

## CURRICULUM VITAE

Name: **Marián GOMEZ-FATOU RODRIGUEZ**

Current position : **Research Professor** at Department of Polymer Physics, Elastomers and Energy Applications  
<http://physics.ictp.csic.es/>  
<http://www.ictp.csic.es/ICTP2/es/node/282>

Institute of Science and Technology of Polymers (ICTP-CSIC)  
CSIC (Spanish National Research Council)

Working address: Juan de la Cierva 3, 28006 Madrid, SPAIN  
E-mail: [magomez@ictp.csic.es](mailto:magomez@ictp.csic.es)  
Phone: +34-91-2587520

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### EDUCATIONAL QUALIFICATIONS

- 1984    **Ph.D degree in PHYSICAL CHEMISTRY** Complutense University of Madrid.
- 1981    **M.Phil degree in PHYSICAL CHEMISTRY** Complutense University of Madrid.
- 1981    **Bachelor of Science degree in Chemistry** Complutense University of Madrid.

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### PREVIOUS WORK EXPERIENCE

- **RESEARCH PROFESSOR** (2008 to date, **CSIC Member of the Scientific Staff**)  
Department of Polymer Physics, Elastomers and Energy Applications,  
Institute of Science and Technology of Polymers, C.S.I.C.
- **MEMBER OF SCIENTIFIC ADVISORY COMMITTEE (SAC) OF SCIENCE EUROPE**  
(<http://www.scienceeurope.org/>) (January 2016 to December 2018).
- **MEMBER OF THE PHYSICAL, CHEMICAL AND MATHEMATICAL SCIENCES COMMITTEE (PHYCHEMA) OF SCIENCE EUROPE** (January 2015 to December 2015).
- **DEPUTY VICE PRESIDENT FOR EUROPEAN AFFAIRS CSIC** (October 2008 to February 2012)
- **HEAD OF THE PHYSICS AND ENGINEERING DEPARTMENT** (March 2006 to September 2008)  
Institute of Science and Technology of Polymers, C.S.I.C.,
- **SENIOR RESEARCH SCIENTIST** (March 1997 to 2007, **CSIC Member of the Scientific Staff**)  
Department of Polymer Physics and Engineering,  
Institute of Science and Technology of Polymers, C.S.I.C.,

- **RESEARCH SCIENTIST** (February 1986 to February 1997, **CSIC Member of the Scientific Staff**)  
Department of Polymer Physics and Engineering,  
Institute of Science and Technology of Polymers, C.S.I.C.,
  - **RESEARCH SCIENTIST VISITOR** (July 2007- September 2007)  
Center for Nanoscale Science and Engineering  
University of California Riverside  
Riverside, California, USA.
  - **RESEARCH SCIENTIST VISITOR** (July 2003- August 2003)  
College of Textiles  
North Carolina State University  
Raleigh, North Carolina, USA.
  - **RESEARCH SCIENTIST VISITOR** (March 1990-June 1990 and October 1989-December 1989)  
Materials Division: Department of Polymer Physics  
AT&T Bell Laboratories  
Murray Hill, New Jersey, USA.
  - **RESEARCH SCIENTIST VISITOR** (May 1986-May 1988)  
Materials Division: Department of Polymer Physics  
AT&T Bell Laboratories  
Murray Hill, New Jersey, USA.
  - **POSTDOCTORAL RESEARCH** (March 1984 - January 1986)  
Department of Polymer Physics and Engineering,  
Institute of Science and Technology of Polymers, C.S.I.C.
- POSTDOCTORAL RESEARCH: European Molecular Biology Organization (EMBO) scholarship** (June 1984 - August 1984)  
H.H.Wills Physics Laboratories  
University of Bristol, UK
- **GRADUATE RESEARCH** (October 1981 - February 1984)  
Department of Crystallography  
Institute of Physical-Chemistry, C.S.I.C.
  - **UNDERGRADUATE RESEARCH** (September 1980 - September 1981)  
Department of Polymer Physics and Engineering,  
Institute of Science and Technology of Polymers, C.S.I.C.,

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## **RESEARCH INTERESTS**

During the last 15 years my research interest has been mainly focused on the development of advanced materials based on polymer nanocomposites with graphene, carbon nanotubes and inorganic fullerenes and study of the correlation between structure, morphology and solid state properties of these materials for structural, bio, sensors or textiles applications among others. My current interest is directed towards the design of more sustainable advanced polymeric materials especially for their application in packaging.

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## **RESEARCH PROJECTS**

I have lead and participated in more than **55** research projects (**17** as PI) financed through the Spanish Research and Development Plan and the local Government and in collaboration with

European, Canadian and US groups within the framework of bilateral agreements or funded by the European Union, as well as in **26** industrial research contracts with major Spanish companies in the polymer area,

Some of the most recent projects are:

“The transition of Multilayer/multipolymer packaging into more sustainable multilayer/single polymer products for the food and pharma sectors through the development of innovative functional adhesives”.

H2020-BBI-JTI-2018 Proposal 837715 MANDALA.

PI ICTP-CSIC: Dr. Horacio Salavagione

Participants: 12 Institutions and companies.

Financed through BBI JTI Program EU.

2019-2023

“Sustainable polymeric nanocomposites for multifunctional materials”.

PID2020-117573GB-I00

PI: Peter Shuttleworth / Horacio Salavagione

Financed through the Spanish Research, Development and Innovation Plan 2017-2020.

2021-2024

“Advanced functional polymeric fibers and fabrics incorporating graphene and related materials and bio-sourced mesoporous carbon structures”. MAT2017-88382-P

PI: Horacio Salavagione

Financed through the Spanish Research, Development and Innovation Plan 2013-2016 (Materials Program).

2018-2021

“Advanced multifunctional graphene-based hierarchical polymer nanocomposites: Development, morphology and solid-state properties”. MAT2013-47898-C2-2-R

PI ICTP-CSIC Marián Gómez-Fatou/Horacio Salavagione

Financed through the Spanish Research, Development and Innovation Plan 2013-2016 (Materials Program)

2014-2017

“Multifunctional, light weight, single-walled carbon nanotube-based carbon fibre nanocomposites for transportation”

National Research Council of Canada (NRC)-CSIC joint projects

PIs: Prof. B. Simard (Institute of Molecular Sciences-NRC), Prof. A. Jonhston (Institute for Aerospace Research-NRC), Prof. T. Martínez (ICB-CSIC) and Prof. Marián Gómez-Fatou (ICTP-CSIC).

Nov 2007- Dic 2010

“Nanocomposite enhancement of naturally derived mesoporous carbons” (i-LINK-0636)

CSIC (i-LINK international program). Joint project with University of York (UK).

PI-CSIC: G. Ellis

2013 – 2014

“Biodegradable polymer blend nanocomposites for ecological applications” (I-20110152 EC)

PI CSIC: Dr. M. Naffakh

Synchrotron facility (DESY,HASYLAB, Hamburg, Germany).

2011 – 2012

“Infrastructure funding in the life sciences” (C-ERANET/0318) ERA-Instrument FP7-INFRASTRUCTURES -2007-1. 7th Framework program EU. CAPACITIES (INFRASTRUCTURE-2007-3.1 ERA-NET).

PI – CSIC: Marián Gómez Fatou

2008-2011

"Fullerene-based opportunities for robust engineering: making optimised surfaces for tribology". FOREMOST. NMP3-CT-2005-515840.

Integrated Project (IP) 6th Framework Program EU.

Coordinator: Dr. Alberto Alberdi, TEKNIKER

PI CSIC: Prof. J.M. Albella/Dr I. Jiménez

ICTP-CSIC: "Incorporation of inorganic fullerene-like materials (IFLM) into thermoplastic polymers".

2006-2010

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## **PATENTS ( = 5)**

I am co-author of 5 patents related with the development of advanced polymeric materials.

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## **SCIENTIFIC PUBLICATIONS ( = 172)**

I have published **172** publications in international journals indexed in SCI (h-index = **39**), with **5.730** citations and related most of them with polymer science, nanotechnology and nanomaterials. I have been editor of **1** book related with the application of scattering and diffraction techniques to Materials and Life Science and have co-authored **18** chapters of books. I have 50 publications in Spanish journals and NON-SCI journals.

I have presented more than **140** papers to International conferences and Workshops.

Selection of most recent publications:

H.J. Salavagione, M.A. Gómez, G. Martínez

Polymeric modification of graphene through esterification of graphite oxide and poly (vinyl alcohol).

Macromolecules 42(17), 6331-6334 (2009)

A.M. Díez-Pascual, G. Martinez, M.A. Gómez, M.T. Martínez.

Novel Nanocomposites Reinforced with Hydroxylated Poly(ether ether ketone)-grafted Carbon Nanotubes.

J. Materials Chemistry 20, 8285-8296 (2010)

M. Naffakh, M. Remskar, C. Marco, M.A. Gómez-Fatou, I. Jiménez.

Towards a new generation of polymer nanocomposites based on inorganic nanotubes.

Journal of Material Chemistry 21, 3574-3578 (2011)

J.M. González-Domínguez, Y. Martínez-Rubí, A.M. Díez-Pascual, A. Ansón-Casaos, M.A. Gómez-Fatou, B. Simard, M.T. Martínez

Reactive fillers based on SWCNTs functionalized with matrix-based moieties for the production of epoxy composites with superior and tuneable properties

Nanotechnology 23(28), 285702-285716 (2012)

M. Naffakh, A.M. Díez-Pascual, C. Marco, G. Ellis, M.A. Gómez-Fatou.

Opportunities and challenges in the use of inorganic fullerene-like nanoparticles to produce advanced polymer nanocomposites

Progress in Polymer Science 38, 1163-1231 (2013).

A.M. Díez-Pascual, M. Naffakh, C. Marco, M.A. Gómez-Fatou, G. Ellis.

Multiscale fiber-reinforced thermoplastic composites incorporating carbon nanotubes: A review Current Opinion in Solid State & Materials Science 18, 62-80 (2014).

H. Salavagione, A.M. Díez-Pascual, E. Lázaro, S. Vera, M.A. Gómez-Fatou.  
Chemical sensors based on polymer composites with carbon nanotubes and graphene. The role of the polymer.  
J. Materials Chemistry A 2 (35), 14289- 14328 (2014).

A. Flores, H. Salavagione, F. Ania, G. Martínez, G. Ellis, M.A. Gómez-Fatou.  
The overlooked role of reduced graphene oxide in the reinforcement of hydrophilic polymers.  
J. Materials Chemistry C 3, 1177-1180 (2015).

H. Salavagione, S. Quiles-Díaz, P. Enrique-Jimenez, G. Martínez, F. Ania, A. Flores, M.A. Gómez-Fatou  
Development of Advanced Elastomeric Conductive Nanocomposites by Selective Chemical Affinity of Modified Graphene  
Macromolecules 49,4948-4956 (2016).

S. Quiles-Díaz, P. Enrique-Jimenez, D. G. Papageorgiou, F. Ania, A. Flores, I. A. Kinloch, M.A. Gómez-Fatou, R. J. Young, H. J. Salavagione.  
Influence of the chemical functionalization of graphene on the properties of polypropylene-based nanocomposites  
Composites: Part A 100,31-39 (2017).

A. Martínez-Gómez, S. Quiles-Díaz, P. Enrique-Jimenez, A. Flores, F. Ania, M. A. Gómez-Fatou, H. J. Salavagione  
Searching for effective compatibilizing agents for the preparation of poly(ether ether ketone)/graphene nanocomposites with enhanced properties.  
Composites: Part A 113, 180-188 (2018).

S. Quiles-Díaz, Y. Martínez-Rubí, J. Guan, K.S. Kim, M. Couillard, H. J. Salavagione, M. A. Gómez-Fatou, B. Simard  
Enhanced Thermal Conductivity in Polymer Nanocomposites via Covalent functionalization of boron nitride nanotubes with short polyethylene chains for heat Transfer Applications.  
ACS Appl. Nano Mater. 2, 440- 451 (2019)

H. J. Salavagione, P. S. Shuttleworth, J. P. Fernandez-Blazquez, G. J. Ellis, M. A. Gómez-Fatou  
Scalable graphene-based nanocomposites coatings for flexible and washable conductive textiles  
Carbon 167, 495-503 (2020).

### **BOOK EDITOR**

T.A. Ezquerra, M.C. García-Gutierrez, A. Nogales, M. A. Gómez (Editors)  
“Applications of Synchrotron Light to Scattering and Diffraction in Materials and Life Sciences”  
Lectures Notes in Physics, vol 776, 2009 (1-318 ). Springer. ISBN: 978-3-540-95967-0

### **RECENT BOOK CHAPTERS**

A. M. Díez-Pascual, J. M. González-Domínguez, Y. Martínez-Rubi, M. Naffakh, A. Ansón, M. T. Martínez, B. Simard, and M. A. Gómez.  
Polymer Nanotube Nanocomposites: Synthesis, Properties, and Applications. “Synthesis and Properties of PEEK/Carbon Nanotube Nanocomposites”.  
Editorial: Wiley-Scrivener. V. Mittal Editor, chapter 10, 281-313 (2010). ISBN: 978-0-470-62592-7

M. A. Hunt, S. Villar-Rodil, M. A. Gomez-Fatou, I. D.Shin, F. C. Schilling, and A. E Tonelli.  
"NMR Spectroscopy of Polymers: Innovative Strategies for Complex Macromolecules: 13C-NMR Observed Conformations and Motions of Neat Liquid and Crystalline n-Hexatricontane

and as a Guest in the Narrow Channels of Its Inclusion Compound Formed with  $\alpha$ -Cyclodextrin"

Editors: H.N. Cheng, T. Asakura, A. D. English

ACS Books, ACS Symposium Series: American Chemical Society, Washington CD, Chapter 16 pages 265-277, (2011)

ISBN13: 9780841226678

Diez-Pascual, Ana M; Naffakh, Mohammed; Gómez-Fatou, Marián.

Polymer Morphology

"Morphology of high-performance thermoplastic nanocomposites"

Vol. 1, Cap. 2 (2012) pág 41-77

Editors: Hongshun Yang.

Editorial: Nova Science Publishers, Inc., Hauppauge, New Jersey, USA

J. M. González-Domínguez, A. M. Díez-Pascual, A. Ansón-Casaos, M. A. Gómez-Fatou, M. T. Martínez.

Polymer Nanotube Nanocomposites: Synthesis, Properties, and Applications. 2nd Edition

"Functionalization strategies for single-walled carbon nanotubes integration into epoxy matrices".

Editorial: Wiley-Scrivener. V. Mittal Editor, chapter 2, 45-109 (2014). ISBN: 978-1-118-94592-6

Horacio J. Salavagione, Marián A. Gómez-Fatou, Gerardo Martínez, Carlos Marco, Gary J. Ellis

Chemical Functionalization of Carbon Nanomaterials. Chemistry and Applications

"Click Functionalization of Carbon Nanotubes and Graphene with Polymers".

Editorial: CRC Press. Vijay Kumar Thakur and Manju Kumari Thakur Editors., Chapter 16, 399-429 (2015). ISBN: 978-1-4822-5394-8

Horacio J. Salavagione, Susana Quiles-Díaz, Peter S Shuttleworth, Gary J Ellis, Marián A Gómez-Fatou

Encyclopedia of Polymer Science & Technology (4<sup>th</sup> Edition)

"Graphene Functionalization for Polymer Nanocomposites"

Editorial: John Wiley & Sons, Inc. (2020)

Print ISBN: 9781118633892 Online ISBN: 9780471440260

## **FULL LIST OF PUBLICATIONS**

1

E.Pérez, M.A.Gómez, A.Bello, y J.G.Fatou

Solubility parameters in polyoxetanes: poly(oxetane), poly(3,3-dimethyl oxetane) and poly(3,3-diethyl oxetane)

J.Applied Polym. Sci., 27, 3721-3728b(1992)

2

E.Pérez, M.A.Gómez, A.Bello y J.G.Fatou

Crystallization behaviour of polyoxetanes:poly(oxetane), poly(3,3-dimethyloxetane) and poly(3,3-diethyloxetane)

Colloid & Polymer Sci. 261, 571-576 (1983)

3

M.A.Gómez-Rodríguez, M.Martínez-Ripoll y S.García-Blanco.

Molecular and chiral structure of (6R,7S,10R,11S)-1-oxo-6 ,7 ,10 ,11 H-germacr-4-en-,12-olide, a ketone derivative of gallicin.

Acta Cryst. Sect. C, C41, 1275-1277, 1985

4

A.G.González, A.Galindo, H.Mansilla, A.Gutierrez, J.A.Palenzuela, M.A.Gómez-Rodríguez, M.Martínez-Ripoll y S.García-Blanco.

Biomimetic synthesis of chaplitrin type compounds.

J.Org.Chem., 50(26), 5856-5858, 1985

5

M-A.Gómez-Rodríguez, M.Martínez-Ripoll y S.García-Blanco.

Molecular and chiral structure of (4R,6S,7S,11S)-5-oxo-4,6,7,11-H-germacran-1(10)-en-12,6-olide a derivative of gallicin.

Acta Cryst. Sect. C, C42, 894-6, 1986

6

J.M.Pastor, J.Merino, M.A.Gómez y A.Bello.

Influence of the crystallinity on the Raman spectra of poly(3,3-dipropyloxetane).

J.Mol.Struct., 143, 187-190, 1986

7

M.A.Gómez, E.Pérez, A.Bello y J.G.Fatou.

X-ray diffraction study of oriented poly(3-ethyl, 3-methyl oxetane).

Polymer Communications, 27, 166-168, 1986

8

M.A.Gómez, J.G.Fatou, y A.Bello.

Crystallization kinetics of poly(3,3-diethyl oxetane).

Eur. Polym. J., 22(1), 43-47, 1986

9

M.A.Gómez, J.G.Fatou y A.Bello.

Spherulitic growth rates of poly(3,3-diethyloxetane).

Eur. Polym. J., 22(8), 661-664, 1986

10

M.A.Gómez, M.H.Cozone, F.C.Schilling, A.E.Tonelli, A.Bello y J.G.Fatou.

Solid-State <sup>13</sup>C NMR study of poly(3,3-diethyl oxetane).

Macromolecules, 20, 1761-1766, 1987

11

M.A.Gómez, H.Tanaka, A.E.Tonelli.

High Resolution Solid State <sup>13</sup>C Nuclear Magnetic Resonance study of isotactic polypropylene polymorphs.

Polymer, 28, 2227-2232, 1987

12

F.C.Schilling, M.A.Gómez, A.E.Tonelli, F.A.Bovey y A.E. Woodward.

Variable temperature, high resolution solid-state carbon-<sup>13</sup> NMR study of 1,4-trans-polybutadiene.

Macromolecules, 20, 2954-2957, 1987

13

H.Tanaka, M.Thakur, M.A.Gómez y A.E.Tonelli.

Study of the thermochromic phase transition of polydiacetylene by solid-state <sup>13</sup>C NMR.

Macromolecules, 20, 3094-3097, 1987

14

M.A.Gómez, E.D.T. Atkins, C.Upstill, A.Bello y J.G.Fatou.

Structure of one crystal modification of poly(3,3-diethyl oxetane).

Polymer, 29, 224-228, 1988

15

M.A.Gómez, M.H.Cozone y A.E.Tonelli.

High resolution solid state <sup>13</sup>C NMR study of the  $\alpha$  and  $\beta$  crystalline forms of poly(butylene terephthalate).

Macromolecules, 21, 388-392, 1988

16

H.Tanaka, M.A.Gómez, y A.E.Tonelli.

Decomposition of overlapped solid-state <sup>13</sup>C NMR resonances belonging to different stereosequences in an atactic polymer.

Macromolecules, 21, 2934-2937, 1988

17

H.Tanaka, M.A.Gómez, A.E.Tonelli, S.V.Chichester-Hicks y R.C.Haddon.

Multinuclear solid state NMR study of phase transitions in poly(bis(4-ethylphenoxy)phosphazene).

Macromolecules, 21, 2301-2304, 1988

18

A.G.González, A.Galindo, M.Alfonso, H.Mansilla, J.A.Palenzuela, M.A.Gómez, M.Martínez-Ripoll.

The biomimetic synthesis of trans(1-H, 5-H)-guaianolides.

Tetrahedron, 44, 4575-4584, 1988

19

H.Tanaka, M.A.Gómez, A.E.Tonelli, S.V.Chichester-Hicks y R.C.Haddon.

Studies of the phase transitions in poly(bis(4-ethylphenoxy)phosphazene) and poly(bis(4-*t*-butylphenoxy)phosphazene). I <sup>31</sup>P NMR study.

Macromolecules, 22, 1031-1036, 1989

20

H.Tanaka, M.A.Gómez, A.E.Tonelli y M.Thakur.  
Thermochromic phase transitions of a polydiacetylene, poly(ETCD), studied by high resolution solid state <sup>13</sup>C NMR.  
Macromolecules, 22, 1208-1215, 1989

21  
H. Tanaka, M.A.Gómez, A.E.Tonelli, A.J.Lovinger, D.D.Davis y M.Thakur.  
Structural and morphological study of a melt crystallized polydiacetylene.  
Macromolecules, 22, 2427-2432, 1989

22  
M.A. Gómez, M.H. Cozine, A.E. Tonelli  
Comments on the alpha to beta transition in poly(butylene terephthalate) - Reply  
Macromolecules, 22, 2015-2015, 1989

23  
C.Marco, M.A.Gómez, J.G.Fatou and A.Bello.  
Morphology of poly(3,3-diethyloxetane).  
European Polymer Journal, 25, 929-934, 1989

24  
M.A.Gómez, A.E.Tonelli, A.J.Lovinger, F.C.Schilling, M.H.Cozone y D.D.Davis.  
Structure and morphology of ethylene-vinyl chloride copolymers.  
Macromolecules, 22, 4441-4451, 1989

25  
C.Marco, J.G.Fatou, M.A.Gómez, H.Tanaka,A.E.Tonelli.  
Molecular weight effect on the miscibility of poly(ethylene oxide)/isotactic poly(methyl methacrylate) blends.  
Macromolecules, 23, 2183-2188, 1990

26  
M.A.Gómez, A.E.Tonelli.  
Carbon-13 Nuclear Magnetic Resonance study of chain conformation in the solid polymorphs of syndiotactic polystyrene.  
Macromolecules, 23, 3385-3386, 1990

27  
M.A.Gómez, C.Marco, J.G.Fatou, S.V.Chichester-Hicks, R.C.Haddon.  
Morphological study of the phase transitions in poly(bis(4-ethylphenoxy) Phosphazene).  
Polymer Communications, 31, 308-312, 1990

28  
V.Lorenzo, C.Marco, M.A.Gómez, J.G.Fatou.  
Influence of composition and molecular weights on the microhardness of poly(ethylene oxide)/ipoly(methyl methacrylate) blends.  
J.Material Science Letters, 9, 1011-1013, 1990

29  
M.A.Gómez, B.Jasse, A.E.Tonelli.  
High resolution <sup>13</sup>C NMR observations of two crystalline model compounds for syndiotactic polystyrene.  
J.Am.Chem.Soc., 112, 5881-5882, 1990

30  
M.A.Gómez, A.E.Tonelli.  
Solid state <sup>13</sup>C NMR study of poly(p-phenylene sulphide) and two model compounds.  
Polymer, 32, 796-801, 1991

31  
M.A.Gómez, C.Marco, J.G.Fatou, T.Bowmer, R.C.Haddon y S.V. Chichester-Hicks.  
Thermal phase transitions of substituted poly(bis-(phenoxy phosphazenes)).  
Macromolecules, 24, 3276-3284, 1991

32  
H.Tanaka, M.Thakur, M.A.Gómez, A.E.Tonelli.  
Study of the correlation between the backbone conformation and the electronic structure of polydiacetylenes by solid state <sup>13</sup>C NMR.  
Polymer, 32, 1834-1840, 1991

33  
T.Bowmer, R.C.Haddon, S.V.Chichester-Hicks, M.A.Gómez, C.Marco, J.G.Fatou.  
Effect of substituents on the thermal transitions and degradation behaviour of poly(bis-R-phenoxy phosphazenes).  
Macromolecules, 24, 4827-4833, 1991

34  
G.Ellis, M.A.Gómez, C.Marco, J.G.Fatou.  
Raman spectroscopic study of a substituted polyphosphazene.

Polymer Bull., 25, 351-356, 1991

35

M.A.Gómez, A.E.Tonelli.

Structural, conformational and motional studies of the crystalline polymorphs of syndiotactic polystyrene.

Macromolecules, 24, 3533-3536, 1991

36

G.Ellis, J.Lorente, C.Marco, M.A.Gómez, J.G.Fatou, P.J.Hendra.

Fourier transform Raman spectroscopic study of main-chain thermotropic liquid crystalline polyesters.

Spectrochim. Acta, 47A, 1353-1366, 1991

37

I.Campoy, C.Marco, M.A.Gómez, J.G.Fatou.

Thermal transitions of liquid crystal polyesters: poly(decamethylene-4,4'-diphenoxy terephthalate).

Polymer Bulletin, 27, 81-89, 1991

38

F.C.Schilling, M.A.Gómez, A.E.Tonelli.

Solid-state NMR observations of the crystalline conformation of poly(dimethylsiloxane).

Macromolecules, 24, 6552-6553, 1991

39

J.Lorente, C.Marco, M.A.Gómez, J.G.Fatou.

Effect of branched alkyl spacers in liquid crystalline poly(2,2-dimethyl (trimethylene) terephthaloyl-bis-4-oxybenzoate).

Polymer Commun, 33, 202-205, 1992

40

C.Marco, J.Lorente, M.A.Gómez, J.G.Fatou.

Thermal and structural study of the phase transitions in liquid crystalline poly(heptamethylene terephthaloyl-bis-4-oxybenzoate).

Polymer, 33, 3108-3115, 1992

41

I.Campoy, C.Marco, M.A.Gómez, J.G.Fatou.

Kinetics of the three dimensional ordering in the thermotropic liquid crystal poly(decamethylene-4,4'-diphenoxy terephthalate).

Macromolecules, 25, 4392-4398, 1992

42

J.Lorente, C.Marco, M.A.Gómez, J.G.Fatou.

Kinetics of the phase transitions in liquid crystalline poly(alkyl terephthaloyl bis-(4-oxybenzoate))s.

European Polymer Journal, 28, 911-921, 1992

43

J.del Pino, M.A.Gómez, C.Marco, G.Ellis, J.G.Fatou.

Polymorphism in liquid crystalline poly(tetramethylene terephthaloyl-bis-4-oxybenzoate).

Macromolecules, 25, 4642-4648, 1992

44

J.del Pino, C.Marco, M.A.Gómez, J.G.Fatou.

Asymmetrically branched alkyl spacers in liquid crystalline poly(alkyl terephthaloyl-bis-(4-oxybenzoate))s: Poly(1,4-dimethyl tetramethylene terephthaloyl-bis-(4-oxybenzoate)).

Makromol. Chem. 193, 2251-2258, 1992

45

C.Marco, M.A.Gómez, J.G.Fatou, A.Etxebarria, M.M.Elorza y J.J.Iruin.

Miscibility of poly(vinyl chloride)/poly(ethylene oxide) blends. Part I.- Thermal properties and solid state <sup>13</sup>C NMR study.

European Polymer Journal 29, 1477-1481, 1993

46

A.Etxebarria, J.M.Elorza, J.J.Iruin, C.Marco, M.A.Gómez y J.Gómez Fatou.

Miscibility of poly(vinyl chloride)/poly(ethylene oxide) blends. Part II: An inverse gas chromatography study.

Eur. Polym. J. 29, 1483-1487, 1993

47

I.Campoy, M.A.Gómez, C.Marco, J.G.Fatou.

Three dimensional ordering in liquid crystalline poly(alkyl-4,4'-diphenoxy terephthalates).

European Polymer Journal 29, 1161-1169, 1993

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