

Program

Polymer Reaction Engineering VII

May 3 - 8, 2009

Niagara Falls, Ontario, Canada

Conference Chair

Professor **Alexander Penlidis**
University of Waterloo, Canada

Conference Co-Chairs

Dr. **John R. Richards**
DuPont, USA

Professor **Marc A. Dubé**
University of Ottawa, Canada



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Sunday, May 3, 2009

16:00 – 18:00 Registration (Crowne Foyer outside Niagara Room)

18:00 – 19:00 Reception

19:00 – 20:30 Dinner

NOTES

- Technical sessions will be held in the Niagara Room.
- Posters may be hung in the Elizabeth Room.
- Breakfasts and Lunches will be in the Brock Room.
- Dinners on Sunday, Monday and Wednesday will be in the Fallsview Room in the Sheraton (connected to Crowne Plaza). Dinner on Tuesday will be in the Niagara Room.
- Audiotaping, videotaping and photography of presentations are strictly prohibited.
- Speakers – Please leave at least 5 minutes for questions and discussion.
- Please do not smoke at any conference functions.
- Turn your cellular telephones to vibrate or off during technical sessions.
- Be sure to make any corrections to your name/contact information on the Master Participant List or confirm that the listing is correct. A corrected copy will be sent to all participants after the conference.

Monday, May 4, 2009

Breakfast

Session 1: Mathematical Modeling and Scale-up of Copolymerization Processes

Co-chairs: Dr. **Klaus-Dieter Hungenberg**, BASF, Germany; Prof. **Eduardo Vivaldo-Lima**, UNAM, Mexico

- 8:15 - 8:25 Conference Welcome/Overview
- 8:25 - 8:30 Introduction by co-chairs
- 8:30 - 9:15 **Reinaldo Giudici**, Univ. of São Paulo - Escola Politécnica, Dept. of Chemical Engineering
Mathematical Model and Development of a Continuous Emulsion VA-BA Copolymerization Process in a Tubular Reactor
- 9:15 - 10:00 **Piet Iedema**, Univ. of Amsterdam, Van 't Hoff Institute for Molecular Sciences
Predicting Changes of Molecular Weight Distribution and Branch Formation Induced by Peroxide Radicals in Linear Polyethylene Using Monte Carlo Simulations and Population Balances
- 10:00 - 10:20 **Eduardo Vivaldo-Lima**, UNAM, Mexico
Modeling of vinyl/divinyl copolymerization kinetics, MWD and gel content in the presence of CRP agents
- 10:20 - 10:40 Coffee break
- 10:40 - 11:25 **Andreas Daiss** and **Klaus-Dieter Hungenberg**, BASF, Polymer Technology – Process Development and Modeling, Germany
Scale-up of Polymerization Reactors: From Classical Engineering Approaches to Comprehensive CFD Modeling
- 11:25 - 11:45 **Davide Moscatelli** and **Marco Dossi**, Politecnico di Milano
Determination of Kinetic Rate Coefficients in Free-Radical Polymerization by Quantum Chemistry
- 11:45 - 12:15 **Philipp Mueller** and **John Richards**, DuPont Engineering Res. & Tech., USA
Polymerization Reactor Modeling in Industry
- 12:15 - 14:00 Lunch
- 14:00 – 17:00 *ad hoc* sessions / Free time
- 17:00 - 19:00 **Poster Session 1** and Social Hour
Co-chairs: Prof. **Michael Cunningham**, Queen's Univ., Canada; Dr. **Daryoosh Beigzadeh**, Dow Chemical Co., USA; Dr. **Jon Debling**, BASF, USA
- 19:00 Dinner

Tuesday, May 5, 2009

Breakfast

Session 2: Emulsion and Suspension Polymerization: New Developments and Issues for PRE

Co-chairs: Prof. **Giuseppe Storti**, ETH, Switzerland; Dr. **John P. Congalidis**, DuPont, USA

- 8:25 - 8:30 Introduction by co-chairs
- 8:30 - 9:15 **Klaus Tauer**, Max Planck Institute of Colloids and Interfaces
Heterophase Polymerization and Monomer Concentration
- 9:15 - 10:00 **Joseph F. Schork**, Univ. of Maryland, Dept. of Chemical & Biomolecular Engineering
Controlled Radical Polymerization in Inverse Miniemulsions
- 10:00 - 10:20 **Werner Pauer**, ITMC, Univ. of Hamburg
Fast Continuous Emulsion Polymerization
- 10:20 - 10:40 Coffee break
- 10:40 - 11:25 **Marco Apostolo**, Solvay Solexis, Italy
Industrial Production of Fluoropolymer Nanocomposites by Microemulsion Polymerization
- 11:25 - 11:45 **Tim McKenna**, Dept. of Chem. Eng., Queen's Univ., Canada
Investigation of the Production of Miniemulsions using an SMX Static Mixer
- 11:45 - 12:15 **Niels Smeets**, Eindhoven Univ. of Technology
The Effect of Catalytic Chain Transfer on the Emulsion Polymerization Kinetics and Particle Size Distribution in Continuous Emulsion Polymerization in a Pulsed Sieve Plate Column
- 12:15 - 13:55 Lunch
- Session 3: PRE of Controlled Radical Polymerizations: Practical Manufacturing Issues**
- Co-chairs: Prof. **Shiping Zhu**, McMaster Univ., Canada; Dr. **Marco Apostolo**, Solvay-Solexis, Italy
- 13:55 - 14:00 Introduction by co-chairs
- 14:00 - 14:45 **Enrique Saldivar**, CIQA, Mexico
Progress in Controlled/Living Radical Polymerization via Nitroxide Chemistry
- 14:45 - 15:30 **Mathias Destarac**, Rhodia Opérations, France
MADIX Technology: About the Industrial Development of Controlled Radical Polymerization at Rhodia
- 15:30 - 15:50 Coffee break
- 15:50 - 16:10 **Robin Hutchinson**, Dept. of Chem. Eng., Queen's Univ., Canada
Continuous ATRP Polymerization in a Tubular Reactor with Low Catalyst Concentration

Tuesday, May 5, 2009 (continued)

- 16:10 - 16:30 **Shane Gao**, Dept. of Chem. Eng, McMaster Univ., Canada
ATRP Polymerization Grafting with Well-Defined Polymer Brush for High Protein-Resistant Surfaces
- 16:30 - 17:00 **Zhibin Ye**, Laurentian Univ., Canada
Surface-Initiated Ethylene Living Polymerization Technique for Covalent Surface Grafting of Polyethylene Chains on Silica Nanoparticles
- 17:00 - 17:45 **Yingwu Luo**, Zhejiang Univ., Institute of Poly. Eng.
RAFT/ATRP Copolymerization Kinetics and Programmed Synthesis of Gradient Copolymer
- 20:00 - 21:30 Dinner
- 21:30 - 22:30 Social Hour

Wednesday, May 6, 2009

Breakfast

Session 4: Reactive Processing and Modification: Interactions with PRE

Co-chairs: Dr. **Marios Avgousti**, DuPont, USA; Prof. **Costas Tzoganakis**, Univ. of Waterloo, Canada

- 8:25 - 8:30 Introduction by co-chairs
- 8:30 - 9:15 **Marino Xanthos**, New Jersey Inst. of Technology, Department of Chem. Eng.
Polymer Modification and Reactive Processing
- 9:15 - 10:00 **Guo-Hua Hu**, Nancy University, Lab. of Chem. Eng. Sci. CNRS-ENSIC-INPL
Concept of Nano-reactor for Chemical Modification of Polypropylene by Reactive Extrusion
- 10:00 - 10:20 **Fouad Teymour**, Illinois Institute of Technology
Carbon Accelerated Radical Polymerization (CARP) — A Comprehensive Kinetic Study
- 10:20 - 10:40 Coffee break
- 10:40 - 11:10 **Jean-Pierre Puaux**, Claude Bernard Lyon University, France
Modeling of L-dilactide polymerization by reactive extrusion
- 11:10 - 11:40 **Oliver Seck**, Chem. Eng., Univ. of Paderborn
Investigation of the Mixing- and Devolatilization Behavior in a Continuous Twin-Shaft Kneader
- 11:40 - 17:00 Lunch on your own/free afternoon
- 17:00 - 19:00 **Poster Session 2** and Social Hour
Co-chairs: Prof. **Michael Cunningham**, Queen's Univ., Canada; Dr. **Daryoosh Beigzadeh**, Dow Chemical Co., USA; Dr. **Jon Debling**, BASF, USA
- 19:00 Banquet
- 20:30 Banquet Plenary Lecture
Dr. **Thomas M. Connelly, Jr.**, Executive Vice President and Chief Innovation Officer of E. I. du Pont de Nemours and Company

Thursday, May 7, 2009

Breakfast

Session 5: Nano-structured Polymer Materials and Nano-particles: Reactions and Processing Issues

Co-chairs: Prof. **Donald Sundberg**, Univ. of New Hampshire, USA; Dr. **Dean Millar**, Dow Chemical Co., USA

- 8:25 - 8:30 Introduction by co-chairs
- 8:30 - 9:15 **Paschalis Alexandridis**, Dept. of Chemical and Biol. Eng., SUNY at Buffalo
Polymer-directed Nanoparticle Organization and Synthesis
- 9:15 - 10:00 **Kyu Yong Choi**, Dept. of Chem. and Biomolecular Eng., Univ. of Maryland
Silica Nanotube Reactors for Catalytic Polymerization of Styrene and Olefins
- 10:00 - 10:20 **Nida Sheibat-Othman**, LAGEP-CPE, Lyon, France
Use of Silica Particles for the Formation of Organic-Inorganic Particles by Surfactant-free Emulsion Polymerization
- 10:20 - 10:40 Coffee break
- 10:40 - 11:25 **Rich Spontak**, North Carolina State University, USA
Melt-state Macromolecular Reactions as a Route to Property Modification in Polymer Nanocomposites
- 11:25 - 11:45 **Rene Peralta**, CIQA, Mexico
Preparation of Nanostructured Core – Shell Polymers Using a Polymerizable Surfactant to Modify the Shell Hydrophilicity in a Reactor Operated in Semicontinuous and Batch Modes
- 11:45 - 12:15 **Prokopis Pladis**, Dept. of Chem. Eng., Univ. of Thessaloniki, Greece
Optimization of the Synthesis of Hybrid Polymer-Silica Composite Nanoparticles
- 12:15 Lunch / Optional Excursions (Boxed lunches available for those going on excursions)
- Dinner on your own

Friday, May 8, 2009

Breakfast

Session 6: Polymers from Renewable Sources, Bio-polymers and Biologically Degradable Polymers

Chair: Prof. **Ramani Narayan**, Michigan State, USA

- 8:25 - 8:30 Introduction by chair
- 8:30 - 9:15 **Ramani Narayan**, Michigan State, USA
The promise of biobased and biodegradable polymer materials-Next gen polymers for reducing carbon and environmental footprint
- 9:15 - 10:00 **Tuyu Xie**, DuPont, Canada
Development of Bio-Based Polymers: Fundamentals, Process Scale up, and Technology Challenges
- 10:00 - 10:20 **Rosario Mazarro**, Univ. of Castilla-La Mancha, Dept. of Chem. Eng., Spain
Co-polymerization of D,L-Lactide and Glycolide in Bulk and Supercritical Carbon Dioxide
- 10:20 - 10:40 Coffee break
- 10:40 - 11:10 **Marc A. Dubé**, Dept. of Chemical and Biological Engineering, Univ. of Ottawa, Canada
Towards Sustainable Polymerization: The Use of Biodiesel as a Solvent for Solution Polymerization
- 11:10 - 11:30 **Georgina Sandoval**, CIATEJ – Univ. de Guanajuato, Mexico
Biopolymer Synthesis Catalyzed by Tailored Lipases
- 11:30 - 12:00 **Yingchuan Yu**, ETH, Switzerland
Ring Opening Polymerization of L,L-Lactide
- 12:00 - 12:15 Conference Wrap-up/Adjournment
- 12:15 Lunch
- Departures

POSTER SESSION I

- 1. High Throughput Polymer Latex Synthesis, Purification and Characterization**
Josef Schroer, Chemspeed Technologies, U.S.A
- 2. Synthesis and Characterization of Polyurethane Dispersions: A Comparison of Traditional and Automated Methods**
Josef Schroer, Chemspeed Technologies, U.S.A
- 3. Preparation of Stable Nanolatex Suspensions**
Josef Schroer, Chemspeed Technologies, U.S.A
- 4. Emulsion Polymerizations on the Chemspeed Autoplant**
Josef Schroer, Chemspeed Technologies, U.S.A
- 5. Aqueous-Phase Free Radical Batch and Semibatch Polymerization of Water Soluble Monomers**
Sandhya Santanakrishnan, Queen's University, Canada
- 6. An Experimental and Simulation Study of Methacrylate Depropagation Kinetics**
Wei Wang, Department of Chemical Engineering, Queen's University, Canada
- 7. Concepts for Product Development in High-Pressure α -olefin *HOMO*- and *CO*-Polymerizations**
M. Busch, Technische Universität Darmstadt, Germany
- 8. Particle Wall Boundary Condition Effect on 3D Numerical Simulation of Pressurized Gas-Solid Fluidized Bed Hydrodynamic**
Guillaume Moula, Université de Toulouse, France
- 9. Transport and Reaction in Reconstructed Polyolefin Particles**
Juraj Kosek, ICT Pragu, Czech Republic
- 10. Reconstruction of Lamellar Structure of Polyolefin's and Prediction of Effective Diffusivity and Mechanical Properties**
Juraj Kosek, ICT Prague, Czech Republic
- 11. Process Safety in Styrene Butadiene Semi-Batch Emulsion Polymerization Process: Mathematical Modeling and Experimental Work**
Reinaldo Giudici, University of Sao Paulo, Polytechnic School, Brazil
- 12. In-line Monitoring of VAc and BuA Emulsion Polymerization Reaction in a Continuous Pulsed Sieve Plate Reactor using NIR Spectroscopy**
Reinaldo Giudici, University of Sao Paulo, Polytechnic School, Brazil
- 13. Modelling of Vinylidene Fluoride Precipitation Polymerization in Supercritical CO₂**
Costas Kiparissides, Aristotle University of Thessaloniki & Chemical Process Engineering Research Institute, Greece

14. **Comprehensive Modeling of the Bivariate MW-LCB Distribution of LDPE Produced in High-Pressure Autoclaves**
Costas Kiparissides, Aristotle University of Thessaloniki & Chemical Process Engineering Research Institute, Greece
15. **Parameter Estimation in a Simplified Model for Molecular Weight Distributions of Ethylene Copolymers Produced with Ziegler-Natta Catalyst**
Kim B. McAuley, Queen's University, Canada
16. **Steady-state and Dynamic Modeling of Industrial Propylene Polymerization Process Composed of Slurry and Fluidized-Bed Reactors in Series**
Guo-Hua Hu, Nancy-University, France
17. **Application of a Choquet Integral to the Multi-Criteria Optimization of an Emulsion Copolymerization Process**
Guo-Hua Hu, Nancy-University, France
18. **Relevance of Backbiting Reactions in Free Radical Polymerization**
Marco Dossi, Politecnico di Milano, Italy
19. **Kinetic Analysis of Free Radical Polymerization of Butyl Acrylate by Quantum Chemistry**
Marco Dossi, Politecnico di Milano, Italy
20. **Nonlinear Model Predictive Control of an Autoclave LDPE Reactor**
Noel C. Jacob, Ryerson University, Canada
21. **Modeling Heterogeneous Copolymerization of Fluorinated Monomers in SCCO_2**
L.I. Costa, ETH-D-CHAB, Switzerland
22. **Diffusion of Small Molecules in Polymers: a Lattice Free-Volume Theory**
L.I. Costa, ETH-D-CHAB, Switzerland
23. **Kinetic Modelling of the Peroxide Cross-linking of Polymer/Monomer Blends: From a Theoretical Model Framework to Its Application for a Complex Polymer/Monomer System**
Blaž Likozar, University of Ljubljana, Slovenia
24. **Modeling of Elastomer Cross-linking by Organic Peroxides: Correlation of Kinetics, Mass Transfer, Heat Transfer and Viscoelasticity**
Blaž Likozar, University of Ljubljana, Slovenia
25. **Acrylic Acid as Cosurfactant in Oil-in-Water Styrene/PS Microemulsion Formulations with Anionic Surfactants**
Raul Moraes, Queen's University, Canada
26. **High Polymer to Surfactant Ratio in Semi-Continuous Microemulsion Polymerization of PS Latexes with Anionic Surfactants**
Raul Moraes, Queen's University, Canada

27. **Development of Microcapsules Containing PCMs made of Different Shell Materials**
María Luz Sánchez, University of Castilla La Mancha, Spain
28. **Modeling Copolymer Sequence Distribution in Controlled Radical Polymerization**
F. Joseph Schork, University of Maryland - College Park, USA
29. **New Modeling Strategy for Atom Transfer Radical Polymerization**
Dagmar R. D'hooge, Ghent University, Belgium
30. **An Experimental and Modeling Study of the Reversible Addition-Fragmentation Transfer (RAFT) Dispersion Polymerization of Styrene and MMA in Supercritical Carbon Dioxide (SCCO₂)**
Gabriel Jaramillo-Soto, Universidad Nacional Autónoma de México, México
31. **Reaction Factor Effects in Nitroxide - Mediated Radical Polymerization of Styrene with a Unimolecular Initiator**
N. T. McManus, University of Waterloo, Canada
32. **Cyclic Trifunctional Peroxide for Standard and Living Free Radical Polymerization of Styrene**
Liliane Lona, University of Campinas, Brazil
33. **Kinetic study on homo and copolymerization of ethylene and 1-octene catalyzed by metallocene methylaluminoxane In a semi batch reactor**
Saeid Mehdiabadi, University of Waterloo, Canada
34. **One-Pot Synthesis of Hyperbranched Polyethylenes Tethered with ATRP Initiating Sites**
Ramesh Subramanian, Laurentian University, Canada
35. **Study of Radical Polymerization of Styrene in Presence of Carbonyl Transition Metal**
B. Shirkavand-Hadavand, Institute for Colorants, Paint and Coatings (ICPC), Iran
36. **Emulsion Polymerization of Polysulfide Polymer using Heavy End Waste**
Behzad Shirkavand-Hadavand, Institute for Colorants, Paint and Coatings (ICPC), Iran
37. **Transport Phenomena in PLA Polycondensation Process**
Fabio Codari, ETH Zurich - Institute for Chemical and Bioengineering, Switzerland
38. **Degradation Kinetics of Polylactic Acid**
Fabio Codari, ETH Zurich - Institute for Chemical and Bioengineering, Switzerland
39. **Production of Bimodal Molecular Weight and Particle Size Distributions by Miniemulsion Polymerization and their Effect on PSA Performance**
Marc A. Dubé, University of Ottawa, Canada
40. **Preparation and Use of BIS (2-HYDROXY-3-ALLYL) M-PHENYLENE BENZAMIDE as a Chelating Agent For Metal Ions**
Nasir Ahmad Rajabi, Islamic Azad University (Central Tehran Campus), Iran

41. **Heat Transfer and Mixing Characterization of a Split-and-Recombination Microreactor**
Lionel S. Méndez-Portillo URPEI, CREPEC, École Polytechnique de Montréal, Canada
42. **Lab-Scale Spinning disc reactor for scale-up studies of polycondensation reactions**
Prof. Dr.-Ing. Michael Bartke, Fraunhofer Polymer Pilot Plant Center, Germany
43. **The Study of Acrylic Acid Grafting on Polycaprolactone by Using UV irradiation**
Jing-Yi Wu, Tatung University, Taiwan

POSTER SESSION II

- 1. High Throughput Polymer Latex Synthesis, Purification and Characterization**
Josef Schroer, Chemspeed Technologies, U.S.A
- 2. Synthesis and Characterization of Polyurethane Dispersions: A Comparison of Traditional and Automated Methods**
Josef Schroer, Chemspeed Technologies, U.S.A
- 3. Preparation of Stable Nanolatex Suspensions**
Josef Schroer, Chemspeed Technologies, U.S.A
- 4. Emulsion Polymerizations on the Chemspeed Autoplant**
Josef Schroer, Chemspeed Technologies, U.S.A
- 5. Reactions and Processing Issues For the Design of New Nanoporous Films from Cyanate Ester Resins**
Alexander Fainleib, Institute of Macromolecular Chemistry of the National Academy of Sciences of Ukraine, Ukraine
- 6. Optimization of Catalytic Process of Polycyclotrimerization of Cyanate Ester Resins**
Olga Grigoryeva, Institute of Macromolecular Chemistry of the National Academy of Sciences of Ukraine, Ukraine
- 7. Computational Mixing Analysis in Emulsion Polymerization Reactors**
Jordan Pohn, Queen's University, Canada
- 8. Modeling of High Temperature Free Radical Terpolymerization of Methacrylate, Acrylate and Styrene for Production of Acrylic Coating Resins**
Wei Wang, Queen's University, Canada
- 9. Linking Polymer Properties to Process Conditions for Vinyl Chloride Suspension Polymerization Processes**
Joris Wieme, Ghent University, Belgium
- 10. Optimization of a Tubular Polymerization Reactor**
Ionut BANU, UCBL, France
- 11. Model Based Transfer of a Free Radical Copolymerization from Batch to Continuous Operation**
Thomas Kröner, Fraunhofer Polymer Pilot Plant Center, Germany
- 12. Towards Sustainable Polymerization: The Use of Biodiesel as a Solvent for Solution Polymerization**
Marc A. Dubé, University of Ottawa, Canada
- 13. PSA Performance Modification using HEMA and AA in BA/MMA Latexes**
Marc A. Dubé, University of Ottawa, Canada

14. **Mathematical Modeling of the Aerobic Carbon Metabolism and the Polymerization Mechanism in *ALCALIGENES EUTROPHUS* for the Synthesis of P(3HB)**
Costas Kiparissides, Aristotle University of Thessaloniki and Chemical Process Engineering Research Institute, Greece
15. **Design and Modeling of Poly(Ethylene Glycol) Diacrylate Hydrogels for Tissue Engineering Applications]**
Chu-Yi Lee, Michael Turturro, Georgia Papavasiliou, and Fouad Teymour, Illinois Institute of Technology, USA
16. **Semi-Flexible Polyelectrolyte Chain Diffusion Through Nanochannels**
Helen Gu, McMaster University, Canada
17. **Modelling of the Filled Elastomer Moduli of Unfunctionalized, Hydroxy-, and Carboxy-Functionalized Multi-walled Carbon Nanotubes Reinforced Hydrogenated Nitrile Rubber and the Morphology of Nanocomposites**
Blaž Likozar, Polymer Competence Center Leoben - Institute for Materials Science and Testing of Plastics, University of Leoben, Austria
18. **The Influence of Nitrile Content, Hydrogenation and Compound preparation on Morphological, Mechanical, Thermal and Other Properties of (Hydrogenated) Nitrile Rubber/Carbon Nanotube Nanocomposites**
Blaž Likozar, Polymer Competence Center Leoben - Institute for Materials Science and Testing of Plastics, University of Leoben, Austria
19. **Modeling of the Free Radical Copolymerization Kinetics of Vinyl/Divinyl Monomers in the Presence of NMRP Controllers**
Julio César Hernández-Ortíz, Universidad Nacional Autónoma de México (UNAM), México
20. **Prediction and Experimental Characterization of the Molecular Architecture of FRP and ATRP Synthesized Polyacrylate Networks**
Rolando C. S. Dias, LSRE-Instituto Politécnico de Bragança, Portugal
21. **Novel Reactants in LDPE-Polymerization - Simulation Based Experimental Design and Comparison to Practice**
Marion Roth, Technische Universität Darmstadt, Germany
22. **Model Package for Simulation Aided Product Design on Industrial Tubular LPDE Reactors**
T. Herrmann, Technische Universität Darmstadt, Germany
23. **Polymerization Kinetics of Methacrylate Monomers in Room Temperature Ionic Liquids**
Sabine Beuermann, University of Potsdam, Germany
24. **Modeling of Precipitation Co-Polymerization of Vinyl Imidazole and Vinyl Pyrrolidone in Organic Solvent**
Paolo Arosio, ETH Zurich - Institute for Chemical and Bioengineering, Switzerland

25. **Free-Radical Copolymerization Kinetics with Crosslinking of Styrene and Divinylbenzene in Supercritical Carbon Dioxide**
Pedro R. García-Morán, Universidad Nacional Autónoma de México, México
26. **Modeling Molecular Properties of Co-Polymers - The Chain-Length Differentiated Co-Polymer Composition**
Katrin Becker, Technische Universität Darmstadt, Germany
27. **Liquid Membrane-Gel Extraction of Cadmium by TRI(n-OCTYL)AMINE with THIOCYANATE in Sulfuric Acid Medium.**
D.E. Hadj-Boussaad, University of Blida, Algeria
28. **Grafting of Maleic Anhydride Onto Polypropylene in the Melt: Mathematical Model Accounting for the Medium Heterogeneity**
Reinaldo Giudici, University of Sao Paulo, Polytechnic School, Brazil
29. **Presentation of a High-Pressure Autoclave System for Kinetic Studies of Polyolefin Copolymerisations in Slurry and Gas Phase**
Sebastian Kröner, Martin-Luther University, Halle-Wittenberg, Germany
30. **Modelling of the Copolymerization of Butadiene and Styrene Using a Ternary Initiator Composed of Alkyl Aluminum, n-ButylLithium and Barium Alkoxide**
José Alfredo Tenorio López, Universidad Veracruzana, México
31. **UV-curing and Applications of PDMS-containing PU Resins**
Kan-Nan Chen, Tamkang University, Taiwan, R.O.C
32. **Modeling the Impact Resistance and Morphology Evolution of High-Impact Polystyrene**
Juraj Kosek, ICT Prague, Czech Republic
33. **Rheological Behavior of Silica/Epoxy Film with Nano and Micro Particles**
B. Shirkavand-Hadavand, Institute for Colorants, Paint and Coatings, Iran
34. **Process Intensification by Spray Polymerization**
Hans-Ulrich Moritz, ITMC, University of Hamburg, Germany
35. **Synthesis of Siloxanes Monomers for Protective Coatings**
D. Kolesnik, The Institute of Macromolecular Chemistry of the NAS of Ukraine, Ukraine
36. **Dendronized Polymers via Macromonomer Route in Supercritical Carbon Dioxide**
L.I.Costa, ETH-D-CHAB, Switzerland
37. **Homogeneous Phase Synthesis of Fluorinated Copolymers in Supercritical Carbon dioxide: Investigations into Conventional and Controlled Free Radical Polymerization**
Eléonore Möller, University Potsdam, Germany
38. **Preparation of Functional Environmentally Responsive Supports**
A. Lamprou, Institute for Chemical & Bioengineering, ETH Zurich, Switzerland

39. **Smart Surfaces: Stimuli-Responsive Polymer Brushes on the Flat Surfaces**
Xiang Gao, McMaster University, Canada
40. **Polymer Gel Dosimeters that Use Cosolvents to Improve Dose Sensitivity**
Kim B. McAuley, Queen's University, Canada
41. **Synthesis of Poly Alkyl-Cyanoacrylates as Biodegradable Polymers for Drug Delivery Applications**
Marco Dossi, Politecnico di Milano, Italy
42. **Emulsion Polymerization in Microreactors**
Arvind Kumar Yadav, Institute for Polymer Materials at the University of the Basque Country, Spain