EvB/SH) I wish to inform you that Prof. Natta is now abroad  
and will come back to Milan in the beginning of May.

At his return, Prof. Natta will reply to you about  
the visit of Dr. W. H. Cobbs next July.

With best regards.

Yours sincerely

R. Lamma (secretary to Prof. Natta)

E.I. Du Pont  
de Neuve.

9 Maggio 1958

Egr. Ing. Piero Giustiniani  
Amministratore Delegato  
Soc. "Montecatini"

Rif. 572/el

S e d e

Caro Ingegnere,

Sebbene già Le abbia esposto a voce i fatti più salienti dell'incontro fra la DuPont, unisco alla presente una breve relazione sulla visita effettuata il 1° Maggio a Wilmington affinché ne resti traccia scritta.

Cordiali saluti.

G. Natta

1 all.



VISITA a WILMINGTON alla DUPONT  
(1° Maggio '58)

---

Presenti :

Mr. Church  
Mr. Gilbert  
Mr. Burk  
Sig. Lucini  
Prof. Natta

---

Mr. Burk della DuPont ha affrontato subito di sua iniziativa il problema della situazione brevettuale nel campo del polipropilene. Ci ha riferito di aver avuto notizia che 13 brevetti entreranno in interferenza sul polipropilene, ma però non ha potuto sapere quali siano esattamente tali brevetti. Ritiene che almeno 9 o 10 cadranno subito, essendo decisamente successivi come data.

La DuPont ritiene di trovarsi in una buona posizione brevettuale, ma a noi è sembrato che non sia sicura al cento per cento.

Mr. Church ha riferito che una grande Società americana si è rivolta alla DuPont per una licenza sul polipropilene, essendosi dichiarata convinta che la priorità DuPont sia antecedente. Sebbene tale società non sia stata nominata, abbiamo avuto l'impressione che essa sia la "Sun Oil". Infatti successivamente i tecnici della DuPont hanno parlato di approcci della Sun Oil alla DuPont.

Il Sig. Lucini ha risposto che 20 società si sono rivolte alla Montecatini per avere licenze e che anche la Montecatini ritiene di poter ottenere dei brevetti dagli Stati Uniti.

Mr. Gilbert ha chiesto se la Montecatini ha in programma soltanto di asportare prodotto italiano negli Stati Uniti o di produrre se stessa in America, oppure di dare licenze a società americane.

Lucini ha precisato che nessuna decisione è stata presa, sinora, ma che in generale la politica della Montecatini è di dare licenze.

I tecnici della DuPont hanno fatto presente come un gran numero di brevetti siano stati chiesti sul polipropilene in questi ultimi anni (di cui un centinaio dalla sola Sun Oil) e come il problema brevettuale si presenti complesso negli Stati Uniti. Essi ritengono che possano trascorrere molti anni (probabilmente 3-4) prima della concessione dei brevetti, dato il notevole numero di interferenze, ed hanno citato il caso di brevetti concessi dopo 14 anni.

Secondo quanto ci ha comunicato Mr. Burk, la DuPont non ha svolto particolari ricerche sui copolimeri ed è disposta eventualmente a trattare questo argomento separatamente da quello del polipropilene.

Mr. Church ha accennato ai notevoli studi svolti dalla DuPont nel campo del politene lineare (per il quale ha ottenuto fibre aventi una resistenza di 10-12 g per den.) ed ha dichiarato esplicitamente che la DuPont non ha svolto particolari studi sulle fibre di polipropilene. Egli ritiene che i monofilamenti e i tessuti di politene lineare possono avere una grande importanza industriale, mentre l'interesse delle fibre di polipropilene possa prevalere nel campo dell'abbigliamento e del vestiario.

Mr. Burk ci ha mostrato dei campioni di politene lineare molto colorati, che hanno interesse storico perchè erano stati preparati prima del politene Ziegler. Ci ha poi fatto vedere dei campioni recenti, nei quali il tenore in cenere è inferiore a 20 parti per milione. Nell'osservare tali campioni, ho fatto rilevare come essi si incidano con l'unghia, mentre il polipropilene isotattico non viene inciso.

Mr. Church ha espresso l'interesse della DuPont nel campo delle fibre di polipropilene. Ha accennato ai precedenti contatti con la Montecatini ed al fatto che l'Ing. Giustiniani aveva detto che, quando l'impianto industriale fosse entrato in marcia, avrebbe invitato delle persone della DuPont. Ha domandato se l'impianto commerciale della Montecatini è già in marcia, ed abbiamo risposto affermativamente.

Il Sig. Lucini, essendo stato richiesto di esporre cosa pensi della situazione, ha detto (facendo presente che ciò rappresenta una sua idea personale) che si possono scegliere due vie :

1. - Attendere la concessione dei brevetti (soluzione che secondo la DuPont può portare a molti anni di attesa).

2. - Dato che ciascuno ritiene di avere almeno il 90 % di probabilità di ottenere dei brevetti fondamentali, cercare una soluzione di compromesso di comune gradimento.

La DuPont desidera di poter essere messa in grado di valutare l'importanza del polipropilene, e propone :

- 1) Visitare l'impianto di Ferrara, se la Montecatini conferma la precedente proposta in proposito (Lucini fa presente che tale visita può avere un carattere diverso a secondo che venga fatto prima o dopo accordi preliminari).
- 2) Avere maggiori informazioni sui copolimeri, in modo da decidere se confermare il loro interesse per una licenza.
- 3) Ottenere maggiori informazioni per quanto riguarda le fibre di polipropilene, qualora la Montecatini si ritenesse pronta a darle.

Abbiamo detto alla DuPont che si sarebbe riferito la cosa a Milano.

Si è parlato inoltre rapidamente durante il colloquio di problemi di carattere tecnico sulle proprietà del polipropilene e su quelle del politene, del comportamento a bassa temperatura, della flessibilità delle molecole dei copolimeri, ma si è toccato questi problemi solo incidentalmente senza entrare in particolari dettagli.

Da parte mia ho evitato di dare notizie sulla nostra politica brevettuale, limitandomi solo a dire che ero rimasto sorpreso che le leggi brevettuali negli Stati Uniti fossero così diverse rispetto agli altri paesi del mondo.

L'impressione che abbiamo ricevuto, sia il Sig. Lucini che io, sulla visita è che la DuPont sia veramente interessata nel campo del polipropilene ed in particolare nel campo delle fibre e degli elastomeri, per i quali si sente probabilmente più debole dal lato brevettuale.

Riteniamo che convenga informare la DuPont (preferibilmente attraverso lo stesso Lucini) se e quando la visita a Ferrara potrebbe aver luogo e indicare il carattere di tale visita.

G. Natta

Milano, 9 Maggio 1958



Hotel Pierre  
NEW YORK 21, N. Y.

1 Maggio 1958

Via Du Pont

Mr. Curtis  
" Gilbert  
" Burke

Mr. Burke è affranto sul bi ed  
problema della 2. regione hawaitiana.

- 13 interferenze -

Du Pont ritiene di essere in un buona  
posizione (però non siamo sicuri al 100%)

Dice che un giudice Smith, recentemente  
i rapporti alla Du Pont per l'acquisto  
comprato da i fratelli Du Pont erano  
fatti. L'unico ho rispettò di co  
la. e non rivoltò alla manifestazione

i di Smith lo presentò in visione  
di ottenere brevetti validi negli Stati U.

Du Pont è diventato in grado di  
venire soltanto esportare prodotti o  
produrre con altri e dare l'idea  
L'unico ho detto di uomini decisioni in  
Stati Uniti, non che i problemi della  
Chromatografia: dare l'idea

Du Pont avevano un gran numero  
 di brevetti. 100 Sun Oil  
 Possibilità di laage durata della  
 concessione brevetti (case 14 anni)  
 3-4 anni. possibile. <sup>specialmente se</sup>  
<sub>vi era un sostanziale</sub>

Du Pont non ha scelto (a quanto  
 pare) portarceli e i suoi in esplicito  
 e ad i disposti a tentare a test

Du Pont non ha scelto particolari

studi sulla fase pre industriale  
 molto recente nel settore (10-12 g/d)  
 che ha importanza industriale

Pute prof. loro per avere informazioni  
~~come~~ ~~per~~ ~~la~~ ~~terza~~ ~~per~~ ~~alligian~~ ~~la~~

V. Schargo. Patente Du Pont (comp. in  
 brevetti per un di 25 per milione  
 la anni, richiesta con tempo, la <sup>in</sup> ~~in~~ ~~carica~~  
 detta (con residenza personale)

che si possono ingoiare due stati

- 1) Ritenere concetti brevetti
- 2) ~~eg~~ ~~dot~~ ~~di~~ ~~crimen~~ ~~ritore~~  
 di avere il 95% di brevetti  
 di altri stati. hanno un  
 bilancio ~~che~~ ~~si~~ ~~di~~ ~~la~~ ~~proprietà~~  
<sup>di</sup> ~~proprietà~~ ~~di~~ ~~la~~ ~~proprietà~~  
 qualche volta

Lo Du Pont dovrebbe poter  
 valutare l'importanza del brevetto in  
 quanto proprio

- 1) ~~che~~ ~~la~~ ~~prima~~ ~~superiore~~ ~~di~~ ~~carica~~
- 2) ~~il~~ ~~caratteristico~~ ~~rispetto~~ ~~al~~  
 complesso proprio

(Carica la ricerca di dati e i dati  
 loro avere avere carattere e dati  
 avere brevetti)

- 2) ~~My~~ ~~più~~ ~~rispetto~~ ~~al~~ ~~complesso~~  
 che non a livello 2  
 intorno la ricerca  
 per la ricerca

- 3) ~~Torre~~ ~~di~~ ~~carica~~ ~~per~~ ~~la~~ ~~ricerca~~  
 quale la ricerca  
 parte

l'incisione è due parti che vengono  
 che l'incisione deve essere svolta  
~~per~~ ~~la~~ ~~ricerca~~ ~~di~~ ~~la~~ ~~proprietà~~  
~~di~~ ~~la~~ ~~proprietà~~ ~~di~~ ~~la~~ ~~proprietà~~  
~~di~~ ~~la~~ ~~proprietà~~ ~~di~~ ~~la~~ ~~proprietà~~

2 Maggio, 1958

Brevetti e Documentazione Tecnica

CV/ma

Data, .....

## PROMEMORIA



Ing. Piero GIUSTIZIANI

per il Signor .....

 P.O. Ing. GROSSI  
 Prof. MARA
**Oggetto: Ulteriore interferenza con du Pont -**

Solo di recente abbiamo potuto entrare in possesso della domanda di brevetto 541,679 depositata dalla du Pont il 26/1/56 negli U.S.A. e tuttora pendente.

Questa domanda rivendica (e almeno originariamente rivendicava) un procedimento simile al nostro selettivo (priorità dicembre 1954!) e contiene le seguenti importanti affermazioni o ammissioni:

- 1) che il catalizzatore a base di  $TiCl_3$  (del colore violetto non si fa menzione) appartiene ad un sistema catalitico di tipo differente da quello a base di  $TiCl_4$ ; (pag. 4)
- 2) che la differenza fra polimero cristallino e polimero amorfo è verosimilmente dovuta a configurazioni steriche differenti della catena. (pag. 3)

Queste autorevoli affermazioni e supposizioni della du Pont a oltre un anno di distanza dalle nostre domande base rafforzano sensibilmente le nuove posizioni da noi assunte nel P.O.

D'altra parte però non è escluso che anche il nostro restricted U.73 (selettivo con impiego di catalizzatore a base di  $TiCl_3$ ), che finora era da ritenersi ragionevolmente libero da ipotesi interferenziali, venga messo in interferenza con la du Pont.

Però le probabilità di vincere l'eventuale interferenza sono in queste cose quasi tutte a favore della Montecatini. Inoltre, potremo anche avvalerci della procedura d'urgenza in base ai nostri affidavits contro la Hercules.

Mentre le probabilità di eventuali interferenze con domande di brevetto della concorrenza, aventi priorità anteriori alle nostre, sono state già da noi ampiamente esplorate, la possibilità di interferenze con trovati depositati in date successive alle ns. non può ancora considerarsi completamente esaurita, come lo sta appunto dimostrando la domanda du Pont in oggetto.

Con ossequio.

H. A. Toulmin  
(1858-1942)

H. A. Toulmin, Jr.

Herbert H. Brown

Daniel J. Hanlon, Jr.

Folsom E. Drummond

Edmund H. Jaskiewicz

William H. Parrett, Jr.

Toulmin & Toulmin  
Attorneys at Law  
Corporation and Patent Law  
Washington 4, D. C.

April 21, 1958

Patent Solicitors

Moham A. Crosby

P. D. Poake

Dayton, Ohio  
Toulmin Building  
308 West First Street

Washington, D. C.  
Pennsylvania Building

Springfield, Ohio  
Ohio Fuel Gas Building

Brussels, Belgium  
27 Rue de la Loi

Cable Address

Toulmin, Dayton

Toulmin, Washington

AIRMAIL - cc boatmail

Montecatini Societa Generale  
per l'Industria Mineraria e Chimica  
Brevetti e Documentazione Tecnico  
Via F. Turati, 18  
Milan, Italy



Re: Du Pont Patent Application  
on Polymerization of Propylene

Gentlemen:

We thank you for your letter of April 16, 1958,  
enclosing a photostat of the duPont application Ser.No. 561,679  
filed January 26, 1956, by Gall and Robinson.

In our preliminary study of that application  
we note the following-

Although they speak of 85% crystallinity, no example  
shows higher than  $66 \pm 5\%$ . No example shows use of a catalyst  
from  $TiCl_3$  and  $Al(Et)_3$ , or use of  $TiCl_3$  alone as the transition  
metal halide component. Violet  $TiCl_3$  is not mentioned. The Payne  
application for the fractionation is not a CIP of 451,064 ~~but~~ *pat. 17/8/56*  
for Baxter, and the filing date for Payne is more than a year  
later than your earliest priority date of June 8, 1954.

Gall et al distinguish between the catalyst  
of 451,064 and their catalyst as being "two types of catalyst  
systems", (p.4) and indicate that in reducing the high valency  
halide to obtain their starting halide, a complex is to be avoided.  
This will be helpful to us in 550,164, in any interference  
on the crude between 451,064 and MC-I, and in the matter of  
invention dates.

Belief in a difference in stereoconfiguration of the  
polymer chain between the amorphous polymers and the crystalline  
polymers is expressed at page 3, but no assertion of an  
"isotactic" structure is made. This will help MC-III-A, we think.

*Du Pont  
m. 14/8/58*

*idem*

*473-473a*

Montecatini  
Page Two

April 21, 1958

473

We now think the Patent Office will set up an interference between 550,164 and this duPont application, but that you will win it against duPont.

We will review 550,164 and the present claims (amendment of April 1st) promptly.

Also, we hope to have time to discuss the disclosures of the duPont application with Professor Natta before we file the proposed supplemental amendment in 550,164.

On the whole, we feel that study of this duPont application tends to clarify the situation as to duPont and that your and our original decision (even when the Natta et al cases were filed) ~~is not the emphasis on structure was wise and will "pay off" for you. We are glad the amendment of MC-III withdrawing the isotactic claims is already on file.~~

We note the disclosures as to DP control by control of the temperature. We do not know if any claim has been made to that during prosecution which would conflict with Natta et al 598,857.

Very good use of these disclosures can be made by us and we are grateful to have the information in advance. We look forward to receiving a copy of the Payne application when you obtain it.

Very truly yours,

*[Handwritten signature]*

cc: Dayton

*Natta  
e. Pirani  
was combated  
policy & civi  
473 restricted  
divisional  
473  
o.k.*

*U. 43c  
Pisani  
proposed*

*[Faded handwritten notes and signatures]*



**PROMEMORIA**ISTITUTO DI CHIMICA  
INDUSTRIALE DEL POLITECNICO

\* 21 APR. 1958 \*

R



18 Aprile, 1958

Data,.....

per il Signor **Ing. Piero GIUSTINIANI**e p.c. **Ing. ORSONI**  
**Prof. NATTA****Oggetto: Toulmin e brevetto U.S.A. polietilene du Pont -**

In occasione del mio viaggio a Washington ho potuto rendermi conto meglio delle ragioni che hanno spinto Toulmin a consigliarmi un'azione di invalidazione del suddetto brevetto du Pont.

Allego lettera Toulmin del 3 aprile che, unitamente a quanto da me osservato (e già riferito) in occasione delle mie visite al Patent Office, illustra abbastanza bene la situazione venutasi a creare in detto Ufficio per quanto riguarda le invenzioni Natta.

Tutte sommate, sono ancora dell'opinione che abbiamo fatto bene a non attaccare il brevetto du Pont.

Se però, in seguito alle nostre recenti ricerche sulla proprietà ingegno-industriale dei trovati Natta non fossimo riusciti, almeno a parer nostro, a "sganciare" detti trovati da quanto, a nostro avviso, ingiustamente rivendicato dalla concorrenza, la proposta Toulmin non sarebbe stata da scartare a priori e senza approfondito esame.

Comunque, anche i cinque cablogrammi scambiati con Toulmin in questi ultimi due giorni dimostrano che la ridisposizione del nostro schieramento brevettuale difensivo e offensivo precede a Washington ~~una seconda~~ ~~la~~ ~~intesa~~ ~~intercorse~~ / con ritmo serrato e sostanzialmente secondo le intese intercorse fra il sottoscritto e Toulmin.

Risponderò a quest'ultimo per ribadire la necessità di "be very vigorous in the Patent Office and press matters hard" assicurandogli che in questa azione non gli verrà certo a mancare il pieno appoggio del nostro Gruppo.

Con esequio.

all/

*H. S. Toulmin*  
(1853-1942)

*H. S. Toulmin, Jr.*  
*Herbert H. Brown*  
*Daniel J. Hannon, Jr.*  
*John E. Drummond*  
*Edmund M. Jachims*  
*William H. Parrell, Jr.*

*Patent Solicitors*  
*Merwin A. Crosby*  
*P. D. Peake*

*Toulmin & Toulmin*  
*Attorneys at Law*  
*Corporation and Patent Law*  
*Dayton 2, Ohio*

April 3, 1958

*Dayton, Ohio*  
*Toulmin Building*  
*308 West First Street*  
*Washington, D.C.*  
*Pennsylvania Building*  
*Springfield, Ohio*  
*Ohio Trust Co. Building*  
*Brussels, Belgium*  
*27 Rue de la Loi*  
*Cable Address*  
*Toulmin, Dayton*  
*Toulmin, Washington*

Dr. Giuseppe De Varda  
c/o Chemore Corporation  
21 West Street  
New York, New York

Dear Dr. De Varda:

Failing to have the opportunity of seeing you again, which I greatly regret, I am writing the following letter because recent events I think have clarified in your mind why I made some recommendations that your company did not think it wise to put into effect.

As you will note from the letter sent to you yesterday with the enclosed statement, I took action immediately after the conference to take advantage of the situation. A few days delay in this matter might make it impossible to take such action and we would lose the opportunity.

Now you will recall that ~~I went to the greatest effort to diagnose the du Pont patent and to give your company a report, the essence of which was that for two legal reasons, the du Pont patent was invalid. If that matter had been pressed before the Patent Office or a Court, it would have put such fear into the Patent Office officials that they would not dare be as loose in their conduct in connection with your competitor's matters as they seem to be.~~

There comes a time when you have to "show your teeth" and take a strong attitude to get the Patent Office to do what it should.



Dr. Guiseppa De Varda  
Page Two

If we had taken that step, there would have been great caution in permitting cases to be allowed competitive to yours, where there was high pressure by du Pont, Phillips and other companies being put upon these young Examiners.

In short, your action would have made them stiffer in accepting these persuasions that have been so powerfully applied to them.

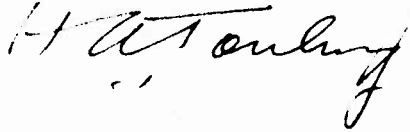
I am not arguing now for you to take any action (although if it were a matter of my own, I would do so), but I am illustrating the grave necessity for letting us act when the psychological time is just right. A few days to several weeks delay can be fatal.

Won't you give some consideration to a faster moving coordination between us? We can always withdraw most matters if we have to, but if we miss the timing, we never can recover it. Will you not discuss this with your associates?

Please emphasize that I am not trying to avoid your system or take action without your authority or anything of that sort. I merely want to get you results, if it is possible to do so.

It is going to take great force of personality and character to deal with this situation, and I propose to be very vigorous in the Patent Office and press your matters hard. Therefore, I will need all of the support I can get from your great company.

Sincerely yours,



CC: Montecatini Brevetti  
Via F. Turati 18  
Milan, Italy

March 28, 1958

Mr. W. G. McCrum

E. I. du Pont de Nemours & Co.  
Polychemicals Department  
Research Division

WILMINGTON 98 - Delaware - USA

Ref.No.470/r1

Dear Mr. McCrum,

I received your kind letter of March 4, 1958. I shall inform you that I am leaving Italy to attend the 133rd Meeting of the American Chemical Society in San Francisco, next April, and the Canada-U.S. Chemical Engineering Conference in Montreal. After this travel, I shall participate at the International High Polymers Conference in Nottingham next July, and we can meet each other in England.

I shall inform you that from the end of July to the end of August, it is a vacation period for our Polytechnic School. Therefore, it is better that you visit us before the Nottingham Conference.

Many thanks for the preprint you enclosed.

With best regards, I am,

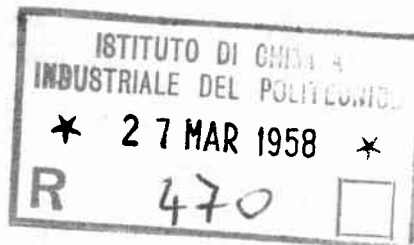
Sincerely yours,

G.Natta



E. I. DU PONT DE NEMOURS & COMPANY  
INCORPORATED  
WILMINGTON 98, DELAWARE

POLYCHEMICALS DEPARTMENT  
EXPERIMENTAL STATION



March 4, 1958

General License GTDU

Professor Giulio Natta  
Politecnico di Milano  
Piazza Leonardo da Vinci 32  
Milan, Italy

Dear Professor Natta:

I will be in Europe in the latter part of July for the International High Polymer Conference at Nottingham. I would like to use this opportunity to visit you at Milan and to discuss with you recent work on the mechanical properties of high polymers. We have recently been very actively engaged in this field and are very interested in the work which you have been doing in your laboratory.

A convenient day would be Wednesday, July 30. However, other arrangements may be made should this day be unsatisfactory to you. I shall await your advice in this connection.

I am enclosing a preprint of the paper which I shall read at the Nottingham Conference entitled "An Internal Friction Study of Polytetrafluoroethylene."

Sincerely yours,

N. G. McCrum  
Polychemicals Department  
Research Division

mmg  
Enc.



ESTABLISHED 1802.

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WILMINGTON 98, DELAWARE, U.S.A.

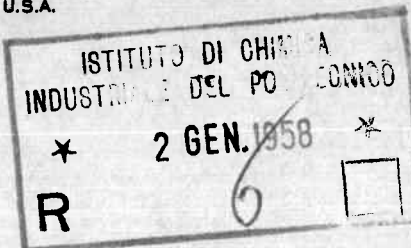
EUROPEAN OFFICE:

BUSH HOUSE,

ALDWYCH,

LONDON, W. C. 2.

TELEPHONE: HOLBORN 0461.  
TELEGRAMS: NEMOURS, ESTRAND, LONDON.



December 20, 1957

Professor G. Natta,  
Istituto di Chimica Industriale,  
Politecnico di Milano,  
Piazza Leonardo da Vinci 32,  
Milano, Italy

Dear Professor Natta,

Thank you very much for your letter of December 10  
and for all the information you have given me.

I shall look forward to the publication of your  
complete paper on different stereoisomers of polybutadiene,  
and to being informed as soon as your patents regarding  
isotactic polybutadiene have been published.

With best wishes for Christmas and the New Year,

Yours sincerely,

BASIL WALDEN

European Research Associate

*Handwritten notes:*  
Eure/ll  
Natta  
non è un  
monomero  
BW/mk  
est. 1958  
(lavoro non ancora  
scritto)

December 10, 1957

Mr. Basil Walden

European Research Associate  
E. I. Du Pont de Nemours & Co.

Bush House - Aldwych

L O N D O N , W. C. 2,

*Jay Wald*

Rif. N. 2051/r1

Dear Mr. Walden,

I received your letter of November 29 (BW/ES), in which you refer to an article appeared on September issue of "La Chimica e l'Industria" about isotactic polybutadiene.

I wish to inform you that this article concerns the ethylene-propylene copolymers, not the polybutadiene. Furthermore, during 1955, I published preliminary information only about syndiotactic polybutadiene, not about isotactic polybutadiene. I described its structure only during 1956. In regard to the preparation of isotactic polybutadiene, I inform you that, I believe that our patents are not yet published; as soon as they will be published I shall inform you.

I foresee that during 1958, most probably, I shall publish a more complete paper on different stereoisomers of polybutadiene. The isotactic polybutadiene is formed, preferentially, when we use as catalyst oxygenated compounds (hydrocarbon soluble) of transition metals, e.g. Chromium, and we operate with a strong excess of Alkylaluminum, e.g. a number of alkylaluminum moles greater than that of oxygen atoms that are present in the soluble compounds of transition metal.

With kind regards.

Yours sincerely,

G. Natta

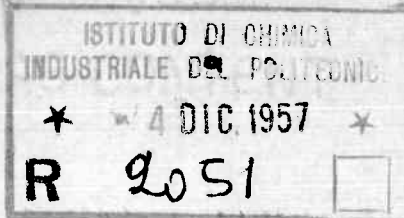


**E. I. DU PONT DE NEMOURS & CO.**  
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 WILMINGTON 98, DELAWARE, U.S.A.

EUROPEAN OFFICE:

**BUSH HOUSE,  
 ALDWYCH,  
 LONDON, W. C. 2.**

TELEPHONE: HOLBORN 0461.  
 TELEGRAMS: NEMOURS, ESTRAND, LONDON.



BW/ES

29th November, 1957.

Professor G. Natta,  
 Politecnico di Milano,  
 Piazza Leonardo da Vinci 32,  
 MILAN, Italy.

Dear Professor Natta,

We were very interested in your latest paper which appeared in the September issue of *La Chimica e L'Industria*. This prompted us to refer to the paper on isotactic polybutadiene which you published in the same journal in 1955. In it, however, you did not give sufficient information to enable us to prepare the polymer. *W* Is this information confidential? If not, we wonder whether you would be kind enough to give us the necessary details, which would interest us very much from the scientific point of view.

With kind regards,

Yours sincerely,

(Basil Walden)

European Research Associate.

*Telefonare  
 a Pirani*

*Pirani  
 Indicare bene  
 l'indirizzo della  
 se occorre!*

*European Research Associate  
 (Basil Walden)*



Dear Mr. ~~Baxix~~ Walden,

ricevo la Vostra lettera del 29 nov. nella quale vi riferite ad un articolo del settembre sulla Chimica e l'Industria circa il polibutadiene isotattico.

Desidero precisarVi che l'articolo del settembre si riferisce ai copolimeri etilene-propilene e non al polibutadiene. Inoltre nel 1955 ho pubblicato le notizie preliminari soltanto sul polibutadiene sindiotattico e non sul polibutadiene isotattico, di cui ho descritto la struttura solo nel 1956.

Per quanto riguarda la preparazione del polibutadiene isotattico Vi informo che non mi risulta che i nostri brevetti siano ancora pubblicati; appena verrò a conoscenza della loro pubblicazione, ve lo comunicherò.

Dear Mr. Walden,

I received your letter of November 29, in which you refer to an article appeared on September issue of "Chimica e Industria" about isotactic polybutadiene.

I wish to inform you that ~~this~~ article concerns the ethylene-propylene copolymers and not the polybutadiene. Furthermore, in 1955, I published preliminary information only about the syndiotactic Polybutadiene, not about isotactic polybutadiene. I described its structure only during 1956.

In regard to the preparation of isotactic polybutadiene I inform you that, <sup>as I believe that</sup> ~~as far as~~ our patents are not yet published; as soon as they will be published, I shall inform you.

With best regards.

Sincerely yours,



E. I. DU PONT DE NEMOURS & COMPANY  
INCORPORATED  
WILMINGTON 98, DELAWARE

POLYCHEMICALS DEPARTMENT  
EXPERIMENTAL STATION

*rip*

NOV 18 1957

November 15, 1957

Dr. Mario L. Ottolenghi  
Chemore Corporation  
21 West Street  
New York 6, New York

Dear Dr. Ottolenghi:

Thank you very much for your letter of November 12 relative to Professor Natta's plans for the San Francisco Meeting of the American Chemical Society next April. We are delighted that Professor Natta has made the decision to present a paper in our Symposium on "The Crystalline State in Polymers." His last letter to us was quite encouraging but not quite final. We look forward to hearing from him about the title of his paper.

Sincerely yours,

W. M. D. Bryant  
Symposium Chairman ACS

tcm

*Copia per prof. G. Natta*

November 12, 1957

Dr. W. M. D. Bryant  
Polychemicals Dept.  
E. I. Du Pont de Nemours & Co.  
Wilmington 98, Del.

Dear Dr. Bryant:

Professor Giulio Natta writes me from Milan that now due to new circumstances he was able to decide to participate in person to the San Francisco meeting of the A. C. S. and that within a few days he will write you the title of his paper for the symposium on "The Crystalline State in Polymers".

I am sure that this decision will please all concerned.

Very truly yours,



Mario L. Ottolenghi  
Member of the A.C.S.  
Div. of Polymer Chemistry  
New York Section

NLO:fc  
cc. Prof. Herman F. Mark  
Polymer Research Institute  
99 Livingston St.  
Brooklyn 1, New York

MONTECATINI

Società Generale per l'Industria Mineraria e Chimica

Brevetti e Documentazione Tecnica

Data, **9 Ottobre, 1957**

*dv/ma*  
PROMEMORIA

per il Signor **Ing. Piero GIUSTINIANI**

**e p.c. Ing. ORSONI**  
**Prof. NATTA**

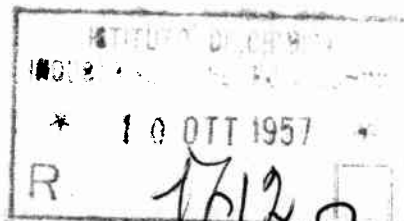
**Oggetto: Nuovi impianti polietilene du Pont**  
**e Union Carbide -**

**Allegiamo alcune recenti**  
**notizie sul nuovo impianto U.S.A. du Pont de-**  
**stinato al polietilene lineare e sul nuovo im-**  
**pianto della Union Carbide che produrrà poli-**  
**etilene ad alta pressione.**

**Con ossequio.**

**"BREVETTI E DOC. TECNICA"**

all/

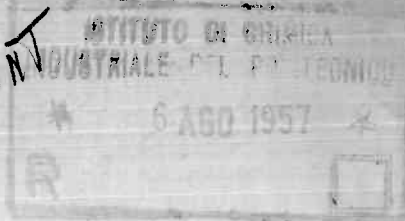


*du Pont*

Milano, 30 Luglio 1957.

Preg.mo Signore  
Ing. Piero Giustiniani,  
S e d e.

DU PONT



Ho avuto oggi la visita del dr. Robert E. Burk, Direttore del Polychemicals Dpt. della Du Pont.

Ha chiesto informazioni sulla nostra situazione isotattici. Risposta : stiamo mettendo in marcia il nostro primo impianto industriale avente la capacità di 6000 t/anno, e presto il prodotto sarà disponibile sul mercato.

Quale è la situazione brevettuale negli Stati Uniti. Risposta : pensiamo che sarà chiarita prossimamente a nostro favore.

Du Pont ha fatto del lavoro di laboratorio in questo campo, ma ha trascurato lo sviluppo perchè negli ultimi anni ha dedicato le sue forze allo sviluppo del Delrin.

Quale è la nostra impressione sui rapporti con Du Pont. Risposta : essi sono eccellenti, e da parte nostra pensiamo che un accordo nel campo isotattico sarebbe utile per entrambi.

Il dr. Burk non vede ragione per non fare tale accordo, e chiede che cosa sarebbe necessario fare secondo noi. Risposta : presentemente la realtà è che ci scambiamo qualche lettera col dr. De Right una volta ogni diversi mesi, e questo non ci sembra un lavoro sufficientemente costruttivo. Pensiamo che un incontro fra i Capi della Du Pont e della Montecatini per un esame realistico della situazione attuale, sarebbe vantaggioso.

Il dr. Burk dice che in vista del mercato comune, Du Pont pensa di organizzare produzioni chimiche in Europa, per esempio Nylon, Teflon, Delrin, e che Du Pont potrebbe considerare la formazione di una società insieme a Montecatini per produrre in Europa. Risposta : anche questa questione potrebbe essere avviata a soluzione in un incontro Du Pont - Montecatini; certo qui una soluzione è anche urgente, e Montecatini per conto suo studia seriamente questa situazione. Come è stato pubblicato, Montecatini si sta, per esempio, interessando attivamente per organizzare produzioni di questo genere in Austria.

Il dr. Burk chiede se è vero che abbiamo comperato un terreno nel West Virginia, e uno in California; che cosa pensiamo di fare negli Stati Uniti, e se siamo associati con qualche Ditta americana. Risposta : abbiamo comperato solo un terreno nel West Virginia, non abbiamo ancora definito i nostri piani, e non siamo associati con nessuna Ditta americana.

Il dr. Burk comunica che Du Pont ha nominato un nuovo Assistant General Manager del Polychemicals Dpt.; l'Assistant General Manager è il dirigente effettivo, mentre il corrispondente Vice President è piuttosto una carica

onorifica e di consulenza; questo nuovo dirigente potrà partecipare utilmente all'incontro con Montecatini.

Mr. Burk ha proseguito dicendo che la Direzione di Du Pont è molto colpita dalla sentenza della Corte Suprema che la obbliga a cedere le azioni General Motors, senza stabilire nè il modo nè il termine di tempo.

La sentenza è stata motivata dal fatto che la partecipazione nella General Motors non è irregolare nè contro la legge, ma che potrebbe dare luogo a situazioni irregolari e contro la legge. E' questo il nuovo principio di giurisprudenza che secondo il parere di Du Pont può portare molto lontano.

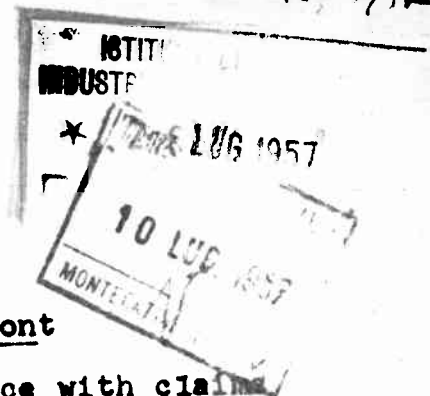
Pare che non vi sia possibilità di appellarsi o di far rivedere questo giudizio.

Il dr. Burk comunica che l'impianto da 12.000 t/anno di politene della Phillips, la cui messa in marcia è stata annunciata diversi mesi fa, deve avere qualche difficoltà perchè non è ancora possibile acquistare il prodotto. Chiede quale è la nostra opinione sul politene a bassa pressione in generale; Du Pont è rimasta allo stadio di impianto pilota. Risposta: noi crediamo che il politene ad alta pressione da una parte e il polipropilene dall'altra, non lascino grandi possibilità di impiego al politene a bassa pressione.

Infine il dr. Burk mi ha lasciato questi campioni.

All.  
Or/sl.

10/2/57



POSSIBLE INTERFERENCE PICTURE Du Pont

Du Pont went into the Patent Office with claims covering the composition to be polymerized, i.e.

the monomer

the catalyst

inert solvent

We do not know if those claims have been amended in any way or if other claims to process and/or products (polymers) have been added during prosecution.

We propose, if we get our formal allowances without declaration of an interference with duPont by the Patent Office, to file for you, at the last minute before issuance of MC-I, a divisional application of MC-I containing claims to the composition for polymerization. MC-I discloses it and the division would give you a basis for a bargaining position with duPont.

Considering the possibility that duPont has added to one or more of their applications, process claims to the production of the crude polymerizate, we would expect the situation to shape up as follows-

MC-I - interference on process for producing the crude using the catalyst prepared from specific heavy metal compounds and specific metall-organic compounds.

No interference on step of separating your polymers from the crude.

[NOTE: We would take out the step claims in a patent and let the interference proceed on the production of the crude. We have explained to Dr. de Varda why this could be done and the conditions under which claims in an application not directly involved in interference sometimes can, and sometimes cannot, be brought to patent before the interference is terminated.]

MC-II No interference

MC-III No interference in view of the language we will use in our claims.

△ NOTE: The only possibility we see for an interference with duPont on our products, at this time, is if they have put in a claim for

"Propylene polymers obtained by polymerizing propylene with the aid of etc. "

and the Examiner would reason that if the conditions of production were the same, the products must be, also, even if duPont did not disclose that.

If we were in duPont's shoes, we would have added a claim like that and we always have to assume that other people see the possibilities as we do so we do not rule out altogether the chance they may have done that. At the same time, we think the Examiner would not go along with them on it since, in Z-IV, he has refused to agree that Ziegler has anything different in his homopolymers over Field et al because he did not disclose the structural characteristics of his polymers in Z-IV.



# MONTECATINI

Società Generale per l'Industria Mineraria e Chimica

Brevetti e Documentazione Tecnica

— 47/ma

## PROMEMORIA

IN	8 LUG 1957	Data	6 Luglio, 1957
*	1315		
R			

**Ing. Piero GIUSTINIANI**

per il Signor.....

• p.c. **Ing. ORSONI**  
**Prof. NATTA**

**Oggetto: Accordo con du Pont -**

Mi riferisco ai vari Suoi cablegrammi pervenutimi in America per segnalarmi l'opportunità di studiare tempestivamente i termini di un accordo brevettuale con la du Pont.

Ne ho parlato ripetutamente anche con Toulmin e siamo arrivati alla conclusione che l'idea è ottima e andrà opportunamente sviluppata.

Però alle state attuale delle nostre "prosecutions" un contatto diretto fra i relativi due Servizi brevettuali è sembrato prematuro in quanto quello che soprattutto a noi interessa è ormai l' "allowance" dei nostri claims di prodotti sui polimeri stereospecifici Natta.

Fino a tale epoca non sembra conveniente che l'iniziativa di un colloquio sui relativi brevetti e sulle "disclosures" brevettuali possa essere presa da Rev.

D'altra parte, in occasione della visita a Ferrara dei tecnici della du Pont, l'argomento potrà essere sfiorato, eventualmente approfondito, se detti tecnici dimostreranno di gradire l'argomento.

Però, non mi sembra per ora possibile (quanto fino a quando perdurerà la possibilità, per non dire la probabilità, di una "interference"), procedere ad alcuna "disclosure" delle specifications e dei claims delle nostre domande americane.

Con ossequio.

Gentilissimo Professore,

Ieri sera è venute qui il dott. Greppi e ci ha detto che sarebbe state stabilite che ,per ora, non sarebbe prevista una visita degli americani al politecnico, perchè vorrebbero prima iniziare degli accordi precisi. Andrebbero a Ferrara per vedere solo campioni di clorosolfenati. L'ing. DiGiulio proponeva che venissero al Politecnico per essere messi al corrente di tutta la parte che riguarda gli esami che permettono di stabilire che i prodotti di partenza sono veramente dei copolimeri amorfi.

L'ing. Crespi è andato ieri dal dott. Pirani per il deposito dei brevetti  
 1) miscele gomma naturale con copolimeri , 2) polibutene clorurate, (?)  
 3) vulcanizzazione con monomeri idrocarburici (Divinilbenzolo).

Nel caso 3 ci sono già dei discreti risultati. Nella prossima settimana dovrebbe presentare un completo del brevetto del dicembre 56, riguardante la vulcanizzazione con ac. maleico in due stadi successivi. In quest'ultimo campo si è riusciti a scindere la fase di innesto da quella di vulcanizzazione. E' così possibile introdurre anche elevate quantità di nero fumo (fino a 40%) e ottenere buoni risultati.

La polimerizzazione del butene con berillio è andata piuttosto bene. Il prodotto ha solo il 7-8% di estraibile con etere. Ci faremo ora l'estratto esanico nella speranza di avere un residuo.

Le allego una serie di rivendicazioni DuPont che mi sono state inviate dal dott. Pirani. Fanno piuttosto paura e convincono, una volta di più, della grande convenienza che si avrebbe ad arrivare ad un accordo con questa Sec. Presto dovrebbero arrivare i testi dei brevetti.

La Sig. Lamma ci ha detto che Lei non si è ancora completamente rimesso e ce ne dispiace molto. Le auguriamo di stare presto completamente bene e di poter presto tornare all'Istituto. Nel frattempo Le inviamo i nostri migliori saluti

*Castaldi* *Crespi*

RIFERIMENTI		DESTINATARIO
Ve.	N <sup>o</sup> RP/ro	Sig. Dr. G. MAZZANTI Ist. Chim. Industriale - POLITECNICO -

## OGGETTO

Brevetto Italiano Du Pont 549.009

Le alleghiamo copia delle rivendicazioni delle domande  
U.S.A. no.:

451.064	470.522
462.608	470.541
470.505	

Delle rivendicazioni relative alle domande 470.497,  
470.501, 470.504 Le è stata data copia brevi manuieri.

Di tutte queste domande è stata rivendicata la priorità per  
il brevetto italiano 549.009. Una ulteriore domanda, la  
450.243, di cui è stata rivendicata la priorità per questo  
e per il brevetto italiano 544.926, le è già nota.

Faremo seguire fotocopia dei testi.

Distinti saluti.

"BREVETTI & DOC. TECNICA"

*Agnati*

*[Signature]*

all/

COMUNICAZIONE INTERNA

POLYMER COMPOSITION

Filing date : August 19, 1954 - Serial Number 451.064 (Du Pont)

CLAIMS:

- 1) Normally solid linear polypropylene characterized in that it has an inherent viscosity of at least one, as measured in decahydronaphtalene, said poly-propylene being the polymer obtained by polymerization of propylene in the presence of a catalyst comprising divalent titanium, said catalyst comprising the mixture obtained by reducing a titanium compound having titanium at a valence greater than two with a reducing agent in which there is a hydrocarbon directly attached to a metal atom.
  
- 2) Normally solid linear ethylene-propylene interpolymer characterized in that it has an inherent viscosity of at least one, as measured in decahydro-naphtalene, said interpolymer being obtained by polymerization of propylene and ethylene in the presence of a catalyst comprising divalent titanium, said catalyst comprising the mixture obtained by reducing a titanium com-  
pound having titanium at a valence greater than two with a reducing agent in which there is a hydrocarbon radical directly attached to a metal atom.
  
- 3) A normally solid linear polymer having propylene as one of its components, and having no component other than at least one member of the class consisting of propylene and ethylene, said polymer being obtained by poly-merization in the presence of a catalyst comprising divalent titanium, said catalyst comprising the mixture obtained by reducing a titanium compound having titanium at a valence greater than 2 with a reducing agent in which there is a hydrocarbon radical attached to a metal atom.

INTERPOLYMERS OF ETHYLENE AND BUTADIENE

Filing date : October 15, 1954

Serial Number : 462.608 Du Pont.

CLAIMS:

- 1) The process of copolymerising an inert organic medium ethylene and butadiene in the presence of a catalyst containing at least some titanium at a valence state of 2.
- 2) A solid interpolymer of ethylene and butadiene having a melt index of below 300.
- 3) A process set forth in claim 1 in which the temperature employed is within the range of 0° to 150°C and the pressure employed is within the range of 1 to 200 atmospheres.
- 4) A process set forth in claim 1 wherein the catalyst is obtained by admixing a titanium compound having titanium in a valence state in excess of 2 with a reducing agent which reduces the titanium, at least in part, into a valence state of 2.
- 5) A process of claim 4 wherein said reducing agent is a member of the class consisting of Grignard reagents, metal alkyls, metal aryls, metal hydrides and metals including Zinc and above in the electromotive series.
- 6) A process of claim 5 wherein said inert organic medium is a hydrocarbon.

I.M. Robinson and C. Schreyer - Du Pont.

PROCESS FOR POLYMERIZING CONJUGATED ALKADIENES.

Serial Number 470.505 - Filing date : 22, Nov. 1954.

CLAIMS

- 1) The process of preparing linear polymers of conjugated alkadiene materials comprising subjecting to polymerisation conditions a conjugated alkadiene monomer in the presence of a coordination catalyst.
- 2) The process of preparing linear homopolymers of conjugated alkadiene materials comprising subjecting to polymerization conditions a mixture consisting essentially of a conjugated alkadiene monomer and a coordination catalyst.
- 3) The process of claim 2 in which said conjugated alkadiene material is selected from the group consisting of butadiene, isoprene and chloroprene.
- 4) The process of preparing a linear polymeric product from a conjugated alkadiene comprising subjecting to reaction conditions of 1 to 200 atmospheres and 0° to 300°C a conjugated alkadiene selected from the group consisting of butadiene, isoprene and chloroprene in the presence of titanium tetrachloride and an organic metallic reducing agent having at least one metal-hydrocarbon bond, said reducing agent being present in sufficient amount to reduce the valence of said titanium, at least in part, to 2.
- 5) A normally solid, high molecular weight copolymer of ethylene and isoprene.
- 6) A normally solid, high molecular weight copolymer of ethylene and chloroprene.

COPOLYMERS OF DIVINYL AROMATIC COMPOUNDS

Serial Number : 470,522 - Filing date : Nov. 22, 1954

CLAIMS:

- 1) A solid linear copolymer of a divinyl aromatic monomer compound and at least one polymerizable ethylenically unsaturated hydrocarbon monomer, having terminal unsaturation, said copolymer containing from 1 to 99% by weight of said divinyl aromatic compound and being a solid soluble in an aromatic solvent and said copolymer capable of becoming insoluble on heating.
- 2) A solid copolymer of a divinyl aromatic monomer and an alkene having terminal unsaturation said copolymer containing from 1 to 99% by weight of said divinyl aromatic monomer and being soluble in an aromatic solvent capable of becoming insoluble on heating.
- 3) A linear copolymer of divinyl benzene and an alkene said copolymer containing from 1 to 99% by weight of said divinyl benzene and being soluble in an aromatic solvent and capable of becoming insoluble on heating.
- 4) A solid linear copolymer of divinylbenzene and ethylene said polymer containing from 1 to 99% by weight of divinylbenzene said copolymer being soluble in an organic solvent capable of becoming insoluble on heating.
- 5) A solid copolymer of propylene and divinylbenzene, said copolymer being soluble in an aromatic solvent and capable of becoming insoluble on heating.
- 6) A solid copolymer of diisopropenyl benzene and ethylene, said copolymer being soluble in an organic solvent and capable of becoming insoluble on heating.
- 7) A copolymer of a divinyl aromatic monomer and an ethylenically unsaturated hydrocarbon monomer having terminal unsaturation obtained by polymerizing said monomer in the presence of a metallic coordination catalyst said copolymer capable of being cross linked on heating.
- 8) A copolymer of an aromatic diene and an alkene, having terminal unsaturation obtained on polymerizing said alkene and said aromatic diene in the presence of a coordination catalyst, said copolymer being soluble in organic solvents and capable of being cross linked.
- 9) A copolymer as set forth in claim 8 wherein the coordination catalyst is obtained on reacting titanium tetrachloride with lithium aluminum alkyl in the presence of a saturated liquid hydrocarbon.
- 10) A copolymer as set forth in claim 8 wherein the aromatic diene is divinyl benzene and the alkene is ethylene.

- 11) A copolymer as set forth in claim 8 wherein the aromatic diene is divinyl benzene and the alkane is propylene.
- 12) A copolymer as set forth in claim 8 wherein the aromatic diene is isopropenyl benzene and the alkane is ethylene.
- 13) The process of polymerizing an aromatic diene with an alkane having terminal unsaturation comprising polymerizing said aromatic diene with said alkane in the presence of a coordination catalyst and a liquid non-polymerizable hydrocarbon as the reaction medium.
- 14) The process as set forth in claim 13 wherein the coordination catalyst is obtained on admixing titanium tetrachloride in lithium aluminium alkyl in the presence of a non-polymerizable liquid hydrocarbon .
- 15) The process set forth in claim 13 wherein the aromatic diene is divinyl benzene and the alkane is ethylene.
- 16) The process as set forth in claim 13 wherein the aromatic diene is divinyl benzene and the alkane is propylene.
- 17) The process as set forth in claim 13 wherein the aromatic diene is diisopropenyl benzene and the alkane is ethylene.
- 18) The process as set forth in claim 13 wherein the non-polymerizable hydrocarbon is cyclohexane.



POLYMERS OF 4-VINYL CYCLOHEXANE

Serial Number 470.541 - Filing date : November 22, 1954.

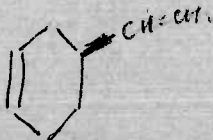
CLAIMS:

- 1) A solid thermoplastic polymer of 4-vinyl cyclohexane, said polymer being soluble in organic solvents and capable of becoming insoluble on heating.
- 2) A solid thermoplastic homopolymer of 4-vinyl cyclohexane, said homopolymer being soluble in organic solvents and capable of becoming insoluble on heating.
- 3) A solid thermoplastic copolymer of 4-vinyl cyclohexane and hydrocarbon monomer having the following general structure:



where R is selected from the group consisting of hydrogen and alkyl radicals

- 4) A solid thermoplastic copolymer of 4-vinyl cyclohexane and ethylene, said copolymer being soluble in organic solvents and capable of becoming insoluble on heating.
- 5) A process of preparing thermoplastic polymers of 4-vinyl cyclohexane comprising subjecting the 4-vinyl cyclohexane to polymerisation conditions in the presence of titanium tetrachloride and a reducing agent having at least 1 metal to hydrocarbon bond, and recovering a solid polymer of said 4-vinyl cyclohexane.



PROCESS OF PREPARING LINEAR POLYMERS  
OF MULTIVINYL AROMATIC COMPOUNDS.

Filing date November 22, 1954

Serial Number : 470.497 Du Pont.

CLAIMS:

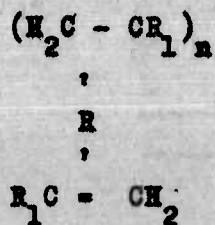
- 1) A process for preparing linear polymers of multivinyl aromatic compounds comprising subjecting a multivinyl aromatic compound to polymerization conditions in the presence of a coordination catalyst.
- 2) A process for preparing linear polymers of multivinyl aromatic compounds subjecting a multivinyl aromatic monomeric compound to polymerization conditions in the presence of a mixture of titanium tetrahalide and a reducing agent having at least one metal-to-hydrocarbon bond, and recovering a linear polymer of said multivinyl aromatic compound.
- 3) The process of claim 2 in which said multivinyl aromatic compound is divinyl benzene.
- 4) A process for preparing a linear polymer of divinyl benzene comprising contacting divinyl benzene with a mixture of titanium tetrachloride and lithium aluminum tetraalkyl at a pressure of 0° to 300°C in the absence of hydroxyl and oxygen, and recovering a linear polymer of divinyl benzene.

POLYMERIZATION OF UNCONJUGATED ALKADIENES INTO LINEAR POLYMERS

Filing date Nov. 22, 1954 - Serial Number 470,501 - Du Pont

CLAIMS:

- 1) A process for preparing linear polymers of unconjugated alkadiene compounds comprising subjecting an unconjugated alkadiene monomeric compound to polymerization conditions in the presence of a coordination catalyst.
- 2) A process for preparing high molecular weight polymers of unconjugated alkadiene compounds comprising subjecting an unconjugated alkadiene monomeric compound to polymerization conditions in the presence of a mixture of titanium tetrachloride and a reducing agent having at least one metal-to-hydrocarbon bond, and recovering a high molecular weight linear polymer of said unconjugated alkadiene compound.
- 3) A polymer having the general formula



in which R is selected from the group consisting of alkyl radicals and haloalkyl radicals, R<sub>1</sub> is selected from the group consisting of hydrogen and methyl, and n is any integer greater than 5.

- 4) A linear polymer of 1,5-hexadiene.

POLYPROPADIENE

Filing date : November 22, 1954

Serial Number 470.504

Du Pont

CLAIMS :

- 1) Normally solid, linear polypropadiene.
- 2) Normally solid linear polypropadiene in the form of a film.
- 3) Normally solid, linear polypropadiene in drawn funicular form.
- 4) The process of preparing a linear polypropadiene comprising subjecting propadiene to polymerization conditions in the presence of a coordination catalyst.
- 5) -The process of preparing a linear propadiene comprising subjecting propadiene to a pressure of 1 to 200 atmospheres pressure and 0 to 300°C in the presence of titanium tetrachloride and a sufficient amount of an organo-metallic reducing agent having at least one metal hydrocarbon bond to reduce the valence of said titanium, at least in part, to 2, and recovering a linear polypropadiene.



## PROMEMORIA

Data, 17 Giugno, 1955

E

Aim.  
Du Pontper il Signor Ing. Piero GIUSTINIANIe p.c. Ing. BALLABIO  
Prof. NATTA  
Ing. ORSINIOggetto: du Pont chiede licenza polimeri isotattici -

Ho avuto ieri un breve colloquio con Mr. Robert E. Burk, Associate Research Director, Polychemicals Department of E.I. du Pont de Nemours, in visita ai vari Settori Montecatini per raccogliere informazioni sui nostri prodotti isotattici e per sottolineare l'interesse della du Pont a un eventuale accordo di licenza e di licenza incrociata.

Il colloquio, molto reticente, si è tradotto in una specie di sondaggio reciproco. Ho seguito inizialmente la linea di azione già concordata confermandogli il grande interesse che annettiamo al nostro lavoro, il forte impegno di ricercatori e di mezzi per curarne il rapido sviluppo, la previsione di poterne parlare appena verso fine anno quando varie situazioni, fra cui specialmente quella brevettuale, saranno state maggiormente chiarite.

Alle seguenti due domande di Mr. Burk ho risposto ambigualmente oppure mi sono rifiutati di rispondere:

**Burk :** Montecatini ha già dato in America delle licenze su questi suoi nuovi prodotti ?

**de Varda :** A parte particolari accordi con Eiegler, la Montecatini non ha ancora dato delle licenze a terzi.

**Burk :** Il procedimento da voi sviluppato si applica anche ad altre sostanze oltre che agli idrocarburi?

**de Varda :** Mi spiace ma non posso ancora rispondere su questo punto anche perché i nostri lavori di ricerca sono in pieno sviluppo, con considerevole impegno di mezzi e di personale.

Ho sentite che siete diventati licenziatari di Eiegler e che avete firmato con Eiegler un accordo di "Cross-licenze". E' vero ?

## PROMEMORIA

per il Signor \_\_\_\_\_

..... pag. 2)

- Dusk** : E' vero. Avevamo fatto molto lavoro, all'insaputa uno dell'altro, per arrivare a risultati molto vicini. Tanto è vero che tutti i catalizzatori Ziegler meno uno sono stati inventati anche da noi e a sua volta Ziegler ha rivendicato tutti i catalizzatori ma/ meno uno. Però abbiamo depositato dopo Ziegler.
- de Varda** : In tal caso in America la du Pont avrebbe la facoltà di poter risalire alla data di ideazione.
- Dusk (piuttosto reticente)** : Sì, ma abbiamo preferito riconoscere a Ziegler anche la priorità della data di ideazione. (M'è però sembrato di capire che su alcuni trovati la priorità spetterebbe alla du Pont anziché a Ziegler).
- de Varda** : Cosa pensa dei brevetti Phillips?
- Dusk** : Penso che fra i brevetti della Standard Oil of Indiana (catalizzatori solidi) e quelli Ziegler, la Phillips avrà un "very hard time".
- de Varda** : Lei si riferisce ai brevetti Standard già pubblicati?
- Dusk** : In parte sì e in parte no.
- de Varda** : Voi fate attualmente sia il polietilene ad alta che quello a bassa pressione?
- Dusk** : Sì, entrambi.
- de Varda** : Quando prevedete usciranno i primi vostri brevetti in merito al procedimento?
- Dusk** : Sono in parte già usciti sia in America che in altri paesi.
- de Varda** : Cosa pensa del polietilene Phillips?
- Dusk** : Finora abbiamo potuto esaminare sole piccole quantitativi. La qualità ci sembra discreta.
- (alla fine)** Si ricordi per favore che la du Pont è una grande società con molti settori e quindi per trattare una eventuale licenza ci vorrà forse un po' più tempo che con qualsiasi altra ditta americana, però du Pont è anche in grado di pagare royalties più robuste di tutti gli altri e sarebbe ben lieta di combinare con Montecatini.

## PROMEMORIA

per il Signor .....

..... pag. 1)

de Varda : Ma noi conosciamo perfettamente la du Font. Siamo in ottimi rapporti con du Font ormai da molti anni e abbiamo delle licenze in corso. Saremo lieti di riprendere queste colloquio appena la situazione più sopra accennata sarà chiarita.

Ho saputo poi che Mr. Dark aveva preso parte al recente Congresso del Petrolio e che aveva parlato dei vari catalizzatori nella comunicazione da lui fatta al Congresso. Occorrerebbe poterla rintracciare al più presto.

Mi sembra molto probabile, (in base ad un accenno lasciato sfuggire da Dark sul vincolo del segreto a cui egli è tenuto), che la du Font è al corrente di tutti i brevetti Standard con probabile reciprocità di conoscenza. Non mi meraviglierei quindi se fra i due gruppi si fosse già in atto un accordo di "cross license".

M'è pure sembrato di capire che la du Font abbia rivendicato (anche se non sperimentato) nei suoi brevetti la polimerizzazione di olefine con  $C > 3$ .

Con ossequio,





E. I. DU PONT DE NEMOURS & COMPANY  
INCORPORATED  
WILMINGTON 98, DELAWARE

*America*

POLYCHEMICALS DEPARTMENT  
EXPERIMENTAL STATION

March 14, 1955

General License GTDU

Professor Giulio Natta  
Istituto di Chimica Industriale  
del Politecnico  
Piazza Leonardo Da Vinci, 32  
Milano, Italia

Dear Professor Natta:

I hope you will excuse my long delay in thanking you for the many courtesies accorded me on the occasion of my visit to the International Symposium on Macromolecular Chemistry last fall.

The Symposium set a high standard with respect to quality of the research presented. You and your colleagues are to be congratulated for the skillful planning that necessarily contributed so much to the success of this gathering.

It was a pleasure to see your facilities at the Politecnico, and to discuss with you the solid state behavior of polyethylenes and related hydrocarbons. I was much interested to find that your X-ray investigations and ours have led to similar conclusions with regard to the crystallinity and crystal structure of polyethylenes.

I am enclosing a mimeographed copy of the paper on crystallinity that we presented in 1950 at the 118th National Meeting of the American Chemical Society in Chicago. This paper has not yet been published, since we are exploring some refinements of the method that we may wish to include. However, Dr. J. B. Nichols (*Journal of Applied Physics*, 25, 840 (1954)) has given a brief account of our original research in a recent paper. Slide 7 of the enclosed manuscript was revised for his use, hence it includes some of the more recent literature results for the crystallinity of polyethylene.

Some time ago, Dr. Robert E. Burk, our Associate Director of Research, expressed an interest in visiting your laboratories during June of this year, en route to the International Congress on Pure and Applied Chemistry at Zurich. I believe he has already written you on this subject.



My wife and I remember with much pleasure the reception at your home during the Symposium of last year, and send our regards to Mrs. Natta and yourself. On your next visit to the United States, you will both be most welcome in Wilmington.

Sincerely yours,



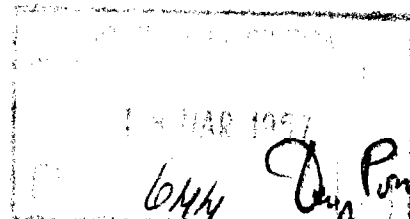
W. M. D. Bryant  
Polychemicals Department  
Research Division

dab  
Att.

BY AIR MAIL

March 15, 1957

Mr. J.K. JENNEY, Director  
Foreign Relations Department  
E.I. du Pont de Nemours & Company  
WILMINGTON 98, DELAWARE



Dear Mr. Jenney,

re Polypropylene License Agreement

Mr. Lucini, President of Chemore Corporation, has sent us a copy of the letter you addressed to him on the 1st inst.

The President of our Company, Count Faiva, has already written to you concerning the visit he could not make at Wilmington. We wish now to let you have our views on the remaining topics dealt with in your said letter.

We confirm, to begin with, what Count Faiva has stated to the American press during his stay in the U.S. concerning the prospects of turning to advantage the very considerable amount of work done by our Company in the development of polypropylene, and the very favorable position we have therefore attained in view of the working of our invention in your country.

On the other hand, also due to the relationship we entertain with your Company, we are acquainted with the interesting work you have been doing in this field, and we have taken notice of what you have again told us in this connection.

Mr. Lucini has acquainted us with the conversation he had with Mr. De Right about our offer to your Company, which offer we confirmed on January 23, 1957. Mr. Lucini has called our attention to the stand your Company has taken as regards the obligation by du Pont to grant licenses under their inventions which may possibly dominate ours.

So far as our information goes, no additional remarks have been made on your part, except for Mr. de Right expressing his opinion that the lump sum asked for by Montecatini is high.

On the former point, i.e. on the obligation to license dominating patents, we must insist for reasons which do not concern Montecatini alone but also your Company, in view of the peculiar U.S. situation, which you well know.

.....2)

As to the order of magnitude of the sums we have asked for, we do not wish to take issue in this letter, also because we must avow that up to this day we have given you too limited an amount of information to permit you to appraise the importance of Montecatini developments. We would rather, and just in order to remedy this situation, make a quite different proposal.

During next May the first commercial unit (slated for a yearly capacity of 13,000,000 lbs.) for the production of polypropylene will go on stream in our Ferrara plant. We think it will be the first polypropylene commercial unit in the world. Polypropylene plastics will then be put on the Italian market as a standard Montecatini product. We propose to you that we postpone resuming our conversations until that time. It will then be possible for representatives of your Company coming to this country to get factual information that will permit them to make a thorough evaluation of the interest of the product. An Agreement far simpler than the agreement that we had to suggest to you several months ago, could then be worked out.

We may anticipate at this time that a new agreement could dispense with the option provided for by our former offer, providing only for a lump sum payment and for a royalty, in any adequate relationship with each other and commensurate to the value of our findings. We do not think we should have great difficulty in agreeing on figures. Far more complete facts than those on which our conversations have so far been based will be available to both parties by that time.

We trust it will then be possible to find also a mutually satisfactory solution concerning the problem of dominating patents, if any. It will be in fact easier for everybody to get a clearer picture of the situation in the course of direct talks with your representatives here than it would be by letter. We deem this clarification to be a necessary prerequisite for an healthy development of our relationship in this field.

An agreement as outlined above may presently be envisaged only with respect to polypropylene plastics. Commercial production will in fact be achieved in the very near future only in this field. We have made however important steps forward in the fields of fibers and of elastomers, and we are prepared to negotiate with you along the same lines as soon as those two fields have reached the same stage of development which we have already attained with regard to polypropylene plastics.

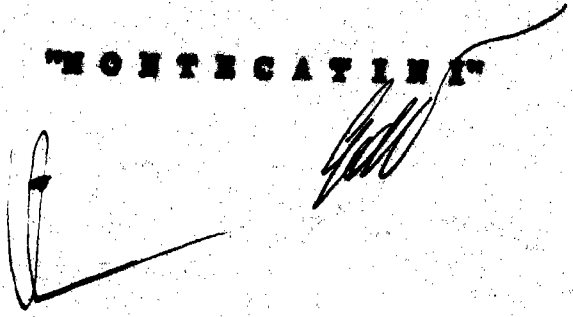
./.

.....3)

We ask our friend Mr. Lucini to hand you the present letter and we shall be looking forward with interest to receive your reply.

Yours very truly,

"MONTECATINI"

A handwritten signature, possibly "Montecatini", is written in dark ink. It features a large, sweeping flourish that extends upwards and to the right, crossing over the printed name. Below the main signature, there is a separate, smaller handwritten mark that resembles a stylized letter or a checkmark.

MONTECATINI

Società Generale per l'Industria Mineraria e Chimica

AMMINISTRATORE DELEGATO

PROMEMORIA  
G/ra

ISTITUTO DI CHIMICA  
INDUSTRIALE DEL POLITECNICO

\* 1 DIC. 1956 \*

R 788 *DuPont*

Data, 30 novembre 1956

per il Signor Prof. NATTA  
Ing. ORSONI  
Ing. BALLABIO

La Du Pont mi comunica la decisione di costruire in  
Inghilterra un impianto per produrre Neoprene.

L'annuncio è molto interessante perchè :

- a) E' la prima volta che la Du Pont si trasferisce con il suo nome in un Paese europeo
- b) Perchè la produzione iniziale scelta è tutt' altro che nuova e soprattutto non è nè diffusa, nè accreditata nei mercati europei.

Cordiali saluti.

*Via  
M.*

497  
Dupont

October 29, 1956

Mr. K. C. Bass, Jr.  
Textile Research Laboratory  
Textile Fibers Dept.  
E. I. du Pont de Nemours & Co.  
WILMINGTON 98 - Delaware - U. S. A.

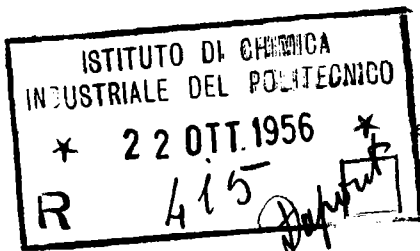
Dear Mr. Bass,

I received few days ago the fabric sample made of Dacron and Wool, you very kind sent to me, and I wish to thank you very much for your kindness.

With my deepest thanks and best regards.

Very truly yours,

Giulio Natta



MARIO F. SARTORI  
502 NORTHSIDE DRIVE, NORTH HILLS  
WILMINGTON 3, DELAWARE

Wilmington, Ottobre 17, 1956

Caro Professore,

Anzitutto desidero ringraziarla ancora una volta per la cordiale accoglienza fattaci a Milano ed, insieme a mia moglie, voglio esprimerle il rammarico per non avere incontrato la Sua Signora.

Le accludo gli estratti delle comunicazioni fatte al Congresso di Chimica ad Atlantic City dai due chimici da lei indicati. Li ho copiati dalla pubblicazione ufficiale del Congresso ( "Abstracts of Papers" - 130 th Meeting Amer. Chem. Soc. Atlantic City - September 1956). Gli articoli completi non sono ancora stati pubblicati, a quanto mi e' noto. Cerchero' di procurarmeli appena possibile e glieli inviero' per via aerea. Non esiti a scrivermi per qualunque altra informazione.

Il nome della persona che le ha inviato il tessuto di "Dacron" e'

Mr. K.C. Bass, Jr.  
Textile Fibers Dept.  
E.I. du Pont de Nemours  
Textile Research Laboratory  
Wilmington, Del.

Noi incontrammo Mr. Bass a Chestnut Run. E' la persona che le mostro' vari tipi di tessuti, fra i quali lei scelse quello pervenutole.

La ringrazio per avermi fatto avere le copie dei suoi articoli apparsi sui "Rendiconti" e per annunciarmi che mi spedira' l'articolo sul butadiene 1,4 cis in corso di stampa. Molti amici della Du Pont aspettano e leggono con molto interesse i suoi articoli.

La prego di porgere i miei saluti alla Sua Signora, anche da parte di mia moglie.

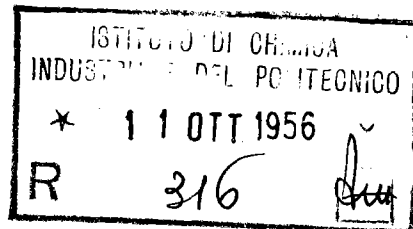
A lei i nostri piu' cordiali saluti

Mario F. Sartori



E. I. DU PONT DE NEMOURS & COMPANY  
INCORPORATED

PIONEERING RESEARCH LABORATORY  
EXPERIMENTAL STATION  
WILMINGTON 98, DELAWARE



TEXTILE FIBERS DEPARTMENT

October 4, 1956

AIR MAIL

Professor Giulio Natta  
Istituto Di Chimica Industriale Del Politecnico  
Piazza Leonardo Da Vinci 32  
Milano, Italy

Dear Professor Natta:

Mario Sartori has passed on to me your inquiry about whether or not the work on 3 Nylon, which you heard about from John Schaeffgen, has been published as yet. We understand that you might wish to refer to it in connection with some of your own publications. Unfortunately, this work has not yet appeared in a journal, but Dr. Schaeffgen is planning to present it at a forthcoming scientific meeting and to publish in the near future as well.

Perhaps the best thing we can do under the circumstances is to let you know as soon as we are sure when and where the paper is going to be presented and in what journal it will eventually appear. Then you could refer to it as a forthcoming paper or publication and give the source, if you so desire. Naturally, we shall see that you get a reprint of this paper as soon as they are available. The same remarks apply in their entirety to the work on orientation measurements mentioned in my letter of July 5, 1956.

Yours sincerely,

PIONEERING RESEARCH DIVISION

*Jack Ballou*  
Jack Ballou

JB:aps



October 16, 1956

Dr. Jack Ballou  
E. I. du Pont de Nemours & Co.  
Pioneering Research Laboratory  
Experimental Station  
WILMINGTON 98 - Delaware, U. S. A

Dear Dr. Ballou,

I received your kind letter of October 4, and I thank you very much for your kindness. I shall appreciate very much your sending to me, as soon as possible, the references to the paper of Dr. J. Schaeffgen.

With best regards.

Yours sincerely,

Giulio Natta



Adresse Télégr.: National Lucerne

188

Roma <sup>Am. du Pont</sup> 22-9-56

Caro Prof. Natta

prima di lasciare l'Italia,  
voglio insieme a mia moglie fare  
giungere i miei più sinceri  
graziamenti per la sua cordiale  
accoglienza a Milano.

Inoltre le ringrazio per le  
fotocopie dei suoi due articoli,  
comparsi sull'Accademia dei Lincei.

Appena in America mi  
interessero per l'articolo su "Nylon 3",  
e ne ho fatto il riassunto.

Le prego di presentare i  
miei saluti e quelli di mia moglie  
alle Sue Signora, esprimendo il nostro  
dispiacere di non aver potuto salutarla  
personalmente. A lei molti cordiali saluti

Nero Pontes

21 Settembre 1956

Egr. Dr. Mario F. Sartori  
Via San Remo 18  
ROMA

Egregio Dottore,

Desidero informarla che ho ricevuto oggi l'avviso dalla  
Dà Pont relativo all'inizio di un tessuto di Dacron, avvenuto il  
18 c.m. Siccome però sull'avviso non è indicato il nome della  
persona che l'ha inviato, Le sarei grato se potesse indicarmi  
a chi devo inviare i miei ringraziamenti. Mi scusi per il distur-  
bo che Le dò.

Sono stato molto contento di vedere Lei e la Sua gentile  
Signora a Milano e spero di avere presto un'altra occasione di vederLa.

La ringrazio molte per tutte le Sue cortesie e La prego  
di gradire i miei migliori saluti.

Giulio Natta

53

7 Settembre 1956

*Am.*

Egr. Dr. Mario F. Sartori  
Via Tiraboschi 55  
BERGAMO

*penn. di Ullis Sartori*

Caro Dottor Sartori,

Ho appreso con molto piacere la notizia della Sua venuta in Italia ma sono stato molto spiacente di non averLa potuta salutare al Suo passaggio da Milano, poichè mi è stato detto che Lei è ripartito subito per la Svizzera.

Ho saputo che Lei ripasserà da Milano nella mattinata di venerdì 14 settembre e sarò molto lieto se la Sua Signora e Lei saranno miei ospiti a colazione. Mia moglie è attualmente a Champoluc in Val D'Aosta ma probabilmente farà una scappata a Milano in tale giorno.

In attesa di rivederLa, La prego di gradire i migliori saluti.

Giulio Natta

1225A



E. I. DU PONT DE NEMOURS & COMPANY  
INCORPORATED

PIONEERING RESEARCH LABORATORY  
EXPERIMENTAL STATION  
WILMINGTON 98, DELAWARE

*Am*

TEXTILE FIBERS DEPARTMENT

July 26, 1956

Professor G. Natta  
Department of Industrial Chemistry  
Polytechnic Institute of Milan  
Milan, Italy

Dear Professor Natta:

I hope that you enjoyed your recent visit to the Pioneering Research Laboratory as much as we did talking to you. At that time you expressed an interest in our work in electron microscopy. Because of that I thought you might like to have the enclosed reprint that was just received.

*Dr. Natta  
in restoration*

Sincerely,

PIONEERING RESEARCH DIVISION

*Robert G. Scott*

Robert G. Scott

RGS:mjm

Enclosure

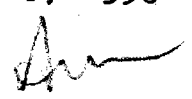
*I thank you very much for your kindness, to have remembered my interest in your work on work in the field of fiber microscopy and to have sent to me a reprint of your ~~reprint~~ work of this it.*

*I enjoyed very much to my visit to the Pioneering Research Lab. and it was the most interesting visit to me during my trip to the States*

*With best regards*

902A

August 29, 1956



Mr. Robert G. Scott  
E. I. Du Pont de Nemours & Co.  
Pioneering Research Division  
Experimental Station  
WILMINGTON 98 - DELAWARE - U. S. A

Dear Mr. Scott,

I thank you very much for your kindness for having remembered my interest on your fine work in the field of fiber microscopy and for having sent to me a reprint of it.

I enjoyed very much my visit to the Pioneering Research Laboratory and it was the most interesting visit for me during my trip through the States.

With my best regards.

Sincerely yours,

Giulio Natta

24 Luglio 1956

Egr. Dr. Mario F. Sartori *E. Dupont*  
602 Northside Drive, North Hills  
WILMINGTON 3, Delaware, U.S.A.

Egregio Dottore,

Sono tornato alla fine della scorsa settimana dagli U.S.A. e desidero ringraziare Lei e la Sua gentile Signora per le Loro cortesie.

Mi riprometto di scrivere nei prossimi giorni alle diverse persone della DuPont che sono state così gentili con noi durante la nostra permanenza a Wilmington, - ma La prego di anticipare sin d'ora a tutti ed in particolare a Mr. e Mrs. Gilbert, Mr. e Mrs. Burrows, a Mr. e Mrs. Hoon, Mr. Berkly, i nostri più vivi ringraziamenti.

Ho tardato a scrivere perchè durante la mia permanenza negli U.S.A. sono stato sempre in viaggio e me ne è mancato il tempo materiale.

Sarberò un indimenticabile ricordo del mio viaggio negli U.S.A.. Ho visitato diversi laboratori e fabbriche ma certo la visita al Laboratorio del Pioneering Research è stata una delle più interessanti.

La prego di porgere anche i miei ringraziamenti a Mr. Charch che ha permesso una visita così interessante al suo laboratorio, e al Dr. Gresham ed agli altri che mi hanno esposto i risultati di certi lavori, che presentano un notevole interesse anche dal punto di vista scientifico per le interpretazioni di certi processi catalitici che decorrono con meccanismo anionico.

La DuPont è stata veramente molto gentile e non doveva disturbarsi ancora a mandarmi per mezzo del Prof. Mark a New-London quell'assegno a rimborso spese di viaggio, che non volevo accettare e che ho trattato solo in seguito all'insistenza del Prof. Mark.

Spero di rivederLa con la Sua gentile Signora, a Milano e spero pure di rivedere qui molte delle persone della DuPont che ho incontrato a Wilmington. Non potrò certo ricambiare le cortesie ri-

./.

24 Luglio 1956

segue lettera al Dr. Sartori - Wilmington

avute in modo adeguato, ma sia io che Rosita saremo lieti se potremo invitare a qualche rappresentazione al Teatro della Scala oppure ospitare nella nostra villa a Champoluc, presso il Monte Rosa, le persone della DuPont che sono state così gentili con noi, nel caso che avessero occasione di venire a Milano.

Molti cordiali saluti.

Giulio Natta





E. I. DU PONT DE NEMOURS & COMPANY  
INCORPORATED

PIONEERING RESEARCH LABORATORY  
EXPERIMENTAL STATION  
WILMINGTON 98, DELAWARE

TEXTILE FIBERS DEPARTMENT

July 5, 1956

AIR MAIL

Professor Giulio Natta  
Istituto Di Chimica Industriale Del Politecnico  
Piazza Leonardo Da Vinci 32  
Milano, Italy

Dear Professor Natta:

At the time of your recent visit to the Pioneering Research Laboratory you expressed interest in the commercially available apparatus we use for measuring sound velocity in fibers. As you know, we have adapted this device to the measurement of molecular orientation in fibers and expect very shortly to publish the method, at which time I will send you a reprint.

In the meantime, I am attaching a brief description of the apparatus provided by the manufacturer. The apparatus costs about \$2200 in this country and is made by:

Janszen Laboratory Inc.  
69 Harvey Street  
Cambridge 40, Massachusetts  
U.S.A.

Mr. Arthur A. Janszen is aware of your interest and would be glad to answer any inquiries. On the other hand if we can be of any help to you in answering questions do not hesitate to write us also.

It was a great pleasure indeed to meet you here in Wilmington and discuss some of our work with you. I hope the occasion arises again in the future when we might continue our discussion, perhaps in more detail. Again, please write me if I can be of any assistance in connection with the above.

Yours sincerely,

PIONEERING RESEARCH DIVISION

*J. W. Ballou*

J. W. Ballou

JWB:mjm

*For the file with all the letters in it - we have an 'B' in the file - it was a mistake*  
*Massachusetts*

201A

*Handwritten initials*

August 1, 1956

*Handwritten signature*

Mr. J. W. Ballou  
Pioneering Research Laboratory  
Experimental Station  
Wilmington 98, Delaware, U.S.A.

Dear Mr. Ballou,

Please excuse my delay in answering your kind letter of July 5, but I have been back to Milan only some days ago from my very interesting trip through the States.

I thank you very deeply for the information you kindly gave me about the measurement of sound velocity in fibers. Many thanks also for your kind offer to help me in answering eventual questions about it.

I expect to discuss this matter with my coworkers, competent in ultrasounds field, after their coming back from summer vacations, and I shall take the liberty to write to you again.

I am very glad to have made your acquaintance and that of the fine people of Pioneering Research Division, and to visit your interesting laboratories.

With best regards and wishes, I remain,

Sincerely yours,

Giulio Natta

784 A  
April 30th, 1956

Mr. G.S. Garstin  
E. I. / Du Pont / de Nemours and Co.  
Bush House, Aldwych  
London W.C. 2.

Dear Mr. Garstin,

Thank you for your kind letter dated April 18th.  
I wish hereby to inform you that Dr. Ing. Larcher, Dr. Ing. Ballabio  
and myself will be very pleased to meet Dr. Burk on June 5th next.

Of course, we have no objections to the visit that Dr. Burk would pay  
to Prof. Natta; we only think that, due to reasons you will easily un-  
derstand, some subjects will be discussed by Prof. Natta with some  
reservedness.

With my best personal regards,

Very truly yours,

f.to: Orsoni

Or/ir

March 29, 1955

Dr. W.M.D. Bryant  
Polychemicals Department  
Research Division  
E.I. du Pont de Nemours  
Wilmington 98, Delaware, U.S.A.

Dear Dr. Bryant,

I thank you very much for your kind letter of March 14, and also for the copy of the paper on crystallinity you sent me.

It was for me a great pleasure to make your acquaintance during the Symposium on Macromolecular Chemistry.

We are studying now the structure of different crystalline polymers and I shall probably submit a report on this argument during the Congress at Zurich, where I shall be pleased to make Dr. Robert E. Burk's acquaintance.

My wife joins me in sending to Mrs. Bryant and yourself our best regards.

Sincerely yours,

G. Natta

5  
December 21, 1954

Mr. Robert E. BURK, Associate  
Director of Research - Poly-  
chemicals Department  
— E.I. Du Pont de Nemours & Com  
WILMINGTON, DELAWARE (U.S.A.)

Dear Sir,

*Amelia*

I received your letter of December 15, and I am very glad to know that you are going to attend the World Petroleum Congress presenting a paper on Polyethylene.

In regard to your visit at our Polytechnic, it will be a pleasure for me to meet you, but, at the present time, I cannot assure you if I shall be in Milan on Friday 17 June 1955. I think however, that other people of my staff, f.i. Prof. Pino or Dr. Piacenti will be here.

With best regards, I am,

Very sincerely yours,

(Prof. G. Natta)