

## **Curriculum del prof. Gaetano Guerra**

Il prof. Gaetano Guerra ha fornito, a partire dalla metà degli anni settanta, importanti contributi alla scuola napoletana di polimeri diretta dal prof. Paolo Corradini ed ha poi guidato a partire dal 1995 una Scuola brillante di Chimica Macromolecolare presso l'Università di Salerno.

La maggior parte dell'attività del prof. Gaetano Guerra ha avuto per oggetto lo studio di materiali polimerici, affrontato sia da un punto di vista teorico che sperimentale, con rilevanti risultati anche in campo applicativo, come testimoniato da numerosi brevetti, alcuni dei quali anche ceduti ad aziende nazionali ed internazionali.

In particolare, è stato attivo nel campo della catalisi eterogenea di polimerizzazione di olefine e nell'area dei catalizzatori omogenei a base di metalloceni. Rilevanti sono risultate pubblicazioni sulla struttura, sul polimorfismo e sui fenomeni di ordine-disordine che hanno luogo nei polimeri semicristallini.

Negli ultimi venti anni, una attività di ricerca da lui promossa, che ha dato eccellenti risultati e di cui è ritenuto “leader” a livello internazionale, ha riguardato polimeri caratterizzati da fasi co-cristalline con molecole ospitate (“guest”) di bassa massa molecolare, di cui sono state evidenziate proprietà foto-reattive, fluorescenti, magnetiche e piezoelettriche. Particolarmente interessanti sono i risultati relativi a due polimeri di produzione industriale (il polistirene sindiotattico ed il polifenilenossido) per i quali la rimozione delle molecole guest porta alla formazione di fasi cristalline-nanoporose. Tali nuovi materiali hanno importanti applicazioni in separazioni molecolari, immagazzinamento di gas ed in sensoristica.

Negli ultimi anni a tale attività si sono affiancate attività su grafeni e su grafeni chimicamente modificati, quali catalizzatori e quali componenti di materiali in tre dimensioni.

Il Prof. Guerra ha pubblicato circa trecentosettanta lavori su riviste internazionali ed il suo “h-index factor” dell’attività scientifica è pari a 77. L’alto livello del lavoro scientifico del prof. Guerra è anche testimoniato dal fatto che oltre cento suoi lavori sono pubblicati su importanti riviste della American Chemical Society. In particolare, oltre ottanta lavori sono stati pubblicati su Macromolecules, la più importante rivista di scienza dei polimeri, 15 lavori su Chemistry of Materials, la più rilevante rivista di chimica dei materiali, ed 11 lavori sul Journal of the American Chemical Society. Ha tenuto conferenze su invito in rilevanti convegni nazionali ed internazionali, tra cui alcuni convegni MACRO IUPAC, della European Polymer Federation e della Polymer Processing Society.

E' stato responsabile di svariati progetti di ricerca ministeriali e della Unione Europea e di attività di ricerca in collaborazione con importanti società internazionali operanti in tecnologie dei polimeri quali ad esempio la Pirelli, la Basell, la Freudenberg, la Prysmian e la Treofan.

E' risultato vincitore nel 1986 di un premio conferito dall'Accademia Napoletana di Scienze Lettere ed Arti per il miglior gruppo di lavori nel settore della Chimica Macromolecolare, e nel 1992 del Premio Nazionale Federchimica (sezione riservata a docenti e ricercatori accademici). Dal 1998 al 2000 è stato Presidente della Associazione Italiana di Scienza e Tecnologia delle Macromolecole. Nel 2003 è stato insignito dal Presidente della Repubblica del Premio Linceo. Nel 2009 il suo gruppo di ricerca ha vinto due "business plan competitions": il terzo premio del "Premio Nazionale Innovazione" (per le migliori idee imprenditoriali ad alto contenuto tecnologico) ed il "Premio Made NEW in Italy 2009 -I materiali innovativi dall'università all'impresa". Nel 2010 il suo gruppo di ricerca è stato insignito, dal Presidente della Repubblica presso la sede del Quirinale, del "Premio Nazionale Innovazione" (per le migliori idee imprenditoriali ad alto contenuto tecnologico). Nel 2016 la Società Chimica Italiana gli ha conferito la Medaglia Piero Pino. E' stato Presidente della Società Chimica Italiana per il triennio 2020-2022, di cui è attualmente Past-President. Nel novembre 2017 è stato eletto Socio Corrispondente dell'Accademia Nazionale dei Lincei.

## **Lista delle principali pubblicazioni del prof. Gaetano Guerra**

La lista è articolata in tre sezioni:

- A) Articoli pubblicati su riviste a diffusione internazionale**
- B) Brevetti**
- C) Capitoli di libri a diffusione internazionale**

## A) Articoli pubblicati su riviste a diffusione internazionale.

- A1) P.Corradi, G.Guerra  
On the chain conformation of poly(tetrafluoroethylene) in the crystalline modification above 30°C.  
*Macromolecules*, 1977, 10, 1410.
- A2) P.Corradi, V.Barone, R.Fusco, G.Guerra  
Analysis of models for the Ziegler-Natta stereospecific polymerization on the basis of the non-bonded interactions at the catalytic site- I- The Cossee model.  
*Eur.Polym.J.*, 1979, 15, 1133.
- A3) P.Corradi, G.Guerra, V.Barone, R.Fusco  
Analysis of models for the Ziegler-Natta stereospecific polymerization on the basis of the non-bonded interactions at the catalytic site- II- Edges, steps and exposed cuts.  
*Eur.Polym.J.*, 1980, 16, 835.
- A4) P.Corradi, G.Guerra, V.Petraccone, B.Pirozzi  
Geometrical and energetical feasibility of a highly extended chain conformation for isotactic polystyrene.  
*Eur.Polym.J.*, 1980, 16, 1089.
- A5) L.Nicolais, G.Guerra, C.Migliaresi, L.Nicodemo, A.T.Di Benedetto  
Mechanical properties of polystyrene/glass beads composites.  
*Composites*, 1981, 12, 33.
- A6) L.Nicolais, G.Guerra, C.Migliaresi, L.Nicodemo, A.T.Di Benedetto  
Viscoelastic behaviour of glass-reinforced epoxy resin.  
*Polym. Composites*, 1981, 2, 116.
- A7) G.Guerra, M.Ilavsky, J.Biros, K.Dusek  
The viscoelastic and equilibrium rheoptical behaviour of crosslinked ethylene-propylene copolymers.  
*Colloid & Polym.Sci.*, 1981, 259, 1190.
- A8) P.Corradi, V.Barone, R.Fusco, G.Guerra  
Steric control in Ziegler-Natta catalysts, an analysis of non-bonded interactions at model catalytic sites.  
*J. Catal.*, 1982, 77, 32.
- A9) P.Corradi, V.Barone, G.Guerra  
Steric control in the first step of the isospecific Ziegler-Natta polymerization of propene.  
*Macromolecules*, 1982, 15, 1242.
- A10) P.Corradi, R.Napolitano, L.Oliva, V.Petraccone, B.Pirozzi, G.Guerra

A possible structural interpretation of the two DSC melting peaks of isotactic polypropylene in the  $\alpha$ -modification.

*Makromol. Chem., Rapid Commun.*, 1982, 3, 753.

- A11) A.Addeo, V.Bonadies, C.Carfagna, G.Guerra, A.Moschetti, L.Nicolais  
Use of polymeric materials in the assembly of solar cells.  
*Solar Energy*, 1983, 30, 421.
- A12) G.Guerra, C.Paolone, L.Nicolais  
Surface colouring of glassy polymers by solvent diffusion.  
*J. Coating Tech.*, 1983, 55, 53.
- A13) C.Carfagna, G.Guerra, L.Nicolais, S.Tartaro  
Effects of postcuring and water sorption on the mechanical properties of composite dental restorative materials.  
*Biomaterials*, 1983, 4, 228.
- A14) P.Corradiini, V.Barone, R.Fusco, G.Guerra  
A possible model of catalytic sites for the stereospecific polymerization of  $\alpha$ -olefins on first generation and supported Ziegler-Natta catalysts.  
*Gazz. Chim.It.*, 1983, 113, 601.
- A15) G.Guerra, A.Moschetti, C.Carfagna, U.Mandara, A.Cutolo, S.Solimeno  
Additives in transparent glassy polymers: concentration profiles obtained by solvent diffusion technique.  
*J.Appl.Polym.Sci.*, 1984, 29, 2271.
- A16) C.Carfagna, C.De Rosa, G.Guerra, V.Petraccone  
Recrystallization kinetics of isotactic polypropylene ( $\alpha$ -form).  
*Polymer*, 1984, 25, 1462.
- A17) G.Guerra, V.Petraccone, P.Corradiini, C.De Rosa, R.Napolitano, B.Pirozzi, G.Giunchi  
Crystalline order and melting behaviour of isotactic polypropylene ( $\alpha$  form).  
*J.Polym.Sci., Polym.Phys.Ed.*, 1984, 22, 1029.
- A18) C.De Rosa, G.Guerra, R.Napolitano, V.Petraccone, B.Pirozzi  
Conditions for the  $\alpha_1$ - $\alpha_2$  transition in isotactic polypropylene samples.  
*Eur.Polym.J.*, 1984, 29, 937.
- A19) G.Guerra, V.Riccio, L.Nicolais  
Surface addition of flame retardants in acrylic cast sheets.  
*J.Fire Sci.*, 1984, 2, 60.
- A20) P.Corradiini, G.Guerra, V.Barone  
Conformational analysis of polypropylene chains bound to model catalytic sites.

*Eur.Polym.J.*, 1984, 20, 1177.

A21) V.Petraccone, C.De Rosa, G.Guerra, A.Tuzi

On the double peak shape of melting endotherms of isothermally crystallized isotactic polypropylene samples.

*Makromol.Chem., Rapid Commun.*, 1984, 5, 631.

A22) P.Ammendola, G.Guerra, V.Villani

Conformational analysis and reactivity in isotactic specific polymerization of C-3 branched  $\alpha$ -olefins.

*Makromol.Chem.*, 1984, 185, 2599.

A23) V.Petraccone, G.Guerra, C.De Rosa, A. Tuzi

Extrapolation to the equilibrium melting temperature for isotactic polypropylene.

*Macromolecules*, 1985, 18, 813.

A24) P.Corradi, G.Guerra, V.Villani

Stereoselectivity of the model catalytic site proposed for the isospecific Ziegler-Natta polymerization of the  $\alpha$ -olefins.

*Macromolecules*, 1985, 18, 1401.

A25) V.Busico, P.Corradi, G.Guerra, P.Severino

Polymorphic and mesomorphic behaviour of ionic amphiphilic compounds : a simple electrostatic model.

*Gazz.Chim.It.*, 1985, 115, 17.

A26) G.Guerra, C.De Rosa, V.Petraccone, A.Tuzi

Unusual recrystallization and melting behaviour in DSC scans of isotactic polypropylene samples.

*J.Thermal Anal.*, 1985, 30, 1337.

A27) C.De Rosa, G.Guerra, R.Napolitano, V.Petraccone, B.Pirozzi

Crystalline order and melting behaviour of isotactic polypropylene ( $\alpha$ -form).

III. Isothermally crystallized samples.

*J.Thermal Anal.*, 1985, 30, 1331.

A28) G.Guerra, V.Petraccone, C.De Rosa, P.Corradi

X-ray analysis on unoriented and oriented samples of the quenched form of isotactic polypropylene.

*Makromol.Chem., Rapid Commun.*, 1985, 6, 573.

A29) P.Corradi, G.Guerra, M.A.Jama, G.Zhi, A.Tuzi

Configurational and conformational requirements for an eventual 'back-biting' of the propagating species in the diolefin polymerization.

*Polym.Commun.*, 1985, 26, 175.

A30) P.Corradi, G.Guerra, R.Pucciariello

New model of the origin of the stereospecificity in the synthesis of syndiotactic polypropylene.

*Macromolecules*, 1985, 18, 2030-4.

A31) G.Guerra, C.De Rosa, V.Petraccone

Manufacturing of polypropylene laminates and related structural reorganization in the crystalline phase.

*J.Appl.Polym.Sci.*, 1986, 19, 1935.

A32) G.Guerra, F.E.Karasz, W.J.MacKnight

On the blends of poly(vinylidene fluoride) and poly(vinylfluoride).

*Macromolecules*, 1986, 19, 1935.

A33) P.Corradi, V.Petraccone, C.De Rosa, G.Guerra

On the structure of the quenched mesomorphic phase of isotactic polypropylene.

*Macromolecules*, 1986, 19, 2699.

A34) G.Guerra, R.Pucciariello, V.Villani, P.Corradi

Model catalytic sites for Ziegler-Natta polymerization and relative reactivities of ethylene and propylene.

*Polym.Commun.*, 1987, 28, 100.

A35) C.De Rosa, G.Guerra, V.Petraccone, A.Tuzi

Comments on the melting behaviour of isotactic polypropylene isothermally crystallized from the melt.

*Polym.Commun.*, 1987, 28, 143.

A36) P.Corradi, C.De Rosa, G.Guerra, V.Petraccone

Fourier transform analysis of models for the disordered phases (IV and I) of poly(tetrafluoroethylene).

*Macromolecules*, 1987, 20, 3043.

A37) C.De Rosa, G.Guerra, V.Petraccone, R.Centore, P.Corradi

Temperature dependence of the intramolecular disorder in the high-temperature phase of poly(tetrafluoroethylene) (phase I).

*Macromolecules*, 1988, 21, 1174.

A38) R.Centore, C.De Rosa, G.Guerra, V.Petraccone, P.Corradi, V.Villani

Melting and solid phase transitions of isothermally crystallized copolymers of tetrafluoroethylene and hexafluoropropene.

*Eur.Polym.J.*, 1988, 24, 445.

A39) G.Guerra, S.Choe, D.J.Williams, F.E.Karasz, W.J.MacKnight

Fourier transform infrared spectroscopy of some miscible polybenzimidazole/polyimide blend.

*Macromolecules*, 1988, 21, 231.

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Miscible polybenzimidazole blends with a benzophenone-based polyimide.

*J.Polym.Sci.,Polym.Phys.Ed.*, 1988, 26, 301.

- A41) S.Stankovic, G.Guerra, D.J.Williams, F.E.Karasz, W.J.MacKnight  
Miscible blends of polybenzimidazole and a diisocyanate-based polyimide.  
*Polym.Commun.*, 1988, 29, 14.
- A42) A.Nelson, G.Guerra, D.J.Williams, F.E.Karasz, W.J.MacKnight  
Catalytic activity of benzimidazole in the imidization of polyamic acids.  
*J.Appl.Polym.Sci.*, 1988, 36, 243.
- A43) C.K.Sham, G.Guerra, F.E.Karasz, W.J.MacKnight  
Blends of two poly(aryl ether ketones).  
*Polymer*, 1988, 29, 1016.
- A44) P.Corradi, G.Guerra, M.Vacatello , V.Villani  
A possible model for site control of stereoregularity of isotactic specific homogeneous Ziegler-Natta polymerization.  
*Gazz. Chim. Ital.*, 1988, 118, 173.
- A45) M.Iuliano, C.De Rosa, G.Guerra, V.Petraccone, P.Corradi  
Structural variations in ethylene-tetrafluoroethylene copolymers as a function of composition and temperature.  
*Makromol.Chem.*, 1989, 190, 827
- A46) L.Cavallo, G.Guerra, L.Oliva, M.Vacatello ,P.Corradi  
Steric control in the initiation step of the isospecific homogeneous Ziegler-Natta polymerization of propene and 1-butene.  
*Polym. Commun.*, 1989, 30, 16.
- A47) P.Corradi, C.De Rosa, G.Guerra, V.Petraccone  
Comments on the possibility that the mesomorphic form of isotactic polypropylene is composed of small crystals of the  $\beta$  crystalline form.  
*Polym.Commun.*, 1989, 30, 281.
- A48) G.Guerra, G.Di Dino, R.Centore, V.Petraccone, J.Obrzut F.E.Karasz, W.J.MacKnight  
Structural characterization of vinylidene fluoride/vinyl fluoride copolymers.  
*Makromol.Chem.*, 1989, 190, 2203.
- A49) A.Grassi, P.Longo , G.Guerra  
Solid-state high-resolution  $^{13}\text{C}$  NMR spectra of syndiotactic polystyrene.  
*Makromol. Chem., Rapid Commun.*, 1989, 10, 687.
- A50) V.Venditto, G.Guerra, P.Corradi , R.Fusco  
Possible model for chain end control of stereoregularity in the isospecific homogeneous Ziegler-Natta polymerization.  
*Polymer*, 1990, 31, 530.

- A51) G.Guerra, V.M.Vitagliano, C.De Rosa, V.Petraccone, P.Corradi  
Polymorphism in melt crystallized syndiotactic polystyrene samples.  
*Macromolecules*, 1990, 23, 1539.
- A52) G.Guerra, P.Musto, F.E.Karasz, W.J.MacKnight  
Fourier transform spectroscopy of the polymorphic forms of syndiotactic polystyrene.  
*Makromol.Chem.*, 1990, 191, 2111.
- A53) V.Venditto, G.Guerra, P.Corradi, R.Fusco  
Mechanism of monomer insertion for heterogeneous isospecific Ziegler-Natta catalytic models.  
*Eur.Polym.J.*, 1991, 27, 45.
- A54) G.Guerra, C.De Rosa, V.M.Vitagliano, V.Petraccone, P.Corradi  
Effects of blending on the polymorphic behaviour of melt-crystallized syndiotactic polystyrene.  
*J.Polym.Sci., Polym.Phys.Ed.*, 1991, 23, 265.
- A55) G.Guerra, C.De Rosa, V.M.Vitagliano, V.Petraccone, P.Corradi, F.E.Karasz  
Blending effects in the polymorphism of syndiotactic polystyrene crystallized from the  
quenched amorphous phase.  
*Polym.Commun.*, 1991, 32, 30.
- A56) L.Cavallo, G.Guerra, M.Vacatello, P.Corradi  
A possible model for the stereospecificity in the syndiospecific polymerization of propene  
with group 4A metallocenes.  
*Macromolecules*, 1991, 24, 1784.
- A57) L.Cavallo, P.Corradi, G.Guerra, M.Vacatello  
On the effect of methyl substituents on chelating ligands in models for homogeneous isospecific  
Ziegler-Natta catalysis.  
*Polymer*, 1991, 32, 1329.
- A58) M.Rapacciulo, C.De Rosa, G.Guerra, G.Mensitieri, A.Apicella, M.A. Del Nobile  
Different solvent stability of the crystalline polymorphic forms of syndiotactic polystyrene.  
*J.Mat.Sci., Lett.*, 1991, 10, 1084
- A59) C.De Rosa, V.Venditto, G.Guerra, B.Pirozzi, P.Corradi  
Polymorphism and chain conformations in the crystalline forms of syndiotactic poly(1-butene).  
*Macromolecules*, 1991, 24, 5645.
- A60) P.Corradi, G.Guerra  
Models for the stereospecificity in homogeneous and heterogeneous Ziegler-Natta  
polymerizations  
*Progr.Polym.Sci.*, 1991, 16, 239.
- A61) C.De Rosa, G.Guerra, P.Corradi

Fenomeni di ordine-disordine nelle forme polimorfe cristalline  $\alpha$  e  $\beta$  del polistirene sindiotattico.  
*Rend.Fis.Acc.Lincei*, 1991, s.9,v.2, 227.

A62) G.Guerra, M.Iuliano, A.Grassi, D.M.Rice, F.E.Karasz, W.J.MacKnight  
Solid-state high-resolution  $^{13}\text{C}$  NMR spectra of syndiotactic poly(p-methyl-styrene).  
*Polym.Commun.*, 1991, 32, 430.

A63) R.Bianchi, P.Chiavacci, R.Vosa, G.Guerra  
Effect of moisture on the crystallization behavior of PET from the quenched amorphous phase.  
*J.Appl.Polym.Sci.*, 1991, 43, 1087.

A64) C.De Rosa, G.Guerra, V.Petraccone, P.Corradi  
Crystal structure of the  $\alpha$ -form of syndiotactic polystyrene.  
*Polym. J.*, 1991, 23, 1435.

A65) L.Cavallo, G.Guerra, M.Vacatello, P.Corradi  
A model for the homogeneous isospecific Ziegler-Natta polymerization of olefins :  
enantioselectivity in the deuteration and deuteriooligomerization of 1-alkenes  
*Chirality*, 1991, 3, 299.

A66) V.Petraccone, C.De Rosa, G.Guerra, M.Iuliano, P.Corradi  
Fourier-transform analysis of models for the orthorhombic crystal phase of the alternating  
ethylene-tetrafluoroethylene copolymer.  
*Polymer*, 1992, 33, 22.

A67) M.Iuliano, G.Guerra, V.Petraccone, P.Corradi, C.Pellecchia  
Polymorphism in syndiotactic poly(p-methyl-styrene) unoriented samples.  
*New Polym.Mat.*, 1992, 3, 133.

A68) P.Corradi, G.Guerra  
Polymorphism in polymers.  
*Adv.Polym.Sci.*, 1992, 100, 183.

A69) G.Guerra, C.De Rosa, M.Iuliano V.Petraccone, P.Corradi, R.Pucciariello, V.Villani,  
G.Ajroldi  
On the conformation and the crystalline structure of an ethylene-chlorotrifluoroethylene  
alternating copolymer.  
*Makromol.Chem.*, 1992, 193, 549.

A70) C.De Rosa, M.Rapacciuolo, G.Guerra, V.Petraccone, P.Corradi  
On the crystal structure of the orthorhombic form of syndiotactic polystyrene.  
*Polymer*, 1992, 33, 1423.

A71) F.Auriemma, P.Corradi, C.De Rosa, G.Guerra, V.Petraccone, R.Bianchi, G.Di Dino  
On the mesomorphic form of poly(ethylene terephthalate).  
*Macromolecules*, 1992, 25, 2490.

- A72) C.De Rosa, V.Venditto, G.Guerra, P.Corradi  
Crystal structure of the form I of syndiotactic poly(1-butene).  
*Makromol.Chem.*, 1992, 193, 1351.
- A73) V.Venditto, C.De Rosa, G.Guerra, R.Napolitano  
X-ray diffraction, conformational analysis and stereo-regularity of a crystalline poly(3-methyl-1,3-pentadiene).  
*Polymer*, 1992, 33, 3547.
- A74) G.Guerra, C.De Rosa, V.Petraccone  
Novel crystalline syndiotactic polystyrene/polyphenyleneoxide blends.  
*Polym.Network & Blends*, 1992, 2, 145.
- A75) G.Guerra, F.Dal Poggetto, M.Iuliano, C.Manfredi  
FTIR spectra and chain conformation in the crystalline forms and clathrates of syndiotactic poly(p-methyl-styrene).  
*Makromol.Chem.*, 1992, 193, 2413.
- A76) P.Corradi, V.Busico, L.Cavallo, G.Guerra, M.Vacatello, V.Venditto  
Structural analogies between homogeneous and heterogeneous catalysts for the stereospecific polymerization of 1-alkenes.  
*J.Mol.Cat.*, 1992, 74, 433.
- A77) P.Corradi, C.De Rosa, G.Guerra, B.Pirozzi, V.Venditto  
On the chain conformation of the syndiotactic vinyl polymers.  
*Gazz.Chim.It.*, 1992, 122, 305.
- A78) V.Petraccone, F.Auriemma, F.Dal Poggetto, C.De Rosa, G.Guerra, P.Corradi  
On the structure of the mesomorphic form of syndiotactic polystyrene.  
*Makromol.Chem.*, 1993, 194, 1335.
- A79) G.Guerra, C.De Rosa, M.Iuliano, V.Petraccone, P.Corradi, G.Ajroldi  
Structural variations as a function of temperature and dynamic-mechanical relaxations for ethylene-tetrafluoroethylene alternating copolymers.  
*Makromol.Chem.*, 1993, 194, 389.
- A80) C.De Rosa, V.Venditto, G.Guerra, P.Corradi  
Chain conformation and unit cell in the crystalline phase of syndiotactic poly(4-methyl-1-pentene).  
*Macromolecules*, 1992, 25, 6938.
- A81) G.Guerra, L.Cavallo, V.Venditto, M.Vacatello, P.Corradi  
Molecular mechanics and the polymerization mechanism of homogeneous and heterogeneous Ziegler-Natta catalysts

*Makromol.Chem., Macromol.Sym.*, 1993, 69, 237.

- A82) L.Cavallo, G.Guerra, P.Corradini, L.Resconi, R.M.Waymouth  
Model catalytic sites for olefin polymerization and diastereoselectivity in the cyclopolymerization of 1,5-hexadiene.  
*Macromolecules*, 1993, 26, 260.
- A83) C.Di Fiore, B.Leone, C.De Rosa, G.Guerra, V.Petraccone, G.Di Dino, R.Bianchi, R.Vosa  
Influence of the antimony catalyst remnants on the melt crystallization of PET.  
*J.Appl.Polym.Sci.*, 1993, 48, 1997.
- A84) F.Auriemma, V.Petraccone, F.Dal Poggetto, C.De Rosa, G.Guerra, C.Manfredi, P.Corradini  
Mesomorphic form of syndiotactic polystyrene as composed of small imperfect crystals of the hexagonal ( $\alpha$ ) crystalline form.  
*Macromolecules*, 1993, 26, 3772.
- A85) G.Guerra, L.Cavallo, G.Moscardi, M.Vacatello, P.Corradini  
Enantioselectivity in the regioirregular placements and regiospecificity in the isospecific polymerization of propene with homogeneous Ziegler-Natta catalysts.  
*J.Am.Chem.Soc.*, 1994, 116, 2988.
- A86) L.Parravicini, B.Leone, F.Auriemma, G.Guerra, V.Petraccone, G.Di Dino, R.Bianchi,  
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Crystallization of poly(ethylene terephthalate)(PET) from the oriented mesomorphic form.  
*J.Appl.Polym.Sci.*, 1994, 52, 875.
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*J.Mat.Sci.*, 1994, 29, 3151.
- A88) P.Corradini, C.De Rosa, G.Guerra, R.Napolitano, V.Petraccone, B.Pirozzi  
Conformational and packing energy of the crystalline  $\alpha$  modification of syndiotactic polystyrene  
*Eur.Polym.J.*, 1994, 30, 1173.
- A89) R.Ziegler, L.Resconi, G.Balbontin, G.Guerra, V.Venditto, C.De Rosa  
Allyltrimethylsilane polymers from metallocene catalysts:  
tacticity and structural characterization  
*Polymer*, 1994, 35, 4648.
- A90) P.Corradini, G.Guerra  
Stereospecific polymerization processes and stereoregular polymers:  
Our present understanding of mechanisms and structure at forthy years from the discovery  
*Polymer Science, Ser.A*, 1994, 36, 1324; *Vysokomol. Soedin., Ser.A*, 1994, 36, 1587.

- A91) F.Auriemma, P.Corradini, G.Guerra, M.Vacatello  
 Conformational analysis of highly extended poly(ethyleneterephthalate) chains by Monte Carlo calculations  
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## **B) Brevetti industriali**

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