

Dr. RUFINA G. ALAMO

<http://www.eng.fsu.edu/cbe/people/alamo.html>

## **Curriculum Vitae**

*FAMU-FSU College of Engineering  
Department of Chemical and Biomedical Engineering*

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## **Dr. RUFINA G. ALAMO**

### **EDUCATION**

- B.S. in Chemistry. University of Valladolid (Spain), 1977.
- Postgraduate Diploma from *The Rubber and Plastics Institute*. Spanish National Research Council. Madrid. 1978
- Masters in Chemistry. University of Valladolid (Spain), 1978.
- Doctorate in Chemistry. Complutense University of Madrid, 1981.

#### *Postdoctoral.*

- Instituto de Plasticos y Caucho, Consejo Nacional de Investigaciones Cientificas ((The Rubber and Plastics Institute of the National Research Council of Science and Engineering), Madrid. 1981 - 1982
- Institute of Molecular Biophysics. Florida State University. Tallahassee, Florida. 1982 - 1985

### **APPOINTMENTS.**

- Research Scientist. DOW Chemical Co. Spain. 1985-1987.
- Advisor to the Committee for the Foundation of the Quincentennial Bilingual University in Central Spain, 1987.
- Assistant Scholar in Research. Florida State University. Tallahassee, Florida, 1988.
- Associate Scholar in Research. Florida State University. Tallahassee, Florida, 1991-August 7th, 1995.
- Research Advisor with the Polymer Section of the Department of Chemistry of the National University of Costa Rica at Heredia, Costa Rica, 1993-1995.
- Associate Professor. FAMU-FSU College of Engineering. Department of Chemical Engineering. Tallahassee, Florida. 1995-2003
- Professor. FAMU-FSU College of Engineering. Department of Chemical Engineering. Tallahassee, Florida. 2003-present

## AWARDS, HONORS, RECOGNITIONS.

- Member of the Editorial Board of *Polymer Crystallization* since 2017. Wiley
- Gordon Research Conference in Polymer Physics, invited speaker, July 2014
- Named Simon Ostrach Professor of Engineering, 2013
- FSU Distinguished Research Professor, 2013
- American Physical Society Fellow, Division of Polymer Physics, 2012
- Discussion Leader of Session “Polymer Crystallization” Gordon Research Conference in Polymer Physics. June 27<sup>th</sup> – July 2<sup>nd</sup>, 2010
- 2009 Award for Outstanding Achievement (Mettler-Toledo Award) given by the North American Thermal Analysis Society (NATAS)
- Member of the FCR-STEM International Advisory Board, 2007 – 2010
- Engineering Research Award of the FAMU/FSU College of Engineering, Spring 2008
- Member of the Advisory Board for *Macromolecules*, 2005 – 2007
- Professional Development Award. FAMU-FSU College of Engineering. 2005
- Special Recognition Award for " Outstanding Contributions to Scholarship" from the Office of Graduate Studies, FAMU. September 2001.
- Engineering Research Award of the FAMU/FSU College of Engineering, Spring 2000.
- Postgraduate scholarship from the Spanish National Research Council of Science. The Rubber and Plastics Institute, Madrid (Spain), (1979 - 1982).
- Postdoctoral scholarship from the U.S. -Spanish Joint Committee for Scientific and Technological Cooperation (Fulbright Scholarship). Institute of Molecular Biophysics, "Thermodynamic and Morphological Properties of Linear and Branched Polyethylenes", (1982 - 1983).
- Invited as *plenary speaker* at the Osaka University Macromolecular Symposium

(OUMS'98). May, 1998, at the Brazilian Polymer Conference, November 2003, at the Management Committee of the European Cost Action P12 'Structuring of Polymers' Eindhoven, Netherlands, October 2004, at the ARCHIPOL 05, Bi-annual Meeting of the Polymer Society in South America, Argentina, December 4-7, 2005, at the International Conference on Polymer Characterization, in 2006, 2008, 2012 and 2014, at the *International Symposium on Polymer Crystallization*, Mishima, Japan, 2007, at the *International Discussion Meeting on Polymer Crystallization*, Beijing, China, 2011, and in Kyoto, Japan, 2013, at the *ACS Advances in Polyolefins Workshops* in 2013, 2015, 2017, at the *Gordon Research Conference in Polymer Physics* in July 2014, and at the *International Conference in Recent Advances an New Perspectives in Polymer Crystallization*, Genoa, Italy 2014. Invited lectures at the *ACS and APS spring meetings*, in focused sessions on *Polymer Physics - From Academia to Industry and Back*, 2017. Invited lecture at ABRATEC, Thermal Analysis Conference, Rio de Janeiro, Brazil. Invited lectures at the *APS spring meeting (2019) and ACS spring meeting (2020)*

## **INDUSTRIAL EXPERIENCE.**

Appointed to the Research Staff by the DOW Chemical Co. in Europe, Tarragona Site, Spain, (1985 - 1987).

## **CONSULTING.**

POLIUNA (Polymers) Department of Chemistry, National University of Costa Rica, Heredia, 1993.  
Cargill Chemicals, 1997  
Revlon Research Center, 1997-2000  
Honda of America, 1999  
Exxon-Mobil Corporate and Strategic Research Center, 2001-2017  
Sumitomo Chemical America, 2001  
Engelhard, 2004 – 2010  
Cryovac, 2004  
CONICYT, National Research Center, Chile, 2008  
SCG (The Siam Cement Public Company Limited), 2015-2017

## **REVIEWER EXPERIENCE.**

*National Science Foundation* (Proposals, Centers, and Participation in Panel Reviews since 1997)  
*Macromolecules*  
*Angewandte Chemie*  
*Advanced Materials*

*Journal of Physical Chemistry*  
*Journal of Polymer Science, Polymer Physics Ed .*  
*Polymer Engineering and Science.*  
*Progress in Polymer Science*  
*Polymer Crystallization*  
*Journal of Rheology.*  
*Journal of Thermal Analysis and Calorimetry.*  
*Polymer*  
*European Polymer Journal*  
*Macromolecular Chemistry and Physics*  
*Petroleum Research Fund.*  
*Thermochimica Acta*  
*NIST (Research Proposals)*  
*DPI (Dutch Polymer Institute) (research proposals)*  
*Acta Polymerica, Germany*

Books Reviews:

“Attenuated Total Reflectance Spectroscopy”. Marek W. Urban. ACS Books, Washington, 1996. Review appeared in *Applied Spectroscopy*, 1998.

“Handbook of Fourier Transform Raman and Infrared spectra of Polymers”. A.H. Kuptsov and G.N. Zhizhin. Elsevier *Physical Sciences Data 45*. New York 1998. Review appeared in *Applied Spectroscopy* 1999.

**PROFESSIONAL ACTIVITIES.**

Member of the following organizations:

- Science
- The American Chemical Society and the Division of Polymer Chemistry and the Division of Polymeric Materials Science and Engineering.
- The American Physical Society and of the Division of High Polymer Physics
- The North American Thermal Analysis Society (NATAS)
- The American Institute of Chemical Engineers
- The Society of Plastics Engineers
- ZONTA International

## TEACHING EXPERIENCE

### Summary of courses taught in the FAMU-FSU College of Engineering:

#### *Undergraduate courses*

ECH 3023	Mass and Energy Balances I
ECH 3024	Mass and Energy Balances II
ECH 4504	Kinetics and Reactor Design
ECH 4824	Chemical Engineering Materials
ECH 3301	Process Analysis and Design
ECH 4823	Introduction to Polymer Science and Engineering
ECH 4905r	Polymer Crystallization
ECH 3264L	Fluid Flow through a Pipe (laboratory)
ECH 4906	Polymer Blends
ECH 4906	Growth of Polymer Crystallites
ECH 4905	Structure of polyolefin crystallites

#### *Graduate courses*

ECH 5828	Advanced Polymer Science and Engineering
ECH 5937	Crystallization and Melting of Polymers. Equilibrium and non-equilibrium concepts
ECH 5937	High Resolution Microscopy
ECH 5052	Reserach Methods

#### Other courses:

CHM 1020	Chemistry for General Education
CHM 1045	General Chemistry I
CHM 1046	General Chemistry II

### UNDERGRADUATE RESEARCH AND TEACHING SUPERVISION.

Dr. Alamo has supervised the individual research of a large number of undergraduate students, including Honors in the Major. The most recent (last five years) are:

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Patrick Davillier	URP, 1996
Satchell Doyle	URP, 1998
<b>Adrian Little</b>	<b>(Honors, 2000)</b>
<b>Ysela Chiari</b>	<b>(Honors, 2005)</b>

Diego Laboy (Honors, 2005)  
 Julie Nowacki WIMSE  
**Kimberly Thomson (Honors 2007)**  
 Stephen Warnost  
**Robert Smith (Honors, 2008)**  
 Belen Kelly WIMSE  
**Eduardo Pereira (Honors, 2010)**  
 Linda Mejia WIMSE  
 Diamond Bivins  
 Zachary Colt  
**Benjamin Reid (Honors, 2012)**  
 Gabriel Trujillo  
 Amanda Stefin WIMSE  
 Alexandra Rodriguez WIMSE  
 Bridget Wesson  
 Stephen Gibbs  
 Constanza Miguel-Sanchez (Honors 2015)  
 Emily Ubillos  
 Austin Hack  
 Sarah Wagglar  
 Sidney Cameron  
 Katherine Obiaja Hernandez  
 Michael Parkhust  
 Chayanne Burey (Honors 2020)

## GRADUATE RESEARCH AND TEACHING SUPERVISION.

### *M.S. Students Supervised:*

1. Carmen Obrador  
 Title of Thesis : "Physical-Chemical Study of Polyformals: Poly(1,3-Dioxocane)".  
 University of Madrid, 1982.  
 [see also publication 25, section A]
2. Chengyou Chi, FSU, Spring 1997  
 Title of Thesis: □Linear Growth Rates and Morphology of Metallocene and Ziegler Type  
 Polypropylenes□,  
 [see also publication 66, section A and presentation 57 of section A]
3. Sudhakar Putcha  
 Title of Thesis: □Effect of Stereo and Regio Defects on the Crystallization Kinetics of

- Isotactic Polypropylene□, Florida State University, 1998.  
[see also presentation 68 of section A]
4. Lakshmidēvi S. Sripada, FSU, Spring 1999  
Title of Thesis: □Properties of High Pressure Polymerized Ethylene Copolymers: Effect of the Type of Comonomer in their Phase Structure and Crystallization Behavior [see also presentation 77 of section A]
  5. T.W. Huang, FSU, Fall 1999  
Title of Thesis: “A Comparative Study of the Melting and Crystallization Behavior for Metallocene and a Narrow Fraction of Ziegler-Natta IPP”, Florida State University.  
[see also publication 76 and presentations 83 and 86 of section A]
  6. Jose Antonio Blanco Saralegui. FSU, Fall 2001  
Title of Thesis: “Crystallization rates and Spherulitic Morphology of Fractions from Metallocene and Ziegler Type Isotactic Polypropylene”, Florida state University.
  7. Isabel Carrilero Borbujo. FSU, Spring 2002  
Title of Thesis: “Properties of Rapidly Crystallized and Annealed Random Ethylene Copolymers: Melting and the Non-Crystalline TIC as Function of Comonomer Type and Content”
  8. Sushmita Kotta  
Title: “Defect Microstructure of Ziegler Natta Isotactic Poly(propylenes)”  
Defended in Fall 2005
  9. Ysela Chiari, FSU, Summer 2007  
Title: “NMR Characterization and Isothermal Crystallization of Random iso-Propylene Copolymers with Ethylene and 1-octene Co-units”
  10. Papatya Kaner FSU, Spring 2012  
Title: “Kinetically Controlled Crystal Structures in Precisely Chlorine Substituted Polyethylenes ”
  11. Wei Zhang, FSU Spring 2013  
Title: “Unusual Temperature Dependence of the Crystal Growth Rates of Bromine Substituted Polyethylenes”
  12. Xuejian Chen, FSU Summer 2014  
Title: “Effect of Length of 1-Alkene on Melt-memory of Crystallization above the Equilibrium Melting temperature of Random Ethylene Copolymers”
  13. Xiaoshi Zhang, FSU Summer 2014



Title: "FTIR and Microscopy Analysis of the Effect of Chlorine on Polymorphism of precision halogen-Substituted Polyethylenes"

14. Chen Qu, FSU Spring 2016  
Title: "Melt Memory of Crystallization above the Equilibrium Melting Temperature in Model Long-Chain Branched Polyethylenes"
15. Yuan Sang, MS, Florida State University, Fall 2016  
Title: "Self-Nucleation of Broad Ethylene 1-Alkene Random Copolymers"
16. Omena Okpwe. MS, Florida State University, Spring 2017  
Title: "Crystallization Behavior of Poly (Propylene Succinate) Stereocomplex from the Melt"
16. Daokun Song. MS, Florida State University, (Spring 2019)  
Title: "Crystalline Properties of Poly (ethylene Brassylate)

*Ph.D. Students Supervised*

1. Adriane Simanke, UFRGS, Brasil. Co Director: Rufina G. Alamo, USA  
Defended in Fall 2001.  
Title: "Properties of Metallocene Polyethylenes"
2. Dongsheng Li, (Co Director with H. Garmestani). Florida State University, Fall 2002  
Title: "Texture Evolution of Polyethylenes During Uniaxial Tension"
3. Wei T. Huang, Florida State University, Fall 2005  
Title: "Melting Kinetics of Ziegler-Natta and Metallocene Isotactic Polypropylenes"
4. Anyndia Ghosal , Florida State University, Spring 2008  
Title: "Crystallization of Isotactic Poly(propylenes) with Enhanced Melt Strength"
5. Madhavi Vadlamuri, Florida State University, Spring 2010  
Title: "Characterization and Crystallization Behavior of Polyethylenes with Different Branching Architectures"
6. Hamed Janani, Florida State University, Spring 2016  
Title: "Development of Crystalline Structure in Blends of iPP and Isotactic Polypropylene- 1-Alkene Random Copolymers"
7. Xuejian Chen, Florida State University, Spring 2018  
Title: "Melt Structure and Crystallization of Random Ethylene Copolymers"

8. Xiaoshi Zhang, Florida State University (Fall 2018)  
Title: “Crystallization of Precision Polyethylenes”
9. Stephanie Marxsen (expected 2021)

*Postdoctoral supervision:*

Begona Pena (1994-1995)  
Jose Ramon Isasi (1995-1998)  
James Haigh (1996-Present)  
Man-Ho Kim (1996-1998)  
Jhunu Chatterjee (1998-2000)  
Iam Hosier (2002-2003)  
Daniel Mowery (2002 – 2003)  
Keesu Jeon (2006 – 2008)  
Juan P. Fernandez-Blazquez (2008)  
Carolina Ruiz-Orta (2009 – 2011)  
Juan M. Lopez-Majada (2010-2012)  
Al Mamun (2013-2015)  
Minqiao Ren (2015-2016)  
Laura Santonja (2012-2016)

*Member of Examining Committee. M.S. Thesis*

1. Sripathi Ramadurai. “Transport Properties in Structured Media”. FSU. Summer 1996
2. Brigita Penke. “Analysis of Diffusion and Structure in Polyacrylamide gels by Nuclear Magnetic Resonance”. FSU. Fall 1997
3. Satish C. Dhanasekaran. “Studies in Open Resonator Techniques for Measuring of Dielectric Properties at Millimeter-Wave Frequencies”. FSU. Spring 2000
4. Seth G. Ostlund, Polymer solutions via multi-angle light scattering, dynamic light scattering, viscometry, and refractometry. FSU, Spring 2006
5. Amir Rmaile, Polymer electrolytes, FSU, Spring 2007

*Member of Examining Committee. Ph.D. Thesis*

1. Zhonghui Duan. “Mathematical Modeling and Computer Simulation of Semicrystalline Polyethylene”. FSU. Spring 1997

2. Hsiaoling Wang. "Effect of Power Sample Properties on Chemical Analysis by Raman Spectroscopy". FSU. Fall 1998
3. Jaekeun Park. "Non-Uniform Flow and Dispersion in Packed Columns Studied by Magnetic Resonance Methods" FSU, Summer 2001
4. Marwan S. Al-Haik. "Life Prediction of Polymer Matrix Composites: A Neural Network Approach". FSU. Fall 2001
5. Dongsheng Li. "Texture Evolution of Polyethylene During Uniaxial Tension". FSU. Summer 2003
6. Zhijie Sui. "Characterization and Applications of Ph-Responsive Polyelectrolyte Complex and Multilayers" Chemistry. Department, FSU. Summer 2004
7. Michael Kirkpatrick. "Plasma Catalyst Interactions in Treatment of Gas Phase Contaminants and in Electrical Discharge in Water" Chemical Engineering. Fall 2004
8. Mayank Shani. "Analysis of the Chemical reactions in Pulsed Streamer Discharges: An Experimental Study". Spring 2006
9. Rukia Marijani. "Development of inhalation drug delivery systems for proteins and peptides" Pharmacy department, FAMU Fall 2008
10. Edward Agyare, Drug delivery (Pharmacy, FAMU)
11. Imad Haidar Ahmad, Characterization of distribution in copolymers using SEC (Chemistry, FSU), 2011. *University Representative*.
12. Lara Al Hariri, Characterization of Polyelectrolytes (Chemistry, FSU), Fall 2011
13. Matt Barrios, Thermal conductivity of aerogel beads and glass microspheres at low temperatures (ME, FAMU-FSU), Fall 2011. *University Representative*.
14. Philip Byers, Cascade Reactions for the Synthesis of Polycyclic Aromatic Hydrocarbons and Graphene Nanoribbons (Chemistry, FSU, Summer 2013). *University Representative*.

#### **2014**

15. Dylan Murray, The Structure of a Three Helix Membrane protein in a Lipid Bilayer (Chemistry, FSU Spring 2014). *University Representative*.
16. Sarah Leonard, FSU Chemical Engineering, Summer 2014 "Solid-State NMR Evaluation of Molecular Structural Engineering for Controlled Peptide Self-Assembly"
17. Wade Henning, Statistics, FSU, Summer 2014. *University Representative*.

#### **2015**

18. Yimin Miao, FSU Chemistry, Spring 2015 "Structure, Dynamics and Proton Conductance Mechanism of the M2 Protein Histidine Tetrad" *University Representative*.
19. Kevin Hsieh, FSU Chemical Engineering, Spring 2015, "Analysis of Radicals in Gas-Liquid Electrical Discharges"
20. Ashley Longstreet, FSU Chemistry, Spring 2015, "Access to Polysubstituted Heterocycles and Fluorescent Indicators from a Single Enamine Class" *University Representative*.
21. Zane Miller, FSU Chemistry, Fall 2015 "Application of Flow-Based Methods to Inorganic Materials Synthesis" *University Representative*.

## **2016**

22. David Jeffcoat (FSU Chemistry)
23. Yue Su (FSU Chemistry)
24. Yiseul Shin (FSU Chemistry)
25. Onyake (FSU Chemical Engineering)
26. Guang Yang (FSU Chemical Engineering)
27. Huihui Wang (FSU Chemical Engineering)
28. Edmundo Bello (FSU Chemistry)
29. A. Blanchard (FSU Chemistry)
30. B. Fulk (FSU Chemistry)
31. W. Neary (FSU Chemistry)
32. R. Kieber (FSU Chemistry)

## **2017**

33. Onyekachi Oparaji (FSU Chemical Engineering)
34. Guang Yang (FSU Chemical Engineering)

## **2018**

35. Huihui Wang (FSU Chemical Engineering)

### *Visiting Graduate students:*

I-nigo Garcia, from Universidad de Navarra, Spain 2005

Humberto Palza, from Universidad de Santiago, Chile 2006

Laura Santonja from Polytechnic University of Valencia, Spain 2010, 2011, 2012

Masafumi Tasaki from Toyota Technological Institute, Nagoya, Japan, 2012

Cheila G Mothe from University of Rio de Janeiro, Brazil, 2019-2020

## **RESEARCH EXPERIENCE**

### **RESEARCH INTEREST**

Physical chemistry and physical properties of macromolecules.

Kinetics of phase transitions, structure and morphology of the crystalline state, structure - properties relations in semicrystalline polymers.

### **RESEARCH FUNDING**

- REU Supplement for “Role of Chain Structure and Melt Topology in Polymer Crystallization” \$7,930; *NSF, DMR-Polymers (single PI Award)*. 5/1/18- 5/31/19
- “Acquisition of a Vantec 500 to upgrade General Area Detector Diffraction System

- (GADDS)” \$54,500, IEIG Program of the CRC, FSU, 1/1/18-12/31/18
- “Acquisition of a Fast Scanning Calorimeter for Advancing Materials Research” \$79,435, IEIG Program of the CRC, FSU, 5/1/17-5/1/18
  - REU Supplement for “Role of Chain Structure and Melt Topology in Polymer Crystallization” \$7,150; *NSF, DMR-Polymers (single PI Award)*. 5/1/17- 12/31/17
  - “SANS studies of the topology and LLPS kinetics of structurally complex polyolefin melts using deuterium labeling” \$20,000; ExxonMobil Chemicals, 8/1/16-7/31/17
  - “Role of Chain Structure and Melt Topology in Polymer Crystallization” \$560,861; *NSF, DMR-Polymers (single PI)*. 6/1/16- 5/30/20
  - “Characterization of Impact Propylene Copolymers and effect on Tensile Properties” \$75,000; SCG Company, 8/1/15-12/31/16
  - REU Supplement for “Kinetic Control of Crystalline Order in Olefin-Based Polymers” \$6,750; *NSF, DMR-Polymers*. 5/1/15- 5/1/16
  - REU Supplement for “Kinetic Control of Crystalline Order in Olefin-Based Polymers” \$6,350; *NSF, DMR-Polymers*. 5/1/14- 5/1/15
  - “Effect of Branching and Molecular Weight Distribution on Nucleation and Growth of Random Ethylene Copolymers and Relevance to Phase Structure” \$237,025; *ExxonMobil Chemical Co. (single PI)* Period 5/11 – 5/14.
  - “Kinetic Control of Crystalline Order in Olefin-Based Polymers” \$466,135; *NSF, DMR-Polymers (single PI)*. 6/1/11- 5/30/15
  - “Characterization of the Branching Microstructure of Ethylene 1-Hexene Copolymers Synthesized under Different Processes” \$50,000; *ExxonMobil Chemical Co. (single PI)* Period 1/11 – 1/12.
  - NUE: NanoCORE II (Nanotechnology Concepts, Opportunities, Research and Education) at the FAMU-FSU College of Engineering. \$200,000; NSF-NUE (Co-PI). Period 1/01/2011 to 12/31/1012.
  - “Acquisition of a Low Noise scanning probe Microscopy for materials Characterization at the Nanoscale” \$75,000 (with W. Maitri, PI, and two other Co-Pis). FSU Equipment and Infrastructure Enhancement Grant (EIEG). April 2010 - April 2011
  - “Characterization of the Distribution of Propylene Ethylene Copolymers and Impact on Film

Properties”; \$ 50,000; *ExxonMobil Chemical Co. (single PI)* Period 9/09 – 9/11.

- “Training Engineers to Entrepreneurs in Advanced Materials (TE<sup>2</sup>AM): From Development to Manufacturing of Nanostructured Functional Materials” NSF-IGERT, \$3,000,000 August 2009 – July 2014 (denied)
- “Alliance for the Advancement of Florida’s Academic Women in Chemistry and Engineering (AAFAWCE)” \$123,408; NSF- ADVANCED-PAID. August 1<sup>st</sup>, 2009 – July 31<sup>st</sup>, 2011.
- “NanoCORE (Nanotechnology Concepts, Opportunities, Research and Education) at the FAMU-FSU College of Engineering” \$199,874; NSF-NUE ( Co-PI). Period 1/1/09 to 12/31/10.
- “Partnership of Master in Materials and Sensor Systems for Environmental Technologies” (MASSET), Erasmus Mundus, €50,000. European Union. August 2009 – August 2011. (active)
- “Dynamic Light Scattering - A Tool for Characterizing Nanomaterials Insitu” \$22,000 (with J. Collier, PI, and six other Co-Pis). FSU Equipment and Infrastructure Enhancement Grant (EIEG). April 2008 - April 2009.
- “The Role of Polymer Molecular Architecture in Controlling Morphology in Quiescent and Flow Induced Crystallization” \$365,000; GOALI, NSF ( PI). Period 7/15/07 to 6/15/11.
- “Center of Excellence in Advanced Materials”; \$4,000,000; *State of Florida* (with B. Wang, PI, and six other Co-Pis). Period 6/07 – 6/10.
- “Characterization of the Branching Microstructure of a New Ethylene 1-Hexene Copolymer and Impact on Film Properties”; \$ 85,000; *ExxonMobil Chemical Co. (single PI)* Period 9/06 – 9/09.
- “Growth, Process and Characterization of Advanced Materials”, \$6,000,000 FSU Cluster Initiative. Multiple PIs. Fall 2007- Fall 2010
- “Acquisition of Equipment for Analytical Scanning Electron Microscopy with Applications in Biology, Chemistry, Geology and Engineering” NSF, MRI Directorate of Biological Sciences. (with F. Ronquist, PI, and three other Co-Pis); \$ 630,892. Period 7/1/05 to 7/1/07.
- “Crystallization Behavior and Structural Properties of Model Semicrystalline Polyolefins” Proposal funded by NSF. Division of Materials Research, Polymers; \$312,000. Period: July 2005- June 2008.

- “Nano-structured Ultra High Molecular Weight Polyethylenes for Biomedical Applications” CRC, FSU, \$10,000 Period 12/04 to 11/05
- “The use of Chiral Surfaces to Control Specific Lamellar Branching in Isotactic Polypropylene”. Co-PI in NSF Partnership for Research and Education in Materials Between FAMU and Carnegie Mellon University. Total Project \$2,800,000. Period 3/1/04 to 3/1/09
- “Acquisition of a Variable-Temperature Scanning Probe Microscope System for Materials Research and Education” Proposal to NSF. Division of Materials Research: Principal Investigator. \$250,000. Period: August 2000 - August 2001.
- “Establishment of Florida Center for Composites Materials (FCCM)”. National Science Foundation. Co-Principal Investigator. 2001.
- “Kinetic and Structural Properties of Semicrystalline Polyolefins derived from NMR, Thermal Analysis and High Resolution Microscopies” Proposal to NSF. Division of Materials Research, Polymers: \$330,000. Period: January 2001- January 2004.
- Co-PI of the NSF Research Proposal "Influence of Molecular Structure on the Thermodynamic and Mechanical Properties of Crystalline Polymers". \$ 240,000 (Three years, 1995-1998). Renewed for three more years \$130,000, 1998-2001.
- □Solid State NMR Applied to Polymer Characterization□, NSF-Powre, DMR Solid State Chemistry and Polymers. (Principal Investigator, funding: \$75,000; period: May 1998- Nov. 2000).
- "Crystallization and Mixing of Polyolefins", EXXON Educational Foundation (Principal Investigator; funding: \$42,500; period: September 30, 1995 to September 30, 2000). Additional \$5,000 by Engelhard for unrestricted research, May 2004.
- □Characterization and Physical-Chemical Properties of Different Formulations of Polyolefines□, REVLON Research Department. (Principal Investigator, Funding: \$43,800; period: March 1st, 1998 -August 31, 1999.
- "Influence of Molecular Structure on the Thermodynamic Properties and Morphology of Crystalline Polymers□, NSF-REU. (Principal Investigator, funding: \$5,000; period: Feb. 1, 1998-Jan 31, 1999).
- "Closed-Loop Monitoring and Process Control in Polymer Manufacturing□, Council of Research and Creativity (Co-principal investigator, funding: \$9,000; period: Nov. 1997 - Nov. 1998).

- "Acquisition of High Field NMR Spectrometer for Transport Studies", NSF -Chemical and Thermal Systems (Co-principal investigator; funding: \$550,000; period: Sept. 96 - Sept. 98).
- "Affordable Biocomposites for Structural Engineering Applications: Preliminary Studies", NSF - International Programs - Africa (Co-principal investigator; funding: \$7,000; period: June 1996 to September 1997).
- "Interrelation of Molecular Structure and Properties of Stereo-irregular Polymers", Council of Research and Creativity, FSU. (Principal Investigator; funding: \$6,000; period: September, 1995 to September, 1996)
- Travel Research Grant by the Oak Ridge Institute for Science and Education for the project, "Relation Between Chain Structure and Morphological Properties of Isothermally Crystallized Linear Low Density Polyethylenes". January, 1995.

## PUBLICATIONS

### A. *Journal Articles (Refereed Publications)*

1. Guzman J., R. Alamo, J.G. Fatou. "Glass Transitions and Solubility Parameter of Poly(Diethylene Glycol Terephthalate)". *An. Quim.*, **76**, 214, 1980.
2. Alamo R., J. Guzman, J.G. Fatou. "Kinetics of Polymerization of Tetrahydrofuran Initiated by Acetyl Perchlorate". *Makromol. Chem.*, **182**, 725, 1981.
3. Alamo R., J. Guzman, J.G. Fatou. "Polymerization of Tetrahydrofuran by Bifunctional Cationics Initiators: Terephthaloyl Perchlorate". *Makromol. Chem.*, **182**, 731, 1981.
4. Alamo R., J. Guzman, J.G. Fatou. "Kinetics of Polymerization of 1,3-Dioxolane Initiated by Acetyl Perchlorate and Terephthaloyl Perchlorate". *An. Quim.*, **78**, 317, 1982.
5. Alamo R., J.G. Fatou, J. Guzman. "Crystallization of Polyformals. I. Crystallization Kinetics of Poly(1,3-Dioxolane)". *Polymer*, **23**, 374, 1982.
6. Alamo R., J.G. Fatou, J. Guzman. "Crystallization of Polyformals. II. Influence of Molecular Weight and Temperature on the Morphology and Growth Rate in Poly(1,3-Dioxolane)". *Polymer*, **23**, 379, 1982.
7. Alamo R., J. Guzman, J.G. Fatou. "Effect of Acetic Acid and Acetic Anhydride on the Cationic Polymerization of Tetrahydrofuran". *An. Quim. Ser. A*, **79**, 648, 1983.



8. Alamo R., J. Guzman, J.G. Fatou. "Influence of Water in the Polymerization of Tetrahydrofuran". *Makromol. Chem.*, **184**, 563, 1983.
9. Alamo R., J.G. Fatou, J. Guzman. "Dependence of the Molecular Weight on the Glass Transition Temperature of Poly(1,3-Dioxolane)". *An. Quim. Ser. A*, **79**, 652, 1983.
10. Alamo R., J.G. Fatou, A. Bello. "Solubility Parameter and Random-Coil Dimensions of Poly(1,3-Dioxolane)". *Polym. J.*, **15**, 491, 1983.
11. Alamo R., J. Guzman, J.G. Fatou. "Comments on G. Pruckmayr's Criticisms on our Paper, Influence of Water in the Polymerization of Tetrahydrofuran". *Makromol. Chem.*, **185**, 1233, 1984.
12. Domszy R.C., R. Alamo, P.J.M. Mathieu, L. Mandelkern. "The Structure of Copolymer Crystals Formed from Dilute Solution and in the Bulk". *J. Polym. Sci., Polym. Phys. Ed.*, **22**, 1727, 1984.
13. Alamo R., R.C. Domszy, L. Mandelkern. "Thermodynamic and Structural Properties of Copolymers of Ethylene". *J. Phys. Chem.*, **88**, 6587, 1984.
14. Domszy R.C., R. Alamo, C.O. Edwards, L. Mandelkern. "The Thermoreversible Gelation and Crystallization of Homopolymers and Copolymers". *Macromolecules*, **19**, 310, 1986.
15. Voigt- Martin I.G., R. Alamo, L. Mandelkern. "A Quantitative Electron Microscopic Study of the Crystalline Structure of Ethylene Copolymers". *J. Polym. Sci., Polym. Phys. Ed.*, **24**, 1283, 1986.
16. Snyder R.G., N.E. Schlotter, R. Alamo, L. Mandelkern. "Observation of a Conformationally Liquid-Like Component in Crystalline Polyethylene by Raman Spectroscopy". *Macromolecules*, **19**, 621, 1986.
17. Alamo R., L. Mandelkern. "Origins of Endothermic Peaks in Differential Scanning Calorimetry". *J. Polym. Sci., Polym. Phys. Ed.*, **24**, 2087, 1986.
18. Mandelkern L., R. Alamo, W.L. Mattice, R.G. Snyder. "Observation of the Raman D-LAM Band in Ethylene Copolymers: Hydrogenated Polybutadienes". *Macromolecules*, **19**, 2404, 1986.
19. Alamo R.G., R.H. Glaser, L. Mandelkern. "The Cocrystallization of Polymers: Polyethylene and Its Copolymers". *J. Polym. Sci., Polym. Phys. Ed.*, **26**, 2169, 1988.
20. Alamo R.G., L. Mandelkern. "Thermodynamic and Structural Properties of Ethylene

- Copolymers". *Macromolecules*, **22**, 1273, 1989.
21. Chiu G., R.G. Alamo, L. Mandelkern. "Formation of Ringed Spherulites in Polyethylenes". *J. Polym. Sci., Polym. Phys. Ed.*, **28**, 1207, 1990.
  22. Alamo R.G., K.W. McLaughlin, L. Mandelkern. "Changes in the Phase Structure of the Polyethylenes After Long-Time Storage at Room Temperature". *Polymer Bulletin*, **22**, 299, 1989.
  23. Mandelkern L., A. Prasad, R.G. Alamo, G.M. Stack. "The Melting Temperature of the n-Alkanes and the Linear Polyethylenes". *Macromolecules*, **23**, 3696, 1990.
  24. Mandelkern L., R.G. Alamo, M.A. Kennedy. "Interphase Thickness of Linear Polyethylene". *Macromolecules*, **23**, 4721, 1990.
  25. Alamo R.G., A. Bello, J.G. Fatou, C. Obrador. "Solution and Thermal Properties of Poly(1,3-Dioxocane)". *J. Polym. Sci., Polym. Phys. Ed.*, **28**, 907, 1990.
  26. Alamo R.G., L. Mandelkern. "Crystallization Kinetics of Ethylene Copolymers". *Macromolecules*, **24**, 6480, 1991.
  27. Mandelkern L., K.W. McLaughlin, R.G. Alamo. "The Phase and Supermolecular Structure of Binary Mixtures of Linear Polyethylene Fractions". *Macromolecules*, **25**, 1440, 1992.
  28. Jarret W.L., L.J. Mathias, R.G. Alamo, L. Mandelkern, D.L. Dorset. "Thermally-Induced Molecular Motion and Premelting in Hexacontane". *Macromolecules*, **25**, 3468, 1992.
  29. Failla M., R.G. Alamo, L. Mandelkern. "On the Analysis of the Raman Internal Modes of Crystalline Polyethylene". *Polymer Testing*, **11**, 151, 1992.
  30. Shen C., A. Peacock, R.G. Alamo, T. Vickers, L. Mandelkern, C.K. Mann. "Structural Studies of Crystalline Linear Polyethylenes as Reveal by Factor Analysis of Their Raman Spectra". *Applied Spectroscopy*, **46**, 1226, 1992.
  31. Bark M., H.G. Zachmann, R.G. Alamo, L. Mandelkern. "Investigations of the Crystallization of Poly(ethylene) by Means of Simultaneous Small Angle and Wide Angle X-Ray Scattering". *Makrom. Chem.*, **193**, 2363, 1992.
  32. Alamo R.G., E.K.M. Chan, L. Mandelkern, I.G. Voigt-Martin. "The Influence of Molecular Weight on the Melting and Phase Structure of Random Copolymers of Ethylene". *Macromolecules*, **25**, 6381, 1992.
  33. Dorset D.L., R.G. Alamo, L. Mandelken. "Premelting of Long Paraffins in Chain-Extended

- Lamellae - An Electron Diffraction Study". *Macromolecules*, **25**, 6284, 1992.
34. Dorset D.L., R.G. Alamo, L. Mandelkern. "Surface Order and the Sectorization of Polymethylene Lamellae". *Macromolecules*, **26**, 3143, 1993
  35. Alamo R.G., L. Mandelkern, G.M. Stack, C. Kronke, G. Wegner. "Isothermal Thickening of Crystals of High Molecular Weight n-Alkanes ". *Macromolecules* **26**, 2743, 1993
  36. Snyder R.G., H. L. Strauss, R.G. Alamo, L. Mandelkern. "Chain Length Dependence of Interlayer Interaction in Crystalline N-Alkanes from Raman LAM-n Measurements". *J. Chem. Phys*, **100**, 5422, 1994
  37. Alamo R.G., B. D. Viers, L. Mandelkern. "Phase Structure of Random Ethylene Copolymers: A Study of the Content and Molecular Weight as Independent Variables". *Macromolecules*, **26**, 5740, 1993
  38. Alamo R.G., L. Mandelkern, G.M. Stack, C. Kronke, G. Wegner. "The Kinetics of Crystallization of Long-Chain n-Alkanes from the Melt and from Solution". *Macromolecules*, **27**, 147, 1994
  39. Alamo R.G., J.D. Londono, L. Mandelkern, F.C. Stehling and G.D. Wignall. "The Phase Behavior of Blends of Linear and Branched Polyethylenes in the Molten and Solid States by Small-Angle Neutron Scattering". *Macromolecules*, **27**, 411, 1994
  40. Mandelkern L., R. G. Alamo, E. L. Sokolov, J. Li, B. Chu. "Small-Angle X-ray Scattering of n-Hexacontane as a Function of Temperature". *Macromolecules*, **27**, 2324, 1994
  41. Lu L., R. G. Alamo, L. Mandelkern. "Lamellar Thickness Distributions in Linear Polyethylene and Ethylene Copolymers". *Macromolecules*, **27**, 6571, 1994
  42. Alamo, R.G. and L. Mandelkern. "The Crystallization Behavior of Random Copolymers of Ethylene" in "*Thermal Analysis and Calorimetry in Polymer Physics*", *Thermochimica Acta*, **238**, 155, 1994.
  43. Wignall G.D., J. D. Londono, R. G. Alamo, M. J. Galante, L. Mandelkern, F. C. Stehling. "The Morphology of Blends of Linear and High Pressure Polyethylene in the Solid State. A Study by SANS, SAXS and DSC". *Macromolecules*, **28**, 3156, 1995.
  44. Striebeck N., R. G. Alamo, L. Mandelkern, H. G. Zachmann. "Study of the Morphological Structure of Polyethylene by Means of Small Angle X-Ray Scattering and Raman Spectroscopy". *Macromolecules*, **28**, 5029, 1995.
  45. Alamo R.G., B.D. Viers, L. Mandelkern. "A Re-examination of the Relation Between the

- Melting Temperature and the Crystallization Temperature: Linear Polyethylene". *Macromolecules*, **28**, 3205, 1995.
46. Stewart M.J., W.L. Jarrett, L.J. Mathias, R.G. Alamo, L. Mandelkern. "Thermally Induced Molecular Motion and Premelting in the Solid State of n-Hexatriacontane". *Macromolecules*, **29**, 4963, 1996.
  47. Mandelkern, L. and R. G. Alamo, "Comments on Paper `Raman Spectroscopy Employed for the Determination of the Intermediate Phase in Polyethylene'", *Macromolecules*, **28**, 2988, 1995.
  48. Annis, B.K., J. Strizak, R. G. Alamo, L. Mandelkern, "A Small Angle Neutron Scattering Study of the Plastic Deformation of Linear Polyethylene", *Polymer*, **37**, 137, 1996.
  49. Graham, J.T., R. G. Alamo, L. Mandelkern, "The Effect of Molecular Weight and Crystallite Structure on Yielding in Ethylene Copolymers", *J. Polym. Sci., Polym. Phys. Ed.*, **35**, 213, 1997.
  50. Kitamaru, R., T. Nakooki, R. G. Alamo, L. Mandelkern, "A Carbon-13 NMR Study of the Phase Structure of Semi-Crystalline Polymers: Hydrogenated Poly(butadiene)", *Macromolecules*, **29**, 6847, 1996.
  51. M. J. Galante, Alamo, R.G., L. Mandelkern, A. Lehtinen, R. Paukkeri, "Crystallization Kinetics of Metallocene Type Polypropylenes. Influence of Molecular Weight and Comparison with Ziegler-Natta Type Systems". *J. Thermal Analysis*, **47**, 913, 1996.
  52. Wignall, G.D., R.G. Alamo, J.D. Londono, L. Mandelkern, F.C. Stehling, "Small Angle Neutron Scattering investigation of Liquid-liquid Phase Separation in Heterogeneous Linear Low Density Polyethylene". *Macromolecules*, **29**, 5332, 1996.
  53. Mandelkern, L., R.G. Alamo, G.D. Wignall, F.C. Stehling, "The Phase Structure of Blends of the Different Polyethylenes", *Trends in Polym. Sci.*, **4**, 377, 1996.
  54. Alamo, R.G. W.W. Graessley, R. Krishnamoorti, D.J. Lohse, J.D. Londono, L. Mandelkern, F.C. Stehling, G.D. Wignall, "SANS Investigations of Melt-Miscibility and Phase Segregation in Blends of Linear and Branched Polyethylenes as a Function of the Branch Content". *Macromolecules*, **30**, 561, 1997.
  55. Isasi, J.R., R.G. Alamo, L. Mandelkern, "Study of the Dilation of the Unit Cell of Metallocene Isotactic Poly(propylenes): The Monoclinic Form", *J. Polym. Sci., Polym. Phys. Ed.* **35**, 2511, 1997.
  56. Isasi, J.R., R.G. Alamo, L. Mandelkern, "The Thermal Expansion of the Monoclinic Unit

- Cell of Isotactic Poly(propylene)", *J. Polym. Sci., Polym. Phys. Ed.* **35**, 2945, 1997.
57. Galante, M.J., L. Mandelkern, R.G. Alamo, "The Crystallization of Blends of Different Type Polyethylenes: The Role of Crystallization Conditions". *Polymer*, **39**, 5105, 1998.
  58. Mandelkern, L., R.G. Alamo, J.A. Haigh, "On the Crystallization Kinetics of High Molecular Weight n-Alkanes", *Macromolecules*, **31**, 765 1998.
  59. Chowdhury, F., J.A. Haigh, L. Mandelkern, R. G. Alamo, "The Supermolecular Structure of Ethylene-Vinyl Acetate Copolymers", *Polymer Bulletin*, **41**, 463, 1998.
  60. Peacock, A.J., L. Mandelkern, R.G. Alamo, J.G. Fatou, "The Influence of the Deformation Temperature on the Tensile Properties of the Polyethylenes" *J. Materials Science*, **33**, 2255, 1998.
  61. Isasi, J., L. Mandelkern, M.J. Galante, R. Alamo, "The Degree of Crystallinity of Isotactic Poly(propylene)" *J. Polym. Sci., Polym. Phys. Ed.* **37**, 323, 1999.
  62. Alamo, R.G., G.M. Brown, L. Mandelkern, A. Lehtinen, R. Paukkeri, "A Morphological Study of a Highly Structurally Regular Isotactic Poly(propylene Fraction)" *Polymer*, **40**, 3933, 1999.
  63. Agamelian, M., R.G. Alamo, M-H Kim, J.D. Londono, L. Mandelkern, G.D. Wignall, "Phase Behavior of Blends of Linear and Branched Polyethylenes on Micron-Length-Scales Via Ultra-Small Angle Neutron Scattering", *Macromolecules*, **32**, 3093, 1999.
  64. Alamo, R., M-H Kim, M.J. Galante, J.R. Isasi, L. Mandelkern, "Structural and Kinetic Factors in the Formation of the Gamma Polymorph of Isotactic Poly(propylene)" *Macromolecules* **32**, 4050, 1999.
  65. Kim, M.H., R.G. Alamo, J.S. Lin, "The Cocrystallization Behavior of Binary Blends of Isotactic Polypropylene and Propylene - Ethylene Random Copolymers", *Polym. Eng. Sci.* **39**, 2117, 1999.
  66. Dai, P.S., P. Cebe, M. Capel, R.G. Alamo, L. Mandelkern, "Simultaneous *in-situ* SAXS and WAXS Study of Crystallization and Melting Behavior of Metallocene Isotactic Poly(propylene)" ACS Symposium Series, *Scattering from Polymers. Characterization by X-Rays, Neutrons and Light*, P. Cebe, B. Hsiao, D. Lohse Ed. Page 152, 2000.
  67. Alamo, R.G., C. Chi, "Crystallization Behavior and Properties of Polyolefins" in *Molecular Interactions and Time-Space Organization in Macromolecular Systems*" Y. Morishima, T. Norisuye, K. Tashiro Ed. Springer, 1999.

68. Huang, T.W., R.G. Alamo, L. Mandelkern “On the Fusion of Isotactic Poly(Propylene)” *Macromolecules*, **32**, 6374, 1999.
69. Agamelian, M., R.G. Alamo, J.D. Londono, L. Mandelkern, G.D. Wignall, “Phase Behavior of Blends of Linear and Branched Polyethylenes on Micron-Length-Scales Via Ultra-Small Angle Neutron Scattering (USANS)”, *Journal of Applied Crystallography*, **33**, 714, 2000.
70. Haigh, J.A., C. Nguyen, R.G. Alamo, L. Mandelkern, “Crystallization and Melting of Model Polyethylenes with Different Chain Structure” *J. Thermal Analysis* **59**, 435, 2000.
71. Wignall, G.D., R.G. Alamo, J.D. Londono, L. Mandelkern, M.H. Kim, J.S. Lin, “The Morphology of Blends of Linear and Short-Chain Branched Polyethylenes in the Solid State by Neutron and X-Ray Scattering and Differential Scanning Calorimetry and Transmission Electron Microscopy” *Macromolecules* **33**, 551-561, 2000.
72. Dai, P.S., P. Cebe, M. Capel, R.G. Alamo, L. Mandelkern, “Small and Wide Angle X-Ray Scattering Study of Metallocene Isotactic Poly(propylene)”, *Journal of Applied Crystallography*, **33**, 714, 2000.
73. Isasi, J.R., Haigh, J.A., Graham, J.T., Mandelkern, L., Alamo. R.G. ”Some Aspects of the Crystallization of Ethylene Copolymers” *Polymer*, **41**, 8813, 2000.
74. VanderHart, D.L., R.G. Alamo, M.R. Nyden, M.H. Kim, L. Mandelkern, “Observation of Resonances Associated with stereo and Regio Defects in the Crystalline Regions of Isotactic Polypropylene: Towards a Determination of Morphological Partitioning” *Macromolecules*, **33**, 6078, 2000.
75. Alamo, R.G., D.L. VanderHart, M.R. Nyden, L. Mandelkern, “Morphological Partitioning of Ethylene Defects in Random Propylene-Ethylene Copolymers”. *Macromolecules*, **33**, 6094-6105, 2000.
76. Huang, W., R.G. Alamo, “A Comparative Study of the Melting and Crystallization Behavior of a Metallocene and a Narrow Fraction of Ziegler-Natta Isotactic Polypropylene”, *Soc. Plast. Eng. J.* **3**, 3546, 2000.
77. Nyden, M.R., D.L. VanderHart, R.G. Alamo “The Conformational Structures of Defect-Containing Chains in the Crystalline Regions of Isotactic Polypropylenes” *J. Comp. Theor. Polym. Sci.*, **11**, 175, 2001.
78. Nakaoki,T., R. Kitamaru, R.G. Alamo, W.T. Huang. L. Mandelkern, “The Conformational Change with Temperature of End Group Sequences of Low Molecular weight Polyethylenes” *Polymer J.* **32**, 876, 2000.

79. Li, D., D., H. Garmestani, S.R. Kalidindi, R.G. Alamo “Crystallographic Evolution in High-Density Polyethylene during Uniaxial Deformation” *Polymer*, **42**, 4903, 2000.
80. Annis, B.K., M.H. Kim, R.G. Alamo, M. Pyda, “Inelastic Neutron Scattering from Isotactic Polypropylene” *J. Polym. Sci., Polym. Phys. Ed.* **39**, 2852, 2001
81. Wignall, G.D., R.G. Alamo, E. Richtson, L. Mandelkern, D. Schwahn, “SANS Studies of Liquid-Liquid Phase Separation in Heterogeneous and Metallocene-Based Linear Low Density Polyethylenes” *Macromolecules*, **34**, 8160, 2001
82. Simanke, A.G., R.G. Alamo, G. B. Galland, R. S. Mauler, “Wide-Angle X-ray Scattering of Random Metallocene-Ethylene Copolymers with Different Types and Concentration of Comonomer” *Macromolecules*, **34**, 6959, 2001
83. Chatterjee, J., R.G. Alamo “Phase Behavior of Low Molecular Weight Polyethylenes Crystallized from Homogeneous and Heterogeneous Solutions” *J. Polym. Sci., Polym. Phys. Ed.* , **40**, 878, 2002
84. Alamo, R.G., J.A. Blanco, I. Carrilero, R. Fu, “Measurement of the <sup>13</sup>C Spin-Lattice Relaxation Time of the Non-Crystalline Regions of Semicrystalline Polymers by a cp-MAS based Method” *Polymer*, **43**, 1857, 2002
85. Alamo, R.G., J.A. Blanco, P. Agarwal, J.C. Randall, “Crystallization Rates of Matched Fractions of MgCl<sub>2</sub>-Supported Ziegler Natta and Metallocene Isotactic Poly(propylenes). I. The Role of Chain Microstructure” *Macromolecules*, **36**, 1559, 2003
86. Randall, J.C., R.G. Alamo, P. Agarwal, C. Ruff “Crystallization Rates of Matched Fractions of MgCl<sub>2</sub>-Supported Ziegler Natta and Metallocene Isotactic Poly(propylenes). II. Chain Microstructures from a Super Critical Fluid Fractionation of a MgCl<sub>2</sub>-Supported Ziegler Natta Isotactic Poly(propylene)” *Macromolecules*, **36**, 1572, 2003
87. Li, D., H. Garmestani, R.G. Alamo S.R. Kalidindi, “The Role of Crystallinity in the Crystallographic Texture Evolution of Polyethylenes During Tensile Deformation” *Polymer*, **44**, 5355, 2003
88. Dai, P.S., P. Cebe, M. Capel, R.G. Alamo, L. Mandelkern, “In-Situ Wide and Small Angle X-Ray Scattering Study of Melting Kinetics of Isotactic Poly(Propylene)” *Macromolecules*, **36**, 4042, 2003
89. Hosier, I.L., R.G. Alamo, P. Estes, J.R. Isasi, L. Mandelkern “Formation of the Alpha and Gamma Polymorphs in Random Metallocene Copolymers. Effect of Concentration and Type of Comonomer”. *Macromolecules*, **36**, 5623, 2003

90. Alamo, R.G. "The Role of Defect Microstructure in the Crystallization Behavior of Metallocene and MgCl<sub>2</sub>-Supported Ziegler-Natta Isotactic Poly(propylenes)" *Polimeros, Ciência e Tecnologia*, **13**, 270, 2003
91. Alamo, R.G. "Defects Distribution of Metallocene and MgCl<sub>2</sub>-Supported Ziegler-Natta Isotactic Poly(propylenes) as Revealed by Fractionation and Crystallization Behaviors" *Macromol. Symp.* **213**, 303, 2004
92. Hosier, I.L., R.G. Alamo, J.S. Lin, "Lamellar Morphology of Metallocene Random Propylene Copolymers Studied by Atomic Force Microscopy". *Polymer*, **45**, 3441, 2004
93. Alamo, R.G., Ghosal, A. Chatterjee, J., Thomson, K.L. "Linear Growth Rates of Random Propylene Ethylene Copolymers. The Changeover from  $\gamma$  Dominated Growth to Mix ( $\alpha+\gamma$ ) Polymorphic Growth" *Polymer*, **46**, 8774, 2005
94. R.G. Alamo. "Thermodynamic Quantities Governing Melting". in *Physical Properties of Polymers Handbook*", J. Mark Ed.; Springer-Verlag: New York, 2007, pg. 165 - 186.
95. Boz, E., Wagener, K.B.Ghosal A., Fu, R. and Alamo, R.G., "Synthesis and Crystallization of Precision ADMET Polyolefins Containing Halogens" *Macromolecules* **39**, 4437, 2006
96. Boz, E., Nemeth, A.J., Alamo R.G., Wagener, K.B. "Precision Ethylene Vinyl Bromide Polymers" *Adv. Synth. Catal.* **349**, 137, 2007
97. Chiary, Y.L, Vadlamudi, M., Jeon, K., Chella, R., Alamo, R.G. "Overall Crystallization Kinetics of Polymorphic Propylene Ethylene Random Copolymers. A Parallel Two Stage Model of Avrami Kinetics" *Polymer*, **48**, 3170, 2007
98. E. Boz, R.G. Alamo, K.B. Wagener, "Correlating Precisely Defined Primary Structure with Crystalline Properties in Halogen Containing Polyolefins" in *New Frontiers in Methathesis Chemistry: From Nanostructure Design to Synthesis and Advanced Materials*. Yimaniogly, D. Valerian and S. Karabulut Ed., pg 333 – 345. Springer, Netherlands 2007
99. K. Jeon, L. Lumata, T. Tokumoto, J. Brooks, R.G. Alamo "Electrical Conductivity and Crystalline Morphology of Single-Walled Carbon Nanotubes-Linear Polyethylene Nanocomposites" *Polymer* **48**, 4751, 2007.
100. Boz, E., Nemeth, A.J., Ghiviriga, I., Jeon, K., Alamo R.G., Wagener, K.B. "Precision Ethylene / Vinyl Chloride Polymers via Condensation Polymerization" *Macromolecules*, **40**, 6545, 2007.
101. K. Jeon, Y.L. Chiari, R.G. Alamo "Maximum Rate of Crystallization and Morphology of Random Propylene Ethylene Copolymers as a Function of Concentration of Comonomer"



- Macromolecules*, **41**, 95, 2008
102. Boz, E., Ghiviriga, I., Nemeth, A.J., Jeon, K., Alamo R.G., Wagener, K.B “Random defect Free Ethylene/Vinyl Halide Model Copolymers via Condensation Polymerization” *Macromolecules* **41**, 25, 2008
  103. Boz, E., Nemeth, A.J., Wagener, K.B., Jeon, K., Smith, R., Nazirov, F., Alamo R.G., Bockstaller, M.R. “Well-Defined Precision Vinyl Fluoride Polymers: Synthesis and Crystalline Properties” *Macromolecules* **41**, 1647-1653, 2008
  104. R.G. Alamo, “Polyethylene, Linear High-Density” in *Polymer Data Handbook*, 2<sup>nd</sup> Ed. pg. 634 – 650, Oxford University Press, 2009.
  105. R.G. Alamo, “Phase Structure and Morphology” in *Comprehensive Analytical Chemistry, Vol. 53: Molecular Characterization and Analysis of Polymers*, J. Chalmers, R. Meier Eds. Elsevier, 2008, pg. 255-287.
  106. S. Shanbhag, R.G. Alamo, “On the Thermodynamic Driving Force for Nucleation at Large Undercoolings” *Polymer* **49**, 2515, 2008.
  107. R. G. Alamo, K. Jeon, R.L. Smith, E. Boz, K.B. Wagener, M.R. Bockstaller “Crystallization of Polyethylenes Containing Chlorines: Precise vs. random Placement” *Macromolecules* **41**, 7141-7151, 2008.
  108. K. Jeon, H. Palza, R. Quijada, R.G. Alamo\* “Effect of Comonomer Type on the Crystallization Kinetics of Random Isotactic Propylene 1-Alkene Copolymers” *Polymer*, **50**, 832 – 844, 2009
  109. M. Vadlamudi, G. Subramanian, S. Shanbhag, R.G. Alamo, M. Varma-Nair, D.M. Fiscus, G.M. Brown, C. Lu, C.J. Ruff, “Molecular and Branching Distribution of a High Performance Metallocene Ethylene 1-Hexene Copolymer Film-Grade Resin” *Macromolecular Symposia* **282**, 1 – 13, 2009.
  110. M. Vadlamudi, R.G. Alamo, D.M. Fiscus, M. Varma-Nair, “Inter and Intra-Molecular Branching Distribution of Tailored LLDPEs Inferred by Melting and Crystallization Behavior of Narrow Fractions” *J. Thermal Analysis and Calorimetry*, **96**, 697 – 704, Issue 3, 2009.
  111. T. Macko, R. Brüll, R.G. Alamo, Y. Thomann, V. Grumel, “Separation of propene/1-alkene and ethylene/1-alkene copolymers by high-temperature adsorption liquid chromatography”, *Polymer*, **50**, 5443 - 5448, 2009
  112. K. Jeon, C. Ruiz-Orta, S. Warnost, A. Kismarhardja, J. Brooks, R.G. Alamo, “Role of

- Crystallinity in Carbon Nanotube Dispersion and Electrical Conductivity of iPP-based Nanocomposites” *J. Polym. Sci., Polym. Phys. Ed.* **48**, 2084 – 2096, 2010
113. T. Macko, R. Brüll, R.G. Alamo, F.J. Stadler, Simone Losio, “Separation of short chain branched polyolefins by high-temperature gradient adsorption liquid chromatography” *Anal. Bioanal. Chem.* **399**, 1547 – 1556, 2011  
<http://www.springerlink.com/content/m10050mm678652q5/fulltext.pdf>
114. C. Ruiz-Orta, J.P. Fernandez-Blazquez, E.J. Pereira, R.G. Alamo “Time-resolved FTIR Spectroscopic Study of the Evolution of Helical Structure during Isothermal Crystallization of Propylene 1-Hexene Copolymers. Identification of Regularity Bands Associated with the Trigonal Polymorph. *Polymer* **52**, 2856-2868, 2011
115. Carolina Ruiz-Orta, Juan P. Fernandez-Blazquez, Amelia M. Anderson-Wile, Geoffrey W. Coates, Rufina G. Alamo “Isotactic Poly(Propylenes) with (3,1) Chain-Walking Defects: Characterization, Crystallization and Melting Behaviors” *Macromolecules* **44**, 3436 – 3451, 2011.
116. E. Steven, J.G. Park, A. Paravastu, E.B. Lopes, J.S. Brooks, O. Englander, T. Siegrist, P. Kaner and R.G. Alamo, “Physical characterization of functionalized spider silk: electronic and sensing properties” *Science and Technology of Advanced Materials* **12**, 055002, 2011 (13 pp). doi:10.1088/1468-6996/12/5/055002
117. C. Ruiz-Orta, R.G. Alamo, “Morphological and Kinetic Comonomer Partitioning in Random Propylene 1-Butene Copolymers” *Polymer*, **53**, 810-822, 2012.
118. Ashley R. Cormier, Carolina Ruiz-Orta, Rufina G. Alamo, Anant K. Paravastu, “Solid-State Self-Assembly Mechanism of RADA16-I Designer Peptide” *Biomacromolecules*, **2012**, *13* (6), pp 1794–1804
119. L. Santonja-Blasco, A. Ribes-Greus, R.G. Alamo, “Comparative Thermal, Biological and Photo Degradation Kinetics of Polylactide and Effect on Crystallization Rates” *Polym. Degrad. Stab.* **98**, 771-784, 2013
120. Ashley R. Cormier, Juan M. Lopez-Majada, Rufina G. Alamo, Anant K. Paravastu, “Distinct Solid and Solution State Self-Assembly Pathways of RADA16-I Designer Peptide” *J. Pept. Sci.* **19**, 477-484, 2013
121. A. Chan-Hilton, M. Zhang, R. G. Alamo, P. Andrei, “Highlights and Updates of the NUE Nanotechnology Concepts, Opportunities, Research and Education (NanoCORE) Program” *J. Nano Education* **5**, No. 2, 172-179(8), 2013
122. Eden Steven, Wasan R. Saleh, Victor Lebedev, Steve F. A. Acquah, Vladimir Laukhin,

- Rufina G. Alamo & James S. Brooks “Carbon Nanotubes on a Spider Silk Scaffold”  
*Nature Communications* 4:2435 (DOI: 10.1038/ncomms3435), 2013
123. Benjamin O. Reid, Madhavi Vadlamudi, Al Mamun, Hamed Janani, Huanhuan Gao, Wenbing Hu and Rufina G. Alamo “Strong Memory Effect of Crystallization above the Equilibrium Melting Point of Random Copolymers” *Macromolecules* **46**, 6485-6497, 2013
  124. Huanhuan Gao, Madhavi Vadlamudi, Rufina G. Alamo and Wenbing Hu, “Monte Carlo Simulations of the Strong Memory Effect of Crystallization above the Equilibrium Melting Point of Random Copolymers.” *Macromolecules* **46**, 6498-6506, 2013
  125. P. Kaner, C. Ruiz-Orta, E. Boz, K.B. Wagener, M. Tasaki, K. Tashiro, R.G. Alamo “Kinetic Control of Chlorine Packing in Crystals of a Precisely Substituted Polyethylene. Toward Advanced Polyolefin Materials” *Macromolecules* **47**, 236 – 245, 2014.
  126. H. Janani, R.G. Alamo “Melt Miscibility of Blends of isotactic Polypropylene and Homogeneous iso-Propylene-1-Hexene Copolymers” *J. Therm. Anal. Calorim.* **116**, 3, 1497-1508, 2014 DOI: 10.1007/s10973-014-3738-y
  127. Cavallo, D., Zhang, L., Portale, G., Alfonso, G.C., Janani, H., Alamo, R.G. “Unusual Crystallization behavior of iPP and Propene 1-Alkene Copolymers at Large Undercoolings” *Polymer*, **55**, 3234 – 3241, 2014. <http://dx.doi.org/10.1016/j.polymer.2014.05.053>
  128. Masafumi Tasaki, Hiroko Yamamoto, Makoto Hanesaka, Kohji Tashiro, Emine Boz, Kenneth B. Wagener, Carolina Ruiz-Orta, Rufina G. Alamo “Polymorphism and Phase Transitions of Precisely Halogen Substituted Polyethylene. (1) Crystal Structures of Various crystalline Modifications of Bromine-Substituted Polyethylene on Every 21<sup>st</sup> Backbone Carbon” *Macromolecules*, **47**, 4738 – 4749, 2014. [doi.org/10.1021/ma5009622](http://doi.org/10.1021/ma5009622)
  129. Al Mamun, Xuejian Chen, Rufina G. Alamo, “Interplay Between a Strong Memory Effect of Crystallization and Liquid-Liquid Phase Separation in Melts of Broadly Distributed Ethylene 1-Alkene Copolymers” *Macromolecules* 2014, **47**, 7958–7970. [doi.org/10.1021/ma501937c](http://doi.org/10.1021/ma501937c)
  130. Hamed Janani, Rufina G. Alamo, “Enhanced Rate of Formation of Trigonal Phase in Blends of Homogeneous Isotactic Propylene-1-Hexene Copolymers” *Polymer*, **2015**, *64*, 163 – 175 DOI: 10.1016/j.polymer.2015.03.042
  131. Xuejian Chen, Al Mamun, Rufina G. Alamo, “Effect of Level of Crystallinity on Melt Memory Above the Equilibrium Melting Temperature in a Random Ethylene 1-Butene Copolymer” *Macromol. Chem. Phys.* **2015**, *216*, 1220–1226 DOI: <http://dx.doi.org/10.1002/macp.201500068>

132. Tibor Macko, Robert Brüll, Laura Santonja-Blasco, Rufina G. Alamo, “High-Temperature Solvent Gradient Liquid Chromatography of Model Long Chain Branched Polyethylenes“ *Macromol. Symp.* **2015**, 356, 70–76 (DOI: 10.1002/masy.201500046)
133. Minqiao Ren, Xuejian Chen, Yuan Sang, Rufina G. Alamo, “Effect of Heterogeneous Short Chain Branching Distribution on Acceleration or Retardation of the Rate of Crystallization from Melts of Ethylene Copolymers Synthesized with Ziegler-Natta Catalysts” *Macromol. Symp.* **2015**, 356, 131–141 (DOI: 10.1002/masy.201500053)
134. Laura Santonja-Blasco, Xiaoshi Zhang, Rufina G. Alamo, Crystallization of Precision Ethylene Copolymers *Advances Polym. Sci.* Vol. 276, pg. 133-182, **2016** (DOI: 10.1007/12\_2015\_346)
135. Wenbing Hu, Vincent Mathot, Rufina Alamo, Huanhuan Gao, Xuejian Chen, Crystallization of Statistical Copolymers *Advances Polym. Sci.* Vol. 276, pg. 1- 43, **2016** (DOI: 10.1007/12\_2016\_349)
136. H. Janani, R.G. Alamo, “Mechanical properties and polymorphic transitions in blends of random isotactic propylene-1-hexene copolymers” *Polymer* **2016**, 102, 21-32. (DOI:org/10.1016/j.polymer.2016.08.101)
137. Leire Sangroniz, Dario Cavallo, Antxon Santamaria, Alejandro J. Müller, Rufina G. Alamo, “Thermo-rheologically Complex Self-seeded Melts of Propylene-Ethylene Copolymers” *Macromolecules* **2017**, 50, 642–651. (DOI:10.1021/acs.macromol.6b02392)
138. L. Santonja-Blasco, W. Rungswang, R.G. Alamo “Influence of chain microstructure on LLPS and crystallization of dual reactor Ziegler-Natta made impact propylene ethylene copolymers (IPC)” *Ind. Eng. Chem. Res.* **2017**, 56 (12), pp 3270–3282. DOI: 10.1021/acs.iecr.6b04708
139. X. Chen, G.D. Wignall, C. Lopez-Barron, R.G. Alamo, “SANS Evidence of Liquid-liquid Phase Separation Leading to Inversion of Crystallization Rate of Broadly Distributed Random Ethylene Copolymers” *Macromolecules* **2017**, 50, 4406-4414 10.1021/acs.macromol.7b00357
140. Peggy Cebe, David Thomas, John Merfeld, Benjamin P. Partlow, David L. Kaplan, Rufina G. Alamo, Andreas Wurm, Evgeny Zhuravlev, Christoph Schick “Heat of Fusion of Polymer Crystals by Fast Scanning Calorimetry” *Polymer* **2017**, 126, 240-247 [doi.org/10.1016/j.polymer.2017.08.042](https://doi.org/10.1016/j.polymer.2017.08.042)
141. Xiaoshi Zhang, Laura Santonja-Blasco, Kenneth B. Wagener, Emine Boz, Masafumi Tasaki, Kohji Tashiro, Rufina G. Alamo, “ Infrared Spectroscopy and X-ray Diffraction

- Characterization of Dimorphic Crystalline Structures of Polyethylenes with Halogens Placed at Equal Distance Along the Backbone” *J. Phys. Chem. Part B* **2017**, 121, 10166–10179  
DOI: 10.1021/acs.jpcc.7b08877
142. L. Santonja-Blasco, W. Rungswang, R.G. Alamo, “Characterization and Morphological Distribution of Ethylene Content in Impact Propylene Copolymers” *Macromol. Symp.* **2018**, 377, 1700046 DOI: 10.1002/masy.201700046
143. L. Sangroniz, F. Barbieri, Dario Cavallo, Antxon Santamaria, Rufina G. Alamo, Alejandro J. Müller, “Rheology of Self-Nucleated Poly( $\epsilon$ -Caprolactone) Melts” *Eur. Polym. J.* **2018**, 99, 495–503. DOI: org/10.1016/j.eurpolymj.2018.01.009
144. Xiaoshi Zhang, Wei Zhang, Kenneth B. Wagener, Emine Boz, Rufina G. Alamo, “Effect of Self-Poisoning on Crystallization Kinetics of Dimorphic Precision Polyethylenes with Bromine” *Macromolecules* **2018**, 51, 1386–1397 (DOI: 10.1021/acs.macromol.7b02745)
145. Xuejian Chen, Rufina G. Alamo, “Effect of Annealing Time and Molecular Weight on Melt Memory of Random Ethylene 1-Butene Copolymers” *Polymer International* (in press) DOI: 10.1002/pi.5586
146. L. Sangroniz, R.G. Alamo, D. Cavallo, A. Santamaría, A. J. Müller, A. Alegría, “Differences between isotropic and self-nucleated PCL melts detected by dielectric experiments” *Macromolecules* **2018**, 51, 3663–3671 (DOI: 10.1021/acs.macromol.8b00708)
147. Xuejian Chen, Yiming Zeng, Carlos López-Barrón, Rufina G. Alamo, “Concentration Fluctuations in the Early Stages of LLPS and Partial Dissolution of Melt Memory in Broadly Distributed Ethylene Copolymers” *Polymer* **2018**, 148, 181-190 (DOI: doi.org/10.1016/j.polymer.2018.06.032)
148. Stephanie F. Marxsen, Rufina G. Alamo, “Melt-memory of Polyethylenes with Halogen Substitution: Random vs. Precise Placement” *Polymer* **2019**, 168, 168-177 doi.org/10.1016/j.polymer.2019.02.030
149. Xiaoshi Zhang, Xiaobing Zuo, Patrick Ortmann, Stefan Mecking, Rufina G. Alamo, “Crystallization of Long-Spaced Precision Polyacetals I: Melting and Recrystallization of Rapidly Formed Crystallites” *Macromolecules* **2019**, 52, 4934-4948 (DOI 10.1021/acs.macromol.9b00922)
150. H. Janani, R.G. Alamo, “Effect of Melt Miscibility, Polymorphism and Crystal Morphology on Tensile Deformation of Blends of Isotactic Polypropylene and Propylene 1-Hexene Random Copolymers” *Polymer Crystallization* (2020 in press)

151. Stephanie F. Marxsen, Manuel Haüßler, Stefan Mecking, Rufina G. Alamo, “Isothermal Step Thickening in a Long-Spaced Aliphatic Polyester” *Polymer* **2020**, in press
152. Xiaoshi Zhang, Sidney Cameron, Patrick Ortmann, Stefan Mecking, Rufina G. Alamo, “Crystallization of Long-Spaced Precision Polyacetals II: Effect of Polymorphism on Crystallization Kinetics” *Macromolecules* (to be submitted)

## PATENTS

1. Alamo\*, R.G., Coates, G.W., Ruiz-Orta, C.  
“Polyolefins Having Reduced Crystallinity” to The Florida State University Research Foundation, Inc.  
U.S. Patent No. [8,389,660](#)  
Issued date: March 14, 2013  
Filing date: March 5th, 2012
2. Alamo\*, R.G., Coates, G.W., Ruiz-Orta, C.  
“Methods of constructing alkene-based homopolymer polyolefins having reduced crystallinity” to The Florida State University Research Foundation, Inc.  
U.S. Patent No. [8,394,908](#)  
Issued date: March 12, 2013  
Filing date: October 4, 2012
3. Alamo\*, R.G., Coates, G.W., Ruiz-Orta, C.  
“Methods of constructing alkene-based copolymer polyolefins having reduced crystallinity” to The Florida State University Research Foundation, Inc.  
U.S. Patent No. [8,399,588](#)  
Issued date: March 19, 2013  
Filing date: October 4, 2012
4. Alamo\*, R.G., Coates, G.W., Ruiz-Orta, C.  
“Methods of constructing polyolefins having reduced crystallinity using a late metal catalyst” to The Florida State University Research Foundation, Inc.  
U.S. Patent No. [8,399,589](#)  
Issued date: March 19, 2013  
Filing date: October 4, 2012
5. Alamo\*, R.G., Coates, G.W., Ruiz-Orta, C.  
“Methods of constructing polyolefins having reduced crystallinity using diimine based catalyst” to The Florida State University Research Foundation, Inc.  
U.S. Patent No. [8,415,441](#)

Issued date: April 9, 2013  
Filing date: October 4, 2012

### **Patent Applications**

1. Alamo, R., Coates, G.W. "Crystallinity Reducer" U.S. Application No. 12/813,131, filed July 10, 2010
2. Alamo, R., Coates, G.W. US Patent Application No: 2013/0030,121  
"Methods of constructing alkene-based homopolymer polyolefins having reduced crystallinity".  
Filing date: October 4<sup>th</sup>, 2012  
Publication date: January 31<sup>st</sup>, 2013

### **OTHERS.**

Articles in the DOW CHEMICAL Co. -  
Five Internal Confidential Publications, 1986-1987.

#### *B. Articles in Preparation*

"Isothermal Thickening of Long-Spaced Aliphatic Polyesters" by Stephanie F. Marxsen, Manuel Haeussler, Stefan Mecking, and Rufina G. Alamo, *Polymer* (in progress)

"Enhanced Nucleation of Long-Chain Branched (LCB) Poly(propylenes) Synthesized by Copolymerization of Propene and  $\alpha - \omega$  Dienes 1. Effect of LCB Content and Distribution" Anindya Ghosal, Juan P. Fernandez-Blazquez, Rufina G. Alamo, (in progress)

#### *C. Books and Book Chapters*

1. Alamo, R.G. "Propiedades del Poli(tereftalato de dietilenglicol)". Edited by the University of Valladolid. Valladolid. Spain, 1978
2. Alamo, R.G. "Mecanismos de Polimerizacion y el Estado Cristalino en Poli(1,3-dioxolano)". Edited by the University of Madrid. Madrid, Spain. 1981

3. Mandelkern L., R.G. Alamo. "Use of Raman Spectroscopy in Characterizing the Structure and Properties of Crystalline Polymers" in *Structure-Property Relations in Polymers: Spectroscopy and Performance*. Advances in Chemistry Series, No. 236, Pag. 157-190, M.W. Urban and C.D. Craver Eds., Washington D.C., 1993.
4. Yang Y., N. Ichise, Z. Li, Q. Yuan, J.E. Mark, E.K.M. Chan, R.G. Alamo, L. Mandelkern. "The Use of Mechanical Property Measurements to Characterize Gel and Gelation Processes". *Mat. Res. Soc. Symp. Proc.* Vol. 248, 325, 1992.
5. Yang Y., N. Ichise, Z. Li, Q. Yuan, J. Mark, E.K.M. Chan, R. G. Alamo, L. Mandelkern. "Investigation of Gelation Processes and Gel Structures by Means of Mechanical Property Measurements" in *Synthesis, Characterization and Theory of Polymeric Networks and Gels*, S.M. Aharoni Ed., Pag. 217. Plenum Press, New York 1992.
6. Mandelkern L., R.G. Alamo, D.L. Dorset. "Pre-Melting in the n-Alkanes: A Review". *Acta Chimica Hungarica, 'Models in Chemistry'*. Andras P. Schubert Ed. Budapest. **130**, (3-4), 415, 1993.
7. Alamo, R.G. "The Crystallization Behavior of Long Chain N-Alkanes and Low Molecular Weight Polyethylenes" in *NATO ASI-C Series, 'Mathematical and Physical Sciences Vol. 405: Crystallization of Polymers'*. M. Dosiere Ed. Klumer Academic Pub, Boston 1993.
8. Alamo, R.G. and L. Mandelkern. "The Crystallization Behavior of Random Copolymers of Ethylene" in *"Thermal Analysis and Calorimetry in Polymer Physics", Thermochimica Acta*, **238**, 155, 1994.
9. Mandelkern L., R.G. Alamo. "Thermodynamic Quantities Governing Melting". in *"American Institute of Physics Handbook of Polymer Properties"*, J. Mark Ed.; AIP Press: New York, 1996.
10. Londono, J. D., G. D. Wignall, R. G. Alamo, L. Mandelkern, F. C. Stehling, J. S. Lin, "The Morphology of Blends of Linear and Branched Polyethylenes by Small-Angle Neutron and X-Ray Scattering" *Mat. Res. Soc. Sym. Proc.* Vol. 376, p. 281, 1995.
11. Agamalian, M.M., R.G. Alamo, J.D. Londono, L. Mandelkern, S. Spooner, F.C. Stehling, G.D. Wignall, □Ultra-High Resolution Small-Angle Neutron Scattering Investigations of Liquid-Liquid Phase Separation in Linear Low Density Polyethylene□. *Mat. Res. Soc. Sym. Proc.* Vol. 461, p. 205, 1997.
12. Mandelkern, L., R.G. Alamo, "Polymer Data Handbook", Polyethylene, linear high-density. Ed. J.E. Mark. Oxford University Press, 1999, pp. 493 - 507.



13. R.G. Alamo, Mandelkern L. "Thermodynamic Quantities Governing Melting". in *Physical Properties of Polymers Handbook*, Second Edition, J. Mark Ed.; Springer-Verlag: New York, 2007, pg. 165 – 186.
14. R.G. Alamo, "Polyethylene, Linear High-Density" in *Polymer Data Handbook*, 2<sup>nd</sup> Ed. Oxford University Press, 2008
15. R.G. Alamo, "Phase Structure and Morphology" in *Comprehensive Analytical Chemistry, Vol. 53: Molecular Characterization and Analysis of Polymers*, J. Chalmers, R. Meier Eds. Elsevier, 2008, pg. 255-287.

## PRESENTATION OF PAPERS IN PROFESSIONAL MEETINGS

### A. Meetings (Regular Presentations)

(Speaker: \*)

1. Alamo R.\*, J.Guzman, J.G. Fatou. "Transfer effects in the Polymerization of Tetrahydrofurane". XVIII Bient Meeting of the Spanish Society of Physics and Chemistry. Burgos. Spain, Oct. 1980.
2. Alamo R.\*, J.G. Fatou, J. Guzman. "A Study of the Dependence Glass Transition Temperature/Molecular Weight in Poly(1,3-Dioxolane)". XIX Bient Meeting of the Spanish Society of Physics and Chemistry. Santander. Spain, Oct. 1982.
3. Mandelkern L., R.C. Domszy, R. Alamo\*, M. Davidson. "Crystallization Behavior and Transitions in Copolymers". 35th Southeastern Regional Meeting of the American Chemical Society. Charlotte, North Carolina, November 9-11, 1983.
4. Schlotter N.E. \*, L. Mandelkern, R. Alamo, R.G. Snyder. "Detection of the Raman DLAM Mode in the Solid Phase". American Physical Society. Detroit, Michigan. March 26-30, 1984.
5. Alamo R.\*, R.C. Domszy, L. Mandelkern. "Thermally Reversible Gels of Polyethylene Copolymers". 37th Annual Meeting of the American Chemical Society (Florida Section). Florida Southern College, Lakeland, Florida. May 9-12, 1984.
6. Anandakumaran K. \*, R. Alamo, L. Mandelkern. "The Properties and Structure of Ethylene-Methacrylic Acid Copolymers". 37th Annual Meeting of the American Chemical Society (Florida Section). Florida Southern College, Lakeland, Florida. May 9-12, 1984.
7. Mandelkern L.\*, R. Alamo. "Thermal Analysis and Polymer Crystallization". American Chemical Society. Symposium on Thermoanalysis . Miami, Florida, April 1985.

8. Mandelkern L.\*, R. Alamo, R.G. Snyder, W.L. Mattice. "The Raman Low Frequency D-LAM Band in Random Ethylene Copolymers". Meeting of the American Physical Society, March 31- April 4, 1986.
9. Mandelkern L.\*, R. Alamo, R. Glaser. "Crystallization and Properties of Blends of Homopolymers and Copolymers of Polyethylene". Meeting of the NATAS. Cincinnati. September 1986.
10. Alamo R.G.\*, L. Mandelkern. "Thermodynamic and Structural Properties of Ethylene Copolymers". American Physical Society. New Orleans. Louisiana. March 21-25, 1988.
11. Alamo R.G.\*, L. Mandelkern. "Crystallization Kinetics of Ethylene Copolymers: Hydrogenated Polybutadiene". FLACS, Vol.XLI, No. 2. March 1988. 39th Annual Meeting of Florida Division ACS. Tampa, Florida, April 13-16, 1988.
12. Alamo R.G., L. Mandelkern\*. "The Melting and Crystallization Kinetics of Hydrogenated Polybutadiene". NATAS Meeting. Orlando, October 1988.
13. Alamo R.G.\*, E.K. Chang, L. Mandelkern. "The Molecular Weight Dependence of the Thermodynamic and Structural Properties of Ethylene Copolymers". 198th ACS National Meeting. Miami Beach, Florida, September 10-15, 1989.
14. Vickers T.J.\*, R. Alamo, C.K. Mann, L. Mandelkern. "Polymer Topics in Undergraduate Analytical Chemistry". 198th ACS National Meeting, Section on Teaching Polymer Chemistry, Miami Beach, Florida, September 10-15, 1989.
15. Alamo R.G.\*, L. Mandelkern, G.M. Stack. "From the n-Alkanes to Polyethylene: The Crystallization of Chain Molecules". 33rd IUPAC Symposium of Macromolecules, Montreal, Quebec. Canada, July 8-13, 1990.
16. Vickers T.J.\*, R. Alamo, C.K. Mann, L. Mandelkern. "Polymer Topics in Undergraduate Analytical Chemistry". 200th ACS National Meeting. Washington DC. August 26-30, 1990.
17. Alamo R.G.\*, G.M. Stack, L. Mandelkern. "The Isothermal Thickening of Normal Alkanes and Low Molecular Weight Polyethylene Fractions". 19th NATAS Meeting. Boston. September, 1990.
18. Alamo R.G.\*, L. Mandelkern, R.G. Snyder. "An Analysis of the LAM of Long Chain N-Alkanes". American Physical Society, Cincinnati, Ohio. March 18-22, 1991.
19. Mandelkern L.\*, R.G. Alamo. "Use of Raman Spectroscopy in Characterizing the Structures and Properties of Crystalline Polymers". 201th ACS National Meeting. Atlanta, Georgia,

April 1991.

20. Alamo R.G.\*, L. Mandelkern. "Crystallization Kinetics of Random Ethylene Copolymers". 202th ACS National Meeting. New York, New York. August 1991.
21. Li Z., Y. Yang, N. Ichise, J.E. Mark\*, E.K.M. Chan, R.G. Alamo, L. Mandelkern. "The Use of Mechanical Properties Measurements to Characterize Gels and Gelation Process". 1991 Fall Meeting of the Materials Research Society (Symposium on Complex Fluids). Boston, December 1991.
22. Alamo R.G.\*, L. Mandelkern. "The Crystallization of Polyethylene Mixtures: Linear Polyethylene/High Pressure Polymerized Long Chain Branched Polyethylenes". 203rd ACS National Meeting. San Francisco, California. April 1992.
23. Yang Y., N. Ichise, Z. Li, W. Yuan, J. E. Mark\*, E.K.M. Chan, R. G. Alamo, L. Mandelkern. "Use of Mechanical Property Measurements to Characterize Gels and Gelation Processes". 203rd ACS National Meeting. San Francisco, California, April 1992.
24. Alamo R.G.\*, L. Mandelkern. "The Phase Structure of Random Ethylene Copolymers". 204th ACS National Meeting. Washington D.C., August 1992.
25. Stribeck N.\*, H.G. Zachmann, R.G. Alamo, L. Mandelkern. "Narrow-Molecular-Weight-Distribution Polyethylene (PE). Comparison of the Results from SAXS and LAM-Raman Spectroscopy Concerning the Thickness Distribution of the Crystalline Lamellae". 13th General Conference of the Condensed Matter Division. European Physical Society. Regensburg. Germany, March 1993.
26. Alamo R.G.\*, B.D. Viers, L. Mandelkern. "Relation Between Melting Temperature and Crystallization Temperature in Linear Polyethylene and Ethylene Copolymers". ACS National Meeting. Chicago, Illinois, August, 1993.
27. Alamo R.G.\*, L. Mandelkern. "Structure Properties Relation of Random Ethylene Copolymers". 22nd NATAS Meeting, Denver, Colorado, September 1993.
28. Alamo R.G.\*, L. Mandelkern, J.G. Fatou, C. Marcos. "The Molecular Weight Dependence on the Rate of Crystallization of Polymeric Chains". 1993 Fall Meeting of the Materials Research Society. Boston, Massachusetts, November 29, 1993.
29. Alamo R.G.\*, L. Lu, L. Mandelkern. "Isothermal Crystallization of Random Ethylene Copolymers". 207th ACS National Meeting. San Diego, California, March 13-17. 1994.
30. Alamo R.G.\*, J.C. Lucas, L. Mandelkern. "The Crystallization Behavior of Isotactic Polypropylenes from the Melt. I. Crystallographic Forms". 207th ACS Meeting. San Diego,

California, March 13-17. 1994.

31. Lucas J.C.\*, R.G. Alamo, L. Mandelkern. "The Crystallization Behavior of Isotactic Polypropylenes from the Melt. II. Melting Process". 207th ACS Meeting. San Diego, California, March 13-17. 1994.
32. Wignall G.D.\*, J.D. Londono, R.G. Alamo, L. Mandelkern, F. C. Stehling. "The Phase Behavior of Blends of Linear and Branched Polyethylenes in the Molten and Solid States by Small Angle Neutron Scattering". March Meeting of the American Physical Society. Pittsburg, Pennsylvania, March 21-25, 1994.
33. Alamo R.G.\*, L. Mandelkern, F.C. Stehling, G.D. Wignall, J.D. Londono. "The Morphology of Blends of Linear and Branched Polyethylenes in the Solid State". March Meeting of the American Physical Society. Pittsburg, Pennsylvania, March 21-25, 1994.
34. Mandelkern L.\*, R.G. Alamo. "The Nucleation and Crystallization of Chain Molecules of Low Molecular Weight". 68th Annual Colloid and Surface Science Symposium, Stanford, June 19-22, 1994.
35. Wignall G.D.\*, J.D. Londono, R.G. Alamo, L. Mandelkern, F.C. Stehling. "The Morphology of Blends of Linear and Branched Polyethylenes in Solid State by SANS". 208th ACS Meeting. Washington D.C. August 1994.
36. Stewart M.J.\*, W.L. Jarrett, L.J. Mathias, R.G. Alamo, L. Mandelkern. "A CRAMPS and  $^{13}\text{C}$  CP/MAS NMR Examination of Solid-Solid Transitions in n-Hexatriacontane ( $\text{C}_{36}\text{H}_{74}$ )". 208th ACS Meeting. Washington D.C. August, 1994.
37. Wignall G.D.\*, J. D. Londono, R. G. Alamo, L. Mandelkern, F. C. Stehling. "The Morphology of Blends of Linear and Branched Polyethylenes by Small-Angle Neutron and X-Ray Scattering (SANS and SAXS)". Fall Meeting of the Materials Research Society. Boston, November 28, 1994.
38. Wignall G.D.\*, J. D. Londono, R. G. Alamo, L. Mandelkern, F. C. Stehling, "The Phase Behavior of Blends of Linear and Branched Polyethylenes in the Molten and Solid States by Small-Angle Neutron Scattering" March Meeting of the American Physical Society, San José, California, March 20-23, 1995.
39. Galante M.J.\*, R.G. Alamo, L. Mandelkern. "The Crystallization and Melting of Binary Mixtures of Polyethylenes". Symposium on Advances in Crystalline Polymers. Polymer Chemistry Division of the ACS. ACS National Meeting. Anaheim, California, April, 1995.
40. Wignall G.D.\*, J.D. Londono, R.G. Alamo, L. Mandelkern. "The Morphology of Blends of Linear and Branched Polyethylenes in Solid State by SANS". Symposium on Advances in

Crystalline Polymers. Chemistry Division of the ACS. ACS National Meeting. Anaheim, California, April, 1995.

41. Alamo R.G.\* "Analysis of the Crystallization and Melting Behavior of Polypropylenes from Different Catalyst Systems". Annual Meeting of the American Chemical Society (Florida Section), Orlando, Florida, May 5-6, 1995.
42. Galante M.J.\*, R. G. Alamo\*, L. Mandelkern "An Analysis of the Crystallographic Forms of Isotactic Polypropylenes with Narrow Molecular Weight Distributions". Annual Meeting of the American Chemical Society (Florida Section), Orlando, Florida, May 5-6, 1995.
43. Alamo R.G.\*, M. J. Galante, A. Lehtinen, R. Paukkeri "The Dependence of the Molecular Structure on the Crystallization and Melting Behavior of Polypropylenes from Different Catalyst System". 1995 Meeting of the American Institute of Chemical Engineers, Miami Beach, November 1995.
44. Alamo R.G.\*, M.J. Galante, L. Mandelkern, A. Lehtinen, R. Paukkeri. "Crystallization Kinetics of Metallocene Type Polypropylenes and Comparison with Ziegler-Natta Type Systems". March Meeting of the American Physical Society. St. Louis, Missouri, March 18-22, 1996.
45. Mandelkern, L., J.T. Graham\*, R.G. Alamo, "The Effect of Molecular Weight and Crystallite Structure on Yielding in Ethylene Copolymers. March Meeting of the American Physical Society. St. Louis, Missouri, March 18-22, 1996.
46. Graham J.T.\*, L. Mandelkern, R.G. Alamo, "An Analysis of the 1060  $\text{cm}^{-1}$  band of the Raman Spectrum of Polyethylene". March Meeting of the American Physical Society. St. Louis, Missouri, March 18-22, 1996.
47. Wignall G.D.\*, J.D. Londono, F.C. Stehling, R.G. Alamo, L. Mandelkern. "Small Angle Neutron Scattering Investigations of Liquid-Liquid Phase Separation in Heterogeneous Linear-Low Density Polyethylene". March Meeting of the American Physical Society. St. Louis, Missouri, March 18-22, 1996.
48. Alamo R.G.\*, J.A. Haigh, L. Mandelkern, "Crystallization and Melting of Model Polyethylenes of Different Chain Structures". 11th International Congress on Thermal Analysis and Calorimetry (ICTAC). Philadelphia, PA. August 1996.
49. Haigh J.A.\* , R.G. Alamo, L. Mandelkern, "Crystallization Behavior and Properties of Model Polyethylenes of Different Chain Structures". ACS National Meeting. Division of Polymer Chemistry. Orlando. August, 1996.
50. Isasi J.R\*., L. Mandelkern, R.G. Alamo, "Crystallization Kinetics of Metallocene Type

- Isotactic Polypropylenes. II. Influence of Defect Concentration". ACS National Meeting. Division of Polymer Chemistry. Orlando. August, 1996.
51. Alamo R.G.\*, G. Brown, L. Mandelkern, R. Paukkeri, A. Lehtinen, "A Morphological Study of a Highly Isotactic Polypropylene Fraction". Symposium *New Concepts of Polymeric Materials: Science and Engineering*. ACS National Meeting. Division of Polymeric Materials Science and Engineering. Orlando. August, 1996.
  52. Ebube\*, N.K., G. Owusu-Ababio, R.G. Alamo, □Non-Destructive Characterization of the Physicochemical Properties of Amorphous Polymers Using the Artificial Neural Networks□. Annual meeting of the American Association of Pharmaceutical Scientists. Seattle. October 1996.
  53. Agamalian\*, M.M., G.D. Wignall, R.G. Alamo, J.D. Londono, L. Mandelkern, F.C. Stehling, □Ultra-High Resolution Small Angle Neutron Scattering (USANS) Investigations of Phase Separations in Linear Low-Density Polyethylene (LLDPE)□. Materials Research Society 1996 Fall Meeting. Symposium BB, □Morphological Control in Multiphase Polymer Mixtures□. Boston, December 1996.
  54. Galante\*, M.J., Alamo R.G., L. Mandelkern, R. Paukkeri, A. Lehtinen, □Crystallization Kinetics of Isotactic Polypropylenes□. 5th. Latin American Polymer Symposium/3rd Ibero American Polymer Symposium. Mar del Plata, Argentina. 2-5 December, 1996.
  55. Alamo\*, R.G., L. Mandelkern, □Morphology and Melting Behavior of Polypropylenes□ March Meeting of the American Physical Society. Kansas City, Kansas, March 17-21, 1997.
  56. Isasi\*, J.R., L. Mandelkern, R.G. Alamo, □Unit Cell Dilation in Metallocene Monoclinic Polypropylenes□ March Meeting of the American Physical Society. Kansas City, Kansas, March 17-21, 1997.
  57. Alamo\*, R.G., C. Chi, □Linear Growth Rates and Morphology of Metallocenes and Ziegler-Type Polypropylenes□ March Meeting of the American Physical Society. Kansas City, Kansas, March 17-21, 1997.
  58. Wignall\*, G.D., M.M. Agamalian, J.D. Londono, R.G. Alamo, L. Mandelkern, □Ultra-High Resolution Small Angle Neutron Scattering (USANS) Investigations of Phase Separations in Linear Low-Density Polyethylene (LLDPE). March Meeting of the American Physical Society. Kansas City, Kansas, March 17-21, 1997.
  59. Yasurek\*, L.R., R.G. Alamo, □Crystallization and Melting of Bacterial Poly(3-Hydroxy Butyrate) and its Random Copolymers with 3-Hydroxy Valerate□ Regional Undergraduate AICHE Meeting. Charlotte. South Carolina, April, 1997.

60. Alamo\*, R.G., L. Mandelkern, G. Brown, □Melting Behavior of Isotactic Polypropylenes□. 25th NATAS (North American Thermal Analysis Society National Meeting), McLean, Virginia, September 1997.
61. Isasi\*, J.R., L. Mandelkern, R.G. Alamo, □Structural and Thermal Characterization of Metallocene Catalyzed Isotactic Copolymers of Poly(Propylene)□. March Meeting of the American Physical Society. Los Angeles, CA, March 16-20, 1998.
62. Kim\*, M-H., R.G. Alamo, L. Mandelkern, □The Crystallite Structure of Isotactic Polypropylenes and Propylene Copolymers by SAXS□. March Meeting of the American Physical Society. Los Angeles, CA, March 16-20, 1998.
63. Dai\*, S.P., C. Peggy, R. Alamo, L. Mandelkern, M. Capel. □Real Time Small Angle X-Ray Scattering and Differential Scanning Calorimetry Study of Metallocene Poly(propylene)□ March Meeting of the American Physical Society. Los Angeles, CA, March 16-20, 1998.
64. VanderHar\*t D.L., R.G. Alamo, M.H. Kim, L. Mandelkern, E. Perez, S. Mansel, □Partitioning of Various Chain Defects within the Semicrystalline Morphology of Isotactic Polypropylene□. March Meeting of the American Physical Society. Los Angeles, CA, March 16-20, 1998
65. Agamalian, M.M., R.G. Alamo, J.D. Londono, L. Mandelkern, F.C. Stehling, G.D. Wignall\*. □Phase Behavior of Blends of Linear and Branched Polyethylenes Via Small- and Ultra-Small Angle Neutron Scattering□. ACS National Meeting. Division of Polymeric Materials Science and Engineering. Symposium on Thermodynamics of Polymer Blends. Dallas, TX. March, 1998.
66. Dai, S.P., C. Peggy\*, R. Alamo, L. Mandelkern, □Crystallization and Melting of Narrow Molecular Weight Distribution Poly(propylene) prepared by Partial Melting□, ACS National Meeting. Division of Polymeric Materials Science and Engineering. Symposium on Newer Methods in Thermal Analysis. Dallas, TX. March, 1998.
67. Alamo\*, R.G, Kim, M-H., L. Mandelkern, M.J. Galante, G.D. Wignall, J.D. Londono, F.C. Stehling, □The Cocrystallization of Mixtures of Homopolymers and Copolymers: Polyolefins□ ACS National Meeting. Division of Polymeric Materials Science and Engineering. Symposium on Newer Methods in Thermal Analysis. Dallas, TX. March, 1998.
68. Putcha\*, S., R.G. Alamo, □Effects of Stereo and Regio Defects on the Crystallization Kinetics of Isotactic Polypropylene□ Annual Meeting of the Florida Section of the American Chemical Society. Orlando May 8, 1998.
69. Alamo\*, R.G., **(invited)** □Crystallization Behavior and Properties of Polypropylenes□ Osaka University Macromolecular Symposium (OUMS□98). Molecular Interactions and

Time-Space Organization in Macromolecular Systems □. June 3-6, 1998. Osaka, Japan.

70. VanderHart\* D.L., H. Feng, M.R. Nyden, R.G. Alamo, M.H. Kim, L. Mandelkern, E. Perez, S. Mansel, C-13 NMR Study of the Inclusion of Stereo and Regio Defects in the Crystalline Regions of Isotactic Polypropylene. Rocky Mountains Conference in Analytical Chemistry, Denver, CO, July, 1998.
71. Dai, P.S., P. Cebe\*, R.G. Alamo, L. Mandelkern, M. Capel, □Real-Time SAXS Study of the Crystallization of Metallocene Poly(Propylene) □ ACS National Meeting. Division of Polymeric Materials Science and Engineering. Symposium on Scattering from Polymers. Boston, MA, August, 1998.
72. Wignall\*, G.D., M.M. Agamelian, R.G. Alamo, L. Mandelkern, □Phase Behavior of Blends of Linear and Branched Polyethylenes via SANS and USANS □ Annual meeting of the American Institute of Chemical Engineers (AIChE), Miami Beach, November 1998.
73. VanderHart\*, D. R.G. Alamo, M. Nyden, L. Mandelkern. □Ethylene Defects in Isotactic Poly(propylene): Partitioning, Conformation and Chemical Shift Calculations □ Experimental NMR Conference, Orlando, FL, Feb. 28-March 5, 1999.
74. Mandelkern, L., G.D. Wignall\*, J.D. Londono, R.G. Alamo, M.H. Kim, □The Morphology of Blends of Linear and Short Chain Branched Polyethylenes in the Solid State by Neutron Scattering and Differential Scanning Calorimetry □. March Meeting of the American Physical Society. Atlanta, GA, March 20 - 26, 1999.
75. Alamo\*, R.G., M.H. Kim, M.J. Galante, J.R. Isasi, L. Mandelkern, □The Structural and Kinetic Factors Governing the Formation of the Gamma Polymorph of Isotactic Polypropylene at Atmospheric Pressure □. March Meeting of the American Physical Society. Atlanta, GA, March 20 - 26, 1999.
76. Huang\*, T.W., R.G. Alamo, L. Mandelkern, □A Study of Melting Kinetics of Isotactic Polypropylene Crystals □. March Meeting of the American Physical Society. Atlanta, GA, March 20 - 26, 1999.
77. VanderHart\*, D. L., R.G. Alamo, M.R. Nyden, L. Mandelkern, □A Study of Ethyl Residues in Isotactic Polypropylene-co-Ethylene Copolymers: Morphological Partitioning by NMR and Conformational Verification Via Chemical Shift Calculations □ March Meeting of the American Physical Society. Atlanta, GA, March 20 - 26, 1999.
78. Sripada, L.S., R.G. Alamo □Properties of High Pressure Polymerized Ethylene Copolymers: Effect of the Type of Comonomer in their Phase Structure and Crystallization Behavior □. Annual Meeting of the Florida Section of the American Chemical Society. Orlando May 7, 1999.



79. Agamelian, M.M., R.G. Alamo, J.D. Londono, L. Mandelkern, G.D. Wignall, □Phase Behavior of Blends of Linear and Branched Polyethylenes on Micron-Length-Scales Via Ultra-Small Angle Neutron Scattering□, SAS99. Brookhaven National Laboratory. New York. May, 1999.
80. R.G. Alamo, J.R. Isasi, M.H. Kim, L. Mandelkern, D.L. VanderHart, □Thermal and Structural Behavior of Metallocene-Type Random Propylene Copolymers□, ACS National Meeting. Division of Polymeric Materials Science and Engineering. Symposium on Semicrystalline Polymers. New Orleans, LA, August, 1999.
81. Dai, P.S., P. Cebe, M. Capel, R.G. Alamo, L. Mandelkern, □Self-Nucleation Study of Metallocene Isotactic Polypropylene□, ACS National Meeting. Division of Polymeric Materials Science and Engineering. Symposium on Semicrystalline Polymers. New Orleans, LA, August, 1999.
82. Little, A.L., R.G. Alamo, □Linear Growth Rates of Random Propylene Copolymers: A Kinetic and Morphological Analysis□ Annual meeting of the American Institute of Chemical Engineers (AIChE), Dallas, TX, November 5, 1999.
83. VanderHart, D.L., M.R. Nyden, R.G. Alamo, L. Mandelkern, □Incorporation of Stereo, Regio and Comonomer Defects into the Crystalline Regions of Isotactic Polypropylene: Results from NMR, Molecular Dynamics and Chemical Shift Calculations□, ACS National Meeting. Division of Polymeric Materials Science and Engineering. Symposium on the Structure, Dynamics and Organization of Polymers in the Solid State by Magnetic Resonance. San Francisco, CA. March 26-31, 2000.
84. Alamo, R.G., T.W. Huang, L. Mandelkern, M.H. Kim, □A Comparative Study of the Melting and Crystallization Behavior of a Metallocene and a Ziegler Fraction of iPP with the Same Overall Defect Content□. March Meeting of the American Physical Society. Symposium on Polymer Crystallization: New Perspectives on an Old Problem, Minneapolis, Minnesota, March 20 - 24, 2000.
85. Wignall, G.D., R.G. Alamo, J.D. Londono, L. Mandelkern, M.H. Kim, J.S. Lin, G.M. Brown, □The Morphology of Blends of Linear and Short-Chain Branched Polyethylenes in the Solid State by Small Angle Neutron and X-Ray Scattering, Differential Scanning Calorimetry and Transmission Electron Microscopy□. Materials Research Society. 2000 Spring Meeting. San Francisco, CA. April 24-28, 2000.
86. Little, A.L., R.G. Alamo, “Linear Growth Rates of Random Propylene Copolymers: A Kinetic and Morphological Analysis” Regional Meeting of the American Institute of Chemical Engineers (AIChE), Lexington, KY, April 6-8, 2000.

87. Huang\*, W., R.G. Alamo, "A Comparative Study of the Melting and Crystallization Behavior For a Metallocene and a Narrow Fraction of Ziegler-Natta Isotactic Polypropylene", ANTEC, Orlando, FL May 5, 2000.
88. Dai, P.S., P. Cebe\*, M. Capel, R.G. Alamo, L. Mandelkern, "Wide and Small Angle X-Ray Scattering Study of Melting Kinetics of Isotactic Polypropylene" ACS National Meeting. Division of Polymeric Materials Science and Engineering. Washington D.C., August 19, 2000.
89. Alamo\*, R.G., W.T. Huang, L. Mandelkern, "Kinetics of Isothermal Melting of Isotactic Polypropylenes with Different Degrees of Isotacticity" ACS National Meeting. Division of Polymer Chemistry. Washington D.C., August 19, 2000.
90. Simanke\*, A.G., R.G. Alamo, "The Thermodynamic and Structural Properties of Metallocene Type Random Ethylene Copolymers" 28th NATAS (North American Thermal Analysis Society) Meeting, Orlando, Florida, October 4, 2000
91. Chatterjee\* J., A. Little, R.G. Alamo, "Kinetic and Morphological Studies of a Series of Narrow Propylene-Ethylene Copolymers" 28th NATAS (North American Thermal Analysis Society) Meeting, Orlando, Florida, October 4, 2000.
92. VanderHart\*, D.L., R.G. Alamo, M.R. Nyden, L. Mandelkern, "NMR Study of Various Defects in Isotactic Polypropylene: Morphological Partitioning and Chain Conformation in the Crystalline Regions" International Chemical Congress of Pacific Basin Societies. Honolulu, Dec. 14, 2000.
93. Wignall G.D., R.G. Alamo\*, L. Mandelkern, D. Schwahn "SANS Studies of Liquid-Liquid Phase Separation in Heterogeneous and Metallocene-Based Linear Low-Density Polyethylenes" March Meeting of the American Physical Society. Seattle, Washington, March 12 - 16, 2001.
94. Li, D.\*, H. Garmestani, S. Kalidindi, R.G. Alamo "Crystallographic Texture Evolution in High Density Polyethylene During Uniaxial Tension" March Meeting of the American Physical Society. Seattle, Washington, March 12 - 16, 2001.
95. Alamo\*, R.G., A. Simanke, G. Galland, R. Mauler " Study of the Effect of Comonomer Type on the Properties of Rapidly Crystallized and Annealed Random Ethylene Copolymer" March Meeting of the American Physical Society. Seattle, Washington, March 12 - 16, 2001.
96. Simanke\*, (**invited**) A.G., Alamo. R.G.,G. Galland, R. Mauler. "The Thermodynamic and Structural Properties of Metallocene Type Random Ethylene Copolymers" IX International Macromolecular Colloquium, November, 10- 15. Porto Alegre, Brazil, 2001.

97. Alamo\*, R.G. **(invited)** “Crystallization and Melting Kinetics of Poly(Propylenes): Effect of Concentration and Type of Defects” POLYOLEFINS III Symposium. October 7 – 10. Sonoma, California, 2001.
98. Ritchson, E., J.A. Blanco, R.G. Alamo. “Crystallization Rates and Spherulitic Morphology of Fractions from Metallocene and Ziegler type Isotactic Poly(propylene)” AIChE Annual Conference, Reno, NV, November 3 –7, 2001
99. Alamo, R.G. **(invited)** “Molecular and Crystalline Characterization of Polyolefins, their Blends and Composites” NSF/Industry Cooperative Research Center Workshop on Affordable Composites Materials. Tallahassee, December 4-5, 2001
100. Alamo, R.G, J.A. Blanco, E. J. Ritchson, P. Agarwal ”Crystallization Rates and Molecular Microstructure of Fractions from Metallocene and Ziegler type Isotactic Poly(propylenes)” ACS National Meeting. Division of Polymer Chemistry. Orlando, FL, April 8, 2002
101. Alamo, R.G., W.T. Huang, I. Hosier “Morphological Studies of Isotactic Poly(propylenes) Subject to Isothermal Melting Kinetics” 30th NATAS (North American Thermal Analysis Society) Meeting, Pittsburgh, Pennsylvania, September 23 – 25, 2002
102. I. L. Hosier, R.G. Alamo, P. Estes “Crystallographic Polymorphs and Lamellar Morphology of Metallocene Random Propylene Copolymers”. ACS National Meeting. Division of Polymeric Materials Science and Engineering. New Orleans, LO, March 23 - 27, 2003
103. D. M. Mowery, I. Carrilero, R.G. Alamo “Structural Studies of Ethylene 1-Octene and Ethylene Norbornene Random Copolymers by NMR and WAXS” March meeting of the American Physical Society. Austin, Texas, March 3 - 7, 2003
104. I. L. Hosier, R.G. Alamo, “Lamellar Morphology of Metallocene Random Propylene Copolymers Studied by Atomic Force Microscopy” March meeting of the American Physical Society. Austin, Texas, March 3 - 7, 2003
105. D. VanderHart, C. Snyder, R. Alamo “ Proton NMR Study of Room Temperature Aging in Isotactic PolyPropylene and Ethylene Octene Copolymers” March meeting of the American Physical Society. Austin, Texas, March 3 - 7, 2003.
106. R.G. Alamo, J.C. Randall, J.A. Blanco, P.K. Agarwal, C.J. Ruff “Crystallization Rates and Defects Distribution in Matched Metallocene and MgCl<sub>2</sub> Supported Ziegler Natta Isotactic Polypropylenes. European Polymer Conference on Stereospecific Polymerization and Stereoregular Polymers. Milan, Italy June 8, 2003

107. R.G. Alamo “Melt and Nano-Scale Crystalline Properties of Industrial Poly(Propylenes) of the Ziegler-Natta and Metallocene Types. The Role of Defect Microstructure” CAPCE-ARC Second Rheology Workshop. Seoul, Korea. September 4-5, 2003
108. R.G. Alamo “Crystallization and Morphology of Matched Fractions of MgCl<sub>2</sub>-Supported Ziegler Natta and Metallocene Isotactic Polypropylene. The Role of Chain Microstructure” Brazilian Polymer Congress. Bello Horizonte, Brazil, November 2003
109. R.G. Alamo, I.L. Hosier, A. Ghosan “Structural and Thermal Properties of Random Propylene Copolymers” IUPAC, Macro 2004. Paris, July 4 – 9, 2004
110. R.G. Alamo, I.L. Hosier, J. Chatterjee, “Polymorphism and Crystallization Kinetics of Random Propylene Copolymers” ACS National Meeting. Division of Polymeric Materials Science and Engineering. Philadelphia, August 2004
111. R. G. Alamo, I.L. Hosier, A, Ghosan “Structural and Thermal Properties of Metallocene Random Propylene Copolymers” North American Thermal Analysis Conference (NATAS). Symposium on Semicrystalline Polymers. Williamsburg, VA. October 4 – 6, 2004
112. R.G. Alamo “Crystallization of Poly(propylenes): The Role of Chain Microstructure” Symposium on Structure of Polymers, Bi-Annual Meeting of the Brazilian Society of Crystallography. February 23 – 25, 2005. Campinas, Brazil
113. D. A. Laboy, R.G. Alamo “Defect Microstructure of Ziegler-Natta isotactic Poly(propylene) inferred from the crystallization rates of its CITREF fractions” AICHE Southern Regional Conference, New Orleans, LO. March 10-12, 2005
114. Y.L. Chiari, R.G. Alamo, K. Thompson “Model Crystallization Kinetics of Polymorphic Poly(propylenes)” AICHE Southern Regional Conference, New Orleans, LO. March 10-12, 2005
115. A.K. Ghosal, R.G. Alamo “Crystallization Behavior of Inter-Chain H-Linked Isotactic Poly(propylenes) from their Quiescent Melts” March meeting of the American Physical Society. Los Angeles, CA, March 21 - 25, 2005
116. R. G. Alamo, “Crystallization of Poly(propylenes): The Role of Chain Microstructure” ARCHIPOL 05, Bi-annual Meeting of the Polymer Society in South America. Argentina, December 4-7, 2005.
117. Y.L. Chiari, K.L. Thompson, R.G. Alamo, “Overall Crystallization Kinetics of Polymorphic Poly (propylenes)” March meeting of the American Physical Society. Baltimore, MA, March 12 - 17, 2006

118. E. Boz, K.B. Wagener, R. Fu, A. Ghosal, R.G. Alamo, "Crystallization in Precision Polyolefins" March meeting of the American Physical Society. Baltimore, MA, March 12 - 17, 2006
119. E. Boz, A. Ghosal, R.G. Alamo, K.B. Wagener, "Polyolefins with Precisely Placed Halogens" ACS National Meeting. Division of Polymeric Materials Science and Engineering. Atlanta, Ga, March 26 - 30, 2006. Vol 47, No.1, pg 219, 2006
120. Humberto Palza, Raúl Quijada, K. Jeon, Rufina G. Alamo, "Aging of propylene/1-hexene random copolymers isothermally crystallized" IUPAC, Macro 2006, World Polymer Congress, 41th Symposium on Macromolecules, Rio de Janeiro, Brazil, July 16 - 21, 2006.
121. R. G. Alamo, Y. Chiari, A. Ghosal, K. Jeon, D. Laboy, K. Thompson, "Crystallization of Propylene Copolymers. The Role of Chain Microstructure" ACS National Meeting. Division of Polymeric Materials Science and Engineering and PREM Symposium. San Francisco, CA, September 2006.
122. R.G. Alamo, "Crystallization of Propylene Copolymers. The Role of Chain Microstructure" (*Keynote talk*) International Conference on Polymer Characterization, Houston, October 16 - 18, 2006
123. J.S. Brooks, L. Lumata, T. Tokumoto, R. G. Alamo, K. Jeon, "Carbon Nanotube Composites - a Double Edged Sword? "AMN-3 Satellite Conference on Nano & Bionano-Technology, Quantum Transport and Quantum Functional semiconductors", Feb 11-16, Wellington, NZ 2007.
124. R.G. Alamo, A.K. Ghosal "Crystallization of Isotactic Poly(propylenes) with Enhanced Melt Strength" ACS National Meeting. Division of Polymer Chemistry. Chicago, March 25 -29, 2007. Polym. Prep, **48** (1), pg. 185-186, 2007.
125. Y. L. Chiari, K. Jeon, and R.G. Alamo "Sequence Distribution and Crystallization Kinetics of Random Propylene Ethylene Copolymers up to 25 mol% Ethylene" ACS National Meeting. Division of Polymer Chemistry. Chicago, March 25 -29, 2007. Polym. Prep, **48** (1), pg. 966-967, 2007.
126. K. Jeon, R. G. Alamo, L. Lumata, T. Tokumoto, and J. Brooks "Electrical Conductivity and Crystalline Morphology of Single-Walled Carbon Nanotube/Linear Polyethylene Nanocomposites" ACS National Meeting. Division of Polymer Chemistry. Chicago, March 25 -29, 2007. Polym. Prep, **48** (1), pg. 953-954, 2007.
127. R. G. Alamo, K. Jeon, E. Boz, A.J. Nemeth and K.B. Wagener "Crystallization of Polyethylenes Containing Halogens: Precise vs. Random Placement" ACS National Meeting.

Division of Polymeric Materials Science and Engineering. Boston, August 19–24, 2007

128. K. Jeon, Y. L. Chiari, H. Palza and R. G. Alamo “Effect of Comonomer Type on the Crystallization Rate and Crystalline Morphology of Random Propylene Copolymers up to 21 mol% Comonomer” ACS National Meeting. Division of Polymeric Materials Science and Engineering. Boston, August 19–24, 2007
129. R.G. Alamo, “Crystallization of Short Branched Polyolefins. From the Random to the Precise Branch Placement “ in *International Symposium on Polymer Crystallization* , Mishima, Japan, September 21 – 24, 2007
130. R. G. Alamo, K. Jeon, R. L. Smith, E. Boz, K. B. Wagener “Crystallization of Bromine Substituted Polyethylenes with Precise Placement or Random Distribution” March meeting of the American Physical Society. New Orleans, LA, March 10 - 14, 2008
131. A. Abe, J. Brooks, K. Jeon, R. G. Alamo “Role of Crystallinity in CNT Dispersion and Electrical Conductivity of SWCNT-Thermoplastic Nanocomposites” March meeting of the American Physical Society. New Orleans, LA, March 10 - 14, 2008
132. K. Jeon, R.G. Alamo “Crystalline Morphology of Highly Branched Propylene 1-Alkene Random Copolymers” March meeting of the American Physical Society. New Orleans, LA, March 10 - 14, 2008
133. R.L. Smith, M.R. Bockstaller, R.G. Alamo, The crystalline structure of halogenated polyethylenes studied by SAXS. AICHE meeting. The AICHE Southern Regional conference will be held April 4-6 at Auburn University. Website is:  
<http://www.eng.auburn.edu/AUSRC2008/>
134. R. G. Alamo, K. Jeon, E. Boz, K. B. Wagener “Crystallization of Polyethylenes Containing Halogens: Precise vs Random Placement” 36<sup>th</sup> Annual meeting of the North American Thermal Analysis Society (NATAS), August 18 – 20, Atlanta, GA 2008.
135. Madhavi Vadlamudi, Rufina G. Alamo, S. Gopinath, S. Shanbhag, Manika Varma-Nair, David M. Fiscus, Gary.M. Brown, Chistina, Lu, Charles, J. Ruff “Molecular and Branching Distribution of a High Performance Metallocene Ethylene 1-Hexene Copolymer Film-Grade Resin” Annual meeting of the 36<sup>th</sup> North American Thermal Analysis Society (NATAS), August 18 – 20, Atlanta, GA 2008.
136. Juan P. Fernandez-Blazquez, Syed A. Abdullah, Anindya K. Ghosal, Rufina G. Alamo, “Enhanced Nucleation of Isotactic Poly(propylenes) with a Small Content of Long-Chain Branching” 36<sup>th</sup> Annual meeting of the North American Thermal Analysis Society (NATAS), August 18 – 20, Atlanta, GA 2008. Conference Proceedings, pages 1-6, 2008.

137. R. G. Alamo “Crystallization of Branched Polyolefins” 2<sup>nd</sup> International Conference of Polyolefins Characterization (ICPC), September 14 -17, 2008 Valencia, Spain.
138. M.Vadlamudi, R.G. Alamo, S. Gopinath, S. Shanbhag, M.Varma-Nair, D.M. Fiscus, G.M. Brown, C., Lu, C.J. Ruff “Molecular and Branching Distribution of a High Performance Metallocene Ethylene 1-Hexene Copolymer Film-Grade Resin” 2<sup>nd</sup> International Conference of Polyolefins Characterization (ICPC), September 14 -17, 2008 Valencia, Spain.
139. M. Vadlamudi, R.G. Alamo, “Crystallization Behavior of Model Long Chain Branch Polyethylenes with Different Branching Architectures” March Meeting of the American Physical Society. Pittsburgh, PA, March 17 - 20, 2009
140. R.G. Alamo, J.P. Fernandez-Blazquez, S.A. Abdullah, “Effect of ppm Levels of Long Chain Branching on the Crystallization of Isotactic Poly(propylenes) from the melt and from Solution” March Meeting of the American Physical Society. Pittsburgh, PA, March 17 - 20, 2009.
141. E. Pereira, R.G. Alamo, “Real-time FTIR Spectroscopic Study of the Crystallization process of Random isotactic Propylene-Ethylene Copolymers” Undergraduate Research and Creative Endeavors Symposium, FSU, Tallahassee, April 14, 2009
142. Juan P. Fernández-Blázquez, Eduardo Pereira, Linda Mejía, Rufina G. Alamo, “Real Time FTIR Spectroscopic Study of the Crystallization Process of Random Isotactic Propylene-1-Alkene Copolymers” Frontiers in Polymer Science, Mainz, Germany. June 7-9, 2009.
143. Tibor Macko, Robert Brull, Rufina G. Alamo, Yi Thomann, “Separation of Ethylene 1-Alkene Copolymers by High-Temperature Adsorption Liquid Chromatography” ACS National meeting, Division of Analytical Chemistry, Washington DC, August 16<sup>th</sup> -21<sup>st</sup>, 2009
144. R.G. Alamo, J.P. Fernandez-Blazquez, A.K. Ghosal, S.A. Abdullah, “Effect of Long Chain Branch Distribution on the Crystallization of Isotactic Poly(propylenes)” Annual meeting of the 37<sup>th</sup> North American Thermal Analysis Society (NATAS), September 19 – 23, Lubbock, TX 2009.
145. Carolina Ruiz-Orta, Juan P. Fernandez-Blazquez, Rufina G. Alamo, “Crystalline Properties and Melting Behavior of isotactic Poly(propylenes) with Regio Defects” Annual meeting of the 37<sup>th</sup> North American Thermal Analysis Society (NATAS), September 19 – 23, Lubbock, TX 2009.
146. Madhavi Vadlamudi, Rufina G. Alamo, “Thermal and Spectroscopic Analyses of the Effect of Long Chain Branching on the Crystallization and Phase Behavior of Model LCB Polyethylenes”. Annual meeting of the 37<sup>th</sup> North American Thermal Analysis Society

(NATAS), September 19 – 23, Lubbock, TX 2009.

147. R.G. Alamo, “Quiescent Crystallization of Model Poly(propylenes). Role of Defect Microstructure”. Mettler-Toledo Award Talk Annual meeting of the 37<sup>th</sup> North American Thermal Analysis Society (NATAS), September 19 – 23, Lubbock, TX 2009.
148. L.Santonja-Blasco, D. Bivins, A. Ribes-Greus, R.G. Alamo, “Effect of Thermal, Photo, and Biodegradation on the Crystallization Rate of Polylactide” *International Conference on Biodegradable Polymers and Sustainable Composites (BIOPOL-2009)*, Alicante, Spain. September 30<sup>th</sup> – October 2<sup>nd</sup>, 2009
149. Rufina G. Alamo, Juan P. Fernandez-Blazquez, Eduardo Pereira, Linda Mejia, Carolina Ruiz-Orta, “Real-Time FTIR Spectroscopic Study of the Crystallization Process of Random Isotactic Propylene-1-Alkene Copolymers” March Meeting of the American Physical Society. Portland, OR, March 15 - 19, 2010
150. Carolina Ruiz-Orta, Juan P. Fernandez-Blazquez, Rufina G. Alamo ”Melting and Crystalline Properties of isotactic Poly(propylenes) with 1,3 Defects” March Meeting of the American Physical Society. Portland, OR, March 15 - 19, 2010
151. R.G. Alamo, J.P. Fernandez-Blazquez, A.K. Ghosal, S.A. Abdullah, “Effect of Long Chain Branch Distribution on the Crystallization of Isotactic Poly(propylenes)” International Polymer Materials, Rolduc, Netherlands, May 16 – 19, 2010
152. C. Ruiz-Orta, R.G. Alamo “Melting and Crystallization of Isotactic Poly(propylenes) with 3,1 defects”. Gordon Research Conference in Polymer Physics. Mount Holyoke College, South Hadley, MA, June 27<sup>th</sup>- July 2<sup>nd</sup>, 2010
153. P. Kaner, C. Ruiz Orta, R.G. Alamo, “Kinetic Control of the Chlorine Distribution in the Crystals of Precisely Substituted Polyethylenes” Annual meeting of the 38<sup>th</sup> North American Thermal Analysis Society (NATAS), August 15 – 18, Philadelphia, PN 2010
154. T. Macko, B. Brüll, S. Losio, F. Forlini, R.G. Alamo, F. J. Stadler, Y. Thomann, “Separation of propene/alkene and ethylene/alkene copolymers by interactive HPLC” International Conference on Polyolefin Characterization, Shanghai, China, Nov 7 – 10, 2010
155. T. Macko, R.G. Alamo, Y. Wang, B. Brüll, “Relations Between Retention Volume in Liquid Chromatography of Poly(olefins) and their Average Chemical composition” International Conference on Polyolefin Characterization, Shanghai, China, Nov 7 – 10, 2010.
156. T. Macko, B. Brull, R.G. Alamo, S. Losio, F.J. Stadler, K. Kivistik, T. Poltimae, T. Thomann . “Influence of Molar Masses on Separation of Polyolefins with Gradient Adsorption Liquid Chromatography in System Hypercarb/1-Decanol/1,2,4



- Trichlorobenzene”. International Conference on Polyolefin Characterization, Shanghai, China, Nov 7 – 10, 2010.
157. Iñigo X. García-Zubiri, José R. Isasi, Gustavo González-Gaitano, and Rufina Alamo. “The effect of cyclodextrins on the crystallinity of isotactic polypropylene” International Conference on Polyolefin Characterization, Shanghai, China, Nov 7 – 10, 2010.
158. Carolina Ruiz-Orta, Rufina G. Alamo ” Kinetic Partitioning of 1-Butene Defect in Random Propylene 1-Butene Copolymers by Time-Resolved FTIR” March Meeting of the American Physical Society, Dallas, TX. March 20 -25, 2011.
159. R. G. Alamo, C. Ruiz-Orta, J.P. Fernandez-Blazquez, A. M. Anderson, G.W. Coates “Effect of (3,1) Chain-Walking Defects Compared with Other Regio and Constitutional Defects on the Crystallization and Melting of Isotactic Poly(propylene)” European Polymer Congress, Granada, Spain, June 26 – July 1<sup>st</sup>, 2011
160. Carolina Ruiz-Orta, Rufina G. Alamo “Characterization, Melting and Crystalline Properties of Isotactic (4,2)-Enchained Poly(1-Butene)” European Polymer Congress, Granada, Spain, June 26 – July 1<sup>st</sup>, 2011
161. L. Santonja-Blasco, A. Ribes-Greus, R.G. Alamo “Effect of Photo, Thermal and Biodegradation on Molar Mass and Crystallization of Polylactide” European Polymer Congress, Granada, Spain, June 26 – July 1<sup>st</sup>, 2011
162. R.G. Alamo “Effect of (3,1) Chain-Walking Defects on the Crystallization and Melting of Isotactic Poly(propylene)” *International Discussion Meeting on Polymer Crystallization*, Beijing, China, August 1<sup>st</sup> – August 5<sup>th</sup>, 2011.
163. Carolina Ruiz-Orta, Juan M. Lopez-Majada, Benjamin Reid, Rufina G. Alamo, “Cyclic and Linear Poly( $\alpha$ -peptoids): Influence of Architecture on Crystalline Properties” 39<sup>th</sup> North American Thermal Analysis Society (NATAS) Annual Meeting, Des Moines, IA, August 7 – 10, 2011
164. R. G. Alamo, C. Ruiz-Orta, A. M. Anderson, G.W. Coates “Effect of (3,1) Chain-Walking Defects on the Crystallization and Melting of Isotactic Poly(propylene)” ACS National Meeting. Division of Polymeric Materials Science and Engineering (PMSE) Denver, August 28 –September 2<sup>nd</sup>, 2011. *Polym. Prep*, **48** (1), pg. 168-169, 2011.
165. Ashley Cormier, Carolina Ruiz-Orta, Rufina G. Alamo, Anant Paravastu, “Solubility and Structural Analysis of Synthetic Designer Self-assembling Protein RADA16-I”. Materials Research Society. Fall 2011
166. Anant K. Paravastu, Ashley Cormier, Carolina Ruiz-Orta and Rufina Alamo, “Solid State

NMR Structural Analysis of the RADA16-I Designer Self-Assembling Peptide” AICHE Annual Meeting, Minneapolis, MN, October 16<sup>th</sup>-21<sup>st</sup> 2011.

167. E. Steven, J.G. Park, A. Paravastu, E.P. Lopes, O. Englander, J.S. Brooks, T. Siegrist, P. Kaner, R.G. Alamo. Physical characterization of functionalized spider silk: electronic and sensing properties, *9th Int. Symposium on Crystalline Organic Metals*, Gniezno-Poznan, Poland. September 25-30, 2011.
168. P. Kaner, C. Ruiz Orta, R.G. Alamo, E. Boz, K. B. Wagener, “Kinetic Control of the Halogen Distribution in Crystals of Precisely Substituted Polyethylenes” March Meeting of the American Physical Society, Boston, MA. Febr. 27<sup>th</sup> - March 2nd, 2012.
169. Eden Steven, Eric Jobilong, Jin Gyu Park, Anant Paravastu, Michael Davidson, Michelle Baird, Rufina Alamo, Papatya Kaner, James Brooks, Theo Siegrist, “Physical Characterization of Functionalized Silk Material for Electronic Application and Devices” March Meeting of the American Physical Society, Boston, MA. Febr. 27<sup>th</sup> - March 2nd, 2012.
170. M. Tasaki, C. Ruiz-Orta, E. Boz, K.B. Wagener and K. Tashiro, R.G. Alamo, “Kinetic Control of Chain Folding and Crystal Microstructure in Precisely Bromine-Substituted Polyethylenes” Annual Meeting of the Polymer Society of Japan, May 2012.
171. B. Reid, R.G. Alamo, “Melt Memory of Prior Crystallization in Model Ethylene Random Copolymers” 2012 AICHE Regional Conference, March 30-April 1<sup>st</sup>, Clemson, NC
172. P. Kaner, C. Ruiz-Orta, R.G. Alamo, E. Boz, K. B. Wagener “On the Two Crystallite Forms of Precisely Chlorine Substituted Polyethylenes” 40<sup>th</sup> North American Thermal Analysis Society (NATAS) Annual Meeting, Orlando, FL, August 12 – 15, 2012.
173. W. Zhang, L. Santonja, R.G. Alamo, E. Boz, K. B. Wagener “Unusual Temperature Dependence of the Growth Rate of a Bromine Substituted Polyethylene” 40<sup>th</sup> North American Thermal Analysis Society (NATAS) Annual Meeting, Orlando, FL, August 12 – 15, 2012.
174. Juan M. Lopez-Majada, M. Vadlamudi, Rufina G. Alamo. “Bivariate Distribution of Ethylene Copolymers Using GPC and DSC” 40<sup>th</sup> North American Thermal Analysis Society (NATAS) Annual Meeting, Orlando, FL, August 12 – 15, 2012.
175. Madhavi Vadlamudi, Rufina Alamo, Manika Varma-Nair. “Thermal Analysis to probe the Complex Bivariate Distribution (Molecular and Branching Distribution) of Ethylene-1-Alkene Copolymer” 40<sup>th</sup> North American Thermal Analysis Society (NATAS) Annual Meeting, Orlando, FL, August 12 – 15, 2012.

176. H. Janani, Juan M. Lopez-Majada, R.G. Alamo. "Phase Structure and Morphology of Blends of Homogeneous Propylene 1-Hexene Copolymers" 40<sup>th</sup> North American Thermal Analysis Society (NATAS) Annual Meeting, Orlando, FL, August 12 – 15, 2012.
177. L. Santonja-Blasco, A. Ribes-Greus, R.G. Alamo. "Comparative Thermal, Biological and Photo Degradation Kinetics of Polylactide and Effect on Crystallization Rates" 40<sup>th</sup> North American Thermal Analysis Society (NATAS) Annual Meeting, Orlando, FL, August 12 – 15, 2012.
178. Benjamin O. Reid, Madhavi Vadlamudi and Rufina G. Alamo "Melt Memory of Prior Crystallization in Model Random Ethylene Copolymers" 40<sup>th</sup> North American Thermal Analysis Society (NATAS) Annual Meeting, Orlando, FL, August 12 – 15, 2012.
179. R.G. Alamo "Crystalline Properties of Late Generation Polyolefins" 4<sup>th</sup> International Conference on Polyolefins Characterization (ICPC), Houston, TX October 21 – 24, 2012
180. Carolina Ruiz-Orta, Juan P. Fernandez-Blazquez, Rufina G. Alamo\*, Amelia M. Anderson, Geoffrey W. Coates, "Melting and Crystalline Properties of Isotactic poly(propylenes) with 3,1 Defects" 4<sup>th</sup> International Conference on Polyolefins Characterization (ICPC), Houston, TX October 21 – 24, 2012
181. M. Vadlamudi, R.G. Alamo "Model Long Chain Branch (LCB) polyethylenes : A detailed Study of Crystallization Behavior and Phase Structure with LCB Architecture" 4<sup>th</sup> International Conference on Polyolefins Characterization (ICPC), Houston, TX October 21 – 24, 2012
182. R.G. Alamo, "Composition and Topology effects on Crystallization" ExxonMobil 2nd Polyolefin Crystallization Symposium. The Woodlands, TX October 25 – 26, 2012
183. G. Trujillo, H. Janani, J.M. Lopez-Majada and R.G. Alamo. "Effects of Blending on the Crystallization Rate of Random Propylene 1-Hexene Copolymers" BMES (Biomedical Engineering Society) Meeting. October 24-27, 2012. Atlanta, GA.
184. R.G. Alamo, W. Zhang, L. Santonja, E. Boz, K. B. Wagener, "Unusual Temperature Dependence of the Growth Rate of a Bromine Substituted Polyethylene" March Meeting of the American Physical Society, Baltimore, MD. March 10<sup>th</sup> - March 14<sup>th</sup>, 2013
185. H. Janani, R.G. Alamo, "Rate of Formation of Trigonal Phase in Blends of Homogeneous Propylene 1-Hexene Copolymers" March Meeting of the American Physical Society, Baltimore, MD. March 10<sup>th</sup> - March 14<sup>th</sup>, 2013
186. R.G. Alamo, (*invited*) R. Smith, P. Kaner, C. Ruiz Orta, E. Boz, K. B. Wagener "Crystallization of Novel Ethylene-Halide Copolymers" ACS National Meeting. Division of

Polymeric Materials Science and Engineering. Providing Opportunities for Under-Represented Students in Polymer Science: Symposium in Honor of Professor Peggy Cebe. New Orleans, LA, April 7<sup>th</sup> – April 12<sup>th</sup>, 2013.

187. R.G. Alamo, (*invited*) “Crystallization of Novel Ethylene-Halide Copolymers” *International Discussion Meeting on Polymer Crystallization*, Kyoto, Japan, June 30<sup>th</sup> – July 4<sup>th</sup>, 2013.
188. L. Zhang, D. Cavallo, G.C. Alfonso, L. Gardella, R. Alamo “Unexpected inversion of the rate of structuring in metallocene copolymers of isotactic polypropylene” *European Polymer Congress*, Pisa, Italy, June 16 – 21, 2013.
189. H. Janani, R.G. Alamo, “Melt Miscibility and Isothermal Crystallization Kinetics of Blends of Homogeneous isotactic Propylene-1-Hexene Copolymers” 41<sup>st</sup> North American Thermal Analysis Society (NATAS) Annual Meeting, Bowling Green, Kentucky, August 4 – 7, 2013
190. M. Vadlamudi, R.G. Alamo, “Crystallization Behavior and Phase Structure with Long Chain branched (LCB) Architecture: Model LCB Polyethylenes” 41<sup>st</sup> North American Thermal Analysis Society (NATAS) Annual Meeting, Bowling Green, Kentucky, August 4 – 7, 2013
191. R.G. Alamo, (**invited**) “Crystalline Properties of Late Generation Polyolefins” *ACS Workshop Advances in Polyolefins*, Santa Rosa, California, October 13<sup>th</sup> – 16<sup>th</sup>, 2013.
192. R.G. Alamo, (**invited**) “Melt topology of random ethylene copolymers above the equilibrium melting point analyzed by differential scanning calorimetry” ACS National Meeting. Division of Polymeric Materials Science and Engineering. Symposium in Honor of B. Wunderlich. Dallas, TX, March 16-20, 2014.
193. Xiaoshi Zhang, Laura Santonja-Blasco, Rufina G. Alamo, “Polymorphism of Precision Halogen Substituted Polyethylenes Studied by Thermal, Microscopy and Spectroscopic Techniques”, ACS Florida Section, Innisbrook, FL, May 8-10, 2014
194. Xuejian Chen, Al Mamun, Rufina G. Alamo, “Effect of length of 1-alkene on melt memory of crystallization above the equilibrium melting temperature of random ethylene copolymers” ACS Florida Section, Innisbrook, FL, May 8-10, 2014.
195. (**invited**) Rufina G. Alamo, “Crystallization and Growth of Halogen Substituted Polyethylenes: Toward Advanced Polyolefin-like Materials” Gordon Research Conference, Polymer Physics, *New Developments in Polymer Dynamics, Crystallization, Self-Assembly, and Interface/Confinement Effects*. Mount Holyoke College, South Hadley, MA, July 13 -18, 2014.

196. Xiaoshi Zhang, Laura Santonja-Blasco, Rufina G. Alamo, "FTIR Analysis of the Effect of Chlorine on Polymorphism of Precision Halogen Substituted Polyethylene", Gordon Research Conference, Polymer Physics, *New Developments in Polymer Dynamics, Crystallization, Self-Assembly, and Interface/Confinement Effects*. Mount Holyoke College, South Hadley, MA, July 13 -18, 2014.
197. L. Santonja Blasco, J.D. Badia, A. Martínez Felipe, R.G. Alamo, A. Ribes Greus, "Kinetics of Thermal Decomposition of Polylactide Previously Subjected to Thermal, Bio and Photo degradation" 42<sup>nd</sup> North American Thermal Analysis Society (NATAS) Annual Meeting, Santa Fe, NM, September 14-17, 2014.
198. L. Santonja-Blasco, X. Zhang, E. Boz, K.B. Wagener, R.G. Alamo, "Crystallization Kinetics of Polyethylenes with Precise Chlorine Substitution" 42<sup>nd</sup> North American Thermal Analysis Society (NATAS) Annual Meeting, Santa Fe, NM, September 14-17, 2014.
199. **(invited)** R.G. Alamo, A. Mamun, X. Chen, " Melt Topology of Ethylene Copolymers above the Equilibrium Melting Temperature" 5<sup>th</sup> International Conference on Polyolefins Characterization (ICPC), Valencia, Spain, September 21 – 24, 2014
200. Xuejian Chen, Laura Santonja-Blasco, Al Mamun and Rufina G. Alamo, "Effect of length of 1-alkene on melt memory of crystallization above the equilibrium melting temperature of random ethylene copolymers" 5<sup>th</sup> International Conference on Polyolefins Characterization (ICPC), Valencia, Spain, September 21 – 24, 2014.
201. L. Santonja-Blasco, X. Zhang, E. Boz, K.B. Wagener, R.G. Alamo, "Polymorphism and Crystallization Kinetics of Polyethylenes with Precise Chlorine Substitution" 5<sup>th</sup> International Conference on Polyolefins Characterization (ICPC), Valencia, Spain, September 21 – 24, 2014.
202. **(invited)** R.G. Alamo, A. Mamun, X. Chen, " Melt Topology of Ethylene Copolymers above the Equilibrium Melting Temperature", Workshop on *Recent Advances and New Perspectives in Polymer Crystallization* Genova, Italy, September 29 – 30, 2014.
203. Xiaoshi Zhang, Laura Santonja-Blasco, and Rufina G. Alamo, "Polymorphism of Precision Halogen Substituted Polyethylenes Studied By Thermal, Microscopy and Spectroscopic Techniques" AICHE 2014 Annual Meeting, Atlanta, GA, Nov 16 -21, 2014.
204. Rufina G. Alamo, Al Mamun, Xuejian Chen, "Interplay Between a Strong Memory Effect of Crystallization and Liquid-Liquid Phase Separation in Melts of Broadly Distributed Ethylene 1-Alkene Copolymers" March Meeting of the American Physical Society, San Antonio, TX. March 1<sup>st</sup> - March 6<sup>th</sup>, 2015.

205. X. Chen, A. Mamun, R.G. Alamo, “Effect of Crystallinity on Melt Memory of Random Ethylene Copolymers” March Meeting of the American Physical Society, San Antonio, TX. March 1<sup>st</sup> - March 6<sup>th</sup>, 2015.
206. Al Mamun, Xuejian Chen and Rufina G. Alamo, “Strong Memory of Crystallization in Melts of Broadly Distributed Ethylene 1-Alkene Copolymers. A Study of Molar Mass and Comonomer Compositions Fractions” 43<sup>rd</sup> North American Thermal Analysis Society (NATAS) Annual Meeting, Montreal, Quebec, Canada, August 10-13, 2015.
207. R.G. Alamo, **(invited)** “Melt Memory of Crystallization and Melt Structure of LLDPEs” *ACS Worskshop, Advances in Polyolefins 2015*, Santa Rosa, California, September 21<sup>st</sup> – 24<sup>th</sup>, 2015.
208. R.G. Alamo, X. Chen, A. Mamun, M. Ren, Y. Sang, “Melt structure and self-nucleation of ethylene copolymers” *New Frontiers in Polymer Crystallization Symposium*, ACS Pacificchem Conference combined with the 2015 International Chemical Congress of Pacific Basin Societies, Honolulu, Hawaii, December 15<sup>th</sup>-20<sup>th</sup>, 2015.
209. Xiaoshi Zhang, Laura Santonja-Blasco, Rufina G. Alamo, “FTIR Spectroscopic analysis of the crystallization of precision halogen substituted polyethylenes” *New Frontiers in Polymer Crystallization Symposium*, ACS Pacificchem Conference combined with the 2015 International Chemical Congress of Pacific Basin Societies, Honolulu, Hawaii, December 15<sup>th</sup>-20<sup>th</sup>, 2015.
210. R.G. Alamo **(invited)** “Melt Memory of Crystallization and Melt Structure of Random Ethylene Copolymers” ACS National Meeting. Division of Polymeric Materials Science and Engineering. Polyethylene Symposium. San Diego, CA, March 13-18, 2016.
211. X. Zhang, L. Santonja-Blasco, R.G. Alamo, “FTIR Spectroscopic analysis of the crystallization of precision halogen substituted polyethylenes” ACS National Meeting. Division of Polymeric Materials Science and Engineering. Polyethylene Symposium. San Diego, CA, March 13-18, 2016.
212. R.G. Alamo **(invited)**, “Melt structure and self-nucleation of ethylene copolymers” March Meeting of the American Physical Society, Focus Session: Polymer Architecture, Control of Structure and Dynamics in Polyolefins, Baltimore, MD. March 13 - March 18, 2016.
213. O. Okpowe, R.G. Alamo “Stereocomplex formation of poly (propylene succinate) from the melt” FAME 2016, Florida Section of the American Chemical Society Meeting, Innisbrook, FL, May 5 – 7, 2016
214. R.G. Alamo **(invited)**, IPRIME Meeting, “New Aspects of the Crystallization and Melt Structure of Ethylene/ 1-Alkene Copolymers”, in *Polyolefins: Synthesis, Characterization*,

*Processing, and Properties*, Microstructured Polymers Program, University of Minnesota, May 31<sup>st</sup> – June 1<sup>st</sup>, 2016.

215. R.G. Alamo, O. Okpoue, G. Coates, J. Longo “Stereocomplex crystallization of poly (propylene succinate) from the melt” 44<sup>th</sup> North American Thermal Analysis Society (NATAS) Annual Meeting and ICTAC, Orlando, FL, August 14<sup>th</sup> – 19<sup>th</sup>, 2016.
216. L. Santonja-Blasco, W. Rungswang, R.G. Alamo “Characterization and properties of dual reactor Ziegler-Natta impact polypropylene copolymers (IPC)” 44<sup>th</sup> North American Thermal Analysis Society (NATAS) Annual Meeting and ICTAC, Orlando, FL, August 14<sup>th</sup> – 19<sup>th</sup>, 2016.
217. X. Zhang, L. Santonja-Blasco, K. Wagener, E. Boz, R.G. Alamo “Crystallization Kinetics of Chlorinated Precision Polyethylene” 44<sup>th</sup> North American Thermal Analysis Society (NATAS) Annual Meeting and ICTAC, Orlando, FL, August 14<sup>th</sup> – 19<sup>th</sup>, 2016.
218. X. Zhang, L. K. Wagener, E. Boz, R.G. Alamo “Crystalline Layered Structure of Precision Halogen Substituted Polyethylenes measured by DSC, WAXD and FTIR” 44<sup>th</sup> North American Thermal Analysis Society (NATAS) Annual Meeting and ICTAC, Orlando, FL, August 14<sup>th</sup> – 19<sup>th</sup>, 2016.
219. X. Chen, R.G. Alamo “Effect of Melt Annealing on Self-Nucleation of Random Ethylene 1-Alkene Copolymers” 44<sup>th</sup> North American Thermal Analysis Society (NATAS) Annual Meeting and ICTAC, Orlando, FL, August 14<sup>th</sup> – 19<sup>th</sup>, 2016.
220. R.G. Alamo (**invited**), “Composition Distribution, Chain Architecture and Melt Topology Effects on Self-Nucleation and Crystallization of Ethylene Copolymers” 6<sup>th</sup> International Conference on Polyolefins Characterization (ICPC), Shanghai, China, November 6 – 9, 2016
221. L. Santonja-Blasco, W. Rungswang, R.G. Alamo “Influence of chain microstructure on LLPS and crystallization of dual reactor Ziegler-Natta made impact polypropylene ethylene copolymers (IPC)” 6<sup>th</sup> International Conference on Polyolefins Characterization (ICPC), Shanghai, China, November 6 – 9, 2016
222. Minqiao Ren, Honghong Huang, DongWei, Meifang Guo, Rufina G. Alamo. Effect of comonomer content distribution on the strong memory effect of crystallization and liquid-liquid phase separation in the melt of Ziegler-Natta and metallocene ethylene copolymers. 6<sup>th</sup> International Conference on Polyolefins Characterization (ICPC), Shanghai, China, November 6 – 9, 2016
223. R.G. Alamo (**invited**), “Understanding Melt-Memory of Commercial Polyolefins” March Meeting of the American Physical Society, Focus Session: *Polymer Physics - From Academia to Industry and Back*, New Orleans, LA. March 13 - March 17, 2017.

224. C. Chen, R.G. Alamo, G.D. Wignall, L. He, "Evidence of LLPS in melts of broadly distributed ethylene copolymers via deuterium labeling and effect on self-nucleation and crystallization" March Meeting of the American Physical Society, New Orleans, LA. March 13 - March 17, 2017.
225. Xiaoshi Zhang, W. Zhang, Rufina G. Alamo, E. Boz. K. B. Wagener " Overall Isothermal Crystallization Kinetics in a Wide Temperature Range of Precision Polyethylenes with Bromine" March Meeting of the American Physical Society, New Orleans, LA. March 13 - March 17, 2017.
226. R.G. Alamo **(invited)**, "Effect of melt viscosity on self-nucleation of *ethylene-* and *propylene-1-alkene* random copolymers" ACS Applied Polymers Award Symposium. 253rd ACS National Meeting, San Francisco, CA, April 2-8, 2017.
227. R.G. Alamo **(invited)** "Understanding Melt-Memory of Commercial Polyolefins" POLYMAT, San Sebastian, Spain, May 31<sup>st</sup>, 2017.
228. R.G. Alamo **(invited)** "Crystallization of Precision Halogen Substituted Polyethylenes: Toward Advanced Polyolefin-like Materials" Center for Physics of Materials (CFM), San Sebastian, Spain, June 9th, 2017.
229. C. Chen, C. Lopez-Barron, Y. Zheng, R.G. Alamo "Phase Separation in the Melt of a Broadly Distributed Random Ethylene Copolymer Showing Special Memory Effect on Crystallization Demonstrated By SANS" Texas Soft Matter Meeting, Houston, TX, August 18<sup>th</sup> 2017.
230. **(invited)** R.G. Alamo, X. Chen, Q. Chen "Peculiar Homogeneous Nucleation of Crystalline Polyolefins" *ACS Workshop, Advances in Polyolefins 2017*, Santa Rosa, California, September 17 – 20<sup>th</sup>, 2017.
231. D. Cavallo, F. Barbieri, L. Sangroniz, A. Santamaria, R.G. Alamo, A.J. Müller, "Rheology of self-nucleated poly( $\epsilon$ -caprolactone) melts", IDMPCC 2017, International Discussion Meeting on Polymer Crystallization, September 17 – 20<sup>th</sup>, 2017.
232. Xiaoshi Zhang, Sidney Cameron, Patrick Ortmann, Stefan Mecking, Rufina G. Alamo, "Crystallization of precision polyethylenes with acetal groups" Symposium on Polymers with Complex Architecture: From Synthesis to Self-Assembly, PMSE Division ACS National Meeting, March 18-22, New Orleans, 2018.
233. Xuejian Chen, Carlos R. Lopez-Barron, Yiming Zeng, Rufina G. Alamo, Concentration Fluctuations during Nucleation in a Phase Separating Broad Ethylene Copolymer Lead to Partial Dissolution of Melt Memory, PMSE Division ACS National Meeting, March 18-22, New Orleans, 2018.



234. R.G. Alamo (**invited**) “New Aspects of the Crystallization of Random and Precision Ethylene Copolymers” Department of Polymer Science and Engineering, March 30<sup>th</sup>, 2018. UMass, Amherst, MA.
235. R.G. Alamo (**invited**) “Understanding Melt-Memory of Commercial Polyolefins” XI Congresso Brasileiro de Análise Térmica e Calorimetria, April 22-24, 2018. Rio de Janeiro, Brazil
236. Rufina G. Alamo, Xiaoshi Zhang, Laura Santonja-Blasco “Spectroscopic and x-Ray Characterization of the Crystalline Packing of Ethylene Copolymers with Equidistant Placement of Co-units” 7<sup>th</sup> International Conference on Polyolefins Characterization (ICPC), Houston, October 21 – 24, 2018
237. Xuejian Chen, Carlos López-Barrón, Rufina G. Alamo “Effect of Branching Distribution on Liquid-Liquid Phase Separation in Broad Ethylene Copolymers” 7<sup>th</sup> International Conference on Polyolefins Characterization (ICPC), Houston, October 21 – 24, 2018
238. R.G. Alamo (**invited**) “Crystallization of Precision Polyethylenes” March Meeting of the American Physical Society, Focused Session in Polymer Crystallization, Boston, MA. March 3 - March 8, 2019.
239. S.F. Marxsen, R.G. Alamo, “Contrasting melt memory of homopolymers and random ethylene copolymers using halogen substitution with precision placement or random distribution” March Meeting of the American Physical Society, Focused Session in Polymer Crystallization, Boston, MA. March 3 - March 8, 2019.
240. Daokun Song, Xiaoshi Zhang, Rufina G. Alamo, Irma Flores, Alejandro J. Muller “Morphology and crystallization kinetics of poly(ethylene brassylate)” March Meeting of the American Physical Society, Focused Session in Polymer Crystallization, Boston, MA. March 3 - March 8, 2019.
241. X. Zhang, S. Cameron, R.G. Alamo, “Unusual crystallization kinetics of long-spaced polyacetals” American Physical Society, Focused Session in Polymer Crystallization, Boston, MA. March 3 - March 8, 2019.

#### B. *Invited Presentations*

1. Alamo R.G.\* "The Use of Raman Spectroscopy in the Characterization of the Structure and Properties of Semicrystalline Polymers". Primer Simposio Iberoamericano de Polimeros. Vigo. Spain, 1992.

2. Alamo R.G.\* "The Crystallization Behavior of Long-Chain n-Alkanes and Low Molecular Weight Polyethylenes". NATO Advanced Research Workshop on Polymer Crystallization. Mons, Belgium, 1992.
3. Alamo R.G.\* , L. Mandelkern. "Crystallization Kinetics of Long Chain N-Alkanes". Annual Meeting of the American Chemical Society (Florida Section). Orlando, Florida. May 5 - 8, 1993.
4. Alamo R.G.\* , L. Mandelkern, H. G. Zachmann, N. Stribeck. "The Use of Raman Spectroscopy and Small Angle X-ray Scattering in Characterizing the Phase Structure of Polyethylene and Random Ethylene Copolymers". Symposium on Hyphenated Techniques in Polymer Characterization. ACS National Meeting. Division of Polymeric Materials, Chicago, August, 1993.
5. Alamo R.G.\* "The Crystallization Behavior of Random Copolymers of Ethylene" Cooperative Research Award Symposium. Polymeric Materials: Science and Engineering Division of the ACS. ACS National Meeting. Anaheim, April, 1995.
6. Alamo R.G.\* , M.J. Galante, J.C. Lucas, L. Mandelkern. "The Crystallization and Melting Behavior of Polypropylenes from Different Catalyst Systems". Symposium on Advances in Crystalline Polymers. Polymer Chemistry Division. ACS National Meeting. Anaheim, April, 1995.
7. Mandelkern\* L., R.G. Alamo, "Raman Spectroscopy and Crystalline Polymers: The Polyethylenes". ACS National Meeting. Division of Polymeric Materials Science and Engineering. Orlando. August, 1996.
8. Alamo\*, R.G, M.H. Kim., L. Mandelkern, M.J. Galante. G.D. Wignall, J.D. Londono, F.C. Stehling. "The Cocrystallization of Mixtures of Homopolymers and Copolymers: Polyolefins". ACS National Meeting. Division of Polymeric Materials Science and Engineering. Symposium on Newer Methods in Thermal Analysis. Dallas, TX. March, 1998.
9. R.G. Alamo\*. "Crystallization Behavior and Properties of Polypropylenes" International Macromolecular Symposium on *Molecular Interactions and Time-Space Organization in Macromolecular Systems*. Osaka, Japan. June, 1998.
10. R.G. Alamo\*. "The Co-Crystallization Behavior of Binary Blends of Isotactic Poly(propylene) and Propylene-Ethylene Random Copolymers and its Relevance to the Analysis of the CCD by TREF" Workshop on Advances in Polyolefins II. October 24-27, 1999. Napa California.
11. Alamo\*, R.G., W.T. Huang, L. Mandelkern, " Kinetics of Isothermal Melting of Isotactic Polypropylenes with Different Degrees of Isotacticity" ACS National Meeting. Division of

Polymer Chemistry. Washington D.C., August 19, 2000.

12. Simanke\*, A.G., Alamo. R.G., G. Galland, R. Mauler. "The Thermodynamic and Structural Properties of Metallocene Type Random Ethylene Copolymers" IX International Macromolecular Colloquium, November, 10- 15. Porto Alegre, Brazil, 2001.
13. Alamo\*, R.G. "Crystallization and Melting Kinetics of Poly(Propylenes): Effect of Concentration and Type of Defects" POLYOLEFINS III Symposium. October 7 – 10. Sonoma, California, 2001.
14. Alamo\*, R.G. "The Role of Defect Microstructure in the Crystallization Behavior of Metallocene and MgCl<sub>2</sub>-Supported Ziegler-Natta Isotactic Poly(propylenes)" 7th Brazilian Polymer Congress. November 9, 2003
15. **(Plenary)** R.G. Alamo "Crystallization and Morphology of Matched Fractions of MgCl<sub>2</sub>-Supported Ziegler Natta and Metallocene Isotactic Polypropylene. The Role of Chain Microstructure" Brazilian Polymer Congress. Bello Horizonte, Brazil, November 2003
16. R.G. Alamo "Melt and Nano-Scale Crystalline Properties of Industrial Poly(Propylenes) of the Ziegler-Natta and Metallocene Types. The Role of Defect Microstructure" CAPCE-ARC Second Rheology Workshop. Seoul, Korea. September 4-5, 2003
17. R.G. Alamo, I.L. Hosier, J. Chatterjee, "Polymorphism and Crystallization Kinetics of Random Propylene Copolymers" ACS National Meeting. Division of Polymeric Materials Science and Engineering. Philadelphia, August 2004
18. **(Plenary)** R. G Alamo, "Crystallization of Poly(propylenes): The Role of Chain Microstructure" ARCHIPOL 05, Bi-annual Meeting of the Polymer Society in South America. Argentina, December 4-7, 2005.
19. R. G. Alamo, "Semicrystalline Polyolefins, Structure-Properties Relations", University of Santiago de Chile, Department of Chemistry and Technology of Polymers. December 12<sup>th</sup>, 2005.
20. **(Plenary)** R. G Alamo, "Crystallization of Poly(propylenes): The Role of Chain Microstructure" ICPC. International Conference on Polymer Characterization, Houston, October 16 – 18, 2006
21. Invited speaker at the ACS celebration of the 50<sup>th</sup> Anniversary of the Discovery of Single Crystals. Symposium: "Fifty Years After the Discovery of Polymer Single Crystals – A Look Back, Current Discoveries, and Future Opportunities" ACS National Meeting, Boston August 19 -23, 2007.

22. **(Plenary)** R. G. Alamo, “Crystallization of Short Branched Polyolefins. From the Random to the Precise Branch Placement “ in *International Symposium on Polymer Crystallization* , Mishima, Japan, September 21 – 24, 2007
23. **(Plenary)** R. G. Alamo “Crystallization of Branched Polyolefins” 2<sup>nd</sup> International Conference of Polyolefins Characterization (ICPC), September 14 -17, 2008 Valencia, Spain.
24. M.Vadlamudi, R.G. Alamo, S. Gopinath, S. Shanbhag, M.Varma-Nair, D.M. Fiscus, G.M. Brown, C., Lu, C.J. Ruff “Molecular and Branching Distribution of a High Performance Metallocene Ethylene 1-Hexene Copolymer Film-Grade Resin” 2<sup>nd</sup> International Conference of Polyolefins Characterization (ICPC), September 14 -17, 2008 Valencia, Spain.
25. **(Plenary, Outstanding NATAS Award)** R.G. Alamo, “Quiescent Crystallization of Model Poly(propylenes). Role of Defect Microstructure”. Mettler-Toledo Award Talk Annual meeting of the 37<sup>th</sup> North American Thermal Analysis Society (NATAS), September 19 – 23, Lubbock, TX 2009.
26. **(Plenary)** R.G. Alamo, “Quiescent Crystallization of Model Polyolefins. Role of Defect Microstructure” Symposium on Polyolefin Crystallization, organized by the ExxonMobil Research and Engineering Center. Clinton, NJ July 21<sup>th</sup> - 23<sup>rd</sup> 2009.
27. Rufina G. Alamo “Characterization, Melting and Crystalline Properties of Isotactic (4,2)-Enchained Poly(1-Butene)” European Polymer Congress, Granada, Spain, June 26 – July 1<sup>st</sup>, 2011
28. R.G. Alamo “ Effect of (3,1) Chain-Walking Defects on the Crystallization and Melting of Isotactic Poly(propylene)” *International Discussion Meeting on Polymer Crystallization*, Beijing, China, August 1<sup>st</sup> – August 5<sup>th</sup>, 2011.
29. R.G. Alamo “Crystalline Properties of Late Generation Polyolefins” 4<sup>th</sup> International Conference on Polyolefins Characterization (ICPC), Houston, TX October 21 – 24, 2012
30. R.G. Alamo, “Composition and Topology effects on Crystallization” ExxonMobil 2<sup>nd</sup> Polyolefin Crystallization Symposium. The Woodlands, TX October 25 – 26, 2012
31. R.G. Alamo, *(invited)* R. Smith, P. Kaner, C. Ruiz Orta, E. Boz, K. B. Wagener “Crystallization of Novel Ethylene-Halide Copolymers” ACS National Meeting. Division of Polymeric Materials Science and Engineering. Providing Opportunities for Under-Represented Students in Polymer Science: Symposium in Honor of Professor Peggy Cebe. New Orleans, LA, April 7<sup>th</sup> – April 12<sup>th</sup>, 2013.

32. R.G. Alamo, *(invited)* “Crystallization of Novel Ethylene-Halide Copolymers” *International Discussion Meeting on Polymer Crystallization*, Kyoto, Japan, June 30<sup>th</sup> – July 4<sup>th</sup>, 2013.
33. R.G. Alamo, *(invited)* “Crystalline Properties of Late Generation Polyolefins” *ACS Workshop Advances in Polyolefins*, Santa Rosa, California, October 13<sup>th</sup> – 16<sup>th</sup>, 2013.
34. R.G. Alamo, *(invited)* “Melt topology of random ethylene copolymers above the equilibrium melting point analyzed by differential scanning calorimetry” ACS National Meeting. Division of Polymeric Materials Science and Engineering. Symposium in Honor of B. Wunderlich. Dallas, TX, March 16-20, 2014.
35. **(invited)** Rufina G. Alamo, “Crystallization and Growth of Halogen Substituted Polyethylenes: Toward Advanced Polyolefin Materials” Gordon Research Conference, Polymer Physics, *New Developments in Polymer Dynamics, Crystallization, Self-Assembly, and Interface/Confinement Effects*. Mount Holyoke College, South Hadley, MA, July 13 -18, 2014.
36. **(invited)** R.G. Alamo, A. Mamun, X. Chen, “ Melt Topology of Ethylene Copolymers above the Equilibrium Melting Temperature” 5<sup>th</sup> International Conference on Polyolefins Characterization (ICPC), Valencia, Spain, September 21 – 24, 2014
37. **(invited)** R.G. Alamo, A. Mamun, X. Chen, “ Melt Topology of Ethylene Copolymers above the Equilibrium Melting Temperature”, Workshop on *Recent Advances and New Perspectives in Polymer Crystallization* Genova, Italy, September 29 – 30, 2014.
38. R.G. Alamo, **(invited)** “Melt Memory of Crystallization and Melt Structure of LLDPEs” *ACS Workshop, Advances in Polyolefins 2015*, Santa Rosa, California, September 21<sup>st</sup> – 24<sup>th</sup>, 2015.
39. R.G. Alamo **(invited)** “Melt Memory of Crystallization and Melt Structure of Random Ethylene Copolymers” ACS National Meeting. Division of Polymeric Materials Science and Engineering. Polyethylene Symposium. San Diego, CA, March 13-18, 2016.
40. R.G. Alamo **(invited)**, “Melt structure and self-nucleation of ethylene copolymers” March Meeting of the American Physical Society, Focus Session: Polymer Architecture, Control of Structure and Dynamics in Polyolefins, Baltimore, MD. March 13 - March 18, 2016.
41. R.G. Alamo **(invited)**, IPRIME Meeting, “Polyolefins: Synthesis, Characterization, Processing, and Properties” Microstructured Polymers Program, University of Minnesota, may 31<sup>st</sup> – June 1<sup>st</sup>, 2016.
42. R.G. Alamo **(invited)**, “Composition Distribution, Chain Architecture and Melt Topology Effects on Self-Nucleation and Crystallization of Ethylene Copolymers” 6<sup>th</sup> International

Conference on Polyolefins Characterization (ICPC), Shanghai, China, November 6 – 9, 2016

43. R.G. Alamo **(invited)**, “Understanding Melt-Memory of Commercial Polyolefins” March Meeting of the American Physical Society, Focus Session: *Polymer Physics - From Academia to Industry and Back*, New Orleans, LA. March 13 - March 17, 2017.
44. R.G. Alamo **(invited)**, “Effect of melt viscosity on self-nucleation of *ethylene-* and *propylene-1-alkene* random copolymers” ACS Applied Polymers Award Symposium. 253rd ACS National Meeting, San Francisco, CA, April 2-8, 2017.
45. **(invited)** R.G. Alamo, X. Chen, Q. Chen “Peculiar Homogeneous Nucleation of Crystalline Polyolefins” *ACS Workshop, Advances in Polyolefins 2017*, Santa Rosa, California, September 17 – 20<sup>th</sup>, 2017.
46. R.G. Alamo **(invited)** “Understanding Melt-Memory of Commercial Polyolefins” XI Congresso Brasileiro de Análise Térmica e Calorimetria, April 22-24, 2018. Rio de Janeiro, Brazil
47. R.G. Alamo **(invited)** “Crystallization of Precision Polyethylenes” March Meeting of the American Physical Society, Focused Session in Polymer Crystallization, Boston, MA. March 3 - March 8, 2019.

### C. *Invited Seminars and Lectures*

1. Physical Chemistry Seminar Series. Institute of Molecular Biophysics. Florida State University. Tallahassee, Fl. April, 1984.  
"Properties of Solution-Formed Crystals of Ethylene Copolymers".
2. Lecturer at the Instituto de Plasticos y Caucho of the National Research Council in Madrid, Spain. December, 1990.  
"Desde los n-Alkanos al Polietileno. La Cristalizacion de Moleculas de Cadena Larga"
3. Physical Chemistry Seminar Series. Institute of Molecular Biophysics. Florida State University. Tallahassee, Florida. February, 1991.  
"From the n-Alkanes to the Polyethylene. The Crystallization of Long Chain Molecules"
4. Lecturer at the Seminar, "New Methods of Characterization of Polymers" of the First Iberoamerican Symposium of Polymers. Vigo. Spain, June 1992.  
"The Use of Raman Spectroscopy in Characterizing the Structure and Properties of Crystalline Polymers"

5. Chemical Engineering Seminar Series. FAMU-FSU College of Engineering. Tallahassee, Florida. March, 1993.  
"Structure and Properties of Random Ethylene Copolymers"
6. Chemistry Seminars. Florida Agricultural and Mechanical University (FAMU). "Crystallization of Long Chain Molecules". Tallahassee, Florida. June, 1993.
7. Lecturer at the National University of Costa Rica. Department of Chemistry, Polymer Section. June, 1993.  
"Structure - Properties Relations in Polyethylenes".
8. Chemistry Seminars. University of South Florida (USF). Tampa, Florida. October, 1995.  
"Crystallization of Chain Molecules".
9. Tallahassee Section of the AICHE. August, 1995.  
"Crystallization and Properties of Polyolefins".
10. The Baytown Polymer Center Lecture Series. The EXXON Chemical Co. Baytown, TX. September, 1996.  
"The Dependence on the Molecular Structure of the Morphology and the Crystallization and Melting Behavior of Polypropylenes".
11. University of Florida. Physical Chemistry Seminar. Gainesville, FL. December 2, 1996.  
"The Crystallization of Long Chain Molecules".
12. The DOW Chemical CO. Lecture Series. Freeport, TX. July 29, 1997.  
"Morphology, Crystallization and Melting Behavior of Polypropylenes".
13. The Baytown Polymer Center Lecture Series. The EXXON Chemical Co. Baytown, TX. February, 1998.  
"The Co-Crystallization of blends of Polypropylene and Random Propylene Ethylene Copolymers".
14. Polymer Engineering and Science Department. Graduate Seminars. University of Massachusetts at Amherst. April 23, 1999.  
"The Relation Between Molecular Structure and Morphology, Crystallization and Melting Behavior of Metallocene and Ziegler-Natta Polypropylenes".
15. Invited seminar at the Exxon-Mobil Corporate and Strategic Research Center. Annandale, NJ. January 26, 2001.  
"Crystallization and Melting Kinetics of Poly(propylenes)" "Effect of Concentration and Type of Defects"

16. Florida State University Chemistry Department, Physical-Chemistry Seminars, Tallahassee, FL. October 1st, 2001.  
“Poly(Propylenes). Crystallization and Melting Kinetics”.
17. Engelhard Corporation, Pasadena, TX. May 24, 2004  
“Structure – Properties Relation in Polyolefins”
18. ExxonMobil, Baytown Polymer Center, May 23, 2006  
“Crystallization of Random Propylene Copolymers”
19. MARTECH, Florida State University, January 29<sup>th</sup>, 2007  
“Crystallization of Poly(propylenes): The Role of Chain Microstructure”
20. University of Florida, Department of Chemistry, February 6<sup>th</sup>, 2007  
“Crystallization of Poly(propylenes): The Role of Chain Microstructure”
21. FAMU-FSU College of Engineering, Department of Electrical Engineering, March 25<sup>th</sup>, 2008  
“Crystallization of Poly(propylenes): The Role of Chain Microstructure”
22. ExxonMobil Baytown Research Center. Baytown, TX May 28<sup>th</sup>, 2009  
“Correlating the molecular weight and branching distribution of ethylene 1-alkyl copolymers with thermodynamic and structural properties”
23. ExxonMobil Research and Engineering Center. Clinton, NJ July 21<sup>th</sup>, 2009  
“Quiescent Crystallization of Model Polyolefins. Role of Defect Microstructure”
24. ExxonMobil Research and Engineering Center. Clinton, NJ July 22<sup>nd</sup>, 2009  
“Correlating the molecular weight and branching distribution of ethylene 1-alkyl copolymers with thermodynamic and structural properties”
25. Material Science and Engineering Graduate Seminar Series, FSU. January 18<sup>th</sup>, 2012.  
“Encoding crystal microstructure and chain folding in the chemical structure of polyolefins”
26. ExxonMobil Baytown Research Center. Baytown, TX May 18<sup>th</sup>, 2012  
“Melting and Crystallization of Isotactic Polypropylene with (3,1) Chain-Walking Defects”
27. POLYMAT, San Sebastian, Spain, May 31<sup>st</sup>, 2017.  
“Understanding Melt-Memory of Commercial Polyolefins”
28. Center for Physics of Materials (CFM), San Sebastian, Spain, June 9<sup>th</sup>, 2017.



“Crystallization of Precision Halogen Substituted Polyethylenes: Toward Advanced Polyolefin-like Materials”

29. R.G. Alamo (**invited**) “New Aspects of the Crystallization of Random and Precision Ethylene Copolymers” Department of Polymer Science and Engineering, March 30<sup>th</sup>, 2018. UMass, Amherst, MA.

#### **ORGANIZATION OF SYMPOSIA AND CHAIR ACTIVITIES.**

1. Chairperson of the "Polymer Science Symposium Honoring Prof. L. Mandelkern on Occasion of his 65th Birthday". Tallahassee, Florida, August 1987.
2. Organization of the Symposium "TA in Polymer Phase Transitions" of the 24th NATAS (North American Thermal Analysis Society) Annual Conference. San Francisco, September 1995.
3. Invited to chair a technical session of the Symposium: "Advances on Crystalline Polymers" at the National American Society Meeting, Anaheim, CA. March 1995.
4. Chair of the Symposium “Semicrystalline Polymers” NATAS, Williamsburg, VA 2004
5. Discussion Leader at the Gordon Research Conference, Polymer Physics. Session on Polymer Crystallization. Mount Holyoke College, South Hadley, MA. June 27<sup>th</sup> – July 2<sup>nd</sup>, 2010
6. Organization of the NATAS Symposium: "Crystalline, Liquid-Crystalline and Semi-Crystalline Materials". Orlando. August 2012
7. Chair of Focus Session on “Polymer Crystallization” at the American Physical Society March Meeting, Boston, MA, March 4-8, 2019