

# 2004

## DPOLY Meeting Program

APS March Meeting  
Montreal, Quebec, Canada  
March 22-26, 2004

APS Division of Polymer Physics

### DPOLY Short Course Rheology and Dynamics of Polymers & Complex Fluids

Saturday March 20, 2004 - 8:00 am - 5:00 pm

Sunday March 21, 2004 - 8:00 am - 5:00 pm

*You must pre-register for this course. There is no on-site registration.*

#### **Course description:**

The ability of applied flow fields to perturb the equilibrium structure of polymers, colloids, self-assembled surfactants and other complex fluids leads to complex flow behavior that defies description by classical constitutive models of elastic solids or viscous liquids. Rheological (and complementary structural) characterization of such materials under flow provides a direct and informative probe of the molecular or meso-scale dynamics. Of equal importance, appreciation of the structure & rheology of complex fluids is of direct technological relevance in materials processing. This course will provide both an introduction to the foundations of this field, and a broad survey of its application to diverse areas of current interest.

#### **Who should attend:**

The course will be useful to scientists from academia or industry with broad interests in polymers, complex fluids or other soft materials. The instructors will assume a background of B.S. level training in physical science or engineering. If you a student, post doc, faculty member or scientist asking yourself the question: "What can Rheology do for me?", then this course is for you.

#### **Topics to be covered**

The course will begin with a review of techniques of mechanical rheometry, and an overview of polymer viscoelasticity. Polymer solutions and melts will be discussed in detail, covering recent experimental and theoretical advances. Focus will then shift to more complex examples of polymeric & self assembled fluids, including liquid crystals, liquid crystalline polymers, block copolymers, surfactants, biopolymers, etc. Experimental methods for obtaining complementary in situ structural information will be reviewed. Finally, the principles, techniques and applications of "microrheology" will be introduced.

#### **Confirmed speakers:**

Wesley Burghardt (Northwestern University), Eric Furst (University of Delaware) Ron Larson (University of Michigan), Scott Milner (Exxon-Mobil), Frank Bates (Minnesota), Jean-Francois Berret (CNRS/Rhodia), William Graessley (Princeton University)

#### **Registration fees:**

Registration fees: \$400 (\$200 for students)

#### **Organizer:**

Wesley R. Burghardt  
Department of Chemical Engineering  
Northwestern University  
Evanston, IL 60208  
Phone: 847-467-1401  
Email: w-burghardt@northwestern.edu

**Special DPOLY events are listed on the inside back cover of this pamphlet.**

*Disclaimer: The information contained within this booklet is unofficial and is accurate as of 01/28/04. For all official information, please refer to the APS March Meeting Proceedings or the website (<http://www.aps.org/meet/MAR04/baps/index.html>)*

**Session A29. DPOLY: Physical Properties of Network Structures-From Adhesion to Elastomers.**

**Monday morning, 08:00, 519A, Palais de Congress**

**Chair: Chris White, NIST**

- 08:00 [A29.001 Effects of Contact Time and Polarity Level on Adhesion](#)  
*Hugh Brown (university of Wollongong), Emmanuel Girard-Reydet (INSA-Lyon)*
- 08:12 [A29.002 Systematic Adhesion: Controlling Interfacial Strength through Patterning](#)  
*Alfred Crosby, Mark Hageman, Andrew Duncan (Polymer Science & Engineering, University of Massachusetts)*
- 08:24 [A29.003 Scaling Micro-Mechanical Properties in Soft Multiphase Gels Based on Methodology and Interfacial Interactions](#)  
*Phillip Cole, Joseph Lenhart, John Emerson (Sandia National Laboratories), Jeffrey Koberstein (Columbia University)*
- 08:36 [A29.004 Microstructure of Hydrophobically Modified Alkyl Acrylamide Hydrogels](#)  
*Jun Tian, Thomas A. P. Seery (University of Connecticut, Storrs, CT 06269), Derek L. Ho (National Institute of Standards and Technology, Gaithersburg, MD 20899), R. A. Weiss (University of Connecticut, Storrs, CT 06269)*
- 08:48 [A29.005 Dynamics around the sol-gel transition in thermoreversible polymer gels](#)  
*Johan Mattsson, Bivash Dasgupta (Department of Physics and DEAS, Harvard University, Cambridge, MA, 02138 USA), Aleksandar Matic, Rikard Bergman (Department of Applied Physics, Chalmers University of Technology, SE 412 96 Goteborg, Sweden), Bo Nystrom (Department of Chemistry, University of Oslo, P.O. Box 1033, Blindern, N-0315 Oslo, Norway), David A Weitz (Department of Physics and DEAS, Harvard University, Cambridge, MA, 02138 USA)*
- 09:00 [A29.006 Viscoelastic Behavior and Adhesion of Ionic Alginate Hydrogels](#)  
*Rebecca Webber, Kenneth Shull (Northwestern University)*
- 09:12 [A29.007 Environmentally Responsive Hydrogels with Tunable Rigidity Constructed Via Peptide Folding and Consequent Self-Assembly](#)  
*Darrin Pochan, Bulent Ozbas (Materials Science and Engineering, University of Delaware), Rajagopal Karthikan, Joel Schneider (Chemistry and Biochemistry, University of Delaware)*
- 09:24 [A29.008 Understanding Thermal Gelation of Methyl-Cellulose](#)  
*Inna Shechtman, Moshe Gottlieb (Chemical Eng. Dept., Ben Gurion University, 84105 Beer Sheva, Israel)*
- 09:36 [A29.009 Temperature-sensitive size of microgel particles](#)  
*Barbara Frisken, Yong Sun, Jun Gao (Department of Physics, Simon Fraser University, Burnaby BC V5A 1S6), Arthur Bailey (SciTech Instruments, North Vancouver BC V7J 2S5)*
- 09:48 [A29.010 Small Angle Neutron Scattering Measurements of the Temperature-Dependent Structure of Colloidal Microgel Particles](#)  
*Thomas G Mason (University of California- Los Angeles), Min Y Lin (National Institute of Standards and Technology)*
- 10:00 [A29.011 Molecular Dynamics of Networks Undergoing Crosslinking](#)  
*Dana R. Rottach (University of New Mexico), John G. Curro, Gary S. Grest, Aidan P. Thompson (Sandia National Laboratories)*
- 10:12 [A29.012 Strain Induced Structural Properties of Nematic Elastomers](#)  
*Fan Zhang, Paul Heiney (Department of Physics and Astronomy, University of Pennsylvania, Philadelphia, Pennsylvania, 19104), Amritha Srinivasan, Jawad Naciri, Banahalli Ratna (Center for Bio/Molecular Science and Engineering, Naval Research Lab, 4555 Overlook Avenue SW, Code 6950, Washington D.C. 20375)*
- 10:24 [A29.013 Orientational Order, Thermodynamics and Mechanical Properties of Nematic Elastomers](#)  
*Folusho Oyerokun, Kenneth Schweizer (University of Illinois at Urbana-Champaign)*
- 10:36 [A29.014 Elasticity and Photoelasticity Relationships of Real Elastomeric Networks by Molecular Simulation](#)  
*Kapileswar Nayak, Hemant Nanavati (Department of Chemical Engineering, Indian Institute of Technology – Bombay, Mumbai-400076, India)*
- 10:48 [A29.015 Simulations on swelling and deformation of polymer model networks](#)  
*Michael Lang, Dietmar Goeritz, Stefan Kreitmeier (University of Regensburg, Institute for exp. and appl. Physics, Polymer Physics, 93040 Regensburg, Germany)*

**Session A30. DPOLY: Polymer-Inorganic Nanoparticle Composites I.**

**Monday morning, 08:00, 519B, Palais de Congress**

**Chair: Mark Dadmun, University of Tennessee, Knoxville.**

- 08:00 [A30.001 An explicit 3D chain and node mesoscale network model for silica-filled polydimethylsiloxane](#)  
*David Hanson (Theoretical Division, Los Alamos National Laboratory)*
- 08:12 [A30.002 Structure and Thermodynamics of Model Polymer Nanocomposites](#)  
*Justin B. Hooper, Kenneth S. Schweizer (University of Illinois at Urbana-Champaign)*
- 08:24 [A30.003 Investigating Filler Reinforcement and Nonlinear Viscoelastic Behavior in Polymer Composites](#)  
*Zhiyong Zhu, Shi-Qing Wang, Ernst von Meerwall (University of Akron)*
- 08:36 [A30.004 The Effect of Mobile Nanoparticles on Phase Separation Dynamics in Thin Film Polymer Blends](#)  
*Russell J. Composto, Hyun-joong Chung, Andreas H. Taubert, Ranjan Deshmukh (Dept of Materials Science and Engineering, LRSM, Univ of Pennsylvania, PA19104)*
- 08:48 [A30.005 Compatibilizing Bulk Polymer Blends by Using Organoclay](#)  
*Mayu Si, Dilip Gersappe (Stony Brook University), Wenhua Zhang (Polymer Divisions, NIST), Harald Ade (University of North Carolina), Miriam Rafailovich, Jonathan Sokolov, Gregory rudomen (Stony Brook University), Bradley Schwartz (Syosset High School), Robert Fisher (Hanc High School)*
- 09:00 [A30.006 In situ x-ray scattering measurements of clay particle orientation in PP nanocomposites under shear flow](#)  
*Laura Dykes, Wesley Burghardt, Kosmas Kasimatis, John Torkelson (Northwestern University)*
- 09:12 [A30.007 Anomalous Diffusion of Pentane and Toluene in a Composite of Polymer and Nanoparticles](#)  
*Alan Jones, JunYan Zhong, Guoxing Lin (Clark University)*
- 09:24 [A30.008 Kinetic Stability to Static Annealing of the Well-Exfoliated State of Polypropylene-Clay Nanocomposites Produced via a Novel, Solid-State Process](#)  
*Kosmas G. Kasimatis, John M. Torkelson (Northwestern University, Evanston, IL 60208 USA)*
- 09:36 [A30.009 Nanosecond relaxation in polymer electrolyte nanocomposites](#)  
*Saboungi Marie-Louise (CRMD, 45071 OrL@ans, France), David L. Price (CRMHT, 45071 OrL@ans, France), Luis J. Smith (Argonne National Laboratory, Argonne, IL 60439), Jean-Marc Zanotti (Intense Pulsed Neutron Source, Argonne Nat. Lab., Argonne, IL 60439 and Laboratoire Leon Brillouin, CEA Saclay, 91191 Gif/Yvette cedex, France), Michel Armand (Joint International Laboratory, Dept. of Chemistry, Universit@ de Montr@al, Montreal QC H3C 3J7 Canada)*
- 09:48 [A30.010 Molecular weight effects on the rheology of polymer/clay dispersions](#)  
*Hossein Baghdadi, Heidi Sardinha, Surita Bhatia (Department of Chemical Engineering, University of Massachusetts Amherst)*
- 10:00 [A30.011 Effect of nm-thin Inorganic Layered Fillers on the Crystallization of Polymer Composites](#)  
*Evangelos Manias (Penn State University), H. Nakajima, Z-M. Wang, J-Y. Huh*
- 10:12 [A30.012 Radial Dependence of Spin-Cast Polymer/Clay Nanocomposite Film Thickness](#)  
*Jun Li (Physics Dept., Graduate Center of CUNY, New York, NY), Avtar Singh (Stuyvesant High School, New York, NY), Scott Schiffman (Cornell University, Ithaca, NY), Deepak Kapoor, Steven Schwarz (Physics Dept., Queens College, Flushing, NY), Jonathan Sokolov, Miriam Rafailovich (Materials Science, SUNY, Stony Brook, NY)*
- 10:24 [A30.013 Tuning Polymer Nanocomposite Morphology: Magnetic and AC Electric Field Manipulation of Epoxy - Montmorillonite \(Clay\) Suspensions](#)  
*Richard Vaia (Air Force Research Laboratory), Hilmar Koerner (University of Dayton Research Institute), J. David Jacobs (University of Cincinnati), John Busbee (Air Force Research Laboratory), Edwin Hampton, Derrick Dean (Tuskegee University)*
- 10:36 [A30.014 Thermal Stability and Flammability of Polypropylene/Montmorillonite Composites](#)  
*Ming-Shu Yang, Huai-Li Qin, Shi-Min Zhang, Charles C. Han (State Key Laboratory of Engineering Plastics, Joint laboratories of Polymer Science and Materials, Institute of Chemistry, Chinese Academy of Sciences (ICCAS), Beijing 100080 (PR China))*
- 10:48 [A30.015 Gas Barrier Behavior of Polystyrene-Clay Nanocomposites](#)  
*Sergei Nazarenko (Department of Macromolecular Science - Case Western Reserve University), Paulo Meneghetti, Kanokorn Photinon, Syed Qutubuddin (Department of Chemical Engineering - Case Western Reserve University)*

**Session A31. DPOLY/GSNP/DBP: Focus Session: Charge Effects on Biomolecules.**

**Monday morning, 08:00, 523AB, Palais de Congres**

**Chair: Erik Luijten, University of Illinois at Urbana-Champaign.**

- 08:00 [A31.001 Counterions surrounding DNA: new measurements using anomalous x-ray scattering](#)  
*Lois Pollack (Cornell University)*
- 08:36 [A31.002 Distribution of Counterions Near Discretely Charged Rods](#)  
*Mark L. Henle, Christian D. Santangelo, Deena M. Patel, Philip A. Pincus (Department of Physics, University of California, Santa Barbara)*
- 08:48 [A31.003 Electrophoretic Mobility Measurements Suggest No Charge Inversion For A System of Charged Rods and Their Divalent Counterions](#)  
*Qi Wen, Jay Tang (Department of Physics, Brown University)*
- 09:00 [A31.004 Direct observation of charge inversion by multivalent ions](#)  
*Koen Besteman, Marcel Zevenbergen, Hendrik Heering, Serge Lemay (Delft University of Technology, Department of Nanoscience), Molecular Biophysics Team*
- 09:12 [A31.005 ION MEDIATED INTERACTIONS BETWEEN RANDOMLY CHARGED POLYPEPTIDE RODS](#)  
*Tommy E. Angelini (Physics, University of Illinois at Champaign-Urbana), Gerard C. L. Wong (Materials Science and Engineering, Physics and Bioengineering, University of Illinois at Champaign-Urbana), Enrico Bellomo (Materials Science and Engineering, University of California Santa Barbara), Jungyeon Hwang (Chemistry, University of California Los Angeles), Timothy Deming (Chemistry, Materials Science and Engineering, University of California Santa Barbara)*
- 09:24 [A31.006 A comparison of co-ion and counterion behavior on condensed polyelectrolytes and condensed polyampholytes](#)  
*Olena Rudko, Thomas E. Angelini (Physics Dept., University of Illinois at Urbana-Champaign), Gerard C. L. Wong (Materials Science and Engineering Dept., University of Illinois at Urbana-Champaign)*
- 09:36 [A31.007 Anomalous counterion condensation of hydrophobic polyelectrolytes](#)  
*Claudine Williams, Wafa Essafi, Damien Baigl, Physique des Fluides Organises Team*
- 09:48 [A31.008 Thermoreversible crosslinking of polyelectrolyte chains](#)  
*Alexander Ermoshkin, Alexander Kudlay, Monica Olvera de la Cruz (Department of Materials Science and Engineering, Northwestern University, Evanston, IL 60208)*
- 10:00 [A31.009 Manning Condensation: Beyond the Limiting Laws](#)  
*Qingbo Yang (Physics Department, Columbia University), Ben O'Shaughnessy (Chemical Engineering Department, Columbia University)*
- 10:12 [A31.010 Accuracy Analysis and Systematic Improvements of the Generalized Born Solvation Model](#)  
*Grigori Sigalov, Alexey Onufriev (Virginia Tech)*
- 10:24 [A31.011 Salt-induced Collapse and Reexpansion of Highly-Charged Flexible Polyelectrolytes](#)  
*Pai-Yi Hsiao, Erik Luijten (Department of Materials Science and Engineering, University of Illinois at Urbana-Champaign, Urbana, Illinois 61801)*
- 10:36 [A31.012 New Distributed Multipole Methods for Accurate Electrostatics in Large-Scale Biomolecular Simulations](#)  
*Celeste Sagui, Christopher M Roland (North Carolina State University), Thomas A Darden (National Institute of Environmental Health Sciences)*
- 10:48 [A31.013 The Generalized Born solvation model: What is it?](#)  
*Alexey Onufriev (Virginia Tech)*

**Session B4. DPOLY/DBP: Ion Containing Polymers and Membranes.**

**Monday midday, 11:15, 517C, Palais des Congres**

**Chair: Ralph Colby, Penn State Univ.**

- 11:15 [B4.001 Dynamics of Sodium Poly\(styrenesulfonate\) in N-methyl Formamide](#)  
*Thomas Seery (University of Connecticut)*
- 11:51 [B4.002 Electrophoresis of Ion Containing Polymers in Microfluidic Applications](#)  
*Andrea Chow (Caliper Technologies Corp.)*
- 12:27 [B4.003 Intercellular Communication in the Adaptive Immune System](#)  
*Arup Chakraborty (Dept of Chemical Engineering and Dept of Chemistry, Univ of California at Berkeley)*
- 13:03 [B4.004 Self-assembly of single charge diblock copolymers](#)  
*Carlos Marques (LDFC, 3 rue de l'Université, 67084 Strasbourg Cedex, FRANCE)*
- 13:39 [B4.005 Supramolecular Assembly of Biomolecules](#)  
*Cyrus R. Safinya (Materials Department, Physics Department, Biomolecular Science and Engineering Program University of California, Santa Barbara, CA 93106 USA)*

**Session B29. DPOLY: Focus Session: Multi-Scale Modeling of Polymers.**

**Monday midday, 11:15, 519A, Palais des Congres**

**Chair: Sanat Kumar, Rensselaer Polytechnic Institute.**

- 11:15 [B29.001 Multiscale Simulations of Polymers Close to \(Metal\) Surfaces](#)  
*Kurt Kremer (Max Planck Institute for Polymer Research, 55021 Mainz, Germany)*
- 11:51 [B29.002 Field-Based Simulations of Inhomogeneous Polymers](#)  
*Glenn Fredrickson (University of California at Santa Barbara)*
- 12:27 [B29.003 Motion of grain boundary in diblock copolymers: effect of oscillatory shear flow](#)  
*Zhi-Feng Huang, Jorge Vinals (CSIT, Florida State University)*
- 12:39 [B29.004 Multiscale Simulation of the Assembly of Hybrid Polymer-Inorganic Materials](#)  
*Feng Qi, Jinhua Zhou, Murat Durandurdu, John Kieffer (Department of Materials Science and Engineering, University of Michigan)*
- 12:51 [B29.005 Multiscale simulation of plastic deformation in glassy polymers](#)  
*Sergei Shenogin, Rahmi Ozisik (Rensselaer Polytechnic Institute)*
- 13:03 [B29.006 Mechanical properties of polymer-nanocomposites by MD simulation](#)  
*Suchira Sen (Dept. of Chemical and Biological Engg., Rensselaer Polytechnic Institute), Pawel Koblinski (Dept. of Materials and Engg., Rensselaer Polytechnic Institute), Sanat Kumar (Dept. of Chemical and Biological Engg., Rensselaer Polytechnic Institute)*
- 13:15 [B29.007 A Model for Incorporating Chemical Reactions in Mesoscale Modeling of Laser Ablation of Polymers](#)  
*Barbara J. Garrison, Yaroslava G. Yingling (The Pennsylvania State University)*
- 13:27 [B29.008 Superpolar polymers by first principles design](#)  
*Serge Nakhmanson (NC State University), Marco Buongiorno Nardelli, Jerry Bernholc (NC State University and ORNL)*
- 13:39 [B29.009 Biomolecule-Directed Assembly of Nanoscale Building Blocks Studied via Lattice Monte Carlo Simulation](#)  
*T. Chen, M.H. Lamm, R. Ziff, S.C. Glotzer (Department of Chemical Engineering, University of Michigan)*
- 13:51 [B29.010 Topological constraints at the Theta-point: Closed loops at two loops](#)  
*William Kung, Randall D. Kamien (University of Pennsylvania)*
- 14:03 [B29.011 Gelation and Elasticity in Polymer-Nanoparticle Suspensions](#)  
*Yeng-Long Chen, Ken Schweizer, Syed Shah, Subramanian Ramakrishnan, Charles Zukoski (University of Illinois at Urbana-Champaign)*
- 14:15 [B29.012 Molecular Simulation of Main-Chain and Side-Chain Liquid Crystalline Polymers](#)  
*Dumitru Pavel, Jolanta Lagowski (Department of Physics and Physical Oceanography, Memorial University of Newfoundland, St. John's, Canada), Robert Shanks, Xiangen Han (Applied Chemistry, RMIT University, Melbourne, Australia)*

**Session B30. DPOLY: Polymer-Inorganic Nanoparticle Composites - II.**

**Monday midday, 11:15, 519B, Palais des Congres**

**Chair: Joao Cabral, National Institute of Standard Technology.**

- 11:15 [B30.001 Non-linear Transport and Processing Properties of Carbon Nanotube Filled Polypropylene](#)  
*Seman B. Kharchenko, Kalman B. Migler, Jack F. Douglas, Jan Obrzut (Polymers Division, NIST), Eric A. Grulke (University of Kentucky)*
- 11:27 [B30.002 Optimization of Hydrogen Bonding in a Polymer Carbon Nanotube Nanocomposite](#)  
*Asif Rasheed, Mark Dadmun (University of Tennessee, Knoxville), Phil Britt Collaboration*
- 11:39 [B30.003 Rheology of Single-Walled Carbon Nanotube/PMMA Nanocomposites](#)  
*Fangming Du (University of Pennsylvania, Dept of Chemical and Biomolecular Engineering), Robert Scogna, Wei Zhou, Stijn Brand, John Fischer, Karen Winey (University of Pennsylvania, Dept of Material Science and Engineering)*
- 11:51 [B30.004 Semi-Crystalline Polymer based Single Walled Carbon Nanotube Nanocomposites](#)  
*Cynthia Mitchell, Ramanan Krishnamoorti (Department of Chemical Engg, Univ of Houston)*
- 12:03 [B30.005 Controlling Mechanical Properties of Polyurethane via Nanoparticles](#)  
*Rahmi Ozisik, Junrong Zheng, Richard W. Siegel (Rensselaer Nanotechnology Center, Rensselaer Polytechnic Institute)*
- 12:15 [B30.006 Self-healing properties of thin films with nanoparticles](#)  
*Jaeyoun Lee, Gavin Buxton, Anna Balazs (University of Pittsburgh)*
- 12:27 [B30.007 Cluster formation in sheared polymer nanocomposites](#)  
*Eihab Jaber, Haobin Luo, Wentao Li, Dilip Gersappe (Dept of Materials Science and Engineering, SUNY at Stony Brook, Stony Brook, NY 11794)*
- 12:39 [B30.008 Ultrathin Polymer Films and Nanoparticle Organization](#)  
*Jaepuk Kim (Columbia University Physics Department), Ben O'Shaughnessy (Columbia University Chemical Engineering Department)*
- 12:51 [B30.009 Electric Field-Induced Structure Formation in Thin Polymer Films Containing Inorganic Nanoparticles](#)  
*K. Amanda Leach, Thomas P. Russell (Polymer Science and Engineering Department, University of Mass. - Amherst, 01003)*
- 13:03 [B30.010 control of the dynamic behavior of the particle-copolymer nanocomposites](#)  
*Gang He, Anna Balazs (University of Pittsburgh, Department of Chemical and Petroleum Engineering)*
- 13:15 [B30.011 Processing and Mechanical Properties of Baroplastics](#)  
*Juan Gonzalez, Sang-Woog Ryu, Metin Acar, Anne Mayes (Department of Materials Science and Engineering, Massachusetts Institute of Technology)*
- 13:27 [B30.012 Elastic Properties of Multiblock and Nanocomposite Systems](#)  
*Russell B. Thompson, Kim O. Rasmussen, Turab Lookman (Los Alamos National Laboratory)*
- 13:39 [B30.013 Tethered Nano Building Blocks: Toward a Conceptual Framework for Nanoparticle Self-Assembly](#)  
*S.C. Glotzer, M.A. Horsch, Z.L. Zhang, M.H. Lamm (Dept. of Chemical Engineering, University of Michigan, Ann Arbor, MI 48109)*
- 13:51 [B30.014 Viscoelastic Behavior of PDMS Filled with Boron Nitrides](#)  
*J. F. Bian (Department of Petroleum and Chemical Engineering, New Mexico Institute of Mining & Technology), D. H. Weinkauff (Department of Petroleum and Chemical Engineering, New Mexico Institute of Mining & Technology.), H. S. Jeon (Department of Petroleum and Chemical Engineering, New Mexico Institute of Mining & Technology)*
- 14:03 [B30.015 Using direct imaging of Nanoparticle embedding to probe viscoelasticity of polymer surfaces](#)  
*Jonathan H. Teichroeb, James A. Forrest (Department of Physics and Guelph-Waterloo Physics Institute, University of Waterloo, Waterloo, ON Canada N2L 3G1)*

**Session B31. DPOLY/GSNP/DBP: Focus Session: Charged Biomolecules in Complexes and on Surfaces.**

**Monday midday, 11:15, 523AB, Palais des Congres**

**Chair: Monica Olvera de la Cruz, Northwestern University.**

- 11:15 [B31.001 Interactions of long DNA chains with charged surfaces: Entropy, Conformations and Applications](#)  
*Francis Rondelez (Laboratoire de Physico Chimie Curie, Institut Curie, Paris, France)*
- 11:51 [B31.002 Electrostatically Stabilized Bundle Phases of Microtubules](#)  
*M. Ojeda-Lopez, D.J. Needleman, U. Raviv, H.P. Miller, L. Wilson, C.R. Safinya (UCSB)*
- 12:03 [B31.003 Multivalent Lipid-DNA Complexes: Distinct DNA Compaction Regimes](#)  
*Heather M. Evans, A. Ahmad, K. Ewert, C.R. Safinya (Departments of Materials, Physics, and Biomolecular Science and Engineering, UCSB, Santa Barbara, CA)*
- 12:15 [B31.004 An Electrostatic Model of Microtubule self assembly](#)  
*Justin Stambaugh, Heather Umberger, David Jones, Edward Ott, Wolfgang Losert (Department of Physics, University of Maryland)*
- 12:27 [B31.005 Polyelectrolyte Flexibility Effect on the Morphology of Charged Lipid Multilayers](#)  
*Keunho Ahn, Sungyoung Yun, Mahn Won Kim (Korea Advanced Institute of Science and Technology, KOREA)*
- 13:03 [B31.006 Preferred Curvature State of an Asymmetrically-Charged Lipid Bilayer](#)  
*Bae-Yeum Ha (Department of Physics, University of Waterloo, Waterloo, Ontario N2L 3G1, Canada)*
- 13:15 [B31.007 Interactions between anionic polyelectrolytes and anionic membranes](#)  
*Hongjun Liang (Department of Materials Science and Engineering, University of Illinois at Urbana-Champaign), Thomas Angelini (Department of Physics, University of Illinois at Urbana-Champaign), Gerard Wong (Department of Materials Science and Engineering, Department of Physics, Department of Bioengineering, University of Illinois at Urbana-Champaign)*
- 13:27 [B31.008 'Melting' of counterion density wave on biopolymer surfaces](#)  
*R Coridan, T Angelini, G C L Wong (Departments of Materials Science and Engineering, Physics, and Bioengineering, University of Illinois at Urbana-Champaign)*
- 13:39 [B31.009 DNA Monolayers at Metal-Solution Interfaces](#)  
*Patrick Johnson, Youlei Weng, Gang Shen, Gaspar Anand, Rastislav Levicky (Chemical Engineering, Columbia University, NY, NY 10027), Young-soo Seo, Sushil Satija (National Institute of Standards and Technology, Gaithersburg, MD)*
- 13:51 [B31.010 Interior versus surface solvation of ions --role of polarization](#)  
*Henry D Herce (North Carolina State University), Thomas Darden (National Institute of Environmental Health Sciences), Celeste Sagui (North Carolina State University)*
- 14:03 [B31.011 Test-charge theory for the planar electric double layer](#)  
*Yoram Burak, David Andelman (School of Physics and Astronomy, Tel-Aviv University), Henri Orland (Service de Physique Theorique, CE-Saclay)*

**Session C1. Poster Session I.**

**Monday afternoon, 14:00, Palais des Congres**

**C1.001 DPOLY Poster Session**

- [C1.002 Magnetism and nuclear magnetic resonance of smectite clays and their polymer nanocomposites](#)  
*E.M. Levin (Ames Laboratory and Department of Physics and Astronomy, Iowa State University (ISU)), A. Rawal (Ames Laboratory and Department of Chemistry, ISU), S.S. Hou (Ames Laboratory, ISU), S.L. Budko (Ames Laboratory and Department of Physics and Astronomy, ISU), K. Schmidt-Rohr (Ames Laboratory and Department of Chemistry, ISU)*
- [C1.003 Lamellar Structure and Thermal Stability of isotactic Polypropylene Studied by Atomic Force Microscopy](#)  
*Lin Li, Jian-Jun Zhou, Xia Gao, Shou-Ke Yan, Charles C. Han (State Key Laboratory of Polymer Physics and Chemistry, Joint Laboratories of Polymer Science and Materials, Institute of Chemistry, Chinese Academy of Sciences (ICCAS), Beijing 100080 (PR China))*
- [C1.004 Supramolecular complexes: lamellar structure and crystalline transformation](#)  
*Su-Rong Zhou, Ying Zhao, Yuan-Li Cai, Yong Zhou, Yong-Lai Lu, Zhi-Qiang Su, Du-Jin Wang, Charles C. Han, Du-Fu Xu (State Key Laboratory of Polymer Physics and Chemistry, Joint Laboratory of Polymer Science and Materials, Institute of Chemistry, the Chinese Academy of Sciences, Beijing 100080, China)*
- [C1.005 Lamellar Single Crystals of Poly\(3-hydroxybutyrate\) as Model Substrates for Enzymolysis: Origin of the Splintered Texture](#)  
*Robert H. Marchessault, Junpei Kawada (Chemistry Department, McGill University)*
- [C1.006 Depletion Bands in the Crystallization of Thin Isotactic Polystyrene Films](#)  
*Duan Yongxin, Jiang Shidong, Jiang Yong, Li Lin, Han C. Charles, Yan ShouKe (State Key Laboratory of Polymer Physics and Chemistry, Joint Laboratory of Polymer Science and Materials, Institute of Chemistry, Chinese Academy of Sciences), Schultz M. Jerold (Department of Chemical Engineering, University of Delaware, Newark, DE 19716 USA)*
- [C1.007 Crystallographic simulation of the crystalline phase of a nonracemic chiral main-chain liquid crystalline polyester](#)  
*Shi Jin, Feng Bai, Frank W. Harris, Stephen Z. D. Cheng (Maurice Morton Institute and Department of Polymer Science, The University of Akron, Akron, Ohio 44325-3909)*
- [C1.008 Tensile Deformation of Polyethylenes: Crystallinity Effects](#)  
*Buckley Crist (Northwestern Univ.), Costas Metaxas (BP Polymers Americas)*
- [C1.009 Orientation Normal to the Surface in Semicrystalline Poly\(lactic acid\) Films](#)  
*Kaoru Aou, Shaw Ling Hsu (Polymer Science and Engineering Department, University of Massachusetts, Amherst)*
- [C1.010 Heat capacity, magnetic susceptibility, EPR, and dc conductivity of some conducting polymers](#)  
*Pawan Kahol, James Ho, Stefania Deterich (Wichita State University), Y.Y. Chen, C.R. Wang, S. Neelshwar, C.B. Tsai (Institute of Physics, Academic Sinica, Taiwan), B. Wessling (Ormecon GmbH, Germany)*
- [C1.011 Time-Resolved SANS Study of Polyethylene Crystallization from Solution](#)  
*Howard Wang (Michigan Technological University)*
- [C1.012 Morphological Studies and Thickness Effect on Crystalline P\(VDF-TrFE\) Copolymer](#)  
*B. Seyhan Ince, Laurel Powers, Peggy Cebe (Department of Physics and Astronomy, Tufts University)*
- [C1.013 Sub-micron Scroll/Tubular single crystals of Nylon 66](#)  
*Wenwen Cai (Department of Polymer Science, University of Akron), Christopher Y Li, Lingyu Li (Department of Materials Science and Engineering, Drexel University), Bernard Lotz (Institute Charles Sadron)*
- [C1.014 Optical and X-ray scattering studies on a semicrystalline triblock copolymer](#)  
*Dongseok Shin, Kyusoon Shin, Khaled Amer, Gregory N. Tew, Thomas P. Russell (Dept. of Polymer Science and Engineering, Univ. Mass., Amherst MA 01003)*
- [C1.015 Double Reversible Melting of Isotactic Polystyrene](#)  
*Hui Xu, Peggy Cebe (Department of Physics and Astronomy, Tufts Univ., Medford MA 02155)*
- [C1.016 Thermomechanical Properties of the Semicrystalline Interphase of Polyethylene](#)  
*Pieter J. in 't Veld, Gregory C. Rutledge (Massachusetts Institute of Technology)*
- [C1.017 Crystal Structure of Hydrogenated, Atactic ROMP Polynorbornene](#)  
*Li-Bong W. Lee, Richard A. Register (Princeton University)*
- [C1.018 Understanding the Complex Morphologies of Homogeneous Ethylene/1-octene Copolymers with Real-Time Small Angle Light Scattering](#)  
*Ying Li, Yvonne Akpalu (Department of Chemistry, NYS Center for Polymer Synthesis, Rensselaer Polytechnic Institute, Troy, NY 12180)*
- [C1.019 Capillary instabilities of thin nematic liquid crystalline polymer fibers embedded in a flexible polymer matrix](#)  
*Jian Wu, Patrick T. Mather (University of Connecticut)*
- [C1.020 Surface Microstructure of Injection-Molded Thermotropic Liquid Crystalline Copolymers](#)  
*Robert Bubeck, Lowell Thomas (Michigan Molecular Institute), Alexander Hexemer (U.C.S.B.), Xuefa Li (Argonne National Lab.), Wesley Burghardt, Stanley Rendon (Northwestern University), Daniel Fischer (N.I.S.T.)*
- [C1.021 The relationship between photooxidation defects and quantum yield loss in a liquid crystalline oligofluorene](#)  
*E. Jane Wesely (Department of Physics, University of Rochester, Rochester, NY, 14627), Lewis Rothberg (Department of Chemistry, University of Rochester, Rochester, NY), Yanhou Geng, Shaw Chen (Department of Chemical Engineering, University of Rochester, Rochester, NY)*

[C1.022 Understanding the Fundamental Mechanism Of Polymer-Substrate Adhesion Loss at a Critical Humidity Level By Combining Neutron Reflectivity and Adhesive Fracture Energy Measurements](#)  
Emmett P. O'Brien, Christopher C. White (National Institute of Standards and Technology)

[C1.023 Radical initiated polymerization in a bi-functional mixture by a computer simulation model](#)  
Keri Diamond, Ras Pandey, Shelby Thames (University of Southern Mississippi)

[C1.024 A CONTACT MECHANICS METHOD FOR CHARACTERIZING THE ELASTIC PROPERTIES AND PERMEABILITY OF POLYMER GELS](#)  
Wei-Chun Lin, Kenneth R. Shull (Northwestern University), Chung-Yuen Hui (Cornell University), Yu Yun Lin, Fu-Chin Chuang (National Cheng Kung University)

[C1.025 Study of PVA solutions and gels with Fluorescence Correlation Spectroscopy](#)  
Ariel Michelman Ribeiro (Boston University and National Institutes of Health), Hacene Boukari, Ferenc Horkay (National Institutes of Health)

[C1.026 Broadband Dielectric Investigation of Hydrogen Bonded Poly\(vinyl ether\) Solutions](#)  
Shihai Zhang, Xing Jin, Justin Horvath, James Runt (Penn State University)

[C1.027 Solvent Quality Based Gel Transitions in Triblock Copolymer Gels](#)  
David A. Brass, Kenneth R. Shull (Northwestern University)

[C1.028 Exploring Fast Flow Behavior of Entangled Polymers](#)  
Prashant Tapadia, Amy Philips, Shi-Qing Wang (University of Akron), Thomas Hu (Unilever Research U.S.)

[C1.029 Ultra-high Modulus Nano-Fluoroelastomers](#)  
David H. Pan (Xerox Innovation Group)

[C1.030 Supramolecular Thin Film Architectures of Oppositely Charged Polyphenylene Dendrimers by Layer-by-Layer Self-Assembly](#)  
Dongha Kim, Jose Luis Hernandez-Lopez, Jianyun Liu, George Mihov, Roland Bauer, Linjie Zhi, Klaus Muellen (Max Planck Institute for Polymer Research), Silvia Mitterler (The University of Western Ontario), Wolfgang Knoll (Max Planck Institute for Polymer Research)

[C1.031 Self-Consistent Field Calculations of Polyelectrolyte Systems](#)  
Qiang Wang (University of California - Santa Barbara), Takashi Taniguchi (Yamagata University), Glenn Fredrickson (University of California - Santa Barbara)

[C1.032 PBZO Based Proton Exchange Membrane \(PEM\) for High Temperature Fuel Cells](#)  
R.K. Eby, S. Puthanarath (Department of Polymer Science, University of Akron, Akron, OH 44325-3909, USA), D. Ofer, B. Nair (Foster Miller, Inc., Waltham, MA 02451, USA), D. Ott (Department of Biology, University of Akron, Akron, OH 44325-3908, USA)

[C1.033 Blend Miscibility of Polystyrene/Sulfonated Polystyrene Blends](#)  
Nancy Zhou (Department of Chemical and Biomolecular Engineering, University of Pennsylvania), Wes Burghardt (Department of Materials Science and Engineering, Northwestern University), Russ Composto, Karen Winey (Department of Materials Science and Engineering, University of Pennsylvania)

[C1.034 Dynamically stabilized lateral patterns in changed blends](#)  
Francisco J. Solis (Life Sciences, Arizona State University West), Galen T. Pickett (Department of Physics and Astronomy, California State University Long Beach)

[C1.035 Influence of chain stiffness on the properties of polyelectrolyte solutions](#)  
Seok Yun, Yuri Melnichenko, George Wignall, Kunlun Hong, Jimmy Mays (ORNL)

[C1.036 Capillary electrophoresis of small ssDNA molecules](#)  
Katerina Kopecka, Gary W. Slater (Department of Physics, University of Ottawa), Guy Drouin (Department of Biology, University of Ottawa)

[C1.037 Complex Transformations between Bicontinuous Cubic and Cylinder Phases in a Polystyrene-block-Poly\(ethylene oxide\) Diblock Copolymer](#)  
Lei Zhu, Lu Sun (Inst. of Mater. Sci. amp; Dept. of Chem. Eng., University of Connecticut, Storrs, CT 06269-3136), Qing Ge, Roderic P. Quirk, Stephen Z.D. Cheng (Maurice Morton Inst. and Dept. of Polymer Sci., University of Akron, Akron, OH 44325), Benjamin S. Hsiao, Igors Sics, Carlos Avila-Orta (Chemistry Dept., State University of New York at Stony Brook, Stony Brook, NY 11794)

[C1.038 Comparison of Wulff Shapes of Cylindrical Domains Growing at Homogenous and Heterogenous Nucleation Sites in Lamellar Block Copolymer Homopolymer Blends](#)  
Sam Gido, Engin Burgaz (Dep. of Polymer Science and Eng., Univ. of Massachusetts, Amherst)

[C1.039 Thermo-mechanical properties of semicrystalline sPP-EPR diblock and sPP-EPR-sPP triblock copolymers](#)  
A Hotta, V Khanna, J Ruokolainen, GH Fredrickson, EJ Kramer (Mitsubishi Chemical Center for Advanced Materials, UC Santa Barbara), PD Hustad, GW Coates (Cornell University), F Shimizu (Mitsubishi Chemical Co.)

[C1.040 Moiré Patterns of 2D Block Copolymer Arrays and Their Defects](#)  
A. Hexemer, G. E. Stein, E. J. Kramer (UCSB)

[C1.041 Effect of Thermal History on Order of Confined 2D Layers of Block Copolymers](#)  
G. E. Stein, A. Hexemer, E. J. Kramer (UCSB)

[C1.042 Block Copolymer Ordering in Swollen Films](#)  
Matthew Misner (Polymer Science amp; Engineering Department, University of Massachusetts-Amherst), Seung Hyun Kim (Polymer Science amp; Engineering Department, University of Massachusetts -Amherst), Nathaniel Lynd, Marc Hillmyer (Department of Chemistry, University of Minnesota), Thomas Russell (Polymer Science amp; Engineering Department, University of Massachusetts -Amherst)

[C1.043 Selective Metalization of Block Copolymer Films](#)  
James D. Sievert, Garth Brown, Thomas P. Russell, James J. Watkins (University of Massachusetts, Amherst)

[C1.044 Separation of ABC triblock copolymer using HPLC](#)  
Won Kim, Chang Yeol Ryu (Rensselaer Polytechnic Institute), Hoichang Yang (RPI/POSTECH), Kilwon Cho (POSTECH)

[C1.045 Thermally Cross-Linked Diblock Copolymer Templates](#)  
Julie M. Leiston-Belanger, Thomas P. Russell (University of Massachusetts- Amherst, Polymer Science and Engineering Dept.), Eric Drockenmuller, Craig J. Hawker (IBM Almaden Research Center)

[C1.046 Defect trapping in ABC block copolymers](#)  
Laurent Corte (Laboratoire Matière Molle et Chimie, ESPCI, Paris, France), Kazuhiro Yamauchi (Department of Polymer Chemistry, Kyoto University, Kyoto, Japan), Francois Court (CERDATO, ATOFINA, France), Michel Cloitre (Laboratoire Matière Molle et Chimie, ESPCI, Paris, France), Takeji Hashimoto (Department of Polymer Chemistry, Kyoto University, Kyoto, Japan), Ludwik Leibler (Laboratoire Matière Molle et Chimie, ESPCI, Paris, France)

[C1.047 Optimizing Graphoepitaxial Ordering in Cylindrical Diblock Copolymer Monolayer Films](#)  
M. R. Hammond, A. Hexemer, E. J. Kramer (UCSB)

[C1.048 CRYSTALLIZATION OF BISPHENOL-A POLYCARBONATE IN POLYCAPROLACTONE/POLYCARBONATE BLENDS](#)  
J.C. Zamora, A.J. Müller (Materials Science Department, Universidad Simón Bolívar, Apartado 89000, Caracas 1080-A, Venezuela), E. Laredo (Physics Department, Universidad Simón Bolívar, Apartado 89000, Caracas 1080-A, Venezuela), T.P. Lodge (Department of Chemistry, University of Minnesota, Minneapolis MN 55455)

[C1.049 The Effect of Molecular Structure of Copolymers formed in-situ on Morphology at Reactive Polymer/Polymer Interface](#)  
Hwang Yong Kim, Jin Kon Kim (Department of Chemical Engineering, Pohang University of Science and Technology)

[C1.050 Piezo- and pyro-resistivity of carbon nanotube-elastomer nanocomposites](#)  
Hilmar Koerner (University of Dayton Research Institute), Nathan Pearce (Miami University, Ohio), Heather Dowty, Shane Juhl, Max Alexander, Richard Vaia (Air Force Research Laboratory)

[C1.051 A Bending angle of 180 of Single walled carbon nanotubes:Novel high resolution electron microscopy observations](#)  
El-Hami Khalil, Matsushige Kazumi (Dept. of Electronic Science and Engineering, Kyoto University)

[C1.052 Morphology and Phase Behavior of Polyhedral Oligomeric Silsesquioxane-Polybutadiene Random Copolymer Blends in Bulk and Thin Films](#)  
Engin Burgaz, Lei Zheng, Gregoire Cardoen, E. Bryan Coughlin, Sam Gido (Dept. of Polymer Science and Eng., Univ. of Massachusetts, Amherst)

[C1.053 Is Curing Behavior Dependent on Morphology in Reactive Polyurethanes](#)  
Young Gyu Jeong, Tomoko Hashida, Jayaraman Krishnamoorthy, Shaw Ling Hsu (Polymer Science and Engineering Department, University of Massachusetts at Amherst)

[C1.054 Influence of prepolymer composition on polyurethane morphology](#)  
Jayaraman Krishnamoorthy, Young Gyu Jeong, Tomoko Hashida, Shaw Ling Hsu (Polymer Science amp; Engineering Department, University of Massachusetts, Amherst, MA)

[C1.055 Theoretical study of copolymer/homopolymer blends of varying composition.](#)  
Amy Gindhart, Kathleen Kolbet (Lebanon Valley College)

[C1.056 Structure and Nanomechanical Properties of Electrospun Polystyrene/Clay Fibers](#)  
Yuan Ji, Shouren GE, Bingquan Li, Miriam Rajalovich, Jonathan Sokolov (Department of Materials Science and Engineering, SUNY Stony Brook)

[C1.057 P\(VDF-TrFE\) – Layered Silicate Nanocomposites: Dielectric Relaxation Studies](#)  
Peggy Cebe (Tufts University, Physics Department), James Runt (The Pennsylvania State University, Dept. Materials Science and Eng.)

[C1.058 Optical Properties of Flowing Carbon Nanotube Suspensions](#)  
D. Fry, B. Langhorst, H. Kim, E. Grulke, H. Wang, E. K. Hobbie (NIST)

[C1.059 Morphology Quantification Of Thermoset-Layered Silicate Nanocomposites Using Dielectric Spectroscopy](#)  
J. David Jacobs (University of Cincinnati), Richard A. Vaia (Air Force Research Laboratory), Hilmar Koerner (University of Dayton Research Institute), John D. Busbee (Air Force Research Laboratory)

[C1.060 Curing Kinetics and Gas Barrier Properties of Thermoset Polymer Nanocomposites](#)  
Kigook Song, In-Jun Wee, U-Jin Lee (Affiliation), Han-Soo Park (Kyung Hee University, Korea), Young-Kwan Lee (Sung Kyun Kwan University, Korea)

[C1.061 Miscibility in Bisphenol-A Polycarbonate/ Poly\(epsilon-caprolactone\)](#)  
Mario Grima, Alfredo Bello, Estrella Laredo, Dinorah Herrera, Alejandro Müller, Jean Carlos Zamora (Universidad Simón Bolívar, Caracas, Venezuela)

[C1.062 Magnetism and Magnetic Materials](#)  
Irina Bariakhtar (Boston College), Valeri Lozovski (National University of Kyiv, Ukraine)

**Session H4. DPOLY: Polymer Physics Prize.**

**Tuesday morning, 08:00, 517C, Palais des Congres**

**Chair: Frank Bates, University of Minnesota.**

- 08:00 [H4.001 Dynamics of Multicomponent Polymers](#)  
*Timothy Lodge (University of Minnesota)*
- 08:36 [H4.002 Viscoelastic and Oscillatory Flow Birefringence Properties of Dilute Polymer Solutions: Experimentally Determined Polymer and Solvating Environment Contributions, and the Solvent-Controlled Polymer Relaxation Time Spectrum Cutoff](#)  
*John Schrag (Department of Chemistry and the Rheology Research Center, University of Wisconsin, Madison, WI 53706)*
- 09:12 [H4.003 Structure and dynamics of diblock copolymers in selective incompatible solvents](#)  
*Petr Stepanek (Institute of Macromolecular Chemistry (IMC), Heyrovsky Sq. 2, Prague 6, Czech Republic)*
- 09:48 [H4.004 Temperature-dependent conformational changes of PNIPAM grafted chains in water: effects of molecular weight and grafting density](#)  
*Michael Kent (Sandia National Laboratories)*
- 10:24 [H4.005 Combinatorial Methods for Exploring Complex Materials](#)  
*Eric J. Amis (Polymers Division, National Institute of Standards and Technology, Gaithersburg, MD 20899)*

**Session H29. DPOLY: Physical Properties of Polymers.**

**Tuesday morning, 08:36, 519A, Palais des Congres**

**Chair: Robert Bubeck, Michigan Molecular Inst.**

- 08:36 [H29.001 Chain-like molecules confined in nanopores](#)  
*Patrick Huber, Viktor Soprunyuk, Tommy Hofmann, Klaus Knorr (Fakultät für Physik und Elektrotechnik, Universität des Saarlandes, 66041 Saarbrücken)*
- 08:48 [H29.002 Vibrations of spherical porous thin shell made of swollen polymer gel](#)  
*Wang Chengqing (Department of Chemistry, The Chinese University of Hong Kong, Shatin, N.T., Hong Kong), Wu Chi (Department of Chemistry, The Chinese University of Hong Kong, Shatin, N.T., Hong Kong; Department of Physics, The Chinese University of Hong Kong, Shatin, N.T., Hong Kong), Prof. Chi Wu Team*
- 09:00 [H29.003 Local Dynamics of Polymers in 1nm and 2nm slit-Pores](#)  
*Evangelos Manias, Vikram Koppa (Penn State University)*
- 09:12 [H29.004 Optimization of Mechanochemical Process of Devalcanisation: Effect of Peptizer Level and Processing Condition](#)  
*Samra Sangari (School of Electrical and Computer Systems, Royal Melbourne Institute of Technology, Melbourne, Victoria, Australia)*
- 09:24 [H29.005 Determining the Mechanism of the Polymerization of Ethylcyanoacrylate for Use in Latent Fingerprinting](#)  
*Steve Wargacki, Mark Dadmun (University of Tennessee, Knoxville), Linda Lewis (Oak Ridge National Laboratory)*
- 09:36 [H29.006 An Investigation of the Solid-State Condensation Polymerization Reaction in Vapor-Deposited Poly\(amic acid\)](#)  
*Mitchell Anthamatten, Stephan A. Letts, Katherine Day, Robert C. Cook (Lawrence Livermore National Laboratory), Anthony P. Gies, William K. Nonidez (University of Alabama- Birmingham)*
- 09:48 [H29.007 Photonic Thin Films Prepared by Plasma Polymerization/Copolymerization](#)  
*Hao Jiang (Anteon Corp./Air Force Research Laboratory), S. Tullis (Air Force Research Laboratory/Materials and Manufacturing Directorate), K.O. O'Neill (Penn State U.), W.E. Johnson, K Eyink (Air Force Research Laboratory/Materials and Manufacturing Directorate), J.T. Grant (research Institute, Univ. Dayton), P.A. Fleitz, T.J. Bunning (Air Force Research Laboratory/Materials and Manufacturing Directorate)*
- 10:00 [H29.008 Jahn-Teller model for electron capture in transport through benzene with NO<sub>2</sub> sidegroup: origin of NDR](#)  
*Michael Stopa (ERATO-JST)*
- 10:12 [H29.009 Photonic nanowires investigated by single molecule fluorescence and atomic force microscopy](#)  
*Jordi Hernando, Erik M.H.P. van Dijk, Niek F. van Hulst, Maria F. Garcia-Parajo (Applied Optics Group, Fac. Science and Technology, MESA+ Research Institute, Univ. Twente (The Netherlands)), Pieter A.J. de Witte, Roeland J.M. Nolte, Alan E. Rowan (Supramolecular Chemistry Group, Univ. Nijmegen (The Netherlands))*
- 10:24 [H29.010 Resistivity and Magnetoresistance of Polypyrrole Nanowires](#)  
*J. M. Mativetsky, W. R. Datars (Department of Physics and Astronomy, McMaster University, Hamilton, Canada, L8S 2M1)*
- 10:36 [H29.011 Electronic polarization in pentacene crystals and thin films](#)  
*Eugene V. Tsiper (Naval Research Laboratory and George Mason University), Zoltán G. Soos (Princeton University)*
- 10:48 [H29.012 Crystal shapes and crystallization in continuum modeling](#)  
*Markus Hütter, Gregory C. Rutledge, Robert C. Armstrong (Department of Chemical Engineering, Massachusetts Institute of Technology, Cambridge, Massachusetts 02139, U.S.A.)*

**Session H30. DPOLY: Polymers for Organic Electronic Devices.**

**Tuesday morning, 08:36, 519B, Palais des Congres**

**Chair: Richard Register, Princeton Univ.**

- 08:36 [H30.001 Mobility of Pentacene Field Effect Transistors with Styrenic Polymer Gate Dielectrics](#)  
*G. Nunes Jr., J. S. Meth, S. Zane (DuPont Central Research amp; Development, Wilmington, Delaware, USA)*
- 08:48 [H30.002 Transport in Pentacene and Tetracene derivatives Thin Film Field Effect Transistor](#)  
*Alexander L. Henderson (Department of Applied Physics and Applied Mathematics, Columbia University, New York, NY 10027), Qian Miao, Colin Nuckolls (Department of Chemistry, Columbia University, New York, NY 10027), Philip Kim (Department of Physics, Columbia University, New York, NY 10027)*
- 09:00 [H30.003 Film structure and morphology effects on charge transport in pentacene thin film transistors.](#)  
*Ricardo Ruiz (Cornell Center for Materials Research, Cornell University), Alex C. Mayer, George G. Malliaras (Dept. of Materials Science and Engineering, Cornell University), Randall L. Headrick (Department of Physics, University of Vermont), Alexander Kazimirov (Cornell High Energy Synchrotron Source), James R. Engstrom (Chemical and Biomolecular Engineering, Cornell University)*
- 09:12 [H30.004 Fabrication of short-channel organic electronic devices using electron beam lithography](#)  
*K. Edwards, J. J. Heremans, J. Jo, V. Soghomonian (Ohio University, Athens OH 45701)*
- 09:24 [H30.005 Photo-Assisted Scanning Probe Microscopy Studies of Organic Semiconductor Surfaces](#)  
*Oleg Stukalov, John Dutcher (University of Guelph), Artyom Pochtemy (Belarussian State University of Technology)*
- 09:36 [H30.006 Local Electronic Characterization of Conjugated Polymer Films using Conducting-Probe Atomic Force Microscopy](#)  
*G. O'Brien, A.J. Quinn, G. Redmond (Nanotechnology Group, NMRC, Cork, Ireland.)*
- 09:48 [H30.007 Weak Localization in Semiconducting Polymer Thin Film Devices](#)  
*Omer Mermer, Govindarajan Veeraraghavan, Thomas Francis, Markus Wohlgenannt (University of Iowa)*
- 10:00 [H30.008 Investigation of negative differential resistance in a metal-insulator-metal device via specific chemical alterations](#)  
*Bonnie Ludwig, Mark Biscotto (University of Michigan Department of Chemistry), Bradford Orr (University of Michigan Department of Applied Physics), Mark Bamaszak Holl (University of Michigan Department of Chemistry), Udo Pernisz (Dow Corning Corporation)*
- 10:12 [H30.009 Metal-Organic Interface Dipole and Charge Transfer](#)  
*Li Yan, Neil Watkins (Affiliation), Yongli Gao (Department of Physics and Astronomy, University of Rochester)*
- 10:24 [H30.010 Metal-organic contacts in organo-electronic devices](#)  
*Wei Tang, Huazhong Shi, Gu Xu (Dept. Materials Sci and Eng., McMaster University), Dept. Materials Sci and Eng. Team*
- 10:36 [H30.011 Transient based studies of organic/inorganic semiconductor hybrid structures](#)  
*Samarendra Singh (Department of Physics, Indian Institute of Technology Kanpur INDIA), Mohammad Quersh, S. Manoharan (Department of Chemistry, Indian Institute of Technology Kanpur INDIA), Yashowanta Mohapatra (Department of Physics, Indian Institute of Technology Kanpur INDIA), Department of Chemistry Collaboration*
- 10:48 [H30.012 Inelastic X-Ray Scattering of the Organic Semiconductor CuPc](#)  
*Michelle Tuel-Benckendorf, Clement Burns (Western Michigan University), Ayman Said (Western Michigan University; ANL Advanced Photon Source), Hasan Yavas (Michigan State University; ANL Advanced Photon Source), Xue Wang (Western Michigan University)*

**Session J4. DPOLY: Networks and Complex Architectures.**

**Tuesday midday, 11:15, 517C, Palais des Congres**

**Chair: Michael Rubinstein, University of North Carolina.**

- 11:15 [J4.001 Liquid Crystal Elastomers: Optics and Mechanics](#)  
*Heino Finkelmann (Institut fuer Makromol. Chem., Univ. Freiburg, Germany)*
- 11:51 [J4.002 Volume Phase Transition of Liquid Crystalline Gels Induced by Nematic Ordering](#)  
*Kenji Urayama (Department of Material Chemistry, Kyoto University)*
- 12:27 [J4.003 Effects of molecular stiffness and energetic interactions on the properties of elastomers](#)  
*Claude Cohen (School of Chemical and Biomolecular Engineering, Cornell University)*
- 13:03 [J4.004 Relaxation mechanisms in architecturally complex macromolecules](#)  
*Dimitris Vlassopoulos (FORTH, Institute of Electronic Structure and Laser, and University of Crete, Dept. of Materials Science and Technology, Heraklion 71110, Crete, Greece)*
- 13:39 [J4.005 Origins of Non-ergodicity and Slow Dynamics of Polymer Gels](#)  
*Chi Wu (Department of Chemistry amp; Department of Physics, The Chinese University of Hong Kong, Shatin, NT, Hong Kong)*



**Session J29. DPOLY: Phase Behavior of Block Copolymers.**

**Tuesday midday, 11:15, 519A, Palais des Congres**

**Chair: Spiros Anastastadis, IESL, Crete.**

- 11:15 [J29.001 Exploring the effect of morphology on the order-disorder transition of block copolymer networks](#)  
*Enrique Gomez, Hyeok Hahn, Nitash Balsara (University of California, Berkeley)*
- 11:27 [J29.002 Electric field induced Sphere to cylinder transition in diblock copolymer thin films](#)  
*Thomas P. Russell, Ting Xu, Yuqing Zhu, Samuel P. Gido (Department of Polymer Science and Engineering, University of Mass. Amherst), Oleg Gang, Ben Ocko (Physics department, Brookhaven National Laboratory), University of Mass. Collaboration, Brookhaven National Laboratory Collaboration*
- 11:39 [J29.003 Continuous polydispersity in a self-consistent field theory for an AB diblock copolymer](#)  
*Scott Sides, Glenn Fredrickson (University of California at Santa Barbara)*
- 11:51 [J29.004 Nucleation of stable cylinders from a metastable bcc-sphere phase in a diblock copolymer melt](#)  
*Robert Wickham (St. Francis Xavier University), An-Chang Shi (McMaster University)*
- 12:03 [J29.005 Effects of Confinement on the Order-Disorder Phase Transition in Diblock Copolymer Melts](#)  
*Dadong Yan, Bing Miao, Charles Han (State Key Laboratory of Polymer Physics and Chemistry, Joint Laboratory of Polymer Science and Materials, Institute of Chemistry, Chinese Academy of Sciences, Beijing 100080, China), An-Chang Shi (Department of Physics and Astronomy, McMaster University, Hamilton, Ontario, Canada)*
- 12:15 [J29.006 Phase Behavior of Weakly Ordered Diblock Copolymers in the High Molecular Weight Limit](#)  
*Amish Patel, Nitash Balsara (University of California, Berkeley)*
- 12:27 [J29.007 The Phase Behavior of Polystyrene-block-Poly\(n-butyl methacrylate\) Copolymers with various End-Functional Groups](#)  
*Jin Kon Kim, Unyong Jeong (Department of Chemical Engineering, Pohang University of Science and Technology)*
- 12:39 [J29.008 Kinetics and Grain Growth for the Disorder to Cylinder Transition in a Block Copolymer Solution](#)  
*Thomas Chastek, Timothy Lodge (University of Minnesota)*
- 12:51 [J29.009 SCFT Study of Phases and Phase Transitions in Diblock Copolymer Solutions](#)  
*Lingyun Zhang, An-Chang Shi (McMaster University)*
- 13:03 [J29.010 Semiflexible Copolymers in Selective Solvents: Toroids, Globules, Cages and other Weird Structures](#)  
*Ira Cooke, David Williams (Research School of Physical Sciences and Engineering, Australian National University, Canberra, ACT 0200, AUSTRALIA)*
- 13:15 [J29.011 Kinetics of HEX-BCC Transition of Triblock Copolymer Micelles in a Selective Solvent for the Middle Block](#)  
*Huijen Nie, Bansil Rama, Karl Ludwig (Boston Univeristy), Milos Steinhart (Institute of Macromolecular Chemistry, Czech Republic)*
- 13:27 [J29.012 Interplay between Cubic and Hexagonal Phases in Block Copolymer Solutions](#)  
*Park Moon Jeong, Char Kookheon (School of Chemical Engineering, Seoul National University), Lodge Timothy P. (Department of Chemical Engineering and Materials Science, University of Minnesota)*
- 13:39 [J29.013 Electrochemical control over order-disorder transitions in organometallic block copolymers](#)  
*Hany Eitouni, Nitash Balsara (University of California, Berkeley)*
- 13:51 [J29.014 Fluctuation and compressibility effects on the scattering  \$\chi\$  for block copolymers](#)  
*Junhan Cho (Polymer Sci. & Eng., Dankook University)*

**Session J30. DPOLY: Padden Award Symposium.**

**Tuesday midday, 11:15, 519B, Palais des Congres**

**Chair: M. Muthukumar, University of Massachusetts.**

- 11:15 [J30.001 Polyolefin Miscibility: Novel Insights from Molecular Inspection](#)  
*Justyna E. Wolak, Jeffery L. White (North Carolina State University)*
- 11:27 [J30.002 Salt Triggered Peptide Folding and Consequent Self-Assembly into Hydrogels with Tunable Modulus](#)  
*Bulent Ozbas, Darrin Pochan (Materials Science and Engineering, University of Delaware), Juiliana Kretsinger, Karthikan Rajagopal, Joel Schneider (Chemistry and Biochemistry, University of Delaware)*
- 11:39 [J30.003 Application of Self-Consistent Field Theory to Model the Temperature Response of Tethered Poly\(N-isopropylacrylamide\) Chains](#)  
*Sergio Mendez (University of New Mexico), Balamurugan Subramanian, Sreelatha Balamurugan (Louisiana State University), Gabriel Lopez (University of New Mexico), Hyun Yim, Michael Kent, John Curro (Sandia National Laboratories), John McCoy (New Mexico Institute of Mining and Technology)*
- 11:51 [J30.004 Pressure Effects on the Closed-Loop Phase Behavior of Polystyrene/Poly\(n-pentyl methacrylate\) Block Copolymers](#)  
*Kristopher A. Lavery, Du Yeol Ryu, James J. Watkins, Thomas P. Russell (Univ. of Massachusetts Amherst), Jin Kon Kim (POSTECH)*
- 12:03 [J30.005 Controllable microgels from multifunctional molecules: structure control and size distribution](#)  
*Zhenyu Gu, Gary Patterson, Rong Cao, Bruce Armitage (Carnegie Mellon University)*
- 12:15 [J30.006 Orthorhombic Network Phases in ABC Triblock Copolymers](#)  
*Eric Cochran, Thomas Epps, Cordell Hardy, Frank Bates (University of Minnesota - Chemical Engineering and Materials Science)*
- 12:27 [J30.007 Beyond Spherical Micelles in Styrene-Isoprene Block Copolymer Solutions](#)  
*Joona Bang, Timothy P. Lodge (University of Minnesota)*

**Session J31. DPOLY: Semicrystalline Polymers: Characterization.**

**Tuesday midday, 11:15, 523AB, Palais des Congres**

**Chair: Howard Wang, Michigan Tech University.**

- 11:15 [J31.001 The Phase Diagram of Polymer Blends with Coexisting Phase Separation and Crystallization](#)  
*Howard Wang (Michigan Technological University), Boualem Hammouda (National Institute of Standards and Technology)*
- 11:27 [J31.002 Application of Small Angle Neutron Scattering \(SANS\) to Semi-Crystalline Polymers using Vapor Absorption Contrast Variation](#)  
*Man-Ho Kim (NIST, Center for Neutron Research, Gaithersburg, MD 20899; MSE, University of Maryland, College Park, MD 20742), Charles J. Glinka (NIST, Center for Neutron Research, Gaithersburg, MD 20899)*
- 11:39 [J31.003 Elliptical Features in Small-Angle X-ray Scattering Arising from Tilted Lamellae in an Affinely Deformed Superlattice](#)  
*Sanjeeva Murthy (University of Vermont), David Grubb (Cornell University)*
- 11:51 [J31.004 The Equatorial Streak in Small-Angle X-ray Scattering is due to Surface Scattering, not internal structure, in Nylon 6 fibers](#)  
*David Grubb (Cornell University), Sanjeeva Murthy (University of Vermont)*
- 12:03 [J31.005 Probing the Origin of Shish-Kebab Formation in Model Polyethylene Blend under Shear by In-situ Rheo-SAXS and Rheo-WAXD](#)  
*Ling Yang, Rajesh Somani, Carlos Avila-Orta, Benjamin Hsiao (Department of Chemistry, Stony Brook University, Stony Brook, NY 11794), Rainer Kolb, Hitesh Fruitwala, Thomas Sun (ExxonMobil Chemical Company, Baytown, TX 77522), David Lohse, Christine Ong (ExxonMobil Research and Engineering Company, Annandale, NJ 08801)*
- 12:15 [J31.006 Effect of Side-Group Substitution on the Raman Spectra of Polyfluorene as a Function of Temperature](#)  
*C.M. Martin, S. Guha, M. Chandrasekhar, H.R. Chandrasekhar (Dept. of Physics and Astronomy, University of Missouri Columbia MO 65211 USA), M.J. Winokur (Dept. of Physics University of Wisconsin, Madison, WI 53706), U. Scherf (Bergische Universität Wuppertal, Makromolekulare Chemie, Wuppertal, Germany)*
- 12:27 [J31.007 Crystallinity and Morphology of ultra-thin Polyethylene films characterized with Near Edge X-ray Absorption Spectroscopy based methods](#)  
*Harald Ade, Ying Zou, A.D.L. Kilcoyne (Department of Physics, North Carolina State University), Yantian Wang, Miriam Rafailovich (Department of Materials Science and Engineering, State University of New York at Stony Brook), Jan Lüning (Stanford Synchrotron Radiation Laboratory, Stanford)*
- 12:39 [J31.008 Formation and Melting of Mesomorphic Polyethylene as Revealed by Derivative Fourier Transform Infrared Spectroscopy](#)  
*R. Androsch, I. Kolesov, H.-J. Radsch (Martin-Luther-University Halle-Wittenberg, Institute of Materials Science, 06099 Halle, Germany)*
- 12:51 [J31.009 Spectroscopic investigation on the polymorphism and side group location of ethylene copolymers](#)  
*Du-Jin Wang, Zhi-Qiang Su, Ying Zhao, Xiu-Qin Zhang, Shan-Nong Zhu, Charles C. Han, Duan-Fu Xu (State Key Laboratory of Polymer Physics and Chemistry, Joint Laboratory of Polymer Science and Materials, Institute of Chemistry, the Chinese Academy of Sciences, Beijing 100080, China)*
- 13:03 [J31.010 Unusual Crystallization Behavior and Morphology Development in Polymer Blends](#)  
*Tomoko Hashida, Young Gyu Jeong, Jayaraman Krishnamoorthy, Shaw Ling Hsu (Polymer Science and Engineering Department, University of Massachusetts, Amherst, MA)*
- 13:15 [J31.011 Positron annihilation lifetime spectroscopy of poly\(ethylene terephthalate\): Contributions from rigid and mobile amorphous fractions](#)  
*Brian Olson, Jun Lin, Sergei Nazarenko, Alexander Jamieson (Case Western Reserve University, Cleveland, OH 44106)*
- 13:27 [J31.012 Irreversible Enthalpic Relaxation of Rigid Amorphous Fraction in Isotactic Polystyrene](#)  
*Hui Xu, Peggy Cebe (Department of Physics and Astronomy, Tufts Univ. Medford, MA 02155)*
- 13:39 [J31.013 Quantitative Thermal Analysis of Poly\(butylene Terephthalate\) by Temperature-Modulated Differential Scanning Calorimetry](#)  
*M. Pyda, E. Nowak-Pyda, B. Wunderlich (Department of Chemistry, The University of Tennessee, Knoxville, TN 37996-1600, and Chemical Sciences Division, Oak Ridge National Laboratory, Oak Ridge, TN 37831-6197, USA)*
- 13:51 [J31.014 Low Temperature Specific Heat Measurements of a Copolymer Film of Vinylidene Fluoride and Trifluoroethylene](#)  
*Jr Newsome, Eva Y. Andrei (Department of Physics, Rutgers University)*
- 14:03 [J31.015 Molecular Dynamics in Hairy Rod Polymers with variable side-chain lengths](#)  
*Estrella Laredo, Mario Grimau, Alfredo Bello (Universidad Simón Bolívar, Caracas, Venezuela), Francisco López-Carrasquero (Universidad de Los Andes, Mérida, Venezuela)*

**Session L4. DPOLY: Dillion Medal Award Symposium.**

**Tuesday afternoon, 14:30, 517C, Palais des Congres**

**Chair: Michael Schick, University of Washington.**

- 14:30 [L4.001 Inhomogeneous polymer systems: A quantitative comparison between computer simulation and self-consistent field theory](#)  
*Marcus Müller (Institut für Physik, Johannes Gutenberg Universität, 55099 Mainz, Germany)*
- 15:06 [L4.002 Field theoretic study of bilayer membrane fusion](#)  
*Kirill Katsov (Materials Research Lab, UC, Santa Barbara), Marcus Mueller (Institute for Physics, Johannes Gutenberg University, Germany), Michael Schick (Department of Physics, University of Washington, Seattle)*
- 15:18 [L4.003 Nanoparticle-Block Copolymer Composites](#)  
*Ellen Reister, Glenn H. Fredrickson (Department of Chemical Engineering and Materials Research Laboratory, University of California, Santa Barbara, CA 93106)*
- 15:30 [L4.004 Computer simulation study of two dimensional polymers](#)  
*Arum Yethiraj (Department of Chemistry, University of Wisconsin)*
- 15:42 [L4.005 The role of network connectivity on the mechanical properties of cross-linked polymers](#)  
*Mesfin Tsigie, Mark J. Stevens (Sandia National Laboratories)*
- 15:54 [L4.006 Can tube models of rubber elasticity describe the microscopic and macroscopic response of end-linked polymer networks to elongational strain?](#)  
*C. Svaneborg, R. Everaers (Max Planck Institute for Physics of Complex Systems), G. S. Grest (Sandia National Laboratories)*
- 16:06 [L4.007 Effective Charge of Flexible Polyelectrolytes](#)  
*M. Muthukumar (University of Massachusetts)*
- 16:18 [L4.008 Polyelectrolyte Adsorption and Multilayering on Charged Colloidal Particles](#)  
*Rene Messina (Institut fuer Theoretische Physik II, Heinrich-Heine-Universität Duesseldorf, 40225 Duesseldorf, Germany), Christian Holm, Kurt Kremer (Max Planck Institute for Polymer Research, 55021 Mainz, Germany)*
- 16:30 [L4.009 Segmental Relaxation, Dynamic Fragility and the Glass Transition in Polymer Melts](#)  
*Kenneth S. Schweizer, Erica J. Saltzman (University of Illinois at Urbana-Champaign)*
- 16:42 [L4.010 Thermal vitrification of dense suspensions of multi-arm star polymers: A Molecular Dynamics Study](#)  
*Ioannis A. Bitsanis, Anastassia Rissanou, Dimitrios Vlassopoulos (FORTH-IESL)*
- 16:54 [L4.011 Multi-Resolution Approach to Polymer Self-Consistent Field Theory](#)  
*Glenn H. Fredrickson, Hector Ceniceros (University of California, Santa Barbara)*
- 17:06 [L4.012 Thin films of asymmetric triblock copolymers: a Self-Consistent Field Theory study](#)  
*Grzegorz Szamel (Department of Chemistry, Colorado State University)*
- 17:18 [L4.013 Single Polymer Molecules: Chain Conformation after Adsorption](#)  
*Manfred Stamm (Institut fuer Polymerforschung Dresden, Germany)*

**Session L29. DPOLY: Polymers at Surfaces and Interfaces (I).**

**Tuesday afternoon, 15:06, 519A, Palais des Congres**

**Chair: Rachel Segalman, University of California, Berkeley.**

- 15:06 [L29.001 Facile creation of super-hydrophobic coated surface with micro-nano-binary structures](#)  
*Charles C. Han, Qiong Dan Xie, Jian Xu, Lin Feng, Lei Jiang, Wen-Hong Tang, Xiang-Dong Luo (Joint laboratories of Polymer Science and Materials, Institute of Chemistry, Chinese Academy of Sciences (ICCAS), Beijing 100080 (PR China))*
- 15:18 [L29.002 Construct of Excellent Liquid Repellent Surface Using Fluorinated Block Copolymers Synthesized by Atom Transfer Radical Polymerization](#)  
*Masaya Hikita (Japan Chemical Innovation Institute), Tetsuya Nakamura (NOF Corporation), Keiji Tanaka (Kyushu University), Atsushi Takahara, Tisato Kajiyama*
- 15:30 [L29.003 Micrometer-Scaled Gradient Surfaces Generated Using Contact Printing of Octadecyltrichlorosilane](#)  
*Bi-min Zhang Newby (Department of Chemical Engineering, The University of Akron, Akron, Ohio 44325-3906, USA), Sung-Hwan Choi*
- 15:42 [L29.004 Changes in mechanical properties and morphology of elastomer coatings after immersion in salt solutions](#)  
*Fernando Terán Arce, Recep Avci (Physics Department, Montana State University), Iwona Beech (University of Portsmouth, UK), Keith Cooksey, Barbara Wigglesworth-Cooksey (Department of Microbiology, Montana State University)*
- 15:54 [L29.005 Solvent Evaporation from Thin Polymer Films Studied Using Molecular Dynamics Simulations](#)  
*Gary S. Grest, Mesfin Tsige (Sandia National Laboratories)*
- 16:06 [L29.006 Ultrathin Chitosan Films with Tailored Properties](#)  
*Chris Murray, Oleg Stukalov, John Dutcher (Department of Physics, University of Guelph)*
- 16:18 [L29.007 Effect of Capping Layer Thickness and Molecular Weight on the Self-Assembled Morphology and Dewetting Pathway for Polymer Trilayer Films](#)  
*Christian Schultz-Nielsen, Stephen Kamp, John Dutcher (Department of Physics, University of Guelph)*
- 16:30 [L29.008 Non-spherical dewetted droplets in ordered lamellar diblocks: spherical to conical transition through the ODT](#)  
*Andrew B. Croll, Michael V. Massa, Kari Dalnoki-Veress (Department of Physics and Astronomy and the Brockhouse Institute for Materials Research, McMaster University, Hamilton, ON, Canada), Mark W. Matsen (Department of Physics, University of Reading, Reading, UK)*
- 16:42 [L29.009 Some Views about the Controversial Dewetting Morphology of Polystyrene Films](#)  
*Yong Jian Wang, Heping Zhao, Binyang Du, Ophelia K. C. Tsui (Department of Physics and Institute of Nano Science and Technology, Hong Kong University of Science and Technology)*
- 16:54 [L29.010 Dewetting Kinetics of PVP Overlayers on Immiscible PS Melt Layers](#)  
*Huiman Kang (School of Chemical Engineering, Seoul National University, Seoul, 151-744, Korea), Seung-Heon Lee (Corporate Ramp/D, LG Chemical, Research Park, Daejeon, 305-380, Korea), Kookheon Char (School of Chemical Engineering, Seoul National University, Seoul, 151-744, Korea), Edward Kramer (Materials Research Laboratory, University of California, Santa Barbara, CA 93106)*
- 17:06 [L29.011 Measuring Viscosity by Observing the Dewetting Velocity](#)  
*Chunhua Li, Sarika Sharma, Clive Li, Yuan Sun, Miriam Rafailovich, Jonathan Sokolov (Department of Materials Science and Engineering, SUNY Stony Brook), Shira Billet, Dora Sosnowik (Stella K Abraham High School)*
- 17:18 [L29.012 Cavitation in a soft adhesive](#)  
*Arnaud Chiche, Josef Döllhofer, Costantino Creton (PCSM - ESPCI, Paris, France)*

**Session L30. DPOLY: Block Copolymers: Mechanical Properties, Fracture, Processing.**

**Tuesday afternoon, 15:06, 519B, Palais des Congres**

**Chair: Azar Alizadeh, GE Corporate R&D.**

- 15:06 [L30.001 Extrusion of Triblock and Pentablock Copolymers: Evolution of Microstructure and Extrudate Surface Characteristics](#)  
*Alhad Phatak, Frank Bates (Chemical Engineering and Materials Science, University of Minnesota)*
- 15:18 [L30.002 Rheology and large-scale structure of block polyelectrolyte micelles: analogies to attractive colloids](#)  
*Mark Crichton (Department of Chemical Engineering, University of Massachusetts Amherst), Ahmed Mourchid (CNRS/Rhodia Complex Fluids Laboratory), Surita Bhatia (Department of Chemical Engineering, University of Massachusetts Amherst)*
- 15:30 [L30.003 Computation of Mechanical Properties of a Poly-\(Styrene-Butadiene-Styrene\) Copolymer using a Mixed Finite Element Approach](#)  
*Stephan A. Baeurle, Glenn H. Fredrickson (Departments of Chemical Engineering and Materials, University of California, Santa Barbara, CA 93106, USA), Andrei A. Gusev (Department of Materials, Institute of Polymers, ETH-Zentrum, CH-8092 Zuerich, Switzerland)*
- 15:42 [L30.004 Influence of Molecular Architecture on Tensile Properties of Multigraft Copolymers](#)  
*Roland Weidisch, Ralf Lach (Institut für Polymerforschung Dresden, Germany), Yuting Zhu, Engin Burgaz, Samuel Gido (University of Massachusetts, Amherst), David Uhrig, Jimmy Mays (University of Tennessee, Knoxville), Nikos Hadjichristidis (University of Athens, Greece), Hadjichristidis Collaboration*
- 15:54 [L30.005 Enhancement of Tensile Strength in Block Copolymers Using Solution Extrusion](#)  
*Lisa S. Lim, Tamotsu Harada, Frank S. Bates (Department of Chemical Engineering and Materials Science, University of Minnesota, Minneapolis, MN 55455), Marc A. Hillmyer (Department of Chemistry, University of Minnesota, Minneapolis, MN 55455)*
- 16:06 [L30.006 Linear viscoelasticity of a polystyrene-polyisoprene bicontinuous microemulsion](#)  
*Kristin Brinker, Wesley Burghardt (Northwestern University)*
- 16:18 [L30.007 Domain Scaling Laws in Crystalline-Amorphous Diblock Copolymers.](#)  
*Li-Bong W. Lee, Richard A. Register (Princeton University)*
- 16:30 [L30.008 Destructive interference between molecular and form birefringence in a semicrystalline block copolymer](#)  
*Cheolmin Park, Jiyoung Hwang (department of materials science and engineering, yonsei university, seoul, korea), Bumsuk Jung, Yong soo Kang (Korea institute of science and technology, P.O. Box 131, Cheongryang, Seoul 130-650, Korea), Edwin L. Thomas (department of materials science and engineering, Massachusetts Institute of technology, cambridge, MA 02139), nanopolymer laboratory Team, polymer physics laboratory Collaboration*
- 16:42 [L30.009 Deformation and fracture of semicrystalline-glassy block copolymers: Effect of microdomain orientation for cylindrical morphology](#)  
*V. Khanna, J. Ruokolainen, G. H. Fredrickson, E. J. Kramer (Materials Department, University of California, Santa Barbara), S. F. Hahn (Dow Chemical)*
- 16:54 [L30.010 Synthesis, and Micro-Phase Separation of Hybrid Organic-Inorganic Polyhedral Oligomeric Silsesquioxane Block Copolymers](#)  
*Narupol Intasanta (Affiliation), Thomas P. Russell, E. Bryan Coughlin (University of Massachusetts at Amherst)*
- 17:06 [L30.011 Block and Graft Copolymers of Polyhydroxyalkanoates](#)  
*Robert H. Marchessault, François Ravenelle, Jumpei Kawada (Chemistry Department, McGill University)*
- 17:18 [L30.012 Reversible gel formation of triblock copolymers studied by molecular dynamics simulation](#)  
*Lei Guo, Erik Luijten (Department of Materials Science and Engineering, University of Illinois at Urbana-Champaign, Urbana, Illinois 61801)*

**Session L31. DPOLY: Polymer Interactions & Biopolymers.**

**Tuesday afternoon, 15:06, 523AB, Palais des Congres**

**Chair: Sanjeeva Murthy, University of Vermont.**

- 15:06 [L31.001 Polymer-mediated interaction between nano-fillers immersed into the solution of immiscible polymers](#)  
*Alexander Chervanyov (Dept. of Chemistry, University of Virginia)*
- 15:18 [L31.002 Fabrication of Mn<sub>12</sub>-acetate Molecular Magnet Thin Films by the Dip-and-Dry Method](#)  
*D.M. Seo, M. Viswanathan, W. Teizer (Department of Physics, Texas A&M University, College Station, TX 77843-4242),  
H. Zhao, K.R. Dunbar (Department of Chemistry, Texas A&M University, College Station, TX 77842-3012)*
- 15:30 [L31.003 Electrostatics in Non-Polar Colloidal Suspensions Mediated by Surfactants](#)  
*Ming F. Hsu, Eric R. Dufresne, David A. Weitz (Harvard University)*
- 15:42 [L31.004 Scaling in Highly Stable Worm-like micelles of block copolymers](#)  
*Dennis Discher, Paul Dalhaimer (Univ.Pennsylvania), F.S. Bates (Univ.Minnesota)*
- 15:54 [L31.005 Conformations of a semi-flexible diblock copolymer in a poor solvent solution](#)  
*Ernesto Hernandez-Zapata, Ira R Cooke, David RM Williams (Australian National University)*
- 16:06 [L31.006 Linear response of a grafted semiflexible polymer to a uniform field](#)  
*Panayotis Benetatos (Theoretical Physics Division, Hahn-Meitner Institute, Berlin, Germany (1)), Erwin Frey ((1) and  
Fachbereich Physik, Freie Universität, Berlin, Germany)*
- 16:18 [L31.007 Solvent Effects on the Association of Rigid-Rod Poly\(p-phenyleneethynylene\)s into Fragile Phases.](#)  
*Yunfei Jiang, Dvora Perahia (Department of Chemistry, Clemson University, Clemson, South Carolina 29634), Uwe H. F.  
Bunz (School of Chemistry and Biochemistry Georgia Institute of Technology Atlanta, GA 30332)*
- 16:30 [L31.008 Thermally processed keratin films](#)  
*Justin Barone, Walter Schmidt (USDA/ARS/ANRI/EQL)*
- 16:42 [L31.009 STRUCTURAL POLYMORPHISM IN ALPHA-ACTININ / F-ACTIN BUNDLES](#)  
*Tommy E. Angelini (Physics, University of Illinois Champaign-Urbana), Rob Coridan (Physics, University of Illinois  
Champaign-Urbana), Lori Sanders (Materials Science and Engineering, University of Illinois Champaign-Urbana), Gerard  
C.L. Wong (Materials Science and Engineering, Physics, Bioengineering, University of Illinois Champaign-Urbana)*
- 16:54 [L31.010 Molecular conformational changes in articular cartilage using NMR spectroscopy](#)  
*Justin Barone, Walter Schmidt (USDA/ARS/ANRI/EQL)*
- 17:06 [L31.011 Interactions between cells and ionized dendritic biomaterials: Flow cytometry and fluorescence spectroscopic studies](#)  
*R. M. Kannan, Parag Kolhe, Jayant Khandare (Chemical Engineering, Materials Science, and Biomedical Engineering,  
Wayne State University), Sujatha Kannan, Mary Lih-Lai (Pediatric Critical Care, Children's Hospital of Michigan)*
- 17:18 [L31.012 Semiconducting polypyrrole-polyacrylamide microparticles with entrapped Glucose Oxidase for application in biosensors](#)  
*Enrique Lopez-Cabarcos (Dpt. Pharmaceutical Physical-Chemistry, UCM, 28040 Madrid, Spain), Jorge Rubio-Retama  
(Dpt. Pharmaceutical Physical-Chemistry, UCM, 28040 Madrid, Spain), David Mecerreyes (CIDETEC, Paseo Mikeletegui  
61, 20009 San Sebastian, Spain), Antonio Fernandez-Barbero (Dpt. Applied Physics, University Almeria, 04120 Almeria,  
Spain), Beatriz Lopez-Ruiz (Dpt. Analytical Chemistry, UCM, 28040 Madrid, Spain)*

**Session N4. DPOLY: Crystallization.**

**Wednesday morning, 08:00, 517C, Palais des Congres**

**Chair: Moshe Gottlieb, Ben Gurion Univ.**

- 08:00 [N4.001 Evidence for a multi-stage route followed in polymer crystallization](#)  
*Gert Strobl (Institute of Physics, University Freiburg, Germany)*
- 08:36 [N4.002 Shifting Paradigms in Polymer Crystallization](#)  
*M. Muthukumar (University of Massachusetts)*
- 09:12 [N4.003 Discovery of Reversible Crystallization of Macromolecules](#)  
*Bernhard Wunderlich (University of Tennessee, Knoxville TN and ORNL, Oak Ridge, TN)*
- 09:48 [N4.004 Kinetics in melting of polymers](#)  
*Sanjay Rastogi (Eindhoven University of Technology, Dept. Chemical Engineering, P.O. Box 513, 5600MB Eindhoven, The  
Netherlands)*
- 10:24 [N4.005 Structure Formation in Supercooled Polymer Melts - Some Ideas from Molecular Dynamics Simulations with Slightly Coarse-Grained Models](#)  
*Hendrik Meyer (Institut Charles Sadron, CNRS UPR22, 67083 Strasbourg, France)*

Session N29. DPOLY: Polymer Rheology.

Wednesday morning, 08:00, 519A, Palais des Congres

Chair: David Morse, University of Minnesota.

- 08:00 [N29.001 Predicting the Tube Diameter in Melts and Solutions](#)  
*Scott Milner (ExxonMobil Research and Engineering)*
- 08:12 [N29.002 Chain Dynamics in Single Chain Limit by Rheological and Diffusion Measurements](#)  
*Shi-Qing Wang, Shanfeng Wang (University of Akron)*
- 08:24 [N29.003 Viscosity and Normal Stress Coefficients of a Critical Gel](#)  
*Daniel C. Vernon, Michael Plischke (Department of Physics, SFU)*
- 08:36 [N29.004 Transitional Flow Behavior of Entangled Polyisoprene Solutions](#)  
*Amy Philips, Shi-Qing Wang (University of Akron)*
- 08:48 [N29.005 Rheological properties of polymers and polyelectrolytes](#)  
*B. Ashok (Dept. of Physics, University of Massachusetts, Amherst, MA 01003.), M. Muthukumar (Dept. of Polymer Science amp; Engineering, University of Massachusetts, Amherst, MA 01003.)*
- 09:00 [N29.006 Rheology of Living Bifunctional Polybutadienyl Dilithium Chains in Benzene: Viscoelastic Evaluation of Aggregate Lifetime](#)  
*Hiroshi Watanabe, Yohei Oishi (Institute for Chemical Research, Kyoto University)*
- 09:12 [N29.007 Nonlinear rheological response of branched polyethylenes: A K-BKZ description](#)  
*Changping Sui, Gregory B. McKenna (Texas Tech University)*
- 09:24 [N29.008 Role of branch density on blending and rheological behavior of polymer melts](#)  
*R. M. Kannan, Ajay Kulkarni (Chemical Engineering, Wayne State University)*
- 09:36 [N29.009 Measurements of Damping Function for Branched Polymer Melts](#)  
*Daniel A Vega (Departamento de Fisica-UNSur. 8000 Bahia Blanca, Argentina), Scott T Milner (ExxonMobil Resamp;Eng, Route 22 East, Ammandale, NJ 08801 USA)*
- 09:48 [N29.010 Disentanglement of Polymer Melt to Produce Lower Viscosity Melts and Higher MFI for their pellets upon Subsequent Processing.](#)  
*J.P. IBAR (EKNET Research Campus)*
- 10:00 [N29.011 Rheology and Microscopic Topology of Entangled Polymeric Liquids](#)  
*R Everaers, C. Svaneborg (Max Planck Institute for Physics of Complex Systems), G. S. Grest (Sandia National Laboratories), S. K. Sukumaran, A. Sivasubramanian, K. Kremer (Max Planck Institute for Polymer Research)*
- 10:12 [N29.012 Stress-induced Disentanglement Transition in Simple Shear of Entangled Polymer Solutions](#)  
*prashant Tapadia (Affiliation), Shi-Qing Wang (University of Akron)*
- 10:24 [N29.013 Dynamics On Multiple Length Scales In a Fragile Phase.](#)  
*Nicholas Rosov (NIST Center for Neutron Research, 100 Bureau Drive, Bldg. 235/E124, Gaithersburg, MD 20899-8562), Uwe H. F. Bunz (School of Chemistry and Biochemistry Georgia Institute of Technology Atlanta, GA 30332), Yunfei Jiang, Dvora Perahia (Department of Chemistry, Clemson University, Clemson, South Carolina 29634)*
- 10:36 [N29.014 Disentanglement of Polymer Melts using a Lab Dynamic Rheometer](#)  
*J.P. IBAR (EKNET Research Campus)*
- 10:48 [N29.015 Deformation mechanisms and rheology of semi-syndiotactic polypropylenes](#)  
*R. M. Kannan, Michael Sevegney, Gautam Parthasarthy (Chemical Engineering, Wayne State University), Allen Siedle (3M Corporate Research)*

Session N30. DPOLY: Polyelectrolytes and Ion-containing Polymers.

Wednesday morning, 08:00, 519B, Palais des Congres

Chair: Andrey Dobrynin, University of Connecticut.

- 08:00 [N30.001 Labeled counterion static and dynamic association to flexible polyelectrolytes](#)  
*Vivek M. Prabhu, Eric J. Amis (Polymers Division, NIST), Nick Rosov, Dobrin Bossev (Center for Neutron Research, NIST)*
- 08:12 [N30.002 Counter-ion Distribution around Semiflexible Polyelectrolytes Undergoing Coil-Toroid-Rod Transitions](#)  
*Zhaoyang Ou, M. Muthukumar (University of Massachusetts, Amherst)*
- 08:24 [N30.003 Invariance of density correlations with charge density in polyelectrolyte solutions](#)  
*James Donley (The Boeing Company), David Heine (Sandia National Laboratories), David Wu (Colorado School of Mines)*
- 08:36 [N30.004 Integral equation theory for polyampholyte solutions](#)  
*Chwen-Yang Shew (Department of Chemistry, College of Staten Island/CUNY, Staten Island, NY 10314), Bong June Sung, Arun Yethiraj (Department of Chemistry, University of Wisconsin, Madison, WI 53706)*
- 08:48 [N30.005 Complexation in solutions of oppositely charged polyelectrolytes](#)  
*Alexander Kudlay, Alexander Ermoshkin, Monica Olvera de la Cruz (Department of Materials Science and Engineering, Northwestern University, Evanston, IL 60208)*
- 09:00 [N30.006 Phase Separation Kinetics of Polyelectrolyte Solutions](#)  
*Sonoko Kanai, Deniz Kaya, Joseph McNamara, M. Muthukumar (University of Massachusetts)*
- 09:12 [N30.007 Polyelectrolyte-like behaviour of poly\(ethylene-oxide\) solutions with added monovalent salt](#)  
*Jyotsana Lal (IPNS, Argonne National Laboratory, 9700 S. Cass Ave. Argonne, IL, 60439), Ilhem-Faiza Hakem (Tlemcen University, Faculty of Sciences, Physics Department, Tlemcen, 13000, Algeria)*
- 09:24 [N30.008 Effect of Wettability and Ionic Strength on the Pattern Integrity of Multilayer Films](#)  
*Kookheon Char, Jinhan Cho, Sangcheol Kim, Hongseok Jang (School of Chemical Engineering, Seoul National university, Korea)*
- 09:36 [N30.009 Processing and Cation Effects on Ionomer Morphologies](#)  
*K. I. Winey, B. P. Kirkmeyer (Materials Science Dep't, Univ. of Pennsylvania), J.-S. Kim (Chosun Univ., Korea)*
- 09:48 [N30.010 Proton-exchange membrane materials based on blends of poly\(ether ketone ketone\) and poly\(ether imide\)](#)  
*S. Swier, J. Gasa, M.T. Shaw, R.A. Weiss (Dept. of Chemical Engineering and Polymer Program, University of Connecticut, Storrs, CT 06269)*
- 10:00 [N30.011 Theoretical Study of counterion size effects on clustering in associating polymers](#)  
*Kathleen Kolbet, Jared Bushey (Lebanon Valley College)*
- 10:12 [N30.012 The correlation between molecular and phase structure in highly ionic polymer](#)  
*Lilin He, Dvora Perahia (Chemistry Department, Clemson University, Clemson, SC 29634-0973), Christopher J. Cornelius (Chem. and Bio Technologies, Sandia National Laboratories, Albuquerque NM 87185)*
- 10:24 [N30.013 Conductivity enhancement of sulfonated poly\(ether ketone ketone\) blends using electric field structuring techniques](#)  
*Jeffrey V. Gasa (Polymer Program, Institute of Materials Science, University of Connecticut, Storrs, CT, USA), Montgomery T. Shaw (Polymer Program and Department of Chemical Engineering, Institute of Materials Science, University of Connecticut, Storrs, CT, USA)*
- 10:36 [N30.014 Segmental Dynamics and Ionic Conduction in Poly\(vinyl methyl ether\)-Lithium Perchlorate Complexes](#)  
*Shihai Zhang, James Runt (Penn State University)*
- 10:48 [N30.015 Counterion Diffusion in Ionomers](#)  
*Russell Walter (Chemical and Biomolecular Eng., University of Pennsylvania), Karen Winey (Materials Science and Engineering, University of Pennsylvania), Joon-Seop Kim (Chosun University, Korea), Russell Composto (Materials Science and Engineering, University of Pennsylvania)*

**Session N31. DPOLY: Theory: Polymer Thermodynamics.**

**Wednesday morning, 08:00, 523AB, Palais des Congres**

**Chair: Valeriy Ginzburg, Dow Chemical Company.**

- 08:00 [N31.001 Chiral molecule adsorption on helical polymers](#)  
*Maria D'Orsogna (Chemistry Department, Caltech, Pasadena, CA)*
- 08:12 [N31.002 Cold Unfolding of a Hydrophobic Chain: Simulations](#)  
*Matthew Stone, Isaac Sanchez (University of Texas)*
- 08:24 [N31.003 Computer Simulation of Associating Ideal Chains](#)  
*Sharon Loverde, Aleksander Ermoshkin, Monica Olvera de la Cruz (Materials Science and Engineering, Northwestern University)*
- 08:36 [N31.004 Effects of Solvent Density on Square-well Chain Dimensions](#)  
*James A. Porter, Jane E. G. Lipson (Dartmouth College)*
- 08:48 [N31.005 Competition between Particle Association and Phase Separation in Model Associating Fluids: Equilibrium Polymerization in Solution with Chemical Initiation and Thermal Activation](#)  
*Jack Douglas (Polymers Division, NIST), Jacek Dudowicz, Karl Freed (James Franck Institute, The University of Chicago)*
- 09:00 [N31.006 Athermal polymer-colloid suspensions: polymer structure and induced depletion potentials](#)  
*Manolis Doxastakis, Yeng-Long Chen, Orlando Guzman, Juan J. de Pablo (Dept. of Chemical and Biological Engineering, Univ. of Wisconsin, Madison)*
- 09:12 [N31.007 Correlation effects of charged polyelectrolyte-colloid complexes](#)  
*K.K. Cheng, K.W. Yu (Department of Physics, The Chinese University of Hong Kong)*
- 09:24 [N31.008 Double Layers and Inter-Particle Forces in Colloid Science and Biology: Analytic Results for the Effect of Ionic Dispersion Forces](#)  
*Scott Edwards, David Williams (Department of Applied Mathematics, Research School of Physical Sciences and Engineering, Australian National University)*
- 09:36 [N31.009 Predicting Interfacial Tension In Oil-Water-Surfactant Systems Using Lattice Self-Consistent Mean Field Model](#)  
*Valeriy Ginzburg, Jozef Bicerano (Dow Chemical Company)*
- 09:48 [N31.010 A simple model for polymer chains in complex inhomogeneous environments: Rigid rods in harmonic potentials](#)  
*Yong Chen (Chemistry Department, College of Staten Island/CUNY-Graduate Center), Chwen-Yang Shew (APS)*
- 10:00 [N31.011 The Effect of the Choice of Experimental Data on Polymer Blend Predictions](#)  
*Michael Tambasco (Dartmouth Molecular Materials Group, Dartmouth College), Jane Lipson (Dartmouth College)*
- 10:12 [N31.012 Theory and MD Simulation of Polyolefin Blends](#)  
*John G. Curro, Gary S. Grest (Sandia National Laboratories), Eugenio Jaramillo (Los Alamos National Laboratory), David T. Wu, Huimin Li (Colorado School of Mines)*
- 10:24 [N31.013 Self-Assembly of Hollow Micelles from Rod-Coil Block Copolymers](#)  
*An-Chang Shi (Affiliation), Lingyun Zhang (McMaster University)*
- 10:36 [N31.014 A comparison of results of amphiphilic self-assembly in NVT and NPT ensembles: effect of volume release due to packing constraints](#)  
*Aniket Bhattacharya, Geuorgui Bourov (University of Central Florida)*
- 10:48 [N31.015 Characterization of Polymer Melts: Does the Choice of Experimental Data Make a Difference ?](#)  
*J.E.G. Lipson, Michael Tambasco (Dartmouth College)*

Monday, March 22, 2004

Room	517C	519A	519B	523AB
		<b>Session A29. DPOLY: Physical Properties of Network Structures-From Adhesion to Elastomers</b>	<b>Session A30. DPOLY: Polymer-Inorganic Nanoparticle Composites I</b>	<b>Session A31. DPOLY/GSNP/DBP: Focus Session: Charge Effects on Biomolecules</b>
Title				
Chair		Chris White	Mark Dadmun	Erik Luijten
8:00		<i>Hugh Brown</i>	<i>David Hanson</i>	<i>Lois Pollack</i>
8:12		<i>Alfred Crosby</i>	<i>Justin B. Hooper</i>	
8:24		<i>Phillip Cole</i>	<i>Zhiyong Zhu</i>	
8:36		<i>Jun Tian</i>	<i>Russell J. Composto</i>	<i>Mark L. Henle</i>
8:48		<i>Johan Mattsson</i>	<i>Mayu Si</i>	<i>Qi Wen</i>
9:00		<i>Rebecca Webber</i>	<i>Laura Dykes</i>	<i>Koen Besteman</i>
9:12		<i>Darrin Pochan</i>	<i>Alan Jones</i>	<i>Tommy E. Angelini</i>
9:24		<i>Inna Shechtman</i>	<i>Kosmas G. Kasimatis</i>	<i>Olena Rudko</i>
9:36		<i>Barbara Frisken</i>	<i>Saboungi Marie-Louise</i>	<i>Claudine Williams</i>
9:48		<i>Thomas G Mason</i>	<i>Hossein Baghdadi</i>	<i>Alexander Ermoshkin</i>
10:00		<i>Dana R. Rottach</i>	<i>Evangelos Manias</i>	<i>Qingbo Yang</i>
10:12		<i>Fan Zhang</i>	<i>Jun Li</i>	<i>Grigori Sigalov</i>
10:24		<i>Folusho Oyerokun</i>	<i>Richard Vaia</i>	<i>Pai-Yi Hsiao</i>
10:36		<i>Kapileswar Nayak</i>	<i>Ming-Shu Yang</i>	<i>Celeste Sagui</i>
10:48		<i>Michael Lang</i>	<i>Sergei Nazarenko</i>	<i>Alexey Onufriev</i>
		<b>Session B4. DPOLY/DBP: Ion Containing Polymers and Membranes</b>	<b>Session B29. DPOLY: Focus Session: Multi-Scale Modeling of Polymers</b>	<b>Session B30. DPOLY: Polymer-Inorganic Nanoparticle Composites - II</b>
Title				<b>Session B31. DPOLY/GSNP/DBP: Focus Session: Charged Biomolecules in Complexes and on Surfaces</b>
Chair		Ralph Colby	Sanat Kumar	Joao Cabral
				<i>Monica Olvera de la Cruz</i>
11:15		<i>Thomas Seery</i>	<i>Kurt Kremer</i>	<i>Seman B. Kharchenko</i>
11:27				<i>Francis Rondelez</i>
11:39				<i>Asif Rasheed</i>
11:51		<i>Andrea Chow</i>	<i>Glenn Fredrickson</i>	<i>Fangming Du</i>
12:03				<i>Cynthia Mitchell</i>
12:15				<i>M. Ojeda-Lopez</i>
12:27		<i>Arup Chakraborty</i>	<i>Zhi-Feng Huang</i>	<i>Rahmi Ozisik</i>
12:39				<i>Heather M. Evans</i>
12:51				<i>Justin Stambaugh</i>
13:03		<i>Carlos Marques</i>	<i>Suchira Sen</i>	<i>Keunho Ahn</i>
13:15				<i>Eihab Jaber</i>
13:27				<i>Jaep Kim</i>
13:39				<i>K. Amanda</i>
13:51				<i>Gang He</i>
14:03				<i>Bae-Yeun Ha</i>
14:15				<i>Hongjin Liang</i>
				<i>Russell B. Thompson</i>
				<i>R Coridan</i>
				<i>Patrick Johnson</i>
				<i>Henry D Herce</i>
				<i>Yoram Burak</i>
Title				
Chair				
14:30				
14:42				
14:54				
15:06				
15:18				
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16:06				
16:18				
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16:54				
17:06				
17:18				

Monday, March 22, 2004  
DPOLY Poster Session

Room	Palais des Congres			
Title	Session C1. Poster Session I			
Chair				
14:00	<i>E.M. Levin</i>	<i>Li-Bong W. Lee</i>	<i>R.K. Eby</i>	<i>M. R. Hammond</i>
	<i>Lin Li</i>	<i>Ying Li</i>	<i>Nancy Zhou</i>	<i>J.C. Zamora</i>
	<i>Su-Rong Zhou</i>	<i>Jian Wu</i>	<i>Francisco J. Solis</i>	<i>Hwang Yong Kim</i>
	<i>Robert H. Marchessault</i>	<i>Robert Bubeck</i>	<i>Seok Yun</i>	<i>Hilmar Koerner</i>
	<i>Duan Yongxin</i>	<i>E. Jane Wesely</i>	<i>Katerina Kopecka</i>	<i>El-Hami Khalil</i>
	<i>Shi Jin</i>	<i>Emmett P. O'Brien</i>	<i>Lei Zhu</i>	<i>Engin Burgaz</i>
	<i>Buckley Crist</i>	<i>Keri Diamond</i>	<i>Sam Gido</i>	<i>Young Gyu Jeong</i>
	<i>Kaoru Aou</i>	<i>Wei-Chun Lin</i>	<i>A Hotta</i>	<i>Jayaraman Krishnamoorthy</i>
	<i>Pawan Kahol</i>	<i>Ariel Michelman</i>	<i>A. Hexemer</i>	<i>Amy Gindhart</i>
	<i>Howard Wang</i>	<i>Shihai Zhang</i>	<i>G. E. Stein</i>	<i>Yuan Ji</i>
	<i>B. Seyhan Ince</i>	<i>David A. Brass</i>	<i>Matthew Misner</i>	<i>Peggy Cebe</i>
	<i>Wenwen Cai</i>	<i>Prashant Tapadia</i>	<i>James D. Sievert</i>	<i>D. Fry</i>
	<i>Dongseok Shin</i>	<i>David H. Pan</i>	<i>Won Kim</i>	<i>J. David Jacobs</i>
	<i>Hui Xu</i>	<i>Dongha Kim</i>	<i>Julie M. Leiston-Belanger</i>	<i>Kigook Song</i>
	<i>Pieter J. in 't Veld</i>	<i>Qiang Wang</i>	<i>Laurent Corte</i>	<i>Mario Grimau</i>

Tuesday, March 23, 2004

Room	517C	519A	519B	523AB
	<b>Session H4. DPOLY: Polymer Physics Prize</b>	<b>Session H29. DPOLY: Physical Properties of Polymers</b>	<b>Session H30. DPOLY: Polymers for Organic Electronic Devices</b>	
	Chair Frank Bates	Robert Bubeck	Richard Register	
8:00	<i>Timothy Lodge</i>			
8:12				
8:24				
8:36	<i>John Schrag</i>	<i>Patrick Huber</i>	<i>G. Nunes Jr</i>	
8:48		<i>Wang Chengqing</i>	<i>Alexander L. Henderson</i>	
9:00		<i>Evangelos Manias</i>	<i>Ricardo Ruiz</i>	
9:12	<i>Petr Stepanek</i>	<i>Samra Sangari</i>	<i>K. Edwards</i>	
9:24		<i>Sieve Wargucki</i>	<i>Oleg Sukalov</i>	
9:36		<i>Mitchell Anhamatten</i>	<i>G. O'Brien</i>	
9:48	<i>Michael Kent</i>	<i>Hao Jiang</i>	<i>Omer Mermer</i>	
10:00		<i>Michael Stopa</i>	<i>Bonnie Ludwig</i>	
10:12		<i>Jordi Hernando</i>	<i>Li Yan</i>	
10:24	<i>Eric J. Amis</i>	<i>J. M. Mativetsky</i>	<i>Wei Tang</i>	
10:36		<i>Eugene V. Tsiper</i>	<i>Samarendra Singh</i>	
10:48		<i>Markus Hütter</i>	<i>Michelle Tuel-Benckendorf</i>	
	<b>Session J4. DPOLY: Networks and Complex Architectures.</b>	<b>Session J29. DPOLY: Phase Behavior of Block Copolymers</b>	<b>Session J30. DPOLY: Padden Award Symposium</b>	<b>Session J31. DPOLY: Semicrystalline Polymers: Characterization</b>
	Chair Michael Rubinstein	Spiros Anastadadis	M. Muthukumar	Howard Wang
11:15	<i>Helmo Finkelmann</i>	<i>Enrique Gomez</i>	<i>Justyna E. Wolak</i>	<i>Howard Wang</i>
11:27		<i>Thomas P. Russell</i>	<i>Bulent Ozbas</i>	<i>Man-Ho Kim</i>
11:39		<i>Scott Sides</i>	<i>Sergio Mendez</i>	<i>Sanjeeva Murthy</i>
11:51	<i>Kenji Urayama</i>	<i>Robert Wickham</i>	<i>Kristopher A. Lavery</i>	<i>David Grubb</i>
12:03		<i>Dadong Yan</i>	<i>Zhenyu Gu,</i>	<i>Ling Yang</i>
12:15		<i>Amish Patel</i>	<i>Eric Cochran</i>	<i>C.M. Martin</i>
12:27	<i>Claude Cohen</i>	<i>Jin Kon Kim</i>	<i>Joona Bang</i>	<i>Harald Ade</i>
12:39		<i>Thomas Chastek</i>		<i>R. Androsch</i>
12:51		<i>Lingyun Zhang</i>		<i>Du-Jin Wang</i>
13:03	<i>Dimitris Vlassopoulos</i>	<i>Ira Cooke</i>		<i>Tomoko Hashida</i>
13:15		<i>Huifan Nie</i>		<i>Brian Olson</i>
13:27		<i>Park Moon Jeong</i>		<i>Hui Xu</i>
13:39	<i>Chi Wu</i>	<i>Hany Eitouni</i>		<i>M. Pyda</i>
13:51		<i>Junhan Cho</i>		<i>Jr Newsome</i>
14:03				<i>Estrella Laredo</i>
	<b>Session L4. DPOLY: Dillion Medal Award Symposium.</b>	<b>Session L29. DPOLY: Polymers at Surfaces and Interfaces (I).</b>	<b>Session L30. DPOLY: Block Copolymers: Mechanical Properties, Fracture, Processing</b>	<b>Session L31. DPOLY: Polymer Interactions &amp; Biopolymers</b>
	Chair Michael Schick	Rachel Segalman	Azar Alizadeh	Sanjeeva Murthy
14:30	<i>Marcus Müller</i>			
14:42				
14:54				
15:06	<i>Kirill Katsov</i>	<i>Charles C. Han</i>	<i>Alhad Phatak</i>	<i>Alexander Chervanyov</i>
15:18	<i>Ellen Reister</i>	<i>Masaya Hikita</i>	<i>Mark Crichton</i>	<i>D.M. Seo</i>
15:30	<i>Arun Yethiraj</i>	<i>Bi-min Zhang Newby</i>	<i>Stephan A. Baeurle</i>	<i>Ming F. Hsu</i>
15:42	<i>Mesfin Tsige</i>	<i>Fernando Terán Arce</i>	<i>Roland Weidisch</i>	<i>Dennis Discher</i>
15:54	<i>C. Svaneborg</i>	<i>Gary S. Grest</i>	<i>Lisa S. Lim</i>	<i>Ernesto Hernandez-Zapata</i>
16:06	<i>M. Muthukumar</i>	<i>Chris Murray</i>	<i>Kristin Brinker</i>	<i>Panayotis Benetatos</i>
16:18	<i>Rene Messina</i>	<i>Christian Schultz-Nielsen</i>	<i>Li-Bong W. Lee,</i>	<i>Yunfei Jiang</i>
16:30	<i>Kenneth S. Schweizer</i>	<i>Andrew B. Croll</i>	<i>Cheolmin Park</i>	<i>Justin Barone</i>
16:42	<i>Ioannis A. Bitsanis</i>	<i>Yong Jian Wang</i>	<i>V. Khanna</i>	<i>Tommy E. Angelini</i>
16:54	<i>Glenn H. Fredrickson</i>	<i>Huiman Kang</i>	<i>Narupol Intasanta</i>	<i>Justin Barone</i>
17:06	<i>Grzegorz Szamel</i>	<i>Chunhua Li</i>	<i>Robert H. Marchessault</i>	<i>R. M. Kannan</i>
17:18	<i>Manfred Stamm</i>	<i>Arnaud Chiche</i>	<i>Lei Guo</i>	<i>Enrique Lopez-Cabarcos</i>

Wednesday, March 24, 2004

Room	517C	519A	519B	523AB
	<b>Session N4. DPOLY: Crystallization</b>	<b>Session N29. DPOLY: Polymer Rheology</b>	<b>Session N30. DPOLY: Polyelectrolytes and Ion-containing Polymers</b>	<b>Session N31. DPOLY: Theory: Polymer Thermodynamics</b>
Chair	Moshe Gottlieb	David Morse	Andrey Dobrynin	Valeriy Ginzburg
8:00	<i>Gert Strobl</i>	<i>Scott Milner</i>	<i>Vivek M. Prabhu</i>	<i>Maria D'Orsogna</i>
8:12	<i>Shi-Qing Wang</i>	<i>Zhaoyang Ou</i>	<i>Matthew Stone</i>	<i>Matthew Stone</i>
8:24	<i>Daniel C. Vernon</i>	<i>James Donley</i>	<i>Sharon Loverde</i>	<i>Sharon Loverde</i>
8:36	<i>M. Muthukumar</i>	<i>Amy Philips</i>	<i>Chwen-Yang Shew</i>	<i>James A. Porter</i>
8:48	<i>B. Ashok</i>	<i>Alexander Kudlay</i>	<i>Jack Douglas</i>	<i>Jack Douglas</i>
9:00	<i>Hiroshi Watanabe</i>	<i>Sonoko Kanai</i>	<i>Manolis Doxastakis</i>	<i>Manolis Doxastakis</i>
9:12	<i>Bernhard Wunderlich</i>	<i>Changping Sui</i>	<i>Jyotsana Lal</i>	<i>K.K. Cheng</i>
9:24	<i>R. M. Kannan</i>	<i>Kookheon Char</i>	<i>Scott Edwards</i>	<i>Scott Edwards</i>
9:36	<i>J.P. IBAR</i>	<i>K. I. Winey</i>	<i>Valeriy Ginzburg</i>	<i>Valeriy Ginzburg</i>
9:48	<i>Sanjay Rastogi</i>	<i>R. Everaers</i>	<i>S. Swier</i>	<i>Yong Chen</i>
10:00	<i>Prashant Tapadia</i>	<i>Kathleen Kolbet</i>	<i>Michael Tambasco</i>	<i>Michael Tambasco</i>
10:12	<i>Nicholas Rosov</i>	<i>Lilin He</i>	<i>John G. Curro</i>	<i>John G. Curro</i>
10:24	<i>Hendrik Meyer</i>	<i>J.P. IBAR</i>	<i>Jeffrey V. Gasa</i>	<i>An-Chang Shi</i>
10:36	<i>R. M. Kannan</i>	<i>Shihai Zhang</i>	<i>Aniket Bhattacharya</i>	<i>Aniket Bhattacharya</i>
10:48			<i>Russell Walter</i>	<i>J.E.G. Lipson</i>
	<b>Session P4. DPOLY: Thermodynamics</b>	<b>Session P29. DPOLY: Crystallization of Polymers</b>	<b>Session P30. DPOLY: Morphology and Assembly of Block Copolymers</b>	<b>Session P31. DPOLY: Dynamics in Polymeric Systems</b>
Chair	Sharon Glotzer	Lei Zhu	Alfred Crosby	Scott Milner
11:15	<i>Ludwik Leibler</i>	<i>Justin Barone</i>	<i>Gregory Grason</i>	<i>Manoj Gopalakrishnan</i>
11:27	<i>Laurent Corte</i>	<i>Laurent Corte</i>	<i>Nitash Balsara</i>	<i>Jutta Luettmmer-Strathmann</i>
11:39	<i>Jianing Zhang</i>	<i>Aaron Brannan</i>	<i>Liping Xue</i>	<i>Liping Xue</i>
11:51	<i>Elena E. Dormidontova</i>	<i>Timothy Rapp</i>	<i>Ferass Abuzaina</i>	<i>Martin Kenward</i>
12:03	<i>Yantian Wang</i>	<i>Nitash Balsara</i>	<i>Tapan Desai</i>	<i>Tapan Desai</i>
12:15	<i>Francisco Medellin-Rodriguez</i>	<i>Michelle D. Lefebvre</i>	<i>E. D. von MEERWALL</i>	<i>E. D. von MEERWALL</i>
12:27	<i>Boualem Hammouda</i>	<i>Jun Xu</i>	<i>Hiroshi Jinnai</i>	<i>David Adolf</i>
12:39	<i>Vincent H. Mareau</i>	<i>Owen Terreau</i>	<i>Gary W. Slater</i>	<i>Gary W. Slater</i>
12:51	<i>Michael Y. Massa</i>	<i>Simon Mochrie</i>	<i>Marina Guenza</i>	<i>Marina Guenza</i>
13:03	<i>Kristoffer Almdal</i>	<i>Shou-Ke Yan</i>	<i>Lei Zhu</i>	<i>Sudesh Kamath</i>
13:15	<i>Keesun Jeon</i>	<i>Megan Ruegg</i>	<i>Christian D. Lorenz</i>	<i>Christian D. Lorenz</i>
13:27	<i>Rachel L. McSwain</i>	<i>Gang Cheng</i>	<i>Marcus Wacha</i>	<i>Marcus Wacha</i>
13:39	<i>Anne Mayes</i>	<i>Keiji Tanaka</i>	<i>Dan Angelescu</i>	<i>Soojin Jang</i>
13:51	<i>Katsuyuki Wakabayashi</i>	<i>III Epps</i>	<i>Alexei Sokolov</i>	<i>Alexei Sokolov</i>
14:03	<i>Rujul Mehta</i>	<i>Dong Ha Kim</i>	<i>Mark Dadmun</i>	<i>Mark Dadmun</i>
Title				
Chair				
14:30				
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Wednesday, March 24, 2004  
DPOLY Poster Session

Room	Palais des Congres			
Title	Session R1. Poster Session III.			
Chair				
14:00	<i>Joshua C. May</i>	<i>Dave Ennis</i>	<i>Laurette McCormick</i>	<i>Venkateswarlu Panchagnula</i>
	<i>Richard Sutherland</i>	<i>Jong-Young Lee</i>	<i>Erica J. Saltzman</i>	<i>R. A. Segalman</i>
	<i>Kyungseok Oh</i>	<i>Ranjan Deshmukh</i>	<i>Soumya Patnaik</i>	<i>Scott Meng</i>
	<i>Jay Klosterman</i>	<i>Suresh Gupta</i>	<i>Jean-Francois Mercier</i>	<i>Sergey Dobrin</i>
	<i>Matt Graham</i>	<i>Insun Park</i>	<i>Mathieu Duchemin</i>	<i>Hua Zhou</i>
	<i>Ahmad Hosseini</i>	<i>Rui Xiong</i>	<i>Sergiy Tkachuk</i>	<i>Kwang-Un Jeong</i>
	<i>Sylvain Massey</i>	<i>John Jerome</i>	<i>Kerem Isik</i>	<i>Dong Ha Kim</i>
	<i>Gabriela Grosu</i>	<i>Yantian Wang</i>	<i>Miron Kaufman</i>	<i>Phil Drew</i>
	<i>Mark Hageman</i>	<i>Sung-Hwan Choi</i>	<i>Ravinder Abrol</i>	<i>Yachin Cohen</i>
	<i>Murat Guvendiren</i>	<i>Virgil Breeden</i>	<i>Barry Farmer</i>	<i>Hiroshi Watanabe</i>
	<i>Kirill Efimenko</i>	<i>Kevin Cavicchi</i>	<i>James Polson</i>	<i>Katsuyuki Wakabayashi</i>
	<i>Hasnain Rangwalla</i>	<i>Seung Hyun Kim</i>	<i>Rahmi Ozisik</i>	<i>Vitelli Vincenzo</i>
	<i>Mourad Yedji</i>	<i>Stephen Swallen</i>	<i>Yitzhak Shnidman</i>	<i>Mayu Si</i>
	<i>Mitchell Anthamatten</i>	<i>Arielle Galambos</i>	<i>Myung Chul Choi</i>	<i>Ira Cooke</i>
	<i>Min Soo Park</i>	<i>Clive Li</i>	<i>Ashoutosh Panday</i>	<i>Samra Sangari</i>
	<i>Daesik Park</i>	<i>Robert Briber</i>	<i>Kelly Anderson</i>	
	<i>Kevin Yager</i>	<i>Jihua Chen</i>	<i>Emma Falck</i>	



Thursday, March 25, 2004

Room	517C	519A	519B	523AB
Title		<b>Session U29. DPOLY: Focus Session: Defects in Polymers and Liquid Crystals</b>	<b>Session U30. DMP/DPOLY: Focus Session: Organic Materials Physics</b>	<b>Session U31. DPOLY: Dynamics of Polymer Thin Films</b>
Chair		Samuel Gido	George Malliaras	Bi-Min Zhang-Newby
8:00		Mark M. Green	V.M. Kenkre	Mikhail Efremov
8:12				Haobin Luo
8:24				Zahra Fakhraei
8:36		Susanta Kumar	Yongguo Yan	Stephen Kamp
8:48		Yong Huang	Antonio J. R. da Silva	Christopher J. Ellison
9:00		Dana Grecov	Murilo L. Tiago	Matthew Wallace
9:12		Matthew L. Trawick	David Cardamone	John M. Torkelson
9:24		Xiaochuan Hu	Aditi Mitra	Na Ji
9:36		Daniel A Vega	Garth J Simpson	Chunhua Li
9:48		Derek Walton	Ignacio Franco	Adam Pound
10:00		Shujun Chen	Sasha Alexandrov	Lun Si
10:12		Panitarn Wanakamol	John M. Hudson	Jean Harry Xavier
10:24		Stanley Rendon	Withoon Chunwachirasiri	Hyunjung Kim
10:36		Ingrid A. Rousseau	Michael Winokur	Urs Duerig
10:48			Adam Fontecchio	Connie Roth
Title	<b>Session V4. DPOLY: Dynamics</b>	<b>Session V29. DPOLY: Electronic Properties of Polymer Systems</b>	<b>Session V30. DMP/DPOLY: Focus Session: Photophysics/Photonics of Organic and Polymeric Materials</b>	<b>Session V31. DPOLY: Polymer Brushes</b>
Chair	Patrick T. Mather	Mary Galvin	Z. Vally Vardeny	Mathias Loesche
11:15	David Vanden Bout	Rudolph J. Magyar	Ifor Samuel	Christiane A. Helm
11:27		Sven Stafström		Vladimir A Belyi
11:39		Vladimir Prigodin		Alexander Chervanov
11:51	Alejandro Rey	William Barford	Y.W. Yi	Sushil Satija
12:03		Kerstin Hummer	A.D. Slepko	John McCoy
12:15		Konstantin N. Kudin	K. O. Cheon	Hyeonjae Kim
12:27	Kalman Migler	Chun-gang Duan	C.-H. Kim	Ben O'Shaughnessy
12:39		Ang Chen	S.W. Robey	J. A. Bitsanis
12:51		Michael Segal	David Bussian	Peng Tian
13:03	Hiroshi Watanabe	Paul Day	Petr Shibaev	Chun-Chung Chen
13:15		M. V. Karkov	J. Li (1)	Stephen Z. D. Cheng
13:27		Marie Noelle Bussac	Jiangeng Xue	Erik W. Edwards
13:39	Ronald Larson	Jeremy D. Schmit	M.-K. Lee	Christiane A. Helm
13:51		Grigori Sigalov	J. Shinar	Nir Kampf
14:03		David M. Richmond	Rajendra Swamy	
Title		<b>Session W29. DPOLY: Polymer Blends</b>	<b>Session W30. DMP/DPOLY: Focus Session: Charge Transport and Transistors</b>	<b>Session W31. DPOLY: Templating with Block Copolymers</b>
Chair		H. Samuel Jeon	Joseph Shinar	Richard Spontak
14:30		Yuri B. Melnichenko	George Malliaras	Sokol Ndoni
14:42		Anne-Valerie Ruzette		Christopher Y. Li
14:54		Anna Balazs		Spiros H. Anastasiadis
15:06		Ralf Lach	Serkan Zorba	Olayo-Valles Roberto
15:18		Jonathan Gupton	Behrang Hamadani	Ryan C. Hayward
15:30		Du Yeol Ryu	F. Bradbury	Rajaram Pai
15:42		Hyun-joong Chung	V. Soghomonian	Hideaki Yokoyama
15:54		Victoria Garcia Sakai	Brian Crone	Francisco J. Solis
16:06		Janna K. Maranas	Erik Mueller	Dennis Discher
16:18		Thomas R. Lutz	Anita Parmar	S.B. Darling
16:30		Nathan Crawford	Vitaly Podzorov	Hongqi Xiang
16:42		Jeffrey C. Haley	Samson Jenekhe	Ting Xu
16:54		Mitchell Fourman	Vladimir Butko	David Frankowski
17:06		Mark Dadmun	Mark S Hybertsen	Nicolas Duxin
17:18		Ananth Indrakanti	Dohwan Kim	Jean-Francois berret

Friday, March 26, 2004

Room	517C	519A	519B	523AB
Title	<b>Session Y4. DPOLY: Thin Films and Interfaces</b>	<b>Session Y29. DPOLY: New Polymer Techniques</b>	<b>Session Y30. DMP/DPOLY: Focus Session: Charge Transport and Spintronics</b>	
Chair	Darrin Pochan	Anne Mayes	Michael Winokur	
8:00	Jan Genzer	Thomas Seery	Z. Vally Vardeny	
8:12		Daniel Savin		
8:24		Joao T. Cabral		
8:36	Peter Green	Srinivas Kolla	J. H. Dickerson	
8:48		Masahito Oh-e	Chun Ning Lau	
9:00		Tae Joo Shin	Jose Amado M Dinglasan	
9:12	Igal Szleifer	Chang Yeol Ryu	Yoichi Otsuka	
9:24		Jian H. Yu	H.-J. Chung	
9:36		Nicholas Benetatos	William Silveira	
9:48	Ramanan Krishnamoorti	A Timmons	Alexander D. Schwab	
10:00		Lei Cai	Kaushik R Choudhury	
10:12		Xiaorong Wang	Mrinal Thakur	
10:24	Richard Jones	Mark P. Stoykovich	Christina Hägemann	
10:36		Adam N. Raegen	Bin Hu	
10:48		Kathryn J. Wahl	David H. Dunlap	
Title		<b>Session Z29. DPOLY: Polymer Thin Films and Interfaces</b>	<b>Session Z30. DPOLY: Properties of Optically Active Materials</b>	
Chair		Ali Dhinojwala	Sonja Krause	
11:15		Yao Lin	J.R. Weinberg-Wolf	
11:27		Sang Woog Ryu	Yi-Fang Huang	
11:39		Clara Carelli	Verner Thorsmølle	
11:51		B. J. Kim	C. Goldmann	
12:03		Shane Harton	S. Haas	
12:15		Alexander Böker	Mark Foster	
12:27			Zaccheus Buffett	
12:39			Yu Hui	
12:51			Youngmin Kim	
13:03			S.J. Konezny	
13:15			Ajith De Silva	
13:27			Markus Wohlgenannt	
13:39			Tieneke E. Dykstra	
13:51			Stephanie Chasteen	
14:03			Augustine Urbas,	
Title				
Chair				
14:30				
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17:06				
17:18				

**Session P4. DPOLY: Thermodynamics.**

**Wednesday midday, 11:15, 517C, Palais des Congres**

**Chair: Sharon Glotzer, University of Michigan.**

- 11:15 [P4.001 Electric field induced phase separation.](#)  
*Ludwik Leibler (Laboratoire Matière Molle et Chimie, ESPCI, 10 rue Vauquelin, 75231 Paris Cedex 05, France)*
- 11:51 [P4.002 Hydrogen Bonding in Aqueous Solutions of PEO: Theoretical Insights](#)  
*Elena E. Dormidontova (Department of Macromolecular Science and Engineering, Case Western Reserve University, Cleveland, OH 44106)*
- 12:27 [P4.003 Insight into Clustering in Poly\(ethylene oxide\) Solutions](#)  
*Boualem Hammouda (National Institute of Standards and Technology)*
- 13:03 [P4.004 Miscibility in AB/BC block copolymer systems.](#)  
*Kristoffer Almdal (The Danish Polymer Centre, Risø National Laboratory, P.O. Box 49, Denmark)*
- 13:39 [P4.005 Baroplastics: Processing polymers by pressure-enhanced miscibility](#)  
*Anne Mayes (Massachusetts Institute of Technology)*

**Session P29. DPOLY: Crystallization of Polymers.**

**Wednesday midday, 11:15, 519A, Palais des Congres**

**Chair: Lei Zhu, University of Connecticut.**

- 11:15 [P29.001 Polyethylene/keratin fiber composites with varying polyethylene crystallinity](#)  
*Justin Barone (USDA/ARS/ANRI/EQL)*
- 11:27 [P29.002 Remarks on processing and toughness of semi-crystalline polymers](#)  
*Laurent Corte, Ludwik Leibler (Laboratoire Matière Molle et Chimie, ESPCI, Paris, France)*
- 11:39 [P29.003 Monte Carlo Simulations of Shish-Kebab Crystallization](#)  
*Jianing Zhang, M. Muthukumar (University of Massachusetts, Amherst)*
- 11:51 [P29.004 Effects of deep quench aging on shallow quench nucleation in a polymer blend](#)  
*Timothy Rapp, Nitash Balsara (University of California, Berkeley)*
- 12:03 [P29.005 Crystallization in the Thin and Ultra-thin Films of Poly\(ethylene-vinyl acetate\) and Linear Low Density Polyethylene](#)  
*Yantian Wang, Shouren Ge, Miriam Rafailovich, Jonathan Sokolov (Department of Materials Science and Engineering, SUNY at Stony Brook, NY 11794-2275), Ying Zou, Harald Ade (Department of Physics, North Carolina State University, Raleigh, North Carolina 27695), Arnold Lustiger (ExxonMobil Research and Engineering Company, Annandale, New Jersey 08801), Gad Marom (Department of Applied Chemistry, The Hebrew University of Jerusalem, Jerusalem 91904, Israel)*
- 12:15 [P29.006 Morphological influence of heating rate, time and crystallization temperature on the nanostructural crystallization and melting behavior of PET](#)  
*Francisco Medellin-Rodriguez, Estanislao Ortiz-Rodriguez (Universidad Autonoma de San Luis Potosi, Fac. de Ciencias Quimicas CIEP, Av. Dr. Manuel Nava 6 Zona Universitaria 78210 San Luis Potosi, S.L.P., Mexico), Norbert Striebeck (Institut fuer Technische un Makromolekulare Chemie, University of Hamburg, Hamburg, Germany and Hasylab at DESY), Armando Almendarez-Camarillo (Institut fuer Technische un Makromolekulare Chemie, University of Hamburg, Hamburg, Germany), Polymer Physics Team, Polymer Physics Collaboration*
- 12:27 [P29.007 Direct AFM Observation of Crystal Twisting and Organization in Banded Spherulites of Chiral Poly\(3-hydroxybutyrate-co-3-hydroxyhexanoate\)](#)  
*Jun Xu, Bao-Hua Guo, Zen-Ming Zhang (Dept. of Chemical Engineering, Tsinghua Univ., Beijing 100084, China), Jian-Jun Zhou, Yong Jiang, Shou-Ke Yan, Xia Gao, Lin Li (State Key Laboratory for Polymer Physics and Chemistry, Chinese Academy of Sciences, Beijing 100080, China), Qiong Wu, Guo-Qiang Chen (Dept. Biological Sciences amp; Biotechnology, Tsinghua Univ., Beijing 100084, China), Jerold M. Schultz (Univ. of Delaware)*
- 12:39 [P29.008 Influence of the Film Thickness on the Crystallization of Poly\(e-Caprolactone\) Ultrathin Films, a Real Time AFM Study.](#)  
*Vincent H. Mareau (CERSIM, Département de chimie, Université Laval, Québec, Canada G1K 7P4), Robert E. Prud'homme (Département de chimie, Université de Montréal, Montréal, Canada H3C 3J7)*
- 12:51 [P29.009 Early stages of crystallisation in confined systems of poly\(ethylene oxide\)](#)  
*Michael V. Massa, Kari Dalnoki-Veress (Department of Physics amp; Astronomy and the Brockhouse Institute for Materials Research, McMaster University, Hamilton, ON, Canada.)*
- 13:03 [P29.010 Origin of oriented recrystallization of carbon coated pre-oriented ultra thin polymer films](#)  
*Shou-Ke Yan, Ji-Jun Wang, Charles C. Han (State Key Lab. of Polym. Phys. amp; Chem., Joint laboratories of Polymer Science amp; Materials, Institute of Chemistry, Chinese Academy of Sciences (ICCAS), Beijing 100080 (PR China))*
- 13:15 [P29.011 Crystallization of Polyethylene in Thin Films](#)  
*Keesu Jeon, Ramanan Krishnamoorti (Department of Chemical Engg, Univ of Houston)*
- 13:27 [P29.012 Investigation of the Interfacial Interactions of Poly\(Ethylene Oxide\)](#)  
*Rachel L. McSwain, Alison Markowitz, Tamishia Jarrett, Kenneth R. Shull (Northwestern University)*
- 13:39 [P29.013 Structure and Molecular Motion at Surface in Semi-Crystalline Isotactic Polypropylene Films](#)  
*Keiji Tanaka (Department of Applied Chemistry, Kyushu University), Atsushi Sakai, Toshihiko Nagamura, Atsushi Takahara (Institute for Materials Chemistry and Engineering, Kyushu University), Tisato Kajiyama (Kyushu University)*
- 13:51 [P29.014 Micromechanical Interpretation of the Modulus of Semicrystalline Copolymers and Ionomers](#)  
*Katsuyuki Wakabayashi, Richard A. Register (Princeton University)*
- 14:03 [P29.015 Effect of self-generated mechanical fields on formation of ripples in isotactic polystyrene single crystals](#)  
*Rujul Mehta, Thein Kyu (The University of Akron)*

**Session P30. DPOLY: Morphology and Assembly of Block Copolymers.**

**Wednesday midday, 11:15, 519B, Palais des Congres**

**Chair: Alfred Crosby, University of Massachusetts.**

- 11:15 [P30.001 Self-Consistent Field Theory of AB<sub>n</sub> Miktoarm Copolymer Melts](#)  
*Gregory Grason, Randall Kamien (Department of Physics and Astronomy, University of Pennsylvania)*
- 11:27 [P30.002 Study of the Effect of Lithium Perchlorate on the Alignment of Polyisoprene-b-polyethyleneoxide \(PI-PEO\) Thin Films using Atomic Force Microscopy](#)  
*Nitash Balsara, Steven Leone, Laurie McDonough, Omolola Odusanya (University of California, Berkeley)*
- 11:39 [P30.003 Hydrophobic Core Structure in Amphiphilic ABCA Tetra-block Copolymer Micelles](#)  
*Aaron Brannan, Frank Bates (University of Minnesota)*
- 11:51 [P30.004 Birefringence and Depolarized Light Scattering from Ordered Block Copolymers with Anisotropic Distributions of Grain Orientations Produced by Shear Flow](#)  
*Ferass Abuzaina, Bruce Garetz, Jatin Mody, Maurice Newstein (Polytechnic University, Brooklyn, NY 11201), Nitash Balsara (University of California, Berkeley, CA 94720)*
- 12:03 [P30.005 Small-Angle Neutron Scattering from Nonuniformly Labeled Block Copolymers](#)  
*Nitash Balsara, Megan Ruegg (University of California, Berkeley), Maurice Newstein (Polytechnic University, Brooklyn), Benedict Reynolds (University of California, Berkeley)*
- 12:15 [P30.006 Homopolymer Solubilization in Diblock Copolymer Micelles](#)  
*Michelle D. Lefebvre, Monica Olvera de la Cruz, Kenneth R. Shull (Department of Materials Science and Engineering, Northwestern University)*
- 12:27 [P30.007 Transmission Electron Microtomography of Gyroid-Forming Diblock Copolymer Blends](#)  
*Hiroshi Jimai (Kyoto Institute of Technology), Michael Braunfeld, David Agard (University of California at San Francisco), Hirokazu Hasegawa (Kyoto University), Richard Spontak (North Carolina State University)*
- 12:39 [P30.008 Control of polystyrene-b-poly\(acrylic acid\) block copolymer aggregate morphology by molecular weight distribution of the core forming block.](#)  
*Owen Terreau, Adi Eisenberg (McGill University)*
- 12:51 [P30.009 Equilibrium dynamics of a polymeric sponge phase](#)  
*Simon Mochrie, Peter Falus (Yale University, Department of Physics), Matt Borthwick (MIT, Department of Physics)*
- 13:03 [P30.010 Self-assembly Behavior and Crystallization of a Low Molecular Weight Double Crystalline Polyethylene-block-Poly\(ethylene oxide\) Diblock Copolymer](#)  
*Lei Zhu, Lu Sun (Inst. of Mater. Sci. & Chem. Eng., University of Connecticut, Storrs, CT 06296-3136), Benjamin Hsiao, Carlos Avila-Orta (Chemistry Dept., State University of New York at Stony Brook, Stony Brook, NY 11794)*
- 13:15 [P30.011 Designing Balanced Surfactants for the Organization of Immiscible Polymers](#)  
*Megan Ruegg (University of California, Berkeley), Nitash Balsara, Benedict Reynolds (University of California, Berkeley), Timothy Shaffer, David Lohse (ExxonMobil), Min Lin (National Institute of Standards and Technology)*
- 13:27 [P30.012 Association And Chain Conformation Of PS-PEO In Solution](#)  
*Gang Cheng, Dvora Perahia (Materials Science and Engineering and Chemistry Department, Clemson University, Clemson, SC 29634-0973)*
- 13:39 [P30.013 First-order melting in a 2D diblock copolymer system](#)  
*Dan Angelescu, Christopher Harrison (Princeton University Physics Dept./ Schlumberger-Doll Research), Matthew Trawick (Princeton University Physics Dept.), Richard Register (Princeton University Chemical Engineering Dept.), Paul Chaikin (Princeton University Physics Dept)*
- 13:51 [P30.014 Homopolymer Blending in the Poly\(Isoprene-b-Styrene-b-Ethylene Oxide\) Triblock System](#)  
*Ill Epps, Frank Bates (University of Minnesota, Chemical Engineering and Materials Science)*
- 14:03 [P30.015 Organic-Inorganic Nanohybridization by Block Copolymer Thin Films](#)  
*Dong Ha Kim, Zaicheng Sun, Jochen Gutmann, Wolfgang Knoll (Max Planck Institute for Polymer Research, Ackermannweg 10, 55128 Mainz, Germany), Thomas P. Russell (Polymer Science and Engineering Department, University of Massachusetts at Amherst, Amherst, MA 01003, USA), Thomas P. Russell Collaboration*

**Session P31. DPOLY: Dynamics in Polymeric Systems.**

**Wednesday midday, 11:15, 523AB, Palais des Congres**

**Chair: Scott Milner, Exxon Mobil Research and Engineering.**

- 11:15 [P31.001 Gas diffusion through a polymer matrix](#)  
*Manoj Gopalakrishnan, Beate Schmittmann, Royce Zia (CSPISE and Department of Physics, Virginia Tech, Blacksburg)*
- 11:27 [P31.002 Effect of hydrogen bonding on thermal diffusion](#)  
*Jutta Luettmer-Strathmann (University of Akron, Department of Physics)*
- 11:39 [P31.003 Mechanism of Thermal Transport in Materials Composed of Linear-chain Molecules](#)  
*Liping Xue, Pawel Koblinski (Rensselaer Polytechnic Institute), Simon Phillpot (University of Florida)*
- 11:51 [P31.004 Molecular Dynamics simulations of polymer friction coefficients and collision dynamics in sieving media.](#)  
*Martin Kenward, Gary W. Slater (University of Ottawa)*
- 12:03 [P31.005 SURFACE DIFFUSION OF SINGLE POLYMER CHAIN USING MOLECULAR DYNAMICS SIMULATION](#)  
*Tapan Desai, Pawel Koblinski, Sanat Kumar (Rensselaer Polytechnic Institute, Troy, NY.), Steve Granick (University of Illinois, Urbana, Illinois.)*
- 12:15 [P31.006 Diffusion in Binary Polyethylene Blends: Role of Constraint Release](#)  
*E. D. von MEERWALL, N. DIRAMA, W. L. MATTICE (Univ. Akron)*
- 12:27 [P31.007 High Pressure Local Dynamics of Bulk Polymers](#)  
*David Adolf, Andrey Kirpatch (School of Physics and Astronomy, University of Leeds, Leeds LS2 9JT UK)*
- 12:39 [P31.008 Reptation Dynamics in a Random Energy Landscape with Long-Range Correlations](#)  
*Gary W. Slater, Sylvain Hubert (University of Ottawa)*
- 12:51 [P31.009 Cooperative Dynamics in Polymer Melts and Blends](#)  
*Marina Guenza (University of Oregon)*
- 13:03 [P31.010 The effect of chain architecture on the dynamics of copolymers in a homopolymer matrix.](#)  
*Sudesh Kamath, Mark D Dadmun (The University of Tennessee, Knoxville)*
- 13:15 [P31.011 Failure simulations of triglyceride-based adhesives](#)  
*Christian D. Lorenz, Mark J. Stevens (Sandia National Laboratories), Richard P. Wool (University of Delaware)*
- 13:27 [P31.012 Simulation of the deformation and the dynamical behavior of entangled polymer chains](#)  
*Marcus Wacha, Stefan Kreitmeier (University of Regensburg, Institute for exp. and appl. Physics, Germany)*
- 13:39 [P31.013 structure and Universal Property of Nonionic Surfactant/Phospholipid Mixed Micelle in the Semidilute Regime](#)  
*Soojin Jang, Mahn Won Kim (Korea Advanced Institute of Science and Technology)*
- 13:51 [P31.014 Comments on a Dynamic Bead Size and Kuhn Segment Length in Polymers](#)  
*Alexei Sokolov, Yifu Ding, Vladimir Novikov (Department of Polymer Science, The University of Akron)*
- [P31.015 The Importance of Sequence Distribution on the Dynamics of a Copolymer](#)  
*Mark Dadmun (University of Tennessee)*

**Session R1. Poster Session III.**

**Wednesday afternoon, 14:00, Palais des Congres**

**R1.001 DPOLY Poster Session II**

**R1.002 Time-resolved nonlinear spectroscopy of the organic molecular crystal DAST**

*Joshua C. May, Ivan Biaggio (Department of physics, Lehigh University, Bethlehem, PA 18015.)*

**R1.003 Phenomenological model of structure development in holographic polymer dispersed liquid crystal gratings**

*Richard Sutherland, Vincent Tondiglia, Lalgudi Natarajan (Science Applications International Corporation), Timothy Bunning (Air Force Research Laboratory/Materials and Manufacturing Directorate)*

**R1.004 HPLC Separation and Characterization of Oligo(2,5-dioctoxy-p-phenylene vinylene)**

*Kyungsok Oh, Chang Yeol Ryu (Chemistry-Rensselaer Polytechnic Institute)*

**R1.005 Localization effects in active resonant structures fabricated by holographic photopolymerization**

*Jay Klosterman, Augustine Urbas, Vincent Tondiglia, Lalgudi Natarajan, Richard Sutherland, Timothy Bunning (Air Force Research Laboratory/MLP.I)*

**R1.006 The Synthesis and Characterization of High Performance Poly(thiophene)**

*Matt Graham, Shi Jin, Frank Harris, Stephen Cheng (University of Akron)*

**R1.007 Charge Injection in Doped Organic Semiconductors**

*Ahmad Hosseini, Man Hoi Wong, Yulong Shen, George Malliaras (Cornell University)*

**R1.008 Study of Hydrolytic Ageing of Industrial Polypropylene by X-Ray Photoelectron Spectroscopy**

*Sylvain Massey, Denis Roy (Affiliation), Alain Adnot (Laboratoire de Physique Atomique et Moléculaire, Centre de Recherche sur les Propriétés des Interfaces et la Catalyse, Faculté des Sciences et de Génie, Université Laval, Québec, Canada, G1K 7P4)*

**R1.009 Relation between contact angles and formation of fog on polymer surfaces**

*Gabriela Grosu, Guy G. Ross, Gilles Abel, Lukasz Andrzejewski (INRS-Energie, Matériaux et Télécommunications, Varennes (Quebec), J3X 1S2)*

**R1.010 Adhesion of Topographically Patterned Elastomers**

*Mark Hageman, Andrew Duncan, Alfred Crosby (Dept. of Polymer Sci. amp; Eng., Univ. of Massachusetts, Amherst, MA)*

**R1.011 Synthesis and Surface Properties of Nitroxide Functionalized PS/PDMS Diblock Copolymers**

*Murat Guvendiren, Chi-Yang Chao, Kenneth R. Shull (Northwestern University)*

**R1.012 Multigeneration buckling on model elastomeric surfaces**

*Kirill Efimenko, Jan Genzer (NC State University), Mindaugas Rackaitis, Evangelos Manias (Pennsylvania State University), L. Mahadevan (Harvard University)*

**R1.013 Molecular Structure of Alkyl-Side-Chain Polymers at the Aqueous Interface**

*Hasnain Rangwala, Alexander Schwab, Betul Yurdumakan, Ali Dhinojwala (The University of Akron), Dalia Yablou (Affiliation), Mohsen Yeganeh (ExxonMobil Research and Engineering Company)*

**R1.014 Molecular Structure of Alkyl-Side-Chain Polymers at the Aqueous Interface**

*Hasnain Rangwala, Alexander Schwab, Betul Yurdumakan, Ali Dhinojwala (The University of Akron), Dalia Yablou (Affiliation), Mohsen Yeganeh (ExxonMobil Research and Engineering Company)*

**R1.015 Effect of low energy ion implantation on insulators**

*Mourad Yedji, Guy Ross (INRS-Energie, Matériaux et Télécommunications)*

**R1.016 The Physics and Phenomenology of Solvent-Vapor Smoothing**

*Mitchell Anthamatten, Stephan A. Letts, Robert C. Cook (Lawrence Livermore National Laboratory)*

**R1.017 A Novel Method to Make Breath Figure Patterns by Spin Coating under Dry Environment: One-step Preparation of Porous Polymer Films**

*Min Soo Park, Jin Kon Kim (Department of Chemical Engineering, Pohang University of Science and Technology)*

**R1.018 Replace with abstract title**

*Daesik Park, Seongjun Kang, huijung Kim, Jungnam Whang (Institute of Physics and Applied Physics, Yonsei University), Surface and Interface physics laboratory Team*

**R1.019 Thermal Considerations in Surface Relief Grating Formation on Azobenzene Polymer Thin Films**

*Kevin Yager, Christopher Barrett (Department of Chemistry, McGill University)*

**R1.020 Investigation of Polymer Film Spin Casting: Solvent Properties that Create Optimal Film Quality and Use of Selective Solvents for Multilayered Films**

*Dave Ennis (North Carolina State University), Shane Harton (North Carolina State University), Christopher Kloxin (North Carolina State University), Heike Betz, Ronald Danner (The Pennsylvania State University), Richard Spontak (North Carolina State University), Harald Ade (North Carolina State University)*

**R1.021 Combinatorial Investigation of Crazes in Polymer Nanocomposites**

*Jong-Young Lee, Alfred Crosby (Dept. of Polymer Sci. amp; Eng., Univ. of Massachusetts, Amherst, MA)*

**R1.022 Surface and Interface Induced Assembly of Nanoparticles in Polymer Blend Films**

*Ranjana Deshmukh, Hyun-joong Chung, Russell J. Composto (Materials Sci. and Eng. and LRSM, Univ of Pennsylvania, Philadelphia, PA19104), Kohji Ohno, Takeshi Fukuda (Inst. for Chemical Research, Kyoto Univ, Uji, Kyoto, 611-0011, Japan)*

**R1.023 Electric Field-Induced Instabilities in Ionic Salt Doped Thin Liquid Films**

*Suresh Gupta, Thomas Russell (University of Massachusetts, Amherst)*

**R1.024 Thin Film Morphology of Homopolymer-Free PS-b-PMMA Diblock Copolymer**

*Insun Park, Soojin Park, Taihyun Chang, Byeongdo Lee, Moonhor Ree (Chemistry - POSTECH), Hoichang Yang, Kilwon Cho (Chemical Engineering - POSTECH), Chang Yeol Ryu (Chemistry-Rensselaer Polytechnic Institute)*

**R1.025 Dewetting of Polystyrene Films on Spin-On Glass**

*Rui Xiong, Oleg Stukalov, John Dutcher (Department of Physics, University of Guelph)*

**R1.026 PS/PMMA in Confinement A Novel Procedure to create Ultra-Thin Materials using Supercritical Fluids**

*John Jerome (Stony Brook University), Mitchell Fourman (Ward Melville High School), Young-Soo Seo, Tadanori Koga (Stony Brook University), Steve Schwartz (Queens College), Davinder Mohajan (Stony Brook University), Jonathan Sokolov, Miriam Rafailovich (Stony Brook University)*

**R1.027 The Effects of Surface Interactions and Density on the Crystallization of Polyethylene Thin Films**

*Yantian Wang, Shouren Ge, Miriam Rafailovich, Jonathan Sokolov (Department of Materials Science and Engineering, SUNY at Stony Brook, NY 11794-2275)*

**R1.028 Substrate Surface Energy Dependent Rim Instability in Polystyrene Thin Film Dewetting**

*Sung-Hwan Choi (Department of Chemical Engineering, The University of Akron, Akron, OH, 44325-3906, USA), Bi-min Zhang Newby (Affiliation)*

**R1.029 Effect of kinetic reaction on the film growth and roughness: Aqueous solution of hydrophobic and polar components**

*Virgil Breedon, Dan Otts, Marek Urban, Ras Pandey (University of Southern Mississippi)*

**R1.030 Ordered Thin Films of Partially Hydrogenated Polyisoprene Containing Block Copolymers**

*Kevin Cavicchi, Thomas Russell (UMASS-Amherst, Dept. of Polymer Science and Engineering)*

**R1.031 Solvent-Induced Ordering in Diblock Copolymer/Homopolymer Mixture Thin Film**

*Seung Hyun Kim, Matthew J. Misner, Thomas P. Russell (Dept. of Polymer Science and Engineering, University of Massachusetts, Amherst, MA 01003)*

**R1.032 Molecular Motion Near the Glass Transition Temperature: a Comparison of Small Molecules and Polymers**

*Stephen Swallen, Osamu Urakawa, Mark Ediger (University of Wisconsin-Madison)*

**R1.033 Surface Self-assembly of Poly(styrene-block-ferrocenyldimethylsilane) Langmuir-Blodgett Thin Films**

*Arielle Galambos (Wellesley College), Young-Soo Seo, Miriam Rafailovich (Mat. Sci. Eng., Stony Brook University), R. Lammertink (University of Twente, Faculty of Chemical Technology, The Netherlands)*

**R1.034 Hole Growth in Crosslinked Thin Polymer Films**

*Hole Li (Materials Science, Stony Brook University), Jean Harry Xavier, Jonathan Sokolov, Miriam Rafailovich (Materials Science, Stony Brook University)*

**R1.035 Suppression of Dewetting in Polystyrene Thin Films by Polymer Nanoparticles**

*Robert Briber, Hongxia Feng (Dept. of Materials Science and Eng., University of Maryland), Victor Lee, Ho-Cheol Kim, Robert Miller (IBM Almaden Research Center)*

**R1.036 THIN FILM MORPHOLOGY AND CRYSTAL STRUCTURE OF TIPS PENTACENE**

*Jihua Chen (Macromolecular Science and Engineering Center, The University of Michigan, Ann Arbor, MI 48109), John Anthony (Department of Chemistry, The University of Kentucky, Lexington, Kentucky 40506), David Martin (Macromolecular Science and Engineering Center, Department of Materials Science and Engineering, The University of Michigan, Ann Arbor, MI 48109), Anthony Group Team*

**R1.037 Diffusion of DNA during gel electrophoresis: a predictive function spanning the relevant regimes**

*Laurette McCormick, Gary Slater (University of Ottawa)*

**R1.038 Theory of Dynamic Barriers and the Glass Transition in Polymer Melts**

*Erica J. Saltzman, Kenneth S. Schweizer (University of Illinois at Urbana-Champaign)*

**R1.039 Chromophore Conformation and Mobility in Green Fluorescent Protein Studied by Molecular Dynamics Simulations**

*Soumya Patnaik, Steven Trohalaki, Ruth Pachter (Air Force Research Laboratory)*

**R1.040 A Brownian Dynamics study of dense DNA brushes.**

*Jean-Francois Mercier, Gary W. Slater (University of Ottawa), Pascal Mayer (Mantec Predictive Medicine)*

**R1.041 Molecular Mechanics modelization of a self-assembled diblock copolymer system : the exemple of PS/PEO in ethanol and benzene**

*Mathieu Duchemin, Alain Gibaud, Florent Calvayrac (laboratoire PEC UMR 6087 Faculté des Sciences Université de Maine F-72085 Le Mans)*

**R1.042 Viscosity of random and alternating polyolefin copolymers – a small scale simulation approach**

*Sergiy Tkachuk, Jutta Luettemer-Strathmann (University of Akron, Department of Physics)*

**R1.043 Chaotic dynamics of a single polymer chain**

*Kerem Isik, Jutta Luettemer-Strathmann (University of Akron, Department of Physics)*

**R1.044 Analytical Model of Creeping Flow in a Rectangular Channel: Advection and Mixing**

*Miron Kaufman (Department of Physics, Cleveland State University)*

**R1.045 Understanding the temperature dependence of charge-carrier mobilities in organic polyacene crystals**

*Ravinder Abrol, Dennis News, Glenn Martyna (IBM Thomas J. Watson Research Center)*

**R1.046 Coarse Grain MD Simulations of the Formation of Polymer Nanocomposites**

*Barry Farmer, Kelly Anderson, Richard Vaia (Air Force Research Laboratory)*

**R1.047 Simulation Study of a Polymer in Dilute Solution**

James Polson, John Gallant, Neil Moore (Physics Department, University of Prince Edward Island, Charlottetown, PE, Canada)

**R1.048 Packing and Entanglements in Polymer Melts**

Rahmi Ozisik (Rensselaer Polytechnic Institute)

**R1.049 Capillary Waves, Chain Conformations, and Viscoelasticity at Sheared Blend Interfaces: DSCF - MD Comparison.**

Yitzhak Shnidman (College of Staten Island, City University of New York), Tak Shing Lo (City College of New York, City University of New York), Maja Mihajlovic (Polytechnic University, Brooklyn, NY), Dilip Gersappe, Wentao Li (State University of New York at Stony Brook)

**R1.050 Highly Ordered Liquid Crystalline Defect Patterns in a Confined Space**

Myung Chul Choi ((1) Materials Research Laboratory, Materials Department, Physics Department, and Biomolecular Science and Engineering Program, University of California, Santa Barbara, CA 93106, U.S.A. (2) Department of Physics, KAIST, Daejeon 305-701, Korea), Thomas Pfohl ((1) Materials Research Laboratory, Materials Department, Physics Department, and Biomolecular Science and Engineering Program, University of California, Santa Barbara, CA 93106, U.S.A. (2) Department of Applied Physics, University of Ulm, D-89069 Ulm, Germany), Zhiyu Wen (College of Optoelectronic Engineering, Chongqing University, Chongqing, China), Youli Li (Materials Research Laboratory, Materials Department, Physics Department, and Biomolecular Science and Engineering Program, University of California, Santa Barbara, CA 93106, U.S.A.), Mahn Won Kim ((1) Materials Research Laboratory, Materials Department, Physics Department, and Biomolecular Science and Engineering Program, University of California, Santa Barbara, CA 93106, U.S.A. (2) Department of Physics, KAIST, Daejeon 305-701, Korea), Cyrus R. Safinya (Materials Research Laboratory, Materials Department, Physics Department, and Biomolecular Science and Engineering Program, University of California, Santa Barbara, CA 93106, U.S.A.)

**R1.051 A Modeling study of azimuthal orientational correlations of anisotropic particles and its application to evolution of order in block copolymers**

Ashoutosh Panday, Samuel Gido (Department of Polymer Science and Engineering, University of Massachusetts, Amherst, MA 01003 (USA))

**R1.052 Simulations of filled epoxy nanocomposites**

Kelly Anderson, Ajit Roy, Richard Vaia, Barry Farmer (Air Force Research Laboratory)

**R1.053 Breakdown of Dynamical Scaling for Dilute Polymer Solutions in 2D?**

Emma Falck, Olli Punkkinen (Laboratory of Physics, Helsinki University of Technology), Ilpo Vattulainen (Helsinki Institute of Physics and Laboratory of Physics, Helsinki University of Technology), Tapio Ala-Nissila (Laboratory of Physics, Helsinki University of Technology)

**R1.054 MD Simulations of Layer-by-Layer Protein-Polyelectrolyte Self-Assembly**

Venkateswarlu Panchagnula, Junhwan Jeon (Affiliation), Andrey V. Dobrynin (Polymer Program, University of Connecticut)

**R1.055 Self-Assembled Semiconducting Block Copolymers for Efficient Photonic Devices**

R. A. Segalman (Dept of Chemical Engineering, UC Berkeley), U. Giovannella, C. Brochon, G. Hadziioannou (Ecole Européenne Chimie Polymères Matériaux, Université Louis Pasteur, Strasbourg)

**R1.056 Formation of 2-D polymer photonic crystals via multi-wave interference technique**

Scott Meng, Kyu Thein (The University of Akron)

**R1.057 STM Studies of Thermal Reactions of Dibromobenzene at Si(111)**

Sergey Dobrin, Rajamma Harikumar, Ioannis Petsalakis, John Polanyi, Giannoula Theodorakopoulos (University of Toronto)

**R1.058 Structure and electrical properties of oriented anthracene and pentacene thin films**

Hua Zhou, Binran Wang, Lan Zhou, Randall Headrick (Department of Physics and Materials Science Program, University of Vermont, Burlington VT 05405), Ricardo Ruiz, Alex Mayer, George Malliaras (Department of Materials Science and Engineering, Cornell University, Ithaca, NY 14853), Alexander Kazimirov (Cornell High Energy Synchrotron Source, Ithaca, NY 14853)

**R1.059 Helical Suprastructure Generated from Achiral 4-Biphenyl Carboxylic Acid Molecules via Hydrogen Bonding**

Kwang-Un Jeong, Jason J. Ge, Shi Jin, Brian S. Knapp, Frank W. Harris, Stephen Z. D. Cheng (Maurice Morton Institute and Department of Polymer Science, The University of Akron, Akron, Ohio 44325-3909)

**R1.060 Nanoscopic Dot Arrays of Inorganic Oxide Semiconductors Templated by Block Copolymer Thin Films**

Dong Ha Kim, Seung Hyun Kim, Kris Lavery, Thomas P. Russell (University of Massachusetts at Amherst)

**R1.061 STM Studies of Thermal Reactions of Dibromobenzene at Si(111)**

Sergey Dobrin, Rajamma Harikumar, Ioannis Petsalakis, John Polanyi, Giannoula Theodorakopoulos (University of Toronto)

**R1.062 Intrinsic Viscosity of Dendrimers via Equilibrium Molecular Dynamics**

Phil Drew, David Adolf (IRC in Polymer Science and Technology, School of Physics and Astronomy, University of Leeds, UK)

**R1.063 The Effect of Salts on the Conformation and Microstructure of Poly(N-isopropylacrylamide) (PNIPA) in Aqueous Solution**

Yachin Cohen, Elena Krasovitski, Havazelet Bianco-Peled (Chemical Engineering Dept., Technion, Israel)

**R1.064 Rheo-dielectric Behavior of Poly(ethylene oxide) Melts Containing Lithium Perchlorate**

Hiroshi Watanabe, Yumi Matsumiya (Institute for Chemical Research, Kyoto University), Nitash Balsara (Department of Chemical Engineering, University of California, Berkeley), John Kerr (Environmental Energy Technologies Division, Ernest Orlando Lawrence Berkeley National Laboratory)

**R1.065 Structure and Mechanical Property Modifications by Blending Alkyl Carboxylate Salts into Ethylene-co-(Meth)Acrylic Acid Ionomers**

Katsuyuki Wakabayashi, Richard A. Register (Princeton University)

**R1.066 Defect generation on corrugated topographies**

Vitelli Vincenzo, Nelson David (Harvard University)

**R1.067 Flame-Retardant PMMA/Clay Nanocomposites**

Mayu Si, Gregory Rudomen, Jonathan Sokolov, Miriam Rafailovich (Stony Brook University)

**R1.068 Stretching polymers in poor and bad solvents: Pullout peaks and an unraveling transition**

Ira Cooke, David Williams (Research School of Physical Sciences and Engineering, Australian National University, Canberra, ACT 0200, AUSTRALIA)

**R1.069 Degree of Mechanochemical Devulcanization of Model Styrene-Butadiene Rubber Compounds Containing Different Amount of Poly-, Di- and Monosulphidic Bonds**

Samra Sangari (School of Electrical and Computer Engineering, Royal Melbourne Institute of Technology Melbourne, Victoria, Australia), Hill Anita (CSIRO Manufacturing amp; Infrastructure Technology), Pavel Dumitru (Department of Physics, Memorial University of Newfoundland)

**Session U29. DPOLY: Focus Session: Defects in Polymers and Liquid Crystals.**

**Thursday morning, 08:00, 519A, Palais des Congres**

**Chair: Samuel Gido, University of Massachusetts.**

- 08:00 [U29.001 Helicity Within and Among Macromolecules](#)  
Mark M. Green (Herman F. Mark Polymer Research Institute, Polytechnic University, Brooklyn, New York 11201 (mgreen@duke.poly.edu))
- 08:36 [U29.002 Textures in multiphase polymer-liquid crystalline materials](#)  
Susanta Kumar Das (Department of Chemical Engineering, McGill University, 3610 University Street, Montreal, Quebec H3A 2B2, Canada.), Alejandro D. Rey (Department of Chemical Engineering, McGill University, 3610 University Street, Montreal, Quebec H3A 2B2, Canada.)
- 08:48 [U29.003 Structural Characters and Defects in Ethyl-cyanoethyl cellulose/Acrylic acid Cholesteric Liquid Crystalline System](#)  
Yong Huang, Lin-Ge Wang, Charles C. Han (Joint laboratories of Polymer Science and Materials, Institute of Chemistry, Chinese Academy of Sciences (ICCAS), Beijing 100080 and Laboratory of Cellulose and Lignocellulosics Chemistry, Guangzhou Institute of Chemistry, Chinese Academy of Sciences, Guangzhou 510650, China)
- 09:00 [U29.004 Computational modeling of texture formation in liquid crystalline polymers](#)  
Dana Grecov, Alejandro D. Rey (Chemical Engineering Department, McGill University, Montreal, Canada)
- 09:12 [U29.005 Cell dynamics simulations of curvature driven grain boundary migration using half-loop bicrystal geometry](#)  
Matthew L. Trawick (Princeton University, Princeton, NJ), Daniel A. Vega (Universidad Nacional del Sur, 8000-Bahia Blanca, Argentina), Dan E. Angelescu (Schlumberger-Doll Research Center, Ridgefield, CT), Paul M. Chaikin, Richard A. Register (Princeton University, Princeton, NJ)
- 09:24 [U29.006 The Effect of Molecular Architecture on the Coarsening of AnBn Star Block Copolymers](#)  
Xiaochuan Hu, Samuel Gido, Thomas Russell (Department of Polymer Science and Engineering, University of Massachusetts, Amherst, MA 01003, USA), Ferass Abuzaina, Bruce Garetz (Department of Chemical and Biological Sciences and Engineering, Polytechnic University, Brooklyn, NY 11201, USA)
- 09:36 [U29.007 Kinetics of Coarsening and Pattern Features in a 2D Hexagonal Phase](#)  
Daniel A Vega (UNSur-8000 Bahia Blanca, Argentina), Matthew L Trawick, Paul M Chaikin, Richard A Register (Princeton University, Princeton, NJ 08544, USA), Christopher K Harrison (Schlumberger-Doll Research Center, Ridgefield CT 06877, USA)
- 09:48 [U29.008 Superparamagnetism and Blocking in Ferronematic Liquid Crystals](#)  
Derek Walton (Dept. of Phys. and Astr., McMaster Un., Hamilton, Canada), Suhail M. Shibli (Inst. de Fisica, Universidade de S.Paulo, S.Paulo, Brasil)
- 10:00 [U29.009 Defect Study on Noncentrosymmetric Lamellar Block Copolymer Blends](#)  
Shujun Chen, Samuel P. Gido (Dept of Polymer Science and Engineering, Univ of Massachusetts, Amherst, MA 01003), Thodoris Tsoukatos, Apostolos Avgeropoulos, Nikos Hadjichristidis (Dept of Chemistry, Univ of Athens, Panepistimiopolis, Zografou, 15771 Athens, Greece), Kunlun Hong, Jimmy W. Mays (Dept of Chemistry, Univ of Tennessee, Knoxville, TN 37996), Univ of Tennessee Collaboration
- 10:12 [U29.010 Observation of defect influence on the deformation behavior of glassy rubbery block copolymer](#)  
Panitarn Wanakamol, Edwin Thomas (Massachusetts Institute of Technology)
- 10:24 [U29.011 Correlation of mechanical properties with complex orientation distributions in injection molded LCs](#)  
Stanley Rendon, Wesley Burghardt (Northwestern University), Robert Bubeck (Michigan Molecular Institute)
- 10:36 [U29.012 Strain Fixing and Recovery in Liquid Crystalline Elastomers](#)  
Ingrid A. Rousseau, Patrick T. Mather (University of Connecticut)

**Session U30. DMP/DPOLY: Focus Session: Organic Materials Physics.**

**Thursday morning, 08:00, 519B, Palais des Congres**

**Chair: George Malliaras, Cornell Univ.**

- 08:00 [U30.001 Recent advances in theory of charge transport in organic semiconductors](#)  
V.M. Kenkre (University of New Mexico)
- 08:36 [U30.002 DMRG study of pi-conjugated polymers with additional pi-conjugation in the transverse direction](#)  
Yongguo Yan, S. Mazumdar (U. Arizona)
- 08:48 [U30.003 A study of Electronic and Structural Properties Of The \[Co\(tpy-SH\)2\]](#)  
Antonio J. R. da Silva, Renato B. Pontes, A. Fazzio (Instituto de Fisica, Universidade de São Paulo, CP 66318, 05315-970, São Paulo SP, Brazil)
- 09:00 [U30.004 Photoisomerization of azobenzene from first principles calculations](#)  
Murilo L. Tiago (University of California at Berkeley and Lawrence Berkeley National Laboratory), Sohrab Ismail-Beigi (Yale University), Steven G. Louie (University of California at Berkeley and Lawrence Berkeley National Laboratory)
- 09:12 [U30.005 Multi-terminal electron transport through single molecules](#)  
David Cardamone, Charles Stafford, Sumit Mazumdar (University of Arizona)
- 09:24 [U30.006 Phonon effects in molecular transistors: Quantum and classical treatment](#)  
Aditi Mitra, Igor Aleiner, Andrew Millis (Columbia University)
- 09:36 [U30.007 Reinterpreting the Molecular Origins of Optical Nonlinearity](#)  
Garth J Simpson (Department of Chemistry, Purdue University)
- 09:48 [U30.008 Electron-Vibrational Dynamics of Photoexcited Polyfluorenes](#)  
Ignacio Franco (University of Toronto), Sergei Tretiak (Los Alamos National Laboratory)
- 10:00 [U30.009 Molecular Memory Effect](#)  
Sasha Alexandrov (Department of Physics, Loughborough University, United Kingdom)
- 10:12 [U30.010 Surface tension driven laser lithography of polymer thin films by forced dewetting](#)  
John M. Hudson, Joanna J. Jarecki, Kari Dalnoki-Veress, John S. Preston (Brockhouse Institute for Materials Research, McMaster University, Hamilton, ON, Canada)
- 10:24 [U30.011 The 7/3 helical phase of poly\[\(S\)-2-methylbutyl\(n-nonyl\)\]silane](#)  
Withoon Chumwachirasiri, Michael Winokur (University of Wisconsin-Madison), Julian Koe, Peng Wenqing (International Christian University, Tokyo, Japan)
- 10:36 [U30.012 Near-term aging and thermal behavior of polyfluorene films-in-various-aggregation-states](#)  
Michael Winokur, Boy Tanto, Withoon Chumwachirasiri (Dept. of Physics, University of Wisconsin, Madison WI), Hyunseok Cheun, Brad Larson (Dept. of Materials Science, University of Wisconsin, Madison WI)
- 10:48 [U30.013 Examination of Nanostructured Polymer Surfaces for Liquid Crystal Alignment](#)  
Adam Fontecchio, Hemang Shah (Drexel University)

**Session U31. DPOLY: Dynamics of Polymer Thin Films.**

**Thursday morning, 08:00, 523AB, Palais des Congres**

**Chair: Bi-Min Zhang-Newby, University of Akron.**

- 08:00 [U31.001 Glass Transition of Ultra Thin Polymer Films: Nanocalorimetry Study](#)  
*Mikhail Efremov, Eric Olson, Ming Zhang, Zishu Zhang, Leslie Allen (Department of Materials Science and Engineering and Coordinated Science Laboratory, University of Illinois at Urbana-Champaign, Urbana, Illinois 61801, U.S.A.)*
- 08:12 [U31.002 Glass transition temperature of polymer thin films](#)  
*Haobin Luo, Miriam Rafailovich, Jonathon Sokolov, Dilip Gersappe (Dept of Materials Science and Engg, SUNY at Stony Brook, Stony Brook NY 11794)*
- 08:24 [U31.003 The role of sample preparation in thin film glass transitions](#)  
*Zahra Fakhraai, James A. Forrest (Department of Physics and Guelph-Waterloo Physics Institute, University of Waterloo, Waterloo, ON, Canada N2L 3G1), James S. Sharp (Department of Physics and Astronomy, University of Nottingham, Nottingham U.K. NG7 2RD)*
- 08:36 [U31.004 The Onset of Dispersion-Driven Morphology for Freely-Standing Polymer Trilayer Films](#)  
*Stephen Kamp, Christopher Murray, John Dutcher (Department of Physics, University of Guelph)*
- 08:48 [U31.005 Distribution of Glass Transition Temperatures across Thin and Nanoscopically Confined Polymer Films](#)  
*Christopher J. Ellison, John M. Torkelson (Northwestern University, Evanston, IL 60208 USA)*
- 09:00 [U31.006 Viscoelastic and thermodynamic properties of short chain polymer melts with van der Waals interactions near the glass transition](#)  
*Matthew Wallace, Bela Joos (University of Ottawa, Ottawa, ON, Canada), Michael Plischke (Simon Fraser University, Burnaby, BC, Canada)*
- 09:12 [U31.007 Effects of Attractive Polymer-Substrate Interactions and Diluent Addition on Tg-Nanoconfinement Behavior in Polymer Films](#)  
*John M. Torkelson, Robert L. Ruzskowski, Nathaniel J. Fredin, Christopher J. Ellison (Northwestern University, Evanston, IL 60208 USA)*
- 09:24 [U31.008 Surface Vibrational Spectroscopy on Shear-Aligned Poly\(tetrafluoroethylene\) Films](#)  
*Na Ji, Victor Ostroverkhov, Francois Lagugné-Labarhet, Y.R. Shen (Department of Physics, University of California, Berkeley, CA 94720)*
- 09:36 [U31.009 Surface Interaction Effect on Viscosity of Polymer Thin Films](#)  
*Chunhua Li, Koga Tadanori, Sarika Sharma, Miriam Rafailovich, Jonathan Sokolov (Department of Materials Science and Engineering, SUNY Stony Brook), Laurence Lurio, Sumil Sinha (Advanced Photon Source, Argonne National Laboratory), Shira Billet, Dora Sosnowik (Stella K Abraham High School)*
- 09:48 [U31.010 Glass transition temperature of freely-standing poly\(methyl methacrylate\) films](#)  
*Adam Pound, Connie Roth, Stephen Kamp, Christopher Murray, John Dutcher (Department of Physics, University of Guelph)*
- 10:00 [U31.011 Shear deformation in thin free-standing polymer films as a probe of entanglement in confined systems](#)  
*Lun Si (Department of Materials Science and Engineering, McMaster University, Hamilton, ON, Canada), Michael V. Massa, Kari Dalnoki-Veress (Department of Physics and Astronomy and the Brockhouse Institute for Materials Research, McMaster University, Hamilton, ON, Canada), Hugh R. Brown (BHP Steel Institute, University of Wollongong, Wollongong, Australia), Richard A. L. Jones (Department of Physics and Astronomy, University of Sheffield, Sheffield, UK)*
- 10:12 [U31.012 Visco-Elasto-Plastic Response of Ultra-Thin Films Below Tg.](#)  
*Jean Harry Xavier, Clive Li, Miriam Rafailovich, Jonathan sokolov (Stony Brook University)*
- 10:24 [U31.013 Dynamics of inhomogeneous layers in thin polymer films : theoretical considerations](#)  
*Hyunjung Kim (Sogang University, Korea), S. K. Sinha (Univ. of California, San Diego and LANSCE, Los Alamos National Laboratory), S. G. J. Mochrie (Yale Univ.), Adrian Ruehm (Max-Planck-Institut für Metallforschung, Germany), L. B. Lurio (Northern Illinois University)*
- 10:36 [U31.014 Relaxation Kinetics in Nano-Structured Thin Polymer Films](#)  
*Urs Duerig, Bernd Gotsmann, Armin Knoll (IBM Research, Zurich Research Laboratory, CH-8803 Rueschlikon, Switzerland), William P. King (Woodrow School of Mechanical Engineering, Georgia Institute of Technology, Atlanta GA, USA 30332-0405), Graham Cross (Dept. Physics, Trinity College, Dublin 2, Ireland)*
- 10:48 [U31.015 Hole growth in viscoelastic freely-standing polystyrene films at temperatures very close to Tg](#)  
*Connie Roth, Ben Deh, Bernie Nickel, John Dutcher (Department of Physics, University of Guelph)*

**Session V4. DPOLY: Dynamics.**

**Thursday midday, 11:15, 517C, Palais des Congres**

**Chair: Patrick T. Mather, University of Connecticut.**

- 11:15 [V4.001 Single Molecule Studies of Dynamics in Polymer Melts Near Tg](#)  
*David Vanden Bout (Department of Chemistry and Biochemistry, University of Texas at Austin)*
- 11:51 [V4.002 Texture Dynamics in Nematic Polymers](#)  
*Alejandro Rey (McGill University)*
- 12:27 [V4.003 Morphology of micro-confined emulsions under shear.](#)  
*Kalman Migler (Polymers Division, NIST)*
- 13:03 [V4.004 Detailed Investigation of Entanglement Dynamics with Dielectric and Viscoelastic Methods](#)  
*Hiroshi Watanabe (Institute for Chemical Research, Kyoto University)*
- 13:39 [V4.005 Highly nonlinear polymer dynamics](#)  
*Ronald Larson (University of Michigan)*

**Session V29. DPOLY: Electronic Properties of Polymer Systems.**

**Thursday midday, 11:15, 519A, Palais des Congres**

**Chair: Mary Galvin, University of Delaware.**

- 11:15 [V29.001 Density functional theory in one-dimension with a delta-function interaction](#)  
*Rudolph J. Magyar (Los Alamos National Laboratory, Theoretical Chemistry and Molecular Physics), Sergei Tretiak (Alamos National Laboratory, Theoretical Chemistry and Molecular Physics)*
- 11:27 [V29.002 Charge transport](#)  
*Sven Stafström, Magnus Boman, Magnus Hultell Andersson (Linköping University), Computational Physics Team*
- 11:39 [V29.003 ION CONTROL OF ELECTRON HOPPING IN CONDUCTING POLYMERS](#)  
*Vladimir Prigodin (Physics Department, The Ohio State University, Columbus, OH 43210-1106), Arthur Epstein (Physics Department and Chemistry Department, The Ohio State University Columbus, OH 43210-1106)*
- 11:51 [V29.004 The singlet exciton fraction in light emitting polymers](#)  
*William Barford, Eric Moore (University of Sheffield, Sheffield, United Kingdom)*
- 12:03 [V29.005 Excitonic Effects in Organic Semiconductors](#)  
*Kerstin Hummer, Stephan Sagmeister, Peter Puschnig, Claudia Ambrosch-Draxl (Institute of Theoretical Physics, University of Graz, 8010 Graz, Austria)*
- 12:15 [V29.006 Longitudinal polarizability of long polymeric chains: quasi-one-dimensional electrostatics as the origin of slow convergence.](#)  
*Konstantin N. Kudin, Roberto Car (Dept. of Chemistry and PMI, Princeton Univ.), Raffaele Resta (INFN Democritos National Simulation Center and Trieste Univ., Italy.)*
- 12:27 [V29.007 Simulations of ferroelectric polymer film polarization: the role of dipole interactions](#)  
*Chun-gang Duan, Wei-Guo Yin, Wai-Ning Mei (Department of Physics, University of Nebraska at Omaha, Omaha, Nebraska 68182-0266), Jianjun Liu, J. R. Hardy, Stephen Ducharme, P. A. Dowben (Department of Physics and Center for Materials Research and Analysis, University of Nebraska at Lincoln, Lincoln, Nebraska 68588)*
- 12:39 [V29.008 Dielectric behavior of electroactive fluorinate-based polymers: dielectric relaxor or ferroelectric relaxor?](#)  
*Ang Chen (Department of Physics, The University of Akron), Yu Zhi (Department of Physics, The University of Akron)*
- 12:51 [V29.009 Triplet-polaron model of photoluminescence detected magnetic resonances in pi-conjugated polymers](#)  
*Michael Segal, Marc Baldo (Dept. of Electrical Engineering and Computer Science, MIT, Cambridge, Massachusetts 02139), Moon Ky Lee, Joseph Shinar (Ames Laboratory and Physics and Astronomy Department, Iowa State University, Ames, Iowa 50011), Zoltan Soos (Department of Chemistry, Princeton University, Princeton, New Jersey 08544)*
- 13:03 [V29.010 Photophysical Properties in Nonlinear Optical Materials: Time-Dependent Density Functional Theory Studies](#)  
*Paul Day, Kiet Nguyen, Ruth Pachter (Air Force Research Laboratory, Materials amp; Manufacturing Directorate, Wright-Patterson AFB, Ohio)*
- 13:15 [V29.011 Theory of coherent optical control of polarons in polydiacetylene.](#)  
*M. V. Katkov, C. Piermarocchi (Department of Physics and Astronomy and Institute for Quantum Sciences, Michigan State University.)*
- 13:27 [V29.012 The impact of molecular polarization on the electronic properties of molecular semiconductors](#)  
*Marie Noelle Bussac (CNRS - Ecole Polytechnique 91128 Palaiseau-cedex, France), Jean-David Picon (Ecole Polytechnique Fédérale de Lausanne, CH 10015 Lausanne, Switzerland), Libero Zuppiroli (Ecole Polytechnique federale de Lausanne, CH 1015 Lausanne, Switzerland), Laboratoire d'optoélectronique des matériaux moléculaires Collaboration*
- 13:39 [V29.013 Intermolecular Bonding in Metallic Polymers](#)  
*Jeremy D. Schmit (University of California, Santa Barbara), Alex J. Levine (University of Massachusetts, Amherst)*
- 13:51 [V29.014 Robust Calculation of Electrostatic Pressure in Thin Polymer Film in AFM-assisted Electrostatic Nanolithography](#)  
*Grigori Sigalov (Virginia Tech), Sergei Lyuksyutov (University of Akron)*
- 14:03 [V29.015 First principles considerations on cystamine core PAMAM dendrimers](#)  
*David M. Richmond, Marco Fornari (Dept. of Physics, Central Michigan University), George Kaminski (Dept. of Chemistry, Central Michigan University)*

**Session V30. DMP/DPOLY: Focus Session: Photophysics/Photonics of Organic and Polymeric Materials.**

**Thursday midday, 11:15, 519B, Palais des Congres**

**Chair: Z. Vally Vardeny, University of Utah.**

- 11:15 [V30.001 The Photophysics of Organic Semiconductors](#)  
*Ifor Samuel (Organic Semiconductor Centre, University of St Andrews)*
- 11:51 [V30.002 High Sensitivity Organic Monolayers for Photonic Switching](#)  
*Y.W. Yi, T.E. Furtak (Colorado School of Mines), M.J. Farrow, D.M. Walba, G. Fang, J.E. Maclellan, N.A. Clark (University of Colorado)*
- 12:03 [V30.003 TIME-RESOLVED NONLINEAR ABSORPTIVE PROPERTIES OF PHENYLENEETHYNYLENES.](#)  
*A.D. Slepov, F.A. Hegmann (Department of Physics, University of Alberta, Edmonton, Canada), R.R. Tykwinski (Department of Chemistry, University of Alberta, Edmonton, Canada), J.A. Marsden, J.J. Miller, M.M. Haley (Department of Chemistry, University of Oregon, Eugene, Oregon, USA)*
- 12:15 [V30.004 Electroluminescence \(EL\) Spikes, Turn-off Dynamics, and Charge Traps in Organic Light-Emitting Devices \(OLEDs\).](#)  
*K. O. Cheon, J. Shinar (Ames Laboratory amp; Physics Department, Iowa State University)*
- 12:27 [V30.005 Photoluminescence \(PL\)-Detected Magnetic Resonance \(PLDMR\) Study of tris-\(8-hydroxyquinoline\) Aluminum \(Alq3\).](#)  
*C.-H. Kim, J. Shinar (Ames Laboratory amp; Physics Department, Iowa State University)*
- 12:39 [V30.006 Occupied and unoccupied states in phenylene ethynylene oligomer monolayers determined with one- and two-photon photoelectron spectroscopy](#)  
*S.W. Robey, C.D. Zangmeister, R.D. van Zee (NIST, Gaithersburg, MD 20899)*
- 12:51 [V30.007 Quantum Optics of Single Tetrahedral Oligophenylenevinylene Molecules](#)  
*David Bussian, Melissa Summers, Bin Liu, Guillermo Bazan, Steven Buratto (University of California, Santa Barbara Department of Chemistry and Biochemistry)*
- 13:03 [V30.008 Responsive Self Assembled Photonic Band Gap Materials Based on Cholesteric Polymers: From Polarized Light Emission to Lasing](#)  
*Petr Shibaev (Dpt. Physics, Fordham University, Bronx, 10458, NY), Jeppe Madsen (Copenhagen University), Valery Milner (Queens College, NY), Azriel Genack (Queens College, New York)*
- 13:15 [V30.009 Active photonic crystal devices in self-assembled electro-optic polymeric materials](#)  
*J. Li (1), P. J. Neyman (2), M. Vercellino (3), J. R. Hefflin (2), R. Duncan (3), S. Evoy ((1) Dept. of Elec. and Sys. Eng, The University of Pennsylvania, Philadelphia, PA; 2 Dept. of Physics, Virginia Tech, Blacksburg, VA; 3 Luma Innovations, Blacksburg, VA)*
- 13:27 [V30.010 A high efficiency thin-film organic photovoltaic cell with a low series resistance](#)  
*Jiangeng Xue (Dept. of Electrical Eng., Princeton Univ.), S. Uchida, B. P. Rand, S. R. Forrest*
- 13:39 [V30.011 Double Modulation \(DM\)-Photoluminescence \(PL\)-Detected Magnetic Resonance \(DM-PLDMR\) Study of poly\(2-methoxy-5-\(2'-ethyl\)-hexoxy-1,4-phenylene vinylene\) \(MEH-PPV\).](#)  
*M.-K. Lee, J. Shinar (Ames Laboratory amp; Physics Department, Iowa State University), M. Segal, M. Baldo (Department of Electrical Engineering, MIT), Z. G. Soos (Department of Chemistry, Princeton University)*
- 13:51 [V30.012 A Thermally Stimulated Luminescence \(TSL\) and Photoluminescence \(PL\)-Detected Magnetic Resonance \(PLDMR\) Study of a Highly Luminescent Poly\(p-phenylene vinylene\) \(PPV\) Derivative](#)  
*J. Shinar, C.-H. Kim (Ames Laboratory amp; Physics Department, Iowa State University), A. Vakhnin, A. Kadashchuk (Institute of Physics, National Academy of Sciences of the Ukraine), D.-W. Lee, Y.-R. Hong, J.-I. Jin (Department of Chemistry, Korea University, Seoul, Korea)*
- 14:03 [V30.013 Quadratic Electro-optic Effect in a Novel Nano-optical Polymer \(iodine-doped polyisoprene\)](#)  
*Rajendra Swamy, Jitto Titus, Mrinal Thakur (Photonic Materials Research Laboratory, Auburn University, AL, 36849)*



**Session V31. DPOLY: Polymer Brushes.**

**Thursday midday, 11:15, 523AB, Palais des Congres**

**Chair: Mathias Loesche, Johns Hopkins University.**

- 11:15 [V31.001 Cylindrical Brushes at the Air-Water Interface Studied by Synchrotron X-ray Diffraction and Reflection: Transition from Aligned Single Molecules to Homogeneous Monolayer](#)  
*Christiane A. Helm, Heiko Ahrens, Georg Papastavrou (Inst. f. Physik, Ernst-Moritz-Arndt Uni, 17489 Greifswald, Germany), Manfred Schmidt (Inst. f. Physikalische Chemie, Johannes-Gutenberg Uni, 55099 Mainz, Germany)*
- 11:27 [V31.002 Exclusion Zone of Convex Brushes in the Strong-Stretching Limit](#)  
*Vladimir A Belyi, Thomas A Witten (James Franck Institute and the Department of Physics, The University of Chicago)*
- 11:39 [V31.003 Interaction between irreversibly adsorbed polymer layers in supercritical solvent.](#)  
*Alexander Chervanyov, Sergei Egorov (Dept. of Chemistry, University of Virginia)*
- 11:51 [V31.004 Density Profiles of Polymer Brushes in Density Fluctuating Supercritical Fluids](#)  
*Sushil Satija (NIST), Tadanori Koga, Yuan Ji (SUNY at Stony Brook), Young-soo Seo (NIST), Miriam Rafailovich, Jonathan Sokolov (SUNY at Stony Brook)*
- 12:03 [V31.005 Density Function Theory of Surface Forces Resulting from Tethered Polymer Chains](#)  
*John McCoy (New Mexico Tech), John Curro (Sandia National Laboratories)*
- 12:15 [V31.006 Surface fluctuations of polymer brushes probed by diffuse x-ray scattering](#)  
*Hyeonjae Kim, Mark Foster (Maurice Morton Institute of Polymer Science, The University of Akron, Akron, OH 44325 USA), Haining Zhang, Oswald Prucker, Jürgen Rühle (Chemistry and Physics of Interfaces, Institute for Microsystem Technology, Freiburg, Germany), Suresh Narayanan, Jin Wang (Advanced Photon Source, Argonne National Laboratory, Experimental Facilities Division, 9700 So. Cass Avenue, Argonne, IL 60439 USA)*
- 12:27 [V31.007 Structure of Non-Equilibrium Adsorbed Polymer Layers](#)  
*Ben O'Shaughnessy, Dimitrios Vavylonis (Chemical Engineering, Columbia University)*
- 12:39 [V31.008 Monte Carlo Studies of Tethered Chains](#)  
*I. A. Bitsanis, E. Karaiskos, S. H. Anastasiadis (Foundation for Research and Technology - Hellas, Heraklion Crete, Greece), C. Toprakcioglu (Univ. of Patras, Rion Patras, Greece)*
- 12:51 [V31.009 Role of Architecture and Block Softness on the Structure of Polymer Brushes](#)  
*Peng Tian, S. Michael Kilbey (Department of Chemical Engineering, Clemson University)*
- 13:03 [V31.010 Monte Carlo Simulations of Polymer Brushes Formed by Reversible Head-to-Tail Associating Polymers](#)  
*Chun-Chung Chen, Elena E. Dormidontova (Department of Macromolecular Science and Engineering, Case Western Reserve University, Cleveland, Ohio, 44106)*
- 13:15 [V31.011 Controlled Tethering Molecules via Crystal Surface Engineering](#)  
*Stephen Z. D. Cheng, Joseph X. Zheng, William Y. Chen (Maurice Morton Institute and Department of Polymer Science, The University of Akron, Akron, Ohio 44325-3909)*
- 13:27 [V31.012 Investigation of sub 50 nm patterned polymer brushes for lithographic applications](#)  
*Erik W. Edwards, Young-Hye Na, Tushar S. Jain, Juan J. de Pablo, Paul F. Nealey (University of Wisconsin Madison Department of Chemical and Biological Engineering and Center for Nanotechnology)*
- 13:39 [V31.013 Osmotic and Salted Brush Phase of Polyelectrolyte Brushes](#)  
*Christiane A. Helm, Heiko Ahrens (Inst. f. Physik, Ernst-Moritz-Arndt Univ, 17489 Greifswald, Germany), Stephan Förster (Inst. f. Physikalische Chemie, Univ Hamburg, 20146 Hamburg, Germany)*
- 13:51 [V31.014 Polyelectrolyte brushes: a new class of lubricant?](#)  
*Nir Kampf, Jacob Klein (Department of Materials and Interfaces, Weizmann Institute of Science, Rehovot 76100, Israel)*

**Session W29. DPOLY: Polymer Blends.**

**Thursday afternoon, 14:30, 519A, Palais des Congres**

**Chair: H. Samuel Jeon, New Mexico Tech.**

- 14:30 [W29.001 Universal Aspects of Macromolecules in Polymer Blends, Solutions, and Supercritical Mixtures](#)  
*Yuri B. Melnichenko, George D. Wignall (Oak Ridge National Laboratory), Dietmar Schwahn (Forschungszentrum Juelich)*
- 14:42 [W29.002 Molecular disorder and mesoscopic order in impact resistant nanostructured polymers](#)  
*Anne-Valerie Ruzette, Ludwik Leibler (Laboratoire Matière Molle et Chimie, UMR 167 ESPCI/CNRS, ESPCI, Paris, FRANCE), Olivier Guerret, Pierre Gerard (Groupement de Recherche de Lacq, ATOFINA, FRANCE)*
- 14:54 [W29.003 Modeling the Dynamic Fracture of Polymer Blends Processed Under Shear](#)  
*Anna Balazs, Gavin Buxton (Department of Chemical Engineering, University of Pittsburgh)*
- 15:06 [W29.004 Morphology and Mechanical Properties of Binary Block Copolymer Blends](#)  
*Ralf Lach, Roland Weidisch (Institut für Polymerforschung Dresden, Germany), Konrad Knoll (BASF-AG, Ludwigshafen, Germany), Collaboration Knoll*
- 15:18 [W29.005 Phase Characterization of sulfonated polystyrene/ poly\(2,6-dimethyl-1,4-phenylene oxide\) binary blends](#)  
*Jonathan Gupton (Polymer Program, Institute of Materials Science, University of Connecticut, Storrs, CT), R.A. Weiss, Montgomery T. Shaw (Department of Chemical Engineering, Institute of Materials Science, University of Connecticut, Storrs, CT)*
- 15:30 [W29.006 Complex Phase Behavior of Weakly-Interacting Binary Polymer Blend](#)  
*Du Yeol Ryu, Jin Jang, Dong Hyun Lee, Jin Kon Kim (Department of Chemical Engineering, Pohang University of Science and Technology), Kristopher A. Lavery, Thomas P. Russell (Polymer Science and Engineering Department, University of Massachusetts Amherst), University of Massachusetts Collaboration*
- 15:42 [W29.007 Breakdown of Dynamic Scaling in Thin Film Polymer Blends Undergoing Phase Separation](#)  
*Hyun-Joong Chung, Russell J. Composto (Dept of Materials Science and Engineering, Univ of Pennsylvania, Philadelphia, PA19104)*
- 15:54 [W29.008 Bimodal Dynamics of PEO in Amorphous Blends with PMMA](#)  
*Victoria Garcia Sakai, Janna K Maranas (Department of Chemical Engineering, The Pennsylvania State University, University Park, PA), Inmaculada Peral (NIST Center for Neutron Research, Gaithersburg, Maryland)*
- 16:06 [W29.009 The effect of environment and intermolecular packing on component mobility in miscible polymer blends.](#)  
*Janna K. Maranas, Arun Neelakantan, Andrew May (Penn State University)*
- 16:18 [W29.010 Dilute Blend Dynamics: Self Concentration and the Lodge-McLeish Model](#)  
*Thomas R. Lutz, Yiyong He, M.D. Ediger (University of Wisconsin-Madison Department of Chemistry)*
- 16:30 [W29.011 Effect of crosslinking agent functionality and curing beam intensity on the phase separation kinetics of a photopolymerizing PDLC](#)  
*Nathan Crawford, Mark Dadmun (Univ. of Tennessee - Knoxville), T.J. Bunning Collaboration*
- 16:42 [W29.012 A Molecular Model for Miscible Blend Viscosity](#)  
*Jeffrey C. Haley, Timothy P. Lodge (University of Minnesota)*
- 16:54 [W29.013 Increasing the Compatibility of Polymer Blends using Supercritical Fluids](#)  
*Mitchell Fourman (Ward Melville High School), Edmund Palermo (Cornell University), Steven Lubin (West Islip High School), Mayu Si, Miriam Rafailovich, Jonathan Sokolov (Stony Brook University)*
- 17:06 [W29.014 Neutron Scattering Studies of Blends Containing a Liquid Crystalline Polymer](#)  
*Mark Dadmun, Sudesh Kamath, Rujul Mehta (University of Tennessee)*
- 17:18 [W29.015 Phase transitions in thin binary polymer blend films](#)  
*Ananth Indrakanti (Pennsylvania State University), Ronald L. Jones (National Institute of Standards and Technology), Robert M. Briber (University of Maryland), Marcus Mueller (Johannes Gutenberg Universität), Sanat K. Kumar (Rensselaer Polytechnic Institute)*

**Session W30. DMP/DPOLY: Focus Session: Charge Transport and Transistors.**

**Thursday afternoon, 14:30, 519B, Palais des Congres**

**Chair: Joseph Shinar, Iowa State University.**

- 14:30 [W30.001 Charge injection and transport in doped organic semiconductors](#)  
*George Malliaras (Cornell University)*
- 15:06 [W30.002 Feasibility of Static Induction Transistor with Organic Semiconductors](#)  
*Serkan Zorba, Yongli Gao (University of Rochester, Rochester, NY 14627)*
- 15:18 [W30.003 Temperature dependent contact resistances in organic field effect transistors](#)  
*Behrang Hamadani, Douglas Natelson (Rice University, Physics and Astronomy Dept, MS 61, 6100 Main St., Houston, TX 77005)*
- 15:30 [W30.004 Characterization and transport properties of 3,4,9,10-perylenetetracarboxylic dianhydride films](#)  
*F. Bradbury, J. Jo, J. J. Heremans, V. Soghomonian (Ohio University, Athens OH 45701)*
- 15:42 [W30.005 Gate tunable carrier injection in submicron pentacene transistors](#)  
*V. Soghomonian, J. Jo, J. J. Heremans, F. Bradbury, Hong Chen (Ohio University, Athens OH 45701)*
- 15:54 [W30.006 Time of Flight, Space Charge Limited Current, and Field Effect Transistor Measurements of Electron and Hole Mobilities in Organic Single Crystals](#)  
*Brian Crone, Vladimir Butko, Xiaoliu Chi (Los Alamos National Laboratory)*
- 16:06 [W30.007 High Sensitivity Electric Force Microscopy of Pentacene Devices](#)  
*Erik Mueller (Dept. of Physics, Cornell University, Ithaca, NY 14853-1301), Ricardo Ruiz (Dept. of Materials Science and Engineering, Cornell University, Ithaca, NY 14853-1301), John A. Marohn (Dept. of Chemistry and Chemical Biology, Cornell University, Ithaca, NY 14853-1301)*
- 16:18 [W30.008 A hopping analysis of the single molecule C60 transistor](#)  
*Anita Parmar, Christina Hagemann, David Dunlap (University of New Mexico), Dario Martinez (University of Texas Austin), Gary White (American Institute of Physics)*
- 16:30 [W30.009 Charge transport on the surface of organic semiconductors.](#)  
*Vitaly Podzorov, Elena Loginova, Sergey Sysoev, Vladimir Pudalov, Michael Gershenson (Department of Physics and Astronomy, Rutgers University, Piscataway, NJ 08854)*
- 16:42 [W30.010 Polymer Thin Film Transistors: High Electron Mobility and Ambipolar Charge Transport](#)  
*Samson Jenekhe, Amit Babel (Department of Chemical Engineering, University of Washington, Seattle, Washington 98195-1750)*
- 16:54 [W30.011 Progress in organic molecular single crystal FET electronics](#)  
*Vladimir Butko (Los Alamos National Laboratory), Xiaoliu Chi, Arthur Ramirez (Lucent Technologies - Bell Labs)*
- 17:06 [W30.012 Electronic Properties of Diazapentacene Crystals with Co-Facial Stacking](#)  
*Mark S Hybertsen, Michael Steigerwald, Qian Miao, Quyen Nguyen, Colin P Nuckolls (Columbia University), Cristian Botz (SUNY Stonybrook), Peter Stephens (SUNY Stonybrook and BNL)*
- 17:18 [W30.013 Enhancement of Field-Effect Mobility by Surface-Mediated Molecular Ordering in Regioregular Polythiophene Thin Film Transistor](#)  
*Dohwan Kim, Yeongdon Park, Yunseok Jang, Hoichang Yang, Kilwon Cho (Pohang University of Science and Technology, Department of Chemical Engineering, Polymer Research Institute, Pohang, 790-784, Korea), Soojin Park, Taihyun Chang (Pohang University of Science and Technology, Department of Chemistry, Polymer Research Institute, Pohang, 790-784, Korea), Chang Y. Ryu (Rensselaer Polytechnic Institute, Department of Chemistry, Troy, NY12180, USA), Pohang University of Science and Technology Team, Pohang University of Science and Technology Team, Rensselaer Polytechnic Institute Team*

**Session W31. DPOLY: Templating with Block Copolymers.**

**Thursday afternoon, 14:30, 523AB, Palais des Congres**

**Chair: Richard Spontak, North Carolina State University.**

- 14:30 [W31.001 Nanoporous Materials Derived from Block Copolymers Containing Polydimethylsiloxane as a Removable Block](#)  
*Sokol Ndoni (Danish Polymer Centre, Risoe National Laboratory, 4000 Roskilde, Denmark), Martin E. Vigild (Danish Polymer Centre, Dept of Chemical Engineering, Technical University of Denmark, 2800 Lyngby, Denmark), Rolf H. Berg (Danish Polymer Centre, Risoe National Laboratory, 4000 Roskilde, Denmark), Danish Polymer Centre Collaboration, Danish Polymer Centre Collaboration*
- 14:42 [W31.002 Hierarchical assembly of a series of rod-coil block copolymers: supramolecular LC phase in nanoenvironment](#)  
*Christopher Y. Li, Kishore K. Tenneti, Lingyu Li (Department of Materials Science and Engineering, Drexel University), Dong Zhang, Hailing Zhang, Xinhua Wan, Qi-Feng Zhou (Department of Polymer Science, Peking University, P. R. China)*
- 14:54 [W31.003 Aqueous Solution Behavior and Metal Nanoparticle Formation in pH-responsive Amphiphilic Diblock Copolymers](#)  
*Spiros H. Anastasiadis, Vasileios Katsamanis, Theodora Afchoudia, Maria Vamvakaki (Foundation for Research and Technology - Hellas and University of Crete, Heraklion Crete, Greece), Stanislav Sidorov (Nesmeyanov Institute of Organoelement Compounds, Russian Academy of Sciences, Moscow, Russia), Maxim Kostylev, Lyudmila Bronstein (Indiana University, Chemistry Department, Bloomington, IN)*
- 15:06 [W31.004 Large Area Nanolithographic Templates by Selective Etching of Chemically Stained Block Copolymer Thin Films](#)  
*Olayo-Valles Roberto, Michael S. Lund, C. Leighton (Chemical Engineering and Materials Science Department, University of Minnesota), Marc A. Hillmyer (Chemistry Department, University of Minnesota)*
- 15:18 [W31.005 Block copolymer thin films as templates for nanostructured silica and titania](#)  
*Ryan C. Hayward, Bradley F. Chmelka, Edward J. Kramer (University of California, Santa Barbara)*
- 15:30 [W31.006 Synthesis of robust mesoporous metal oxide films by the rapid replication of block copolymer templates in supercritical carbon dioxide](#)  
*Rajaram Pai, Sumit Agarwal, David Hess, James Watkins (Dept of Chemical Engineering, University of Massachusetts, Amherst MA 01003)*
- 15:42 [W31.007 Tunable Nano-cellular Polymeric Monoliths using Fluorinated Block Copolymer Templates and Supercritical Carbon Dioxide](#)  
*Hideaki Yokoyama, Lei Li (National Institute of Advanced Industrial Science and Technology), Kenji Sugiyama (Tokyo Institute of Technology)*
- 15:54 [W31.008 Pattern formation in charged micelles.](#)  
*Francisco J. Solis (Life Sciences, Arizona State University West), Monica Olvera de la Cruz (Materials Science, Northwestern University)*
- 16:06 [W31.009 Pore stability and dynamics in polymer membranes](#)  
*Dennis Discher, Harry Bermudez, Helim Aranda-Espinoza (Univ. Pennsylvania)*
- 16:18 [W31.010 A Novel Method to Obtain Arbitrarily Long Domains of Aligned Polymer Cylinders](#)  
*S.B. Darling (Argonne National Laboratory, Materials Science Division), Deepak Sundrani, S.J. Sibener (The University of Chicago, The James Franck Institute and Department of Chemistry)*
- 16:30 [W31.011 Block copolymers in confined geometry](#)  
*Hongqi Xiang, Kyusoon Shin, Kate Nelson, Thomas J. McCarthy, Thomas P. Russell (Department of Polymer Science and Engineering, University of Massachusetts, Amherst, Massachusetts 01003, USA)*
- 16:42 [W31.012 Electric field alignment of asymmetric diblock copolymer thin films](#)  
*Ting Xu, Thomas P. Russell (Department of Polymer Science and Engineering, University of Mass., Amherst)*
- 16:54 [W31.013 Microvesicles Produced by Poly\(dimethylsiloxane-b-ferrocenylsilane\) Block Copolymers in Selective Solvents](#)  
*David Frankowski (North Carolina State Univ.), Nicole Power-Billard, Jose Raetz (Univ. of Toronto), Saad Khan (North Carolina State Univ.), Ian Manners (Univ. of Toronto), Richard Spontak (North Carolina State Univ.)*
- 17:06 [W31.014 Water Soluble Cadmium Sulfide Quantum Dots in Biamphiphilic Triblock Copolymer Micelles](#)  
*Nicolas Duxin, Liu Futian, Adi Eisenberg (Department of Chemistry, McGill University, Montreal, Canada), Hojatollah Vali Collaboration*
- 17:18 [W31.015 Electrostatic Self-Assembly in Copolymers-Nanoparticles Systems](#)  
*Jean-Francois berret (Complex Fluids Laboratory, Unité Mixte de Recherche CNRS - Rhodia n° 166, 259 Prospect Plains Road CN 7500, Cranbury NJ 08512 USA)*

**Session Y4. DPOLY: Thin Films and Interfaces.**

**Friday morning, 08:00, 517C, Palais des Congres**

**Chair: Darrin Pochan, University of Delaware.**

- 08:00 [Y4.001 Macromolecular gradients on material surfaces: Formation and applications](#)  
*Jan Genzer (NC State University)*
- 08:36 [Y4.002 Nano-scale organization and surface wetting of structured liquid films](#)  
*Peter Green (The University of Texas at Austin)*
- 09:12 [Y4.003 Weak polyelectrolyte layers: tuning properties at the local level](#)  
*Igal Szleifer (Department of Chemistry, Purdue University, West Lafayette IN 47907)*
- 09:48 [Y4.004 Polymer Stabilization of Phospholipid Vesicles](#)  
*Ramanan Krishnamoorti, Jeremy Strauch, Koray Yurekli, Kishore Mohanty (Department of Chemical Engg, Univ of Houston)*
- 10:24 [Y4.005 Relating interfacial structure and morphology to performance in thin film semi-conducting polymer devices](#)  
*Richard Jones (University of Sheffield)*

**Session Y29. DPOLY: New Polymer Techniques.**

**Friday morning, 08:00, 519A, Palais des Congres**

**Chair: Anne Mayes, MIT.**

- 08:00 [Y29.001 Anomalous Light Scattering - Model Systems](#)  
*Thomas Seery (University of Connecticut, Polymer Program and Chemistry Department), Maricel DeMesa (University of Connecticut, Chemistry Department)*
- 08:12 [Y29.002 Evidence of the  \$\gamma\$ -relaxation in the Light Scattering Spectra of Poly \(n-hexyl methacrylate\) Near the Glass Transition](#)  
*Daniel Savin (University of Vermont), Gary Patterson (Carnegie Mellon University), James Stevens (University of Guelph)*
- 08:24 [Y29.003 Combinatorial polymer research in microfluidics](#)  
*Joao T. Cabral, Steven D. Hudson, Jack F. Douglas, Christopher Harrison, Alamgir Karim, Eric J. Amis (Polymers Division, NIST, Gaithersburg, MD)*
- 08:36 [Y29.004 The Tau-Effective Paradox: New Measurements Towards a Resolution](#)  
*Srinivas Kolla, Sindee Simon (Chemical Engineering, Texas Tech University)*
- 08:48 [Y29.005 Sum-Frequency Vibrational Spectroscopy of Helically Structured Conjugated Polymers](#)  
*Masahito Oh-e, Hiroshi Yokoyama (Yokoyama Nano-structured Liquid Crystal Project, ERATO, Japan Science and Technology Agency, 5-9-9 Tokodai, Tsukuba, Ibaraki, 300-2635 JAPAN), Shinfichi Yorozuya, Kazuo Akagi (Institute of Material Science, University of Tsukuba, Tsukuba, Ibaraki, 305-8573 JAPAN), Y.R. Shen (Department of Physics, University of California at Berkeley, Berkeley, CA 94720)*
- 09:00 [Y29.006 X-ray Photon Correlation Spectroscopy Study of Polystyrene-block-polyisoprene Copolymer](#)  
*Tae Joo Shin, Steven Dierker (National Synchrotron Light Source, Brookhaven National Laboratory, Upton, NY 11973, USA)*
- 09:12 [Y29.007 Semi-prep HPLC technique for fractionating homopolymer-free and compositionally-narrow AB diblock copolymers](#)  
*Chang Yeol Ryu, Felicia Tsai, Won Kim (Rensselaer Polytechnic Institute), Soojin Park, Insun Park, Taihyun Chang (POSTECH)*
- 09:24 [Y29.008 Production of Nanofibers by Two-Fluid Electrospinning](#)  
*Jian H. Yu, Sergey V. Fridrikh, Gregory C. Rutledge (Department of Chemical Engineering, MIT)*
- 09:36 [Y29.009 Application of Analytical Electron Microscopy Methods in Ionomer Systems](#)  
*Nicholas Benetatos, Brian Smith, Paul Heiney, Karen Winey (University of Pennsylvania)*
- 09:48 [Y29.010 Optical Observations of Amorphous Metallic Alloy / Polymer Composite Electrodes for Li-Ion Batteries](#)  
*A Timmons (Dalhousie University), Z. Chen Team, J. Dahn Team*
- 10:00 [Y29.011 A STM Study of the Structure of Ultra-Thin P\(VDF-TrFE\) Copolymer Films on Graphite\\*](#)  
*Lei Cai, Hongwei Qu, Chenxi Lu (FIU), M. Poulsen, S. Ducharme, P. A. Dowben (University of Nebraska-Lincoln), Jiandi Zhang (Florida International University)*
- 10:12 [Y29.012 Direct Observation of Chain Conformation in Two-Dimensional Dense State](#)  
*Xiaorong Wang (Bridgestone/Firestone Research Center, 1200 Firestone Parkway, Akron, Ohio 44317-0001)*
- 10:24 [Y29.013 Measuring polymer properties at the nanoscale using capillary forces and lithographically defined structures](#)  
*Mark P. Stoykovich, Ivan Junarsa, Kenji Yoshimoto, Paul F. Nealey (University of Wisconsin)*
- 10:36 [Y29.014 Measurement of adhesion energies between free-standing and supported polymer films using a novel axisymmetric peel test geometry](#)  
*Adam N. Raegen, Kari Dalnoki-Veress (Department of Physics and Astronomy and the Brockhouse Institute for Materials Research, McMaster University, Hamilton, ON, Canada.)*
- 10:48 [Y29.015 Dynamic Nanoscale Mechanical Analyses of Polymers](#)  
*Kathryn J. Wahl, Thomas J. Mullen (U.S. Naval Research Laboratory)*

**Session Y30. DMP/DPOLY: Focus Session: Charge Transport and Spintronics.**

**Friday morning, 08:00, 519B, Palais des Congres**

**Chair: Michael Winokur, University of Wisconsin.**

- 08:00 [Y30.001 Spin-valves in organic semiconductors](#)  
*Z. Vally Vardeny (University of Utah)*
- 08:36 [Y30.002 Orientation and Deposition of Dipolar Molecular Fibers in Electric Fields](#)  
*J. H. Dickerson (Department of Applied Physics and Applied Mathematics, Columbia University, New York, NY), T. -Q. T. Nguyen, C. Nuckolls, L. Brus (Department of Chemistry, Columbia University, New York, NY), I. P. Herman (Department of Applied Physics and Applied Mathematics, Columbia University, New York, NY)*
- 08:48 [Y30.003 Direct Imaging of Switching Centers in Metal/Molecule/Metal Structures](#)  
*Chun Ning Lau, Duncan Stewart, Stan Williams (Hewlett-Packard Laboratories), Marc Bockrath (Dept of Applied Physics, Caltech)*
- 09:00 [Y30.004 Conductance switching of planar tunnel junctions mediated by ferrocene moieties](#)  
*Jose Amado M Dinglasan (Department of Chemistry, University of Toronto), Michael Bailey, Jong Park, Al-Amin Dhirani*
- 09:12 [Y30.005 Fabrication of Nano-gap Electrodes Without Lithography Technique and Electrical Characteristics of Nano Structured Molecules](#)  
*Yoichi Otsuka (Institute of Scientific and Industrial Research, Osaka University), Yasuhisa Naitoh (Nanotechnology Research Institute, National Institute of Advanced Industrial Science and Technology, AIST), Takuya Matsumoto (Institute of Scientific and Industrial Research, Osaka University amp; CREST, JST), Wataru Mizutani (Nanotechnology Research Institute, National Institute of Advanced Industrial Science and Technology, AIST), Hitoshi Tabata, Tomoji Kawai (Institute of Scientific and Industrial Research, Osaka University amp; CREST, JST)*
- 09:24 [Y30.006 Transport Property of an Isolated Gold-Polypyrrole-Gold Nanowire](#)  
*H.-J. Chung, H.H. Jung, Y.-S. Cho, S. Lee, J.H. Ha, Y. Kuk (Department of Physics, and Cneter for Science in Nanometer Scale, Seoul National University, Seoul, Korea)*
- 09:36 [Y30.007 Electric force microscopy of organic hopping conductor films and devices](#)  
*William Silveira, John Marohn (Cornell University)*
- 09:48 [Y30.008 Photoconductivity of Porphyrin Nanorods](#)  
*Alexander D. Schwab, Brooks B. Bond-Watts, Julio C. de Paula, Walter F. Smith (Haverford College), Deirdre E. Smith, Danvers E. Johnston, Alan T. Johnson (University of Pennsylvania), James Hone (Columbia University)*
- 10:00 [Y30.009 Charge Carrier Transport in Novel Organic Polymer-Inorganic Quantum Dot Hybrid Nanocomposites](#)  
*Kaushik R Choudhury, Marek Samoc, Paras Prasad (Institute for Lasers, Photonics and Biophotonics State University of New York at Buffalo, New York 14260)*
- 10:12 [Y30.010 Poly-beta-pinene, a Novel Nonconjugated Conductive Polymer](#)  
*Mrinal Thakur, Prakash Vipra, Harish Rajagopalan (Photonic Materials Research Laboratory, Auburn University, AL 36849)*
- 10:24 [Y30.011 Relations between the current-voltage response of a single molecule junction and inelastic electron tunneling spectroscopy](#)  
*Christina Hagemann, Anita Parmar, David Dunlap (University of New Mexico), Dario Martinez (University of Texas Austin), George Malliaras (Cornell University)*
- 10:36 [Y30.012 Spintronic Behaviors of Polymer Magnetic Nano-Composites](#)  
*Bin Hu, Yue Wu, Karl Menako (University of Tennessee), Sheng Dai, Zontao Zhang, Jian Shen (Oak Ridge National Laboratory)*
- 10:48 [Y30.013 Point-probe magnification of contact potential fluctuations for scanning EFM](#)  
*David H. Dunlap (University of New Mexico), John A. Marohn, Bill R. Silveira (Cornell University)*

**Session Z29. DPOLY: Polymer Thin Films and Interfaces.**

**Friday midday, 11:15, 519A, Palais des Congres**

**Chair: Ali Dhinojwala, University of Akron.**

- 11:15 [Z29.001 Nanoparticles at Fluid-Fluid Interfaces: Assembly, Scattering and Ultrathin Membranes](#)  
*Yao Lin, Alexander Böker, Habib Skaff, Todd Enrick (Department of Polymer Science and Engineering, University of Massachusetts, Amherst), A. D. Dinsmore (Department of Physics, University of Massachusetts, Amherst), Thomas P. Russell (Department of Polymer Science and Engineering, University of Massachusetts, Amherst)*
- 11:27 [Z29.002 Baroplastic core-shell nanoparticles](#)  
*Sang Woog Ryu, Juan Gonzalez, Metin Acar, Anne Mayes (MIT, Depart. of Materials Science and Engineering, 77 Mass Ave, Cambridge, MA 02140)*
- 11:39 [Z29.003 Long and short range forces at polymer/polymer interface](#)  
*Clara Carelli (Dept of Physics, Univ of Surrey, Guildford, UK), Michele Sferrazza (DÃ©partement de Physique, UniversitÃ© Libre de Bruxelles, Bruxelles, Belgique), Richard Jones (Dept of Physics, Univ of Sheffield, Sheffield, UK), Ron Young (Dept of Chemistry, Univ of Sheffield, Sheffield, UK)*
- 11:51 [Z29.004 Interfacial Roughening and Droplet Emission Induced by the Reaction of End-Functionalized Polymers at the Interface between Immiscible Polymer Melts](#)  
*B. J. Kim, E. J. Kramer (UCSB), H. Kang, K. Char (SNU)*
- 12:03 [Z29.005 Early-Stage Block Copolymer Formation by Reactive Coupling at a Planar Polymer-Polymer Interface](#)  
*Shane Harton (North Carolina State University), Miriam Rafailovich, Jonathan Sokolov (SUNY Stony Brook), Richard Spontak, Harald Ade (North Carolina State University)*
- 12:15 [Z29.006 Size-dependent Assembly and Segregation of Nanoparticles at Liquid-liquid Interfaces](#)  
*Alexander Böker, Yao Lin, Habib Skaff, Todd Enrick, Thomas P. Russell (Department of Polymer Science and Engineering, University of Massachusetts, Amherst), David Cookson (Australian Nuclear Science and Technology Organization, PMB 1, Menai 2234, Australia), A. D. Dinsmore (Department of Physics, University of Massachusetts, Amherst), Heiko Zettl, Georg Krausch (Lehrstuhl für Physikalische Chemie II, Universität Bayreuth, 95440 Bayreuth, Germany)*
- [Z29.007 Block Copolymers at Sheared Blend Interfaces: DSCF-MD Comparison](#)  
*Yitzhak Shnidman (Affiliation), Maja Mihajlovic (Polytechnic university, Brooklyn, NY), Tak Shing Lo (City College of New York, City University of New York), Dilip Gersappe, Wentao Li (State University of New York at Stony Brook)*
- [Z29.008 Effect of sample preparation on the glass transition temperature of thin polymer films](#)  
*Zahra Fakhraai, James A. Forrest (Department of Physics and Guelph-Waterloo Physics Institute, University of Waterloo, Waterloo, On, Canada), James S. Sharp (School of Physics and Astronomy, University of Nottingham, University Park, Nottingham, NG7 2RD, U.K.)*
- [Z29.009 Nano-Calorimetric Studies of Ultrathin Film Polymers](#)  
*Azar Alizadeh, Surya Ganti, Kenneth Conway, Kasiraman Krishnan, Anis Zribi, Loucas Tsakalacos (General Electric, Global Research Center, Niskayuna, NY)*
- [Z29.010 direct imaging of nanoparticle embedding to probe polymer surface viscoelasticity](#)  
*Jonathan H. Teichroeb, James A. Forrest (Department of Physics and Guelph-Waterloo Physics Institute, University of Waterloo, Waterloo, ON, Canada N2L 3G1)*
- [Z29.011 Elasticity of diblock copolymer melts and applications to thin films](#)  
*Gerald Pereira (Department of Mechanical Engineering, The University of Sydney, Sydney 2052)*
- [Z29.012 High-throughput mapping of polymer mixture phase-behavior](#)  
*Joao T. Cabral, Alexander Norman, Alamgir Karim, Eric J. Amis (Polymers Division, NIST, Gaithersburg MD)*

**Session Z30. DPOLY: Properties of Optically Active Materials.**

**Friday midday, 11:15, 519B, Palais des Congres**

**Chair: Sonja Krause, RPI.**

- 11:15 [Z30.001 Resonance Raman Measurements from 20 K to 50 K of Alpha-Hexathiophene Single Crystals](#)  
*J.R. Weinberg-Wolf, L.E. McNeil (University of North Carolina at Chapel Hill, Chapel Hill NC 27599)*
- 11:27 [Z30.002 Direct measurements of triplet quantum yield of poly\(3-dodecylthiophene\) in solution](#)  
*Yi-Fang Huang, Hsin-Liang Chen, Wunshain Fann (Institute of Atomic and Molecular Sciences, Academia Sinica, Taipei, Taiwan)*
- 11:39 [Z30.003 Ultrafast dynamics in pentacene and tetracene probed using optical pump-probe spectroscopy](#)  
*Verner Thorsmølle, Richard Averitt, Jure Demsar (Los Alamos National Laboratory), Xiaoliu Chi (Columbia University), Sergie Tretiak (Los Alamos National Laboratory), Arthur Ramirez (Bell Laboratories, Lucent Technologies), Antoinette Taylor (Los Alamos National Laboratory)*
- 11:51 [Z30.004 Hole mobility of organic single crystal FETs: Rubrene, pentacene, and tetracene](#)  
*C. Goldmann, S. Haas, C. Krellner, K.P. Pernstich, D.J. Gundlach, B. Batlogg (Solid State Physics Laboratory, ETH Zurich, Switzerland)*
- 12:03 [Z30.005 In-situ studies of iodine intercalation in pentacene thin films and single crystals](#)  
*S. Haas, \*\* Bergemann\*, B. Batlogg\* (^\*ETH Zurich, Switzerland / ^\*\*Cavendish Lab., Univ. Cambridge, UK)*
- 12:15 [Z30.006 Interface structure of photonic multilayers prepared by PECVD](#)  
*Mark Foster, Hyeonjae Kim (Maurice Morton Institute of Polymer Science, The University of Akron, Akron, OH 44325), Hao Jiang (Anteon Co., Dayton, OH 45431), Scott Tullis, Timothy Bunning (Air Force Research Laboratory, Materials and Manufacturing Directorate/MLP, Wright-Patterson Air Force Base, OH 54533), Charles Majkrzak (NIST Center for Neutron Research, Gaithersburg, MD 20899)*
- 12:27 [Z30.007 Ionic charge conduction in molecular organic diodes](#)  
*Zaccheus Buffett, Ross Datars (McMaster University)*
- 12:39 [Z30.008 Comb-like structured multiple heterojunctions organic devices](#)  
*Yu Hui, Ishiang Shih (Department of Electrical and Computer Engineering, McGill University, Montreal, Quebec, Canada)*
- 12:51 [Z30.009 Modulation in Optical Response in Conducting Polymer-Based Field Effect Devices](#)  
*Youngmin Kim, Fang-Chi Hsu, Nan-Rong Chiou, June Hyoung Park, Oliver Waldmann, Vladimir Prigodin, Arthur J. Epstein (The Ohio State University)*
- 13:03 [Z30.010 The Effects of Polydispersity and Energetic Disorder on Carrier Injection and Transport](#)  
*S.J. Konezny (Department of Physics and Astronomy, University of Rochester, Rochester, New York 14627), S. Vaidyanathan, O.Y. Kas, M.E. Galvin (Department of Materials Science and Engineering, University of Delaware, Newark, Delaware 19716), D.L. Smith (Los Alamos National Laboratory, Los Alamos, New Mexico 87545), L.J. Rothberg (Department of Chemistry, University of Rochester, Rochester, New York 14627)*
- 13:15 [Z30.011 Photoluminescence from PTCDA Films and PTCDA/Alq3 Multilayers](#)  
*Ajith De Silva, H. P. Wagner (Dept. of Physics, Univ. of Cincinnati, Cincinnati OH 45221-0011), T. U. Kampen (Institut fuer Physik, Technische Universitaet Chemnitz, D-09197 Chemnitz, Germany)*
- 13:27 [Z30.012 Confined and delocalized polarons in pi-conjugated oligomers and polymers](#)  
*Markus Wohlgenannt (University of Iowa), Xiaomei Jiang, Z. Vally Vardeny (University of Utah)*
- 13:39 [Z30.013 Photon Echo Studies of MEH-PPV with Broken Conjugation](#)  
*Tieneke E. Dykstra, Xijuan Yang, Gregory D. Scholes (Lash Miller Chemical Laboratories, University of Toronto)*
- 13:51 [Z30.014 Exciplex formation in blended and layered polymer photovoltaics](#)  
*Stephanie Chasteen, Sue A. Carter (University of California - Santa Cruz), Garry Rumbles (National Renewable Energy Labs), H.-H. Hoerhold, H. Tillman (University of Jena, Germany)*
- 14:03 [Z30.015 Photo-optic HPDLCs incorporating azobenzene derived liquid crystals](#)  
*Augustine Urbas, Jay Klosterman, Vincent Tondiglia, Lalgudi Natarajan, Richard Sutherland, Timothy Bunning (Air Force Research Laboratory/MLPJ), Tomiki Ikeda (Tokyo Institute of Technology)*

**Special DPOLY Events**

**Sunday March 21, 2004**

**DPOLY Reception**

**Sir Winston Churchill Pub and Winnie  
1459 rue Crescent, Montreal  
6 – 9 PM**

**Tuesday March 23, 2004:**

**DPOLY Business Meeting**

**Palais des Congres, Room 519B  
5:30 – 6:30 PM**

**DPOLY Honorary Reception for Tim Lodge and Marcus Mueller**

**Palais des Congres, Room 710B  
6:30 – 7:30 PM**