

Session A5. DPOLY: Simulations of the Structure and Dynamics of Polymers.

Monday morning, 08:00, Room 602-603, Washington State Convention Center

Chair: Sharon Glotzer, National Institute of Standards and Technology.

08:00 A5.001 Hierarchical modeling of rheological and adhesion properties of polymers

Doros Theodorou (Department of Chemical Engineering, University of Patras and ICE/HT-FORTH, Patras, Greece and Institute of Physical Chemistry, NRCPS "Demokritos", 15310 Athens, GREECE)

08:36 A5.002 Molecular Simulations of Nanoscale Systems with Application to Nanopatterning

Juan J. de Pablo (Department of Chemical Engineering, University of Wisconsin, Madison)

09:12 A5.003 Interfacial fracture in polymer adhesives

Mark Stevens (Sandia National Laboratories)

09:48 A5.004 Gelation in Physically Associating Polymer Solutions

Sanat Kumar (Penn State University)

Session A18. DPOLY: Biopolymers.

Monday morning, 08:00, Room 307-308, Washington State Convention Center

Chair: David Martin, University of Michigan.

08:00 A18.001 Exploring Heterogeneities in Actin Networks

Margaret Gardel, Megan T. Valentine, Michael Nikolaides (Harvard University), John C. Crocker (California Institute of Technology), Andreas R. Bausch, David A. Weitz (Harvard University)

08:12 A18.002 Mechanical Properties Of Entangled And Crosslinked Actin Solutions

Alois Popp (Physics and DEAS, Harvard University), Guenther Gerisch (Max-Planck-Institut fuer Biochemie, Martinsried (Germany)), Erich Sackmann (Technische Universitaet Muenchen, Garching (Germany)), Erwin Frey (Physics Dept., Harvard University)

08:24 A18.003 Effect of Hydrophobic Modification Methods on the Gelation and Aggregation of O-Methyl Cellulose

Inna Ginzburg (Chemical Eng. Dept.), Mark Karpassas (Institute for Applied Bio-Sciences), Moshe Gottlieb (Chemical Eng. Dept. Gurion University, Beer Sheva 84105, Israel)

08:36 A18.004 Self-assembled structures of cell cytoskeletal actin filaments by actin-crosslinking proteins

Olivier Pelletier, Elena Pokidysheva, Allison Lin, Youli Li, Cyrus Safinya (University of California at Santa Barbara)

08:48 A18.005 Self-assembly of designed block polypeptides; control of final morphology with polypeptide secondary structure and molecular architecture

Darrin Pochan (University of Delaware)

09:00 A18.006 Preparation, Stability, and Bio-Compatibility of Block Copolymer Vesicles

Dennis Discher, Lee James C-M., Harry Bermudez, Frank Bates, Bohdana Discher (University of Pennsylvania and University of Minnesota)

09:12 A18.007 DNA Microarrays: Kinetics of Hybridization to a Polyelectrolyte Brush

Qingbo Yang (Department of Physics, Columbia University, New York, NY, 10027), Ben O'Shaughnessy (Department of Chemical Engineering, Columbia University, New York, NY, 10027)

09:24 A18.008 DNA Electrophoresis in Agarose Gels: Mobility vs. Length Dependence

Afshin Beheshti, David Van Winkle (Florida State University Physics Department and MARTECH (Center for Materials Research and Technology)), Randolph Rill (Florida State University Department of Chemistry and Institute of Molecular Biophysics)

09:36 A18.009 DNA translocation across protein channels: How does a polymer worm through a hole?

M Muthukumar (Dept of Polymer Science and Engineering, University of Massachusetts, Amherst, MA 01003)

09:48 A18.010 Unbinding of Semiflexible Polymers

Jan Kierfeld (Max-Planck Institute of Colloids and Interfaces, Golm, Germany)

10:00 A18.011 Designing toy proteins with several distinct stable states

Alexander Borovinskiy, Alexander Grosberg (Department of Physics, University of Minnesota)

10:12 A18.012 DNA Fluorescence Decay: Solution Versus Confined States

Sangmin Jeon (Dept. of Materials Science and Engineering, University of Illinois, Urbana, IL 61801, USA), Sung Chul Bae (Department of Chemistry, Pohang Univ. of Science and Technology, Pohang, Korea.), Steve Granick (Dept. of Materials Science and Engineering, University of Illinois, Urbana, IL 61801, USA)

10:24 A18.013 Anomalous x-ray scattering study on counterion condensed DNA

Helmut Strey, Natalia Kozlova, Taehyung Kim (Univ. of Massachusetts Amherst, PSE), Jin Wang (Argonne National Labs, APS)

10:36 A18.014 Nanomechanics of Cartilage : Investigation of Biomacromolecular Intermolecular Interactions via High-Resolution Force Spectroscopy

Christine Ortiz, Joonil Seog, Delphine Dean, Alan Grodzinsky (Massachusetts Institute of Technology), Anna Plaas, Shirley Wong-Palms (Shriners Hospital for Children)

10:48 A18.015 Band structure effects on electron transport in DNA

R. A. Jishi, J. Bragin (California State University), J. W. Mintmire, C. T. White (Naval Research Laboratory)

Session A19. DPOLY: Nanoparticle Filled Systems.

Monday morning, 08:00, Room 310, Washington State Convention Center

Chair: Francis Starr, National Institute of Standards and Technology.

08:00 A19.001 Clay Modification and Nanocomposite Fabrication with Controlled Polymer/Surfactant

Rick Beyer, Nora Beck Tan (Polymers Research Branch, U.S. Army Research Laboratory, APG, MD), Arnab Dasgupta, Mary Galvin (Department of Materials Science and Engineering, University of Delaware, Newark, DE)

08:12 A19.002 Influence of Nanofillers on Blend Phase Behavior

Koray Yurekli, Ramanan Krishnamoorti (University of Houston), Alamgir Karim (Polymers Division, NIST)

08:24 A19.003 Morphology Of Organically-Modified Layered Silicates (OLS) In Binary Solvents: Model System For Polymer Nanocomposites

Richard Vaia, Barry Farmer (AFRL/ML), Weidong Lui, Rishi Bharadwaj (Systran Federal Corp.), Air Force Research Laboratory Collaboration

08:36 A19.004 Characterization of the Internal Structure of Ultrathin Films Prepared by Layer-by-layer Self-assembly of Polycations and Clay.

Karine Glinel, Alain Moussa, Alain M. Jonas (Dept. Materials Science), Andre Laschewsky (Dept. Chemistry, Universite catholique de Louvain.)

08:48 A19.005 Influence of Nanoparticles on Lamellar Block Copolymer Ordering

Ramanan Krishnamoorti, Cynthia Mitchell (University of Houston)

09:00 A19.006 Structural changes induced by thermal treatment of nylon 6/clay nanocomposites

Tzong-Ming Wu, Erh-Chiang Chen (Department of Material Science and Engineering, I-Shou University)

09:12 A19.007 Shear Response of Layered Silicate Based Polymer Nanocomposites

Jiaxiang Ren, Ramanan Krishnamoorti (Department of Chemical Engineering, University of Houston)

09:24 A19.008 Self-Consistent Field Theory for Particle/Diblock Composite System

R. B. Thompson, V. V. Ginzburg, A. C. Balazs (University of Pittsburgh), M. W. Matsen (University of Reading)

09:36 A19.009 Interference of Filler-Induced Composition Wave in Polymer Thin Films

Yi Jiang, Turab Lookman, Avadh Saxena (Los Alamos National Laboratory)

09:48 A19.010 NEXAFS of Poly(amidoamine-organosilicon) (PAMAMOS) Dendrimer-Based Network Nanocomposites

Robert Bubeck, Petar Dvornic, Paul Parham (Michigan Molecular Institute), Alexander Hexemer (University of California at Santa Barbara), Xuefa Li (Cornell University), Daniel Fischer (NIST)

10:00 A19.011 Failure mechanisms in polymer nanocomposites

Gersappe Dilip (Dept of Materials Science and Engg, SUNY Stony Brook)

10:12 A19.012 Fracture Strength and Rheological Properties of Alumina Filled Model Thermoreversible Gels

Peter Drzal, Kenneth Shull (Northwestern University)

10:24 A19.013 Effect of Interfaces on the Crystallization Behavior of a Semicrystalline Polymer

Thilo Dollase (MPI, Mainz), Yafa Yagen (Chemical Eng,BGU, Beer-Sheva), Manfred Wilhelm (MPI, Mainz), Rachel Yerushalmi-Rozen, Moshe Gottlieb (Chemical Eng,BGU, Beer-Sheva), Chemical Engineering Dept. Collaboration, Max-Planck-Institut für Polymerforschung Collaboration

Session C3. DPOLY: Polymer Surfaces and Biocompatibility.

Monday morning, 11:00, Ballroom 6C, Washington State Convention Center

Chair: Hyuk Yu, University of Wisconsin-Madison.

11:00 C3.001 Creating functional peptide architectures at interfaces

Matthew Tirrell (University of California, Santa Barbara)

11:36 C3.002 Polymerized supramolecular assemblies and biocompatibility

David F. O'Brien (Department of Chemistry, University of Arizona, Tucson, AZ 85721)

12:12 C3.003 A Surface Strategy to Achieve Biomaterials That Heal

Buddy Ratner (University of Washington, University of Washington Engineered Biomaterials (UWEB))

12:48 C3.004 Intelligent Biomimetic Colloids

Helmuth Moehwald (MPI-KG Golum)

13:24 C3.005 Biological mechanisms of protein adsorption

Deane Mosher (University of Wisconsin)

Session C18. DPOLY: Block Copolymers.

Monday morning, 11:00, Room 307-308, Washington State Convention Center

Chair: Rick Register, Princeton University.

11:00 C18.001 Experimental and Theoretical Analysis of Heteroarm Star Copolymers vs Diblock Copolymers in the Microphase Separated State

Elena E. Dormidontova (Department of Chemical Engineering and Materials Science, University of Minnesota, Minnesota, MN 55455), Valerie Grayer, Georges Hadziioannou (Department of Polymer Chemistry and Materials Science Centre, University of Groningen, 9747 AG Groningen, The Netherlands), Constantinos Tsitsilianis (Department of Chemical Engineering, University of Patras and ICE/HT-FORT, P.O.Box 1414, 26500 Patras, Greece)

11:12 C18.002 Phase behavior of three and four miktoarm star polymers

Francois Drolet (Hyperdigm Research), Glenn H. Fredrickson (University of California, Santa Barbara)

11:24 C18.003 Effect of central junction point of AnBn star block copolymers on chain conformation in strong segregated limit

Yuqing Zhu, Samuel P. Gido (Polymer Science & Engineering Department, University of Massachusetts at Amherst, Amherst, MA 01002), Maria Moshakou, Hermis Iatrou, Nikos Hadjichristidis (Department of Chemistry, University of Athens, Panepistimiopolis Zografou 15771, Athens, Greece)

11:36 C18.004 Equilibrium Properties of Triblock Copolymers

K. Rasmussen, T. Lookman, A. Saxena (Los Alamos National Laboratory), R.C. Desai (University of Toronto)

11:48 C18.005 Morphological Behavior Spanning the Symmetric AB Diblock and ABC Triblock Copolymer States

Travis Bailey, Hoai Pham, Frank Bates (University of Minnesota, Chemical Engineering and Materials Science Department)

12:00 C18.006 Morphology formation in rod-coil diblock copolymers

Wentao Li, Dilip Gersappe (Dept. of Materials Science and Engg, SUNY Stony Brook)

12:12 C18.007 Effect of Polydispersity on the Phase Behaviour of Diblock Copolymers

David M. Cooke, An-Chang Shi (McMaster University)

12:24 C18.008 Phase behaviour of blends of AB and AC diblock copolymers

Robert Wickham, An-Chang Shi (Dept. of Physics and Astronomy, McMaster University, Hamilton ON L8S 4M1, Canada)

12:36 C18.009 Nano-confined Polymer Crystallization in Self-assembled Block Copolymers*

S.Z.D. Cheng, L. Zhu, P. Huang, B.H. Calhoun, Q. Ge, R.P. Quirk (Maurice Morton Institute and Department of Polymer Science, The University of Akron, Akron, OH 44325-3909.), E.L. Thomas (Department of Materials Science and Engineering, Massachusetts Institute of Technology, Cambridge, MA 02139), B.S. Hsiao, F. Yeh, L. Liu (Department of Chemistry, The State University of New York at Stony Brook, Stony Brook, New York 11794-3400), B. Lotz (Institute Charles Sadron, 6 Rue Boussingault, Strasbourg 67083, France)

12:48 C18.010 Quantifying Confined Crystallization within Block Copolymer Microdomains

Y.-L. Loo, R.A. Register (Princeton University), A.J. Ryan (University of Sheffield)

13:00 C18.011 Microdomain-Tailored Crystallization Kinetics of Block Copolymers

Hsin-Lung Chen (Department of Chemical Engineering, National Tsing Hua University, Hsin-Chu, 30013 Taiwan, R.O.C.), Tsang-Lang Lin (Department of Engineering and System Science, National Tsing Hua University, Hsin-Chu, 30013 Taiwan, R.O.C.), Takeji Hashimoto (Department of Polymer Chemistry, Kyoto University, Kyoto 606, Japan)

13:12 C18.012 Self-consistent field theory of twist grain boundaries in block copolymers

Daniel Duque, Michael Schick (Department of Physics, University of Washington, Seattle WA 98195-1560)

13:24 C18.013 T-Junction Grain Boundaries in Block Copolymer - Homopolymer Blends

Samuel Gido, Engin Burgaz (University of Massachusetts Amherst)

13:36 C18.014 Time-Iteration in Mesoscale Polymer Morphology Modeling

Hans Fraaije (University of Leiden)

13:48 C18.015 Micelle Disordering Transition in Strongly Asymmetric Diblock Copolymer Melts

Elena E. Dormidontova (Department of Chemical Engineering and Materials Science, University of Minnesota, MN 55455), Timothy P. Lodge (Department of Chemistry, Department of Chemical Engineering and Materials Science, University of Minnesota, MN 55455)

Session C19. DPOLY: Adhesion and Thin Film Mechanical Properties.

Monday morning, 11:00, Room 310, Washington State Convention Center

Chair: Jan Genzer, North Carolina State University.

11:00 C19.001 Polymer-Solid Interfaces: Role of Sticker and Receptor Groups on Adhesion.

Iisoon Lee, Richard P. Wool (Department of Chemical Engineering, University of Delaware)

11:12 C19.002 Block copolymers as soft adhesives

Costantino Creton, Jacob Hooker, Kelly Brown (Laboratoire PCSM-ESPCI, France)

11:24 C19.003 Block Copolymer Adhesion Promoter: Effect of Non Adsorbing Block Length and Substrate Polarity

Ana Claudia Costa, Russell J. Composto (Materials Science and Engineering, University of Pennsylvania), Petr Vlcek (Institute of Macromolecular Chemistry, Prague), Sushil Satija, Robert Ivkov (NIST)

11:36 C19.004 The Effects of Composition Drift on Random Copolymer Reinforcement of Polymer-Polymer Interfaces

Jason Benkoski, Glenn Fredrickson, Edward Kramer (UCSB)

11:48 C19.005 Combinatorial Investigations of Polymer Adhesion

Alfred Crosby, Alamgir Karim, Eric Amis (National Institute of Standards and Technology, Polymers Division)

12:00 C19.006 Electric field induced instabilities at surface and interface

Zhiqun Lin, Tobias Kerle, Shenda M. Baker, David A. Hoagland, Thomas P. Russell (Department of Polymer Science and Engineering, University of Massachusetts at Amherst, Amherst MA 01003), Erik Schaffer, Ullrich Steiner (Department of Polymer Chemistry and Materials Science Center, University of Groningen, Groningen, The Netherlands)

12:12 C19.007 Polymerization Induced Strain In Langmuir-Blodgett Films Of Organic Molecules

N. G. Semaltianos (Queen Mary and Westfield College, University of London, Department of Physics, Mile End Road, London E1 4NS, U.K.)

12:24 C19.008 Nanomechanical properties of heneicosanoic acid LB films measured with an Atomic Force Microscope (AFM)

Fernando Terán Arce, Pulak Dutta (Physics Department, Northwestern University)

12:36 C19.009 Photodegradation of UV-Irradiated Polymeric Coatings-Oxygen Effect

Hongmin Chen, Renwu Zhang, Ying Li, Chia-Ming Huang, Junjie Zhang, Peter Mallon (University of Missouri-Kansas City), R. Suzuki (Electrotechnical Labs, Tsukuba, Japan), Y.Y. Huang, T.C. Sandreczki (University of Missouri-Kansas City), Q. Peng, J.R. Richardson (University of Missouri-Columbia), T. Ohdaira (Electrotechnical Labs., Tsukuba, Japan), Y.C. Jean (University of Missouri-Kansas City)

12:48 C19.010 Optical Imaging of Surface Scratches

Pratima Rangarajan, Kevin Harding, Vicki Watkins (GE Corporate Research & Development)

Session D40. Poster Session I.

Monday afternoon, 14:00, Exhibit Hall, Washington State Convention Center

Chair: Ron Jones, National Institute of Standards and Technology

D40.062 A study of Exciton relax process in a polymeric molecule

Xi-juan Zhang (Dept. Phys., Yangzhou Univ., China.), Zheng-ming Shao (Yangzhou Skilled Workers' School, China.)

D40.063 ESR and PAS Studies of Photo-Degradation of a Polyurethane Coating

Y. He, J.-P. Yuan, H. Cao, R. Zhang, Y.C. Jean, T.C. Sandreczki (Dept. of Chemistry, U. of Missouri--KC, Kansas City, MO 64110)

D40.064 Energy dispersive electron beam irradiation of vinylidene fluoride-trifluoroethylene copolymer [P(VDF-TrFE)]

E. Balizer (Naval Surface Warfare Center, Carderock Division, West Bethesda, MD), A. DeReggi (Polymers Division, National Institute of Standards and Technology, Gaithersburg, MD), F. Bateman (Ionizing Radiation Division, National Institute of Standards and Technology, Gaithersburg, MD)

D40.065 Properties of Polymer-Infiltrated Carbon Foams

W. A. Adams, T. J. Bunning, B. L. Farmer, K. M. Kearns, D. A. Anderson, A. K. Roy (Air Force Research Lab), T. Banerjee, H. G. Jeon (Systran Federal Corp.)

D40.066 Crystallization in Multi-layered Crystalline Block Copolymer Thin Films

Sheng Hong, William J. MacKnight, Thomas Russell, Samuel P. Gido (University of Massachusetts, Amherst)

D40.067 In-situ X-ray studies of Molecular Orientation Enhancement in Polyhedral Oligomeric silsesquioxanes(POSS)/iPP nanocomposites

L Yang, R.H Somani, B.X Fu, L Liu, B.S Hsiao (Department of Chemistry, State University of New York at StonyBrook, NY-11794), S.H Phillips, P Ruth, R Blansky (USAF, Res Lab, Prop Directorate, Edwards AFB, CA-93524)

D40.068 Effect of supercooling on crystalline morphology in blends of syndiotactic polypropylene and poly(octene-ethylene) copolymer

Wirunya Keawwattana, Thein Kyu (Institute of Polymer Engineering, The University of Akron, Akron OH 44325)

D40.069 Morphological Evolution of Semi-crystalline Poly(ethylene terephthalate) During Large Scale Simple Shear Deformation

Zhiyong Xia, Hung-Jue Sue (Department of Mechanical Engineering, Texas A&M University, College Station, TX 77843-3123)

D40.070 Observations of a Flattened Helical Backbone Conformation in Regularly twisted Poly(m-Phenylene Diisophtalamide) (MPDI) Fibers

Christian Kuebel (Philips Research Laboratory), Dan Lawrence (Flint Ink), David Martin (The University of Michigan), Materials Science and Engineering Collaboration

D40.071 Crystallization of Polyethylene and its Octene Copolymers over a Wide Range of Supercoolings

John Wagner, Samir Abu Iqyas, Anita DiMeska, Paul Phillips (University of Tennessee)

D40.072 Analysis of Displacement Fields Near Dislocation Cores in Ordered Polymers

David Martin, Lawrence Drummy (Department of Materials Science and Engineering and the Macromolecular Science and Engineering Center, University of Michigan), Ingrid Voigt-Martin (Institute for Physical Chemistry, University of Mainz)

D40.073 Influence of Neutralization Method and Cation on the Morphology of Styrenic Ionomers

Karen I. Winey, Brian P. Kirkmeyer (Department of Materials Science and Engineering, University of Pennsylvania)

D40.074 From Aliphatic Polyurethanes to Linear Polyethylene: Influence of Hydrogen Bonding on the Thermal and Morphological Features of Semi-Crystalline Polymers

Robin McKiernan, Jacques Penelle, Samuel Gido (Department of Polymer Science and Engineering, University of Massachusetts, Amherst, MA, 01003-4530)

D40.075 Application of Parallel Tempering to Molecular Dynamics Simulations of Polymer Chains with Strongly Attracting End-Groups

Michael Johnson, Oleksiy Byutner, Grant Smith (Department of Materials Science and Engineering, University of Utah, Salt Lake City, Utah 84112)

D40.076 Morphology development upon melting of ultrahigh molecular weight polyethylene formed at high pressure by Ultra SAXS and DSC

Zhigang Wang (CHEM DEPT, SUNYSB), Xuehui Wang (CHEM DPET, SUNYSB), Norbert Striebeck (Univ. Hamburg), Benjamin S. Hsiao* (CHEM DEPT, SUNYSB), Charles C. Han (Polymer Division, NIST), SUNYSB Collaboration, Univ of Hamburg Collaboration, NIST Collaboration

D40.077 Polymer Melting and SAXS: A Modeling Study

Buckley Crist (Northwestern University)

D40.078 Confining Polymer Crystallization in One, Two, and Three Dimensions

Y.-L. Loo, R.A. Register (Princeton University), A.J. Ryan (University of Sheffield)

D40.079 A Major Intermediate Component in Drawn High-Density Polyethylene Identified by Solid-State NMR

Daniel Mowery (Polym. Sci. and Eng. Dept., UMass. Amherst), Klaus Sshmidt-Rohr (Dept. of Chem., Iowa State Univ. Ames)

D40.080 Structure of the Molten Stereo-regular Polyolefins with Different Side Chain Size from X-ray Diffraction and PRISM Theory

Man-Ho Kim, Anton Habenschuss (Oak Ridge National Laboratory), John G. Curro (Sandia National Laboratories)

D40.081 In-situ Structural Studies during PBO Fiber Spinning by Synchrotron WAXD/SAXS

Shaofeng Ran, Christian Burger, Dufei Fang, Xinhua Zong, Sharon Cruz, Benjamin Hsiao, Benjamin Chu (Dept. of Chemistry, State University of New York at Stony Brook), Robert Bubeck (Michigan Molecular Institute), Kazuyuki Yabuki, Yoshihiko Teramoto (Toyobo Co. Ltd, Research Center, Japan), David Martin, Michael Johnson (Department of Materials Science and Engineering, University of Michigan), Philip Cunniff (Department of the Army, Natick Research, Development and Engineering Center), Michigan Molecular Institute Collaboration, Toyobo Co. Ltd Collaboration, Department of Materials Science and Engineering Collaboration, Department of the Army Collaboration

D40.082 Caged Polymer Crystallization in Perforated Layers*

L. Zhu, P. Huang, B.H. Calhoun, S.Z.D. Cheng, Q. Ge, R.P. Quirk (Maurice Morton Institute and Department of Polymer Science, The University of Akron, Akron, OH 44325-3909), E.L. Thomas (Department of Materials Science and Engineering, Massachusetts Institute of Technology, Cambridge, MA 02139), B.S. Hsiao, F. Yeh, L. Liu (Department of Chemistry, The State University of New York at Stony Brook, Stony Brook, NY 11794-3400), B. Lotz (Institute Charles Sadron, 6 Rue Boussingault, Strasbourg 67083, France)

D40.083 Effect of Preparation Conditions on Microphase Separation in Poly(urethane urea) Block Copolymers.

James T. Garrett, James Runt (Penn State University), J.S. Lin (Oak Ridge National Laboratory)

D40.084 Crystallization and Structure Formation of Polyethylene oxide Fractions and Their Blends

J.D. Cho, J. Runt (Penn State University), F. Yeh, B. Hsiao (SUNY Stony Brook)

D40.085 Morphology of Crystalline Block Copolymers

Sheng Hong, Lizhang Yang, William J. MacKnight, Samuel P. Gido (University of Massachusetts, Amherst)

D40.086 Twin-like Superstructure in a Ferroelectric LC Polyester

Christopher li, Stephen Cheng, John zhang, Frank Harris (The Maurice Morton Institute and Department of Polymer Science, The University of Akron, Akron, Ohio 44325-3909), Liang-Chy chien (Liquid Crystal Institute, Kent State University, Kent,

Ohio 44010-0001), Bernard Lotz (Institute Charles Sadron, 6 Rue Boussingault, Strasbourg 67083)

D40.087 Crystal Structure of a Model Spider Silk Peptide

Shujun Chen, Samuel Gido (University of Massachusetts, Amherst), Regina Valluzzi, David Kaplan (Tufts University), Tufts University Collaboration

D40.088 Mass Transport within Block Copolymers: The Relationship with Morphology and Grain Structure

Kenneth S. Laverdure, Samuel P. Gido (Department of Polymer Science and Engineering, University of Massachusetts-Amherst), Bruce Garetz (Department of Chemical Engineering and Chemistry, Polytechnic University), Nitash Balsara (Department of Chemical Engineering, University of California-Berkeley)

D40.089 Side Chain Liquid Crystalline Poly(silylenemethylene)s

Soo-Young Park, B. L. Farmer (Air Force Research Lab), Tao Zhang, L. V. Interrante (Rensselaer Polytechnic Institute)

D40.090 Characterization of elastomers by micellar formation at a Lower Critical Solution Temperature

Geneviève Delmas (Université du Québec à Montréal), Fabrice Gouanvé, Maryline Seguin, Zohra Ferhat

D40.091 Computational and Experimentally Obtained Crystal Modulus of Silk

Anuchai Sinsawat, S. Putthanarat (The University of Akron, OH 44325-3909), Y. Magoshi (Dept. of Insect Technology, Japan), R. Pachter (AFRL/MLPJ, WPAFB, OH 45433-7702), R. K. Eby (The University of Akron, OH 44325-3909)

D40.092 Aspects of the Morphology of Silk Fibroin Membranes

S. Putthanarat (Inst. of Polymer Science, University of Akron, Akron, OH 44325-3909), S. Zarkoob (GE Company, Mt. Vernon, IN 47620-9364), J. Magoshi (National Inst. of Agrobiological Resources, Tsukuba, Japan 305-8602), J.A. Chen (Zhejiang Sichou Inst. Of Tech., Hangzhou, China 31003), M. Stone (AFRL/MLPJ, WPAFB, OH 45433-7702), R.K. Eby (Inst. of Polymer Science, University of Akron, Akron, OH 44325-3909)

D40.093 AFM Studies of Fracture Surfaces Of Composition B Energetic Materials

Y. D. Lanzerotti (U. S. Army TACOM-ARDEC)

D40.094 Light Extinction Spectra of Crazes in Polymers

Tom Krupenkin (Bell Labs, Lucent Tech., USA)

D40.095 Synchronized stress-PALS test on a series of polyester copolymer glasses

Lei Li, Albert F. Yee (Macromolecular Science and Engineering Center, University of Michigan, Ann Arbor, MI 48109)

D40.096 Effect of Thermal History on the Deformation and Fracture of a Semicrystalline-Glassy Block Copolymer*

C. Y. Ryu, J. Ruokolainen, G. H. Fredrickson, E. J. Kramer (UCSB), S. F. Hahn (Dow Chemical Co.), S. Magonov (Digital Instruments)

D40.097 Light Scattering as a Tool to Study Cavitation in Rubber-Toughened Polymers

Sebastien GEHANT, David J. PINE, Edward J. KRAMER (UCSB)

D40.098 Dynamic Shear Modulus of Polymers from Molecular Dynamics Simulations

Oleksiy Byutner (Department of Chemical and Fuels Engineering, University of Utah), Grant Smith (Department of Materials Science and Engineering, University of Utah)

D40.099 Crystallographic Texture Evolution In High Density Polyethylene During Uniaxial Tension

Dongsheng Li, Hamid Garmestani (Department of Mechanical Engineering, FAMU-FSU College of Engineering, Tallahassee, FL 32310), Surya Kalidindi (Department of Materials Engineering, Drexel University, Philadelphia, PA 19104), Rufina Alamo (Department of Chemical Engineering, FAMU-FSU College of Engineering, Tallahassee, FL 32310)

D40.100 Probing polymer networks using pulse propagation and Brillouin light scattering measurements

Moitreyee Sinha, H. E. Jackson, J. E. Mark, T. H. Ridgway (University of Cincinnati), B. Erman (Sabanci University, Turkey), D. Walton (McMaster University, Canada)

D40.101 Contribution of edge recoiling of diffusion to anomalous transient photo-currents in amorphous materials

Abraham Picos-Vega, Mufei Xiao (CCMC-UNAM)

D40.102 Dielectric Normal Mode Relaxation of Polyisoprene-Polybutadiene Diblock Copolymers

Osamu Urakawa, Masaatsu Kido, Keiichiro Adachi (Osaka University, 1-1 Machikaneyamacho, Toyonaka, Osaka 560-0043, Japan)

D40.103 Conformational Order and Chain Dynamics in Molten Poly(n-alkyl methacrylates) Revealed by Solid-State NMR Spectroscopy

Michael Wind, Robert Graf, Lothar Brombacher (Max-Planck-Institute for Polymer Research, Mainz, Germany), Andreas Heuer (University of Muenster, Institute for Physical Chemistry, Germany), Werner Steffen, Hans Wolfgang Spiess (Max-Planck-Institute for Polymer Research, Mainz, Germany)

D40.104 Characterization of Distributive Mixing in Polymer Processing Equipment

Winston Wang, Ica Manas-Zloczower (Department of Macromolecular Science, Case Western Reserve University, Cleveland, OH 44106), Miron Kaufman (Department of Physics, Cleveland State University, Cleveland, OH 44105)

D40.105 Separation of polymeric topoisoomers in a microchannel device: a Monte Carlo study

Frederic Tessier, Gary W. Slater (University of Ottawa)

D40.106 Stress Relaxation of Model Polymer Networks with Pendant Chains

Daniel A. Vega (Department of Chemical Engineering, Princeton University, Princeton, NJ 08544), Marcelo A. Villar, Enrique M. Valles (Planta Piloto de Ingenieria Quimica.

C.C. 717 (8000)-Bahia Blanca-Argentina)

D40.107 Strength of Reaction Runaway in Free Radical Polymerization: Competition between Diffusion-Controlled and Chemically-Controlled Reactions

Brian P. Chekal, Mehdi Emrani, John M. Torkelson (Northwestern University)

D40.108 An Exact Solution to the First-Passage Time in Low-Functionality Star Polymer Melts

Daniel A. Vega, John M. Sebastian, William B. Russel, Richard A. Register (Princeton University)

D40.109 Flow Studies of Highly Filled Fluids in Small Gaps

John Emerson, Kerry Lamppa, Christopher Sorensen (Sandia National Laboratories)

D40.110 Glass Transition near Polymeric Surfaces Studied by Positron Annihilation

Junjie Zhang, Renwu Zhang, Ying Li, Chia-Ming Huang, Yichu Wu, Peter Mallon (University of Missouri-Kansas City), R. Suzuki (Electrotechnical Labs, Tsukuba, Japan), Y.Y. Huang, T.C. Sandreczki (University of Missouri-Kansas City), Q. Peng, J.R. Richardson (University of Missouri-Columbia), T. Ohdaira (Electrotechnical Labs., Tsukuba, Japan), Y.C. Jean (University of Missouri-Kansas City)

D40.111 Characterizing nanoscopic heterogeneity in polymers near Tg: simulation and single-molecule spectroscopy

Jason C. Quirin, John M. Torkelson (Northwestern Univ.), Andrew P. Bartko, Robert M. Dickson (Georgia Tech.)

D40.112 Glass Transition Temperature for PMMA from Molecular Dynamics Simulations

Mesfin Tsige, P. L. Taylor (Case Western Reserve University)

D40.113 FT-IR studies of Hydrogen Bonding in a Blend containing an N-methylated Liquid Crystalline Polyurethane

Sriram Viswanathan, Mark Dadmun (Dept. of Chemistry, University of Tennessee, Knoxville, TN 37996)

D40.114 Splat: A non-equilibrium morphology of PPE-epoxy blends

Emmanuel Girard-Reydet, Jean-Pierre Pascault (LMM, INSA Lyon, France), Hugh Brown (University of Wollongong, Australia)

D40.115 Ordered Multilayers Obtained by Electrostatic Self-Assembly.

X. Arys, K. Glinel, A.M. Jonas, R. Legras (Department of Materials Science, Universite catholique de Louvain), P. Fisher, A. Laschewsky (Department of Chemistry, Universite catholique de Louvain.)

D40.116 Self-assembled nanostructures of amide containing dendrimers in lyotropic and thermotropic conditions

Hyun Hoon Song, Hae-Jin Jeon, Tai-Yon Cho (Dept. of Polymer Sci. and Engr., Hannam Univ., Daejeon, S. Korea), Kyung Taek Kim, Chulhee Kim (Dept. of Polymer Sci. and Engr., Inha Univ., Incheon, S. Korea)

D40.117 Electrospinning from Molten Polymers in Vacuum

Ratthapol Rangkupan, Darrell H. Reneker (Department of Polymer Science, The University of Akron)

D40.118 Flat, Branched and Split Electrospun Fibers

Sureeporn Koombhongse, Darrell H. Reneker (The University of Akron)

D40.119 Controlling phase and alignment in thin films of block copolymer templated mesostructured metal oxides

Ryan C. Hayward, Peter Alberius-Henning, Karen L. Frindell, Galen D. Stucky, Bradley F. Chmelka, Glenn H. Fredrickson, Edward J. Kramer (University of California, Santa Barbara)

D40.120 Solvent Effect on ABA and ABABA Block Copolymer Morphology

Lei Qiao, Karen Winey (Department of Materials Science, University of Pennsylvania)

D40.121 Nanoscopic Posts via Block Copolymer Templates

Dong-Ha Kim, Ho-Cheol Kim, Christopher Stafford, Mark Tuominen, Xinqiao Jia, Thomas McCarthy, Thomas Russell (University of Massachusetts Amherst, MA 01003)

D40.122 Fabrication of Rod-Coil Nanocomposites via Emulsion Technique

Gregory Rossi, Gregory Beaucage (Department of Materials Science and Engineering, University of Cincinnati, Cincinnati, OH. 45221), Richard Vaia, Thuy Dang (Air Force Research Laboratory, Materials and Manufacturing Directorate, WPAFB, OH. 45433)

D40.123 Unimolecular amphipolar nanocylinders via a "grafting from" process using a ATRP

Guanglou Cheng, Axel Mueller (Universitaet Bayreuth - Makromolekulare Chemie II - 95440 Bayreuth - Germany), Alexander Boeker, Georg Krausch (Universitaet Bayreuth - Physikalische Chemie II - 95440 Bayreuth - Germany)

D40.124 Synthesis and Aggregation Behavior of Janus micelles

Rainer Erhardt, Alexander Boeker, Volker Abetz, Axel Mueller (Universitaet Bayreuth - Makromolekulare Chemie II - 95440 Bayreuth - Germany), Håkon Kaya, Wim Pyckhout-Hintzen (Institute of Condensed Matter Research - Research Center Jülich - Germany), Heiko Zettl, Georg Krausch (Universitaet Bayreuth - Physikalische Chemie II - 95440 Bayreuth - Germany)

D40.125 The Orientation of Cylindrical Microdomain in polystyrene-block-poly(n-butyl methacrylate) thin film.

Jin Kon Kim, Irene Tsai, Thomas P. Russell (Polymer Science and Engineering Department, U. of Massachusetts, Amherst, MA 01003), C.J. Hawker (IBM Almaden Research Center, San Jose, CA 95720)

D40.126 Side-chain Effect on the Properties of Oxadiazole-containing PPVs

Hanpeng Dong, Subramanian Vaidyanathan, Mary Galvin (Department of Materials Science and Engineering, Univ. of Delaware)

D40.127 Scanning Electroluminescence Microscopy and Combinatorial Characterization of OLEDs

Helmut Hänsel, Heiko Zettl, Armin Knoll, Georg Krausch (Universität Bayreuth - Physikalische Chemie II - 95440 Bayreuth - Germany), Stefan Berlep, Anton Mückl, Wolfgang Brütting (Universität Bayreuth - Experimentalphysik II - 95440 Bayreuth - Germany), Christoph Schmitz, Mukundat Thelakkat, Hans-Werner Schmidt (Universität Bayreuth - Makromolekulare Chemie I - 95440 Bayreuth - Germany)

D40.128 Observations of phase deformation of monomeric systems in electric fields and subsequent polymerization

Nikolaos Benteinis, Sonja Krause (Chemistry Department, Rensselaer Polytechnic Institute, Troy NY 12180)

D40.129 Electronic Structure Calculations of Two-Photon Absorbing Materials: A Time-Dependent Density Functional Theory Study

Paul N. Day, Kiet A. Nguyen, Ruth Pachter (Air Force Research Laboratory, Materials and Manufacturing Directorate, Wright-Patterson AFB, OH 45433-7702)

D40.130 Stress-induced birefringence associated with latent image development in UV-photopatterned chemically amplified polymeric resists

Jan Preusser, Bogdan Dragnea, Laurie McDonough, Jodi M. Szarko, Stephen R. Leone (JILA, National Institute of Standards and Technology and University of Colorado, Departments of Chemistry and Physics, Boulder CO 80309-0440, USA), Wolfgang Schade (Institut fuer Physik und Physikalische Technologien, Technische Universitaet Clausthal, 38678 Clausthal-Zellerfeld, Germany), William D. Hinsberg (IBM Almaden Research Center, 650 Harry Road, San Jose CA 95120-6099, USA)

D40.131 Two-Dimensional, Optical Ellipsometric Studies of Polymer Orientation

Georgi Georgiev (Tufts University, Physics Department, Medford, MA 02155), David Berns (MIT, Physics Department, Cambridge, MA 02139), Peggy Cebe (Tufts University, Physics Department, Medford, MA 02155)

D40.132 Morphology of immiscible polymer blends made by polymerizing one component in an electric field

Jing Li, Sonja Krause (Department of Chemistry, Rensselaer Polytechnic Institute, Troy, NY 12180)

D40.133 Photoluminescence characteristics of phenylated siloxanes

Udo C. Pernisz, Michael W. Backer (Dow Corning Corporation, Midland MI 48686)

D40.134 Self-assembled Block Copolymers as Two-Dimensional Photonic Band Gap Materials

Cinti X Chen, Christian C Honeker, Edwin L Thomas (MIT), Department of Materials Science and Engineering Team

D40.135 Orientational phase transitions in block copolymer melts under shear flow

Alexander Morozov (University of Groningen/Leiden), Hans Fraaije (University of Leiden)

D40.136 Gyroid Single Crystal Diffraction

L. Yang, S. Hong, S. P. Gido (University of Massachusetts at Amherst), D. Uhrig, J. W. Mays (University of Alabama at Birmingham)

D40.137 Four-Colour Mesoscale Morphologies in External Fields

Hans Fraaije, Agur Sevink, Andrei Zvelindovsky (University of Leiden)

D40.138 Temperature-Induced Solid-Solid Phase Transitions of HMX and TATB*

Cheng K. Saw, Joseph Zaug, Daniel Farber (Lawrence Livermore National Laboratory)

Session E21. DBP: Function of Biomolecules.

Monday afternoon, 14:30, Room 604, Washington State Convention Center

Chair: Aihua Xie, Oklahoma State University.

14:30 E21.001 A new method for analysis of Ion Channel dwell times

J. Bruce Johnson (Department of Chemistry and Physics, Arkansas State University, State University AR, 72467), Seth Armstrong (Department of Computer Science and Mathematics, Arkansas State University, State University AR, 72467), Richard Puetter (University of California, San Diego, La Jolla, CA 92092-0424)

14:42 E21.002 Instability and symmetry-breaking of beads driven by actin polymerization

Shoudan Liang (NASA Ames Research Center, Moffett Field CA 94035), Hong Qian (Dept. of Applied Mathematics and Bioengineering, University of Washington, Seattle WA 98195)

14:54 E21.003 Fluorescence energy transfer monitoring of protein-protein interaction in human cells: the Cyclin T1-HIV1 Tat case.

Aldo Ferrari, Riccardo A. G. Cinelli, Vittorio Pellegrini, Fabio Beltram (Scuola Normale Superiore and INFN, I-56126 Pisa, Italy), Alessandro Marcello, Mudit Tyagi, Mauro Giacca (Molecular Medicine Laboratory, ICGEB, I-34012 Trieste, Italy.)

15:06 E21.004 Balanced Rates in Transcription Termination

Kevin Harrington, Robert Laughlin (Stanford), Shoudan Liang (NASA Ames), Stanford/Ames Collaboration

15:18 E21.005 Statistical Mechanics of Transcription Factor Binding

J. David Moroz, Ulrich Gerland, Terence Hwa (Department of Physics, University of California San Diego)

15:30 E21.006 Transport Measurements of single peptide molecules Single Peptide Molecules

Huiming Qiu, A.T. Johnson (Department of Physics and Astronomy and LRSM, University of Pennsylvania), P.L. Dutton (Department of Biochemistry and Biophysics, University of Pennsylvania)

15:42 E21.007 Creation of a Buried Charge Drives Protein Quake in Photoreceptor Activation

Aihua Xie, Lorand Kelemen (1), Johnny Hendriks (2), Brandy White (1), Klaas J. Hellingwerf (2), Wouter D. Hoff (1) Dept. of Phys., Oklahoma State Univ., 2) Dept. of Microbiol., Univ. of Amsterdam, 3) Dept. of Biochem. amp; Mol. Biol., Univ. of Chicago)

Session G4. DPOLY: Polymer Physics Prize Symposium.

Tuesday morning, 08:00, Ballroom 6E, Washington State Convention Center

Chair: Ken Schweizer, University of Illinois at Urbana-Champaign.

- 08:00 G4.001 Modeling of Polymer Entanglement -Dual Slip Link Model-
Masao Doi (Department of Computational Science and Engineering, Nagoya University, Nagoya, Japan)
- 08:36 G4.002 Constraint release in mechanical and dielectric relaxation of star polymers
Ronald Larson (University of Michigan)
- 09:12 G4.003 Viscoelasticity of Solutions of Semiflexible Rods
David Morse (University of Minnesota)
- 09:48 G4.004 Dielectric and Viscoelastic Tests of Global Chain Dynamics
Hiroshi Watanabe (Institute for Chemical Research, Kyoto University)

Session G9. DMP: Organic Electronic Materials and Devices I: Charge Injection and Transport.

Tuesday morning, 08:00, Room 201, Washington State Convention Center

Chair: Luisa Bozano, IBM Almaden Research Center.

- 08:00 G9.001 Exciton Binding Energy in π -Conjugated Molecular Films: Impact on Interface Barriers
Antoine Kahn (Dept. Electrical Engineering, Princeton Univ., Princeton, NJ 08544)
- 08:36 G9.002 Photoemission And Inverse Photoemission Investigation Of Organic Material And Metal/Organic Interfaces In OLED Devices
Li Yan, Yongli Gao (Univ. of Rochester), M.G. Mason, C.W. Tang (Kodak research lab)
- 08:48 G9.003 Charge transport mechanisms at the InP | poly(pyrrole) interface.
Frank E. Jones, Carrie Daniels-Hafer, Mark C. Lonergan (University of Oregon, Material Science Institute)
- 09:00 G9.004 Charge Injection in Organic Semiconductors
Yulong Shen, Daniel Jacobs, David Dunlap, George Malliaras (Materials Science and Engineering, Cornell University), J. Campbell Scott (IBM Research Division, Almaden Research Center)
- 09:12 G9.005 Space Charge Limited Current in the Single Electron Regime
David Dunlap (Department of Physics and Astronomy, University of New Mexico), Matthias Klein, Yulong Shen, George Malliaras (Department of Materials Science and Engineering, Cornell University)
- 09:24 G9.006 Multilayered Organic Light Emitting Diodes Based on Polyfluorenes
Luisa Bozano, Dirk Marsitzky, Kenneth Carter, Sally Swanson, Victor Lee, Jesse Salem, Robert Miller, Campbell Scott (IBM Almaden Research Center, San Jose, CA), Sue Carter (University of California, Physics Department, Santa Cruz, CA)
- 09:36 G9.007 Transient and steady-state charge processes in multilayer organic light-emitting diodes
J. Campbell Scott (IBM Almaden Research Center, San Jose CA), Beat Ruhstaller, Heike Riel, Walter Riess (IBM Research Div., Zurich, Switzerland), Siegfried Barth (Optrex Europe GmbH, Babenhausen, Germany), Sue A. Carter (Physics Dept., Univ. of California, Santa Cruz CA)
- 09:48 G9.008 Singlet and triplet exciton cross-sections for charge recombination in π -conjugated polymers: Theory

S. Ramasesha, Kunj Tandon (Solid State and Structural Chemistry Unit, Indian Institute of Science, Bangalore 560012, India), S. Mazumdar (Department of Physics, University of Arizona, Tucson, Arizona 85721), M. Wohlgenannt, Z.V. Vardeny (Department of Physics, University of Utah, Salt Lake City, Utah 84112)
10:00 G9.009 Singlet and triplet exciton cross-sections for charge recombination in pi-conjugated polymers: Experiment

M. Wohlgenannt, Z.V. Vardeny (Department of Physics, University of Utah, Salt Lake City, Utah 84112), Kunj Tandon, S. Ramasesha (Solid State and Structural Chemistry Unit, Indian Institute of Science, Bangalore 560012, India), S. Mazumdar (Department of Physics, University of Arizona, Tucson, Arizona 85721)

10:12 G9.010 A Model Hamiltonian for the Description of the Electronic Properties of Oligomers and Polymers.

H.T. Jonkman, R. Telesca, J.G. Snijders, G.A. Sawatzky (Department of Solid State Physics, University of Groningen, Groningen, The Netherlands)

10:24 G9.011 Singlet and triplet excitons in Oligomers and polymers and their dispersions

S. Yunoki, H. T. Jonkman, G. A. Sawatzky (Materials Science Center, University of Groningen, The Netherlands)

10:36 G9.012 Polaron dynamics in a system of coupled conjugated polymer chains

Åsa Johansson, Sven Stafström (Department of Physics and Measurement Technology, Linköping University, Sweden)

10:48 G9.013 Three dimensional simulations of polaron transport in molecular solids

P. E. Parris (Department of Physics, University of Missouri Rolla), V. M. Kenkre, and D. H. Dunlap (Department of Physics and Astronomy, University of New Mexico)

Session G18. DPOLY: Microemulsions and Reactive Blends.

Tuesday morning, 08:00, Room 307-308, Washington State Convention Center

Chair: Gary S. Grest, Sandia National Laboratories.

08:00 G18.001 Ford Prize Break

08:36 G18.002 Reaction Kinetics in Reactive Polymer Blends: End vs. Mid-functional Reactive Compatibilizer

Hyun K. Jeon, Christopher W. Macosko (Department of Chemical Engineering and Material Science, University of Minnesota, USA), Bongjin Moon, Thomas R. Hoye (Department of Chemistry, University of Minnesota, USA)

08:48 G18.003 The Effect of Difunctional Oligomer Concentration and Processing Temperature on the Reactive Processing of Polymer Blends

Charles O'Brien, Kevin Rice, Mark Dadmun (The University of Tennessee, Knoxville)

09:00 G18.004 Shear-induced droplet coalescence in immiscible polymer blends and the effect of interfacial modification

P. V. Gopalkrishnan, S. D. Hudson, A. M. Jamieson (Case Western Reserve U.)

09:12 G18.005 Time-resolved SAXS studies of a polymer bicontinuous microemulsion under shear

Franklin Caputo, Wesley Burghardt (Northwestern University), Kasiraman Krishnan, Frank Bates, Timothy Lodge (University of Minnesota)

09:24 G18.006 Surfactancy in Multicomponent Polyolefin Blends

Joon-Hyung Lee, Nitash Balsara (University of California, Berkeley), Ramanan Krishnamoorti Collaboration, Boualem Hammouda Collaboration

09:36 G18.007 Topography and instability of biphasic monolayers

H. Diamant, T. A. Witten (Department of Physics and James Franck Institute, University of Chicago), A. Gopal, K. Y. C. Lee (Department of Chemistry and Institute for Biophysical Dynamics, University of Chicago)

09:48 G18.008 Shear flow induced nanostructure-microstructure transition in a polymeric bicontinuous microemulsion

Kasiraman Krishnan, Frank S. Bates, Timothy P. Lodge (Department of Chemical Engineering and Materials Science, University of Minnesota), Wesley R. Burghardt (Department of Chemical Engineering, Northwestern University)

10:00 G18.009 Microporosity of Bicontinuous Polymer Composites, Studied with Restricted Diffusion

E. D. von Meerwall, K. Kuta, V. Challa, S. Lopina, M. Cheung (Univ. Akron)

10:12 G18.010 Mesoscale Fluctuations in Complex Dispersions

T. S. Chow (Xerox Research and Technology, 0114-39D, Webster, NY)

10:24 G18.011 Microemulsions of ABA Amphiphilic Block Copolymers and Surfactants

Liora Braun-Shmueli, Ortal Netanel, Oren Regev, Moshe Gottlieb (Chemical Engineering Dept.), Ben Gurion University Collaboration

Session G19. DPOLY: Polymer Solutions.

Tuesday morning, 08:00, Room 310, Washington State Convention Center

Chair: Isaac Sanchez, The University of Texas at Austin.

08:00 G19.001 Ford Prize Break

08:36 G19.002 Phase behavior and viscoelastic properties of diblock/triblock copolymer mixtures in a selective solvent

Daniel A. Vega, John M. Sebastian, Richard A. Register (Princeton University)

08:48 G19.003 Ordering Kinetics Of Micelles In Triblock Copolymer Solutions In Selective Solvent For The Middle Block

Rama Bansil, Yong Li (Boston University), Huifen Nie (Boston University), Karl Ludwig (Boston University), Milos Steinhart, Cestmir Konac (Institute of Macromolecular Chemistry, Czech Republic), Boston University Collaboration, Institute of Macromolecular Chemistry Collaboration

09:00 G19.004 Small Angle Neutron Scattering of Core-Shell Arborescent Graft Poly(styrene)-Poly(2-vinylpyridine) Polymers

Seok Il Yun, Robert M. Briber (University of Maryland), Barry J. Bauer (NIST), Mario Gauthier (University of Waterloo)

09:12 G19.005 Conformational Contribution to the Heat Capacity of Interacting System of Carbohydrate Polymer - Water.

Marek Pyda, Bernhard Wunderlich (The University of Tennessee, Knoxville, and ORNL, Oak Ridge, TN)

09:24 G19.006 Calorimetric investigation of polyaniline and 1-methyl 2-pyrrolidone (NMP) mixtures

Geneviève Delmas (Université du Québec à Montréal), Nathalie Luce, Raphael Marigot, Zohra Ferhat

09:36 G19.007 Integral Equation Theory of Polymer Solutions: Explicit Treatment of the Solvent

Sergio Mendez (University of New Mexico, Albuquerque, NM), John G. Curro (Sandia National Laboratories, Albuquerque, NM), Mathias Puetz (Max Planck Institute, Mainz, Germany), Dmitry Bedrov, Grant D. Smith (University of Utah, Salt Lake City, UT)

09:48 G19.008 Effects of chain architecture on the polymer collapse transition - Exact results for short chains

Mark P. Taylor (Dept. of Physics, Swarthmore College)

10:00 G19.009 Experimental Evidence of the Rayleigh Instability in Single Polymer Chains

Belinda Haupt (Research School of Chemistry, Australian National University, Canberra ACT 0200, AUSTRALIA), Tim Senden (Department of Applied Mathematics, Research School of Physical Sciences and Engineering, Australian National University, Canberra ACT 0200, AUSTRALIA), Edith Sevick (Research School of Chemistry, Australian National University, Canberra ACT 0200, AUSTRALIA)

10:12 G19.010 Solvent Effect on Collapse Dynamics of a Neutral Homopolymer
Rakwoo Chang, Arun Yethiraj (Department of Chemistry, University of Wisconsin)

10:24 G19.011 Dilute Simple n-Alkane-poly(ethylene-co-1-butene) Solutions

Thomas Kermis (Department of Chemical Engineering, Johns Hopkins University), Mark McHugh (Department of Chemical Engineering, Virginia Commonwealth University), John van Zanten (Chemical Engineering Department, North Carolina State University)

10:36 G19.012 Regular branched Macromolecules: Structure of Bottlebrush Polymers in Solution

T. Pakula (Max-Planck-Institut, Mainz, Germany), S. Rathgeber (Forschungszentrum Juelich, Juelich, Germany), K. Matyjaszewski (Carnegie Mellon University, Pittsburgh, USA)

10:48 G19.013 On Coarse-Graining Statistical Mechanics of Dense Polymeric Fluids
Edwin David (MIT Lincoln Laboratory)

Session J7. DPOLY: Padden Award Symposium.

Tuesday morning, 11:00, Room 609, Washington State Convention Center

Chair: Ralph Colby, The Pennsylvania State University.

11:00 J7.001 Novel Determination of Polymer Optical Constants

Tao Liu, Robert Samuels (School of Chemical Engineering, Georgia Institute of Technology, Atlanta, Georgia 30332-0100)

11:12 J7.002 Entanglement Dynamics of Polyethylene Melts Measured by C13 NMR

XiaoHua Qiu (University of Wisconsin-Madison), Mark Ediger (University of Wisconsin-Madison)

11:24 J7.003 Counterion Phase Transition in Dilute Polyelectrolyte Solutions

Alexander Deshkovski (UNC-CH), Sergei Obukhov (U of Florida), Michael Rubinstein (UNC-CH)

11:36 J7.004 Characterization of the structure and defects in nanocrystals of the organic semiconductor pentacene

Lawrence Drummy, Christian Kuebel, Daniel Lee, Aleks White, David Martin (Department of Materials Science and Engineering and the Macromolecular Science and Engineering Center, The University of Michigan)

11:48 J7.005 Covalent and Hydrogen Bonded Liquid Crystalline Mesophases in Block Copolymer Microdomains - Controlling Hierarchical Structures for Photonic Applications

Chinedum Osuji, Edwin Thomas (Massachusetts Institute of Technology), Chi-Yang Chao, Christopher Ober (Cornell University)

Session J9. DMP/DPOLY: Organic Electronic Materials and Devices II: Optical Properties.

Tuesday morning, 11:00, Room 201, Washington State Convention Center

Chair: Melissa Kreger, University of California, Santa Cruz.

- 11:00 J9.001 Random microlasers in pi-conjugated polymer films
Randall Polson, A. Chipouline, M. Raikh, Z. Vardeny (University of Utah)
- 11:12 J9.002 Optical Spectroscopic Studies of Soluble Fluorene-based Conjugated Polymers
J.D. Rice, S. Guha (Southwest Missouri State University), A. Erlacher (Technical University, Graz, Austria), R. Schroeder, W. Graupner (Virginia Tech.), U. Scherf (University of Potsdam, Germany)
- 11:24 J9.003 Transient Photoinduced Absorption Measurements in Thermally Treated Poly(9,9-dioctylfluorene) Films
Oleg Korovyanko, Zeev Vally Vardeny (University of Utah)
- 11:36 J9.004 A study of the morphology of Polyfluorene Composites by AFM, SNOM and Raman spectroscopy
R. Stevenson, R.G. Milner (Cambridge, U.K.), D. Richards (King's College London, U.K.), J. Morgado (Instituto Superior Tecnico, Portugal), E. Moons (CDT, U.K.), D.-J. Kang (Cambridge, U.K.), M. Blamire, F. Cacialli (Cambridge, U.K.)
- 11:48 J9.005 Optical Properties of Substituted Poly(p-phenylene-ethynylene) Films
Xiaomei Jiang (Department of Physics, University of Utah, 115 S 1400 E Rm201, UT84112-0830), Yoshi Okamoto (Poly Research Institute, Polytechnic University, Brooklyn, NY 11201)
- 12:00 J9.006 Understanding Exciton Motion in Disordered Conjugated Polymers via Energy Landscapes Derived from Quantum Chemistry
Melissa Pasquinelli, David Yaron (Carnegie Mellon University)
- 12:12 J9.007 Ultrafast Dynamics of Photoexcitations in Regioregular and Regiorandom Poly(3-alkylthiophene)
Chenchun Wu, Oleg Korovyanko, Arkadi Chipouline, Vally Vardeny (Physics Department, University of Utah)
- 12:24 J9.008 High Pressure Study of Delocalized Polarons in 2-D Lamellar Structure of Regio-Regular Poly(3-alkylthiophene) Films
C.P. An, X.M. Jiang, Z.V. Vardeny (Univ. of Utah)
- 12:36 J9.009 Photoexcitations in trans/cis mixture of PPA
Ilarie Gontia (Physics Department, University of Utah, SLC, UT 84112, USA), Kam Sing Wong (Physics Department, University of Hong Kong for Science and

Technology, Clear Water Bay, Kowloon, Hong Kong, China), Vally Vardeny (Physics Department, University of Utah, SLC, UT 84112, USA)

12:48 J9.010 Transport Studies of Conjugated Star Polymers

J.B. Ferguson (Air Force Research Laboratory and The Ohio State University), V.N. Prigodin, A.J. Epstein (The Ohio State University), F. Wang (EIC Laboratories, Inc.)

13:00 J9.011 High Efficient, Localized Emission from Exciplexes in Conducting Polymers

Frank DeLucia, Terry Gustafson, Daike Wang, Arthur Epstein (The Ohio State University)

13:12 J9.012 Photophysics of Methoxy-Substituted Polyphenylene Vinylene Segmented Block Copolymers (MeO-PPV SBC): Picosecond Photoluminescence and Femtosecond Photoinduced Absorption

Erica Kyllö, Terry Gustafson (The Ohio State University, Department of Chemistry), Wang Daike, Run Sun (The Ohio State University, Department of Physics), Arthur Epstein (The Ohio State University, Department of Physics and Chemistry), C. Lefumeux, G. Burdzinski, G. Buntinx, O. Poizat (Université des Sciences et Technologies de Lille, France)

13:24 J9.013 The dynamics of exciton formation in quasi-one-dimensional materials: Geometrical effects

S.L. Dexheimer, A.D. Van Pelt (Washington State University), J.A. Brozik (University of New Mexico)

13:36 J9.014 INDO in periodic boundary conditions: the band structure of poly(paraphenylenevinylene)

Jason D. Weibel, David Yaron (Department of Chemistry, Carnegie Mellon University)

13:48 J9.015 Combined Optical and Structural Studies of Polyalkylsilanes

M.J. Winokur, W. Chunwachirasiri (Department of Physics, University of Wisconsin, Madison, WI), D. Sherlock, R. West (Organosilicon Research Center, Department of Chemistry, University of Wisconsin, Madison, WI)

Session J17. DMP/DCMP: Multiscale Dynamics, Relaxation and Charge Transport in Polymers II.

Tuesday morning, 11:00, Room 304, Washington State Convention Center

Chair: E. Giannelis, Cornell University.

- 11:00 J17.001 Muon Spectroscopy in Conducting Polymers
Francis Pratt (RIKEN-RAL)
- 11:36 J17.002 Lithium Environment in PEO-LiClO₄ Polymer Electrolyte
Marie-Louise Saboungi, Guomin Mao, David Price (Argonne National Laboratory), Henry Fischer (Institut Laue Langevin, Grenoble, France)
- 11:48 J17.003 Nanosecond relaxation in polymer electrolytes
David L. Price, Marie-Louise Saboungi, Guomin Mao (Argonne National Laboratory, Argonne, IL 60439)
- 12:00 J17.004 A Molecular Dynamics Simulation Study of the Composition Dependence of Polymer and Water Dynamics in Aqueous Poly(ethylene oxide) Solutions
Oleg Borodin, Dmitry Bedrov, Grant Smith (Department of Materials Science and Engineering, University of Utah)
- 12:12 J17.005 Nonexponential Response in Piezoelectric PVDF
Gary Bohannon (MSU Physics, Bozeman, MT 59717)
- 12:24 J17.006 Interfacial Dynamics in Thin Perfluorinated Ionomer Films
Teresa A. Hill (Department of Chemistry, Clemson University, Clemson, SC 29634-0973), Dvora Perahia (Department of Chemistry and MSamp;E, Clemson University, Clemson, SC 29634-0973)
- 12:36 J17.007 Analysis of Nonlinear Dielectric Permittivity of PVDF
Priti Shah, V.Hugo Schmidt (MSU Physics, Bozeman, MT 59717)

Session J18. DPOLY: Polyelectrolytes.

Tuesday morning, 11:00, Room 307-308, Washington State Convention Center

Chair: Rastislav Levicky, Columbia University.

- 11:00 J18.001 Adsorption of Polyelectrolytes at Charged Surfaces
Andrey Dobrynin, Alexander Deshkovski, Michael Rubinstein (University of North Carolina at Chapel Hill)
- 11:12 J18.002 Supported Lipid Bilayers as Substrates for Polyelectrolyte Adsorption
Feng Xie, Granick Steve (Department of Materials Science and Engineering, University of Illinois at Urbana-Champaign, Urbana, IL, 61801)
- 11:24 J18.003 Charge Dependent Structural Properties of Dendrimer:DNA Complexes with Application to Gene Delivery
Heather M. Evans, A. Ahmad (UC Santa Barbara), T. Pfohl (Universitat Ulm), Ana Martin (Unilever Corporation), C.R. Safinya (UC Santa Barbara)
- 11:36 J18.004 Polyelectrolyte Brushes at Interfaces: Effect of Counterion Valence
Feng Li, Matthew Tirrell (Department of Chemical Engineering, University of California, Santa Barbara)
- 11:48 J18.005 Viscoelasticity of Concentrated Proteoglycan Solutions
Nispa Meechai, Alex Jamieson, John Blackwell, David Carrino (Case Western Reserve University), Departments of Macromolecular Science and Biology Collaboration
- 12:00 J18.006 Rheological Consequences of Protein / Polyelectrolyte Interactions
Ralph H. Colby (Materials Science and Engineering, Penn State)
- 12:12 J18.007 Viscosity of Polyelectrolyte solutions
Arun Yethiraj (Department of Chemistry, University of Wisconsin), Biman Bagchi (SSCU, Indian Institute of Science)
- 12:24 J18.008 Configurational Properties of a Single Semiflexible Polyelectrolyte
Kingshuk Ghosh (Department of Physics, University of Massachusetts, Amherst MA 01003, USA), Gustavo Carri, Murugappan Muthukumar (Department of Polymer Science and Engineering, University of Massachusetts, Amherst MA 01003, USA)
- 12:36 J18.009 Radial distribution function of semiflexible polyelectrolytes
Roya Zandi, Joseph Rudnick (Department of Physics, UCLA, Box 951547, Los Angeles, CA 90095-1547), Ramin Golestanian (Institute for Advanced Studies in Basic Sciences, Gava Zang 45195-159, Zanjan, Iran)
- 12:48 J18.010 Condensed Phases of Like-Charged Biological Polyelectrolytes

Thomas Angelini (Physics Dept., University of Illinois at Urbana-Champaign), James Ho, Hongjun Liang (Materials Science and Engineering Dept., University of Illinois at Urbana-Champaign), Gerard Wong (Physics Dept., Materials Science and Engineering Dept., Bioengineering Dept., University of Illinois at Urbana-Champaign)

13:00 J18.011 Nanoscale morphology of polyelectrolyte self-assembled films probed by Scanning Force and Near-Field Scanning Optical Microscopy

Geoffrey Lowman, Steven Buratto (Dept. of Chemistry and Biochemistry, UC Santa Barbara, Santa Barbara, CA 93106)

13:12 J18.012 Structural characteristics of polyelectrolyte-surfactant complexes in aqueous solution

Richard Nause, Helmut H. Strey, David A. Hoagland (Department of Polymer Science and Engineering, University of Massachusetts at Amherst)

13:24 J18.013 Complexation of a polyelectrolyte with oppositely charged spherical macroions: Giant inversion of charge.

Toan T. Nguyen, Boris I. Shklovskii (University of Minnesota)

13:36 J18.014 Adsorption of Sodium Polystyrene Sulfonate at the Air Surface of Water by Neutron Reflectivity: Concentration Dependence

Hyun Yim, Michael Kent (Sandia National Labs.), Robert Ivkov, Sushil Satija (NIST), Jaroslaw Majewski, Greg Smith (Los Alamos National Labs.)

13:48 J18.015 Polymerization and Structure of Bio-Based Plastics: A Computer Simulation

Shrikant N. Khot, Richard P. Wool (Department of Chemical Engineering, University of Delaware, Newark DE 19716-3144)

Session J19. DPOLY: Polymer Dynamics in Thin Films and at Interfaces.

Tuesday morning, 11:00, Room 310, Washington State Convention Center

Chair: Christopher L. Soles, National Institute of Standards and Technology.

11:00 J19.001 Simultaneous Measurements of Surface and Bulk Chain Relaxation in Polystyrene

William E. Wallace (Polymers Division, MSEL, NIST), Jan Genzer, K Efimenko (Department of Chemical Engineering, NC State University), Daniel A. Fischer (Ceramics Division, MSEL, NIST), Wen-li Wu (Polymers Division, MSEL, NIST)

11:12 J19.002 Dynamics of Supported Polymer Films: X-ray Photon Correlation Spectroscopy

Hyunjung Kim, S.K. Sinha (Advanced Photon Source, Argonne National Laboratory), A. Rühm, L.B. Lurio, S.G.J. Mochrie (Center for Materials Science and Engineering, MIT), J.K. Basu (University of Illinois, Urbana-Champaign), J. Lal (Intense Pulsed Neutron Source, Argonne National Laboratory)

11:24 J19.003 Mobility Measurements of Freely-Standing Cyclic PS Films

Chris A. Murray, John R. Dutcher (University of Guelph), Gregory B. McKenna (Texas Tech University)

11:36 J19.004 Chain dynamics near surfaces: an unconventional approach

Jean-Loup Masson, Peter Green (Graduate Program in Materials Science and Department of Chemical Engineering, the University of Texas at Austin)

11:48 J19.005 Surface Viscoelasticity Studies of Polymer Ultrathin Films Using Atomic Force Microscopic Adhesion Measurements

X.P. Wang, Xudong Xiao, Ophelia K.C. Tsui (Physics Department, Hong Kong University of Science and Technology)

12:00 J19.006 Photophysical Tools for Studying Thin Films of Polydimethylsiloxane

S. D. Kim (Northwestern University), J. M. Torkelson (Northwestern University, Evanston, IL 60208-3120 USA)

12:12 J19.007 Fingering Instabilities in Dewetting Holes of Ultrathin Polystyrene Films

George Vlachos (Department of Physics and Astronomy, University of Sheffield, Sheffield S3 7RH, United Kingdom), Kari Dalnoki-Veress (Department of Physics and Astronomy, McMaster University, Hamilton, ON, L8S 4M1, Canada), James A. Forrest (Department of Physics, University of Waterloo, Waterloo, ON, N2L 3G1, Canada), Richard A.L. Jones (Department of Physics and Astronomy, University of Sheffield, Sheffield S3 7RH, United Kingdom)

12:24 J19.008 Crystallization Kinetics in Ultrathin Films of Poly(ethyleneoxide)

Kari Dalnoki-Veress (Department of Physics and Astronomy, McMaster University, Hamilton, ON, L8S 4M1), James A. Forrest (Department of Physics, University of Waterloo, Waterloo, ON, N2L 3G1, Canada)

12:36 J19.009 Modeling Miscibility-Mediated Interdiffusion

Erin Jablonski, Balaji Narasimhan (Iowa State University)

12:48 J19.010 Polymer Diffusion at the Glass-Melt Interface of Immiscible Polymers

James A. Forrest (Department of Physics, University of Waterloo, Waterloo, ON, N2L 3G1, Canada), Kari Dalnoki-Veress (Department of Physics and Astronomy, McMaster University, Hamilton, ON, L8S 4M1, Canada)

13:00 J19.011 Thin Film Blends of Polystyrene and Poly (bromo-styrene): Phase Behavior and Interdiffusion

Russell Gorga, Balaji Narasimhan (Iowa State University), P. Thiyagarajan Collaboration

13:12 J19.012 Effects of Chain Ends and Chain Entanglement on the Glass Transition Temperature of Polymer Thin Films

Ophelia K. C. Tsui, H. F. Zhang (Physics Department, Hong Kong University of Science and Technology)

13:24 J19.013 Dewetting of Thin Polymer Films

P.S. Dixit (New Mexico Tech), J.L. Sorensen, M. Kent (Sandia National Laboratories), H.S. Jeon (New Mexico Tech)

13:36 J19.014 Adsorption of Single Polymer Chain on Surface - A MD Study

Andreas Michel, Stefan Kreitmeier (DPG), Institute for Experimental and Applied Physics Team

13:48 J19.015 Very early stage wetting in polymer blends

Howard Wang (NIST, polymer division), Sushil K. Satija (NIST, NIST center for neutron research), Russell J. Composto (Materials Sci. & Engr., LRSM, University of Pennsylvania), Charles C. Han (National institute of standards and technology, polymer division, Gaithersburg, MD 20899)

Session L4. DCMP/DMP: Nobel Prize Winners (2000).

Tuesday afternoon, 14:30, Ballroom 6E, Washington State Convention Center

Chair: George Trilling, Lawrence Berkeley National Laboratory.

14:30 L4.001 Semiconductor Heterostructures: New Physics and New Technology

Zhores Alferov (Ioffe Physiko-Technical Institute, Russian Academy of Sciences, St. Petersburg, Russia)

15:06 L4.002 Synthetic Metals: A Novel Role for Organic Polymers

Alan MacDiarmid (University of Pennsylvania)

15:42 L4.003 The Plastic Electronics Revolution: Opportunities for Science and Opportunities for Technology

Alan Heeger (Institute for Polymers and Organic Solids)

16:18 L4.004 Quasi-Electric Fields and Band Offsets: Teaching Electrons New Tricks

Herbert Kroemer (University of California, Santa Barbara)

Session L9. DMP/DPOLY: Organic Electronic Materials and Devices III: Photovoltaics, Transistors and Conductors.

Tuesday afternoon, 14:30, Room 201, Washington State Convention Center

Chair: J. Campbell Scott, IBM.

14:30 L9.001 Energy and charge transfer in semiconductor copolymer blends for photovoltaic applications

Carlos Silva (University of Cambridge)

15:06 L9.002 Polymeric and Organic Light-Emitting Diodes and Field-Effect Transistors with Anisotropic Electrical Properties

Andrew J. Lovinger, Zhenan Bao, X. Linda Chen (1) (Bell Laboratories, Lucent Technologies)

15:18 L9.003 Scanning tunneling microscopy characterization of potential molecules for implementing molecular-quantum-dot cellular automata

Frank Peiris, Gregory Snider (Department of Electrical Engineering, University of Notre Dame, Notre Dame, IN 46556), Zhiyong Li, Sudha Chellamma, Bindhu Varughese, Marya Lieberman (Department of Chemistry and Biochemistry, University of Notre Dame, Notre Dame, IN 46556)

15:30 L9.004 A Single-Electron DNA Transistor

Mingshaw W. Wu (Physics Department, Princeton Un), L. L. Sohn (Physics Department, Princeton University)

15:42 L9.005 Structural transitions and transport in a molecular switch.

Mina Yoon, David Tomanek (Michigan State University), Jorge M. Pacheco, Gueorgui K. Gueorguiev (University of Coimbra), Steven W.D. Bailey, Colin J. Lambert (Lancaster University)

15:54 L9.006 Multisite Resonant Tunneling and Asymmetric Negative Differential Resistance in Quantum Wires with Electron-electron Interactions

J. E. Han, Vincent H. Crespi (Department of Physics, Pennsylvania State University)

16:06 L9.007 BN polymers: new building blocks for organic electronic devices

Michel Cote (Département de physique, Université de Montréal, Québec, Canada), Peter D. Haynes, Carla Molteni (Theory of Condensed Matter, Cavendish Laboratory, Madingley Road, Cambridge, UK)

16:18 L9.008 Electronic Structure of Non-degenerate Ground State Conjugated Polymers in Their Neutral and Doped States

J. Hwang, D.B. Tanner, I. Giurgiu, J.R. Reynolds (University of Florida)

16:30 L9.009 Percolation enhancement of conductivity in polyaniline films cast from volatile solvents

Graciela Blanchet, Curtis Fincher, Feng Gao (DuPont, Central Research), Che Hsu (DuPont, iTechnologies)

16:42 L9.010 The absence of strong electron correlation energies in polyaniline

Bo Xu, Peter Dowben (University of Nebraska), Jaewu Choi (Center for Advanced Microstructure and Devices)

16:54 L9.011 Electronic and Optical Properties of Conjugated Polymers

Murilo L. Tiago, Steven G. Louie (University of California at Berkeley and Lawrence Berkeley National Laboratory)

17:06 L9.012 Electron Paramagnetic Resonance Studies of Mesoscopic Disorder in Polypyrrole

Pawan Kahol (Wichita State University), Neil Kemp, Alan Kaiser (Victoria University of Wellington)

17:18 L9.013 Strong orientation dependence of conductance in molecular films

Pavel Kornilovitch, Alexandre Bratkovsky (Hewlett-Packard Laboratories, Palo Alto, California)

Session L17. DPOLY: Relaxation Processes in Polymers.

Tuesday afternoon, 14:30, Room 304, Washington State Convention Center

Chair: Christopher Soles, National Institute of Standards and Technology.

15:06 L17.001 The Effect of Local Segmental Motion on Some Mechanical Properties of High T_g Glassy Polymers

X.Y. Li, A.F. Yee (University of Michigan)

15:18 L17.002 Dynamics in supercooled polymer melts by the Dynamically Disordered Rouse model - comparison to simulation and mode coupling theory

Boaz Ilan, Roger F. Loring (Cornell University)

15:30 L17.003 Effect of Density on Local Segmental Polymer Dynamics: A Molecular Dynamics Study

D.B. Adolf, S. Hotston (University of Leeds Department of Physics and Astronomy Leeds LS2 9JT United Kingdom), K. Karatasos (Universite Libre De Bruxelles Unite de physique de Polymeres cp 223 Brussels, Belgium)

15:42 L17.004 Fast Relaxations in PMMA

G. Caliskan, A. Kisliuk, A. P. Sokolov (The University of Akron, Polymer Science Dept.), V. N. Novikov (IAE, Russian Academy of Sciences), C. Soles (NIST, Polymer Division)

15:54 L17.005 Modeling the Mechanical Response of a High-Performance Glassy Polyimide as a function of Molecular Weight

Lee Nicholson (ICASE/NASA Langley Research Center), Thomas Gates (NASA Langley Research Center)

16:06 L17.006 The Effect of Chain Configuration on Glass Transition Temperatures

X.Y. Li, A.F. Yee (University of Michigan)

16:18 L17.007 Conformational dynamics in polyethylene under isochoric conditions: a molecular dynamics simulation study

Richard Boyd (U. of Utah), Rishikesh Bharadwaj (Avery Research Center)

16:30 L17.008 Relaxation of Polymer Thin Films in Temperature Jump Measurements

G. Beaucage (Department of Materials Science and Engineering, University of Cincinnati), M. J. Banach (Department of Physics, Cambridge University), R. A. Vaia (Airforce Research Laboratory, Wright-Patterson Airforce Base)

16:42 L17.009 Temporal Evolution of Relaxation in Rubbed Polystyrene Thin Films

Z. Yang (Dept. of Physics, Hong Kong Univ. of Sci. and Tech.), O. C. Tsang, O. K. C. Tsui (Same as the 1st author)

16:54 L17.010 Calculation of the Free Volume Distribution of Polymers from Integral Equation Theory

Dana R. Rottach (University of New Mexico, Albuquerque, NM), John G. Curro (Sandia National Laboratories, Albuquerque, NM), John D. McCoy (New Mexico Institute of Mining and Technology, Socorro, NM)

17:06 L17.011 Vibrated Chains as Models of Polymer Dynamics

Robert E. Ecke, Eli Ben Naim, Zahir Daya (Los Alamos National Lab)

17:18 L17.012 Forced Rayleigh Scattering Measurements of the Average Ground-State/Photoproduct Diffusion Coefficient

Dan Spiegel (Department of Physics, Trinity University)

17:30 L17.013 An NMR Study of Mobility in a Crystalline Side Chain Comblike Polymer

Marcus Giotto, David Azar, Jaimie Gosselin, Paul Inglefield, Alan Jones (Carlson School of Chemistry, Clark University)

Session L18. DPOLY: John H. Dillon Medal Symposium.

Tuesday afternoon, 14:30, Room 307-308, Washington State Convention Center

Chair: David Hoagland, University of Massachusetts.

- 14:30 L18.001 Elucidation of Dynamics and Structure of Solid Polymers by Advanced NMR Techniques
Klaus Schmidt-Rohr (Dept. of Chemistry, Iowa State University, & Dept. of Polymer Science & Engineering, UMass Amherst)
- 15:06 L18.002 Raman Analysis of Ordered and Disordered Poly(lactic acid) Chains
Shaw Hsu, Shuhui Kang (University of Massachusetts)
- 15:18 L18.003 Where Are the Chain Ends in Semi-Crystalline Polyethylene?
Christoph Wutz, Maurice Brookhart, Martha Tanner, Edward Samulski (University of North Carolina at Chapel Hill)
- 15:30 L18.004 Chemical and Morphological Studies of Nylon-6/Clay Nanocomposites by Solid State NMR
D.L. VanderHart, A. Asano, J.W. Gilman (NIST)
- 15:42 L18.005 Morphology of Thermally Degraded PU and Irradiated PE
Douglas Harris, Kenneth Gillen, Mathias Celina, Roger Assink (Sandia National Laboratories)
- 15:54 L18.006 Mobility of polymers at the air/polymer interface
Tobias Kerle, Zhiqun Lin, Ho-Cheol Kim, Thomas P. Russell (Polymer Science and Engineering, University of Massachusetts)
- 16:06 L18.007 Applying Lattice-Boltzmann Methods to Phase Inversion Polymer Membranes
Ariya Akthakul (Massachusetts Institute of Technology), Alexander J. Wagner (The University of Edinburgh), Christopher E. Scott, Anne M. Mayes (Massachusetts Institute of Technology)
- 16:18 L18.008 Gas Flow through a Polysiloxane Foam Under Compression
Rosanne A. Smith (BWXT Y-12 L.L.C., Oak Ridge, Tennessee), Paul J. Phillips (University of Tennessee, Knoxville)
- 16:30 L18.009 Diffusion of Oxygen and Carbon Dioxide in Semicrystalline Syndiotactic Polystyrene
Sergei Nazarenko, Thummanoon Prodpran, Sergei Shenogin, Natalia Shenogina (Department of Macromolecular Science, Case Western Reserve University, Cleveland, OH 44106-7202)
- 16:42 L18.010 Measurement of Small Molecule Diffusion in Carbon Dioxide Swollen Polymers using Fluorescence Nonradiative Energy Transfer

James Watkins, Ravi Gupta, Vijay RamachandraRao (Chemical Engineering Department, University of Massachusetts)

16:54 L18.011 Diffusion of Methanol into PMMA - a Theoretical and Molecular-Dynamics Study

P. L. Taylor, Mesfin Tsige (Case Western Reserve University)

17:06 L18.012 Two-Dimensional Diffusion of Colloidal Particles in Polymer Solutions

Dana Pilaski, Ginger Chao, Tai-Chou Lee, Trinh Vo (Department of Chemical Engineering, Rice University), Marc Robert (Rice Quantum Institute, Center of Nanoscale Science and Technology, and Department of Chemical Engineering, Rice University)

17:18 L18.013 "Rotator Phase" in Ethylene-Propylene Copolymers

Weiguo Hu, Srivatsan Srinivas (ExxonMobil Chemical Company), Eric B. Sirota (ExxonMobil Research and Engineering Company)

Session L19. DPOLY: Biocompatible Surfaces and Adsorbed Polymers.

Tuesday afternoon, 14:30, Room 310, Washington State Convention Center

Chair: Alamgir Karim, National Institute of Standards and Technology.

15:06 L19.001 Fibrinogen Relaxation Kinetics on Hydrophobic Surfaces

Christian Wertz, Maria Santore (Lehigh University)

15:18 L19.002 Osteoblast Cell Adhesion and Spreading on Modified Surfaces

R.J. Composto (Materials Science, Univ. of Pennsylvania), A. El-Ghannam (Bioengineering, Univ. of Pennsylvania), I. Shapiro Collaboration, P. Ducheyne Collaboration

15:30 L19.003 Smart Polymer Surfaces

Spiros H. Anastasiadis, Haralambos Retsos (Foundation for Research and Technology - Hellas, Heraklion, Crete, Greece), Stergios Pispas, Nick Hadjichristidis (University of Athens, Athens, Greece), Stylianos Neophytides (Institute of Chemical Engineering and High Temperature Chemical Processes, FORTH, Patras, Greece)

15:42 L19.004 Molecular Surface Structure and Biocompatibility

Curtis Meuse, David Vanderah, Joseph Hubbard, Raymond Mountain (CSTL, National Institute of Standards and Technology, Gaithersburg, MD 20899-8313)

15:54 L19.005 Methyl 1-Thiahexa(ethylene oxide) Monolayers for the Inhibition of Protein Adsorption

David Vanderah, Curtis Meuse (Nat'l. Inst. of Strds. and Tech.)

16:06 L19.006 Interactions Between PEG Brushes in Aqueous Medium: Soft Surface Modification For Implants and Biomaterials

Raviv Uri, Frey Joseph, Laurat Pierre, Tadmor Rafael, Klein Jacob (Department of Materials and Interfaces, Weizmann Institute of Science, Rehovot, ISRAEL)

16:18 L19.007 In Situ Evaluation of Thickness of Swollen Adsorbed Polymer Layers by Ellipsometry

Ryan Toomey, Matthew Tirrell (Materials Research Laboratory, University of California at Santa Barbara)

16:30 L19.008 Differences between tethered polyelectrolyte chains adsorbed onto bare mica and hydrophobically modified mica, comparison with theory.

Marc Balastre, Mario N Tamashiro, Ernesto Hernandez, Philip Pincus, Matthew Tirrell (Materials Research Laboratory), Matthew Tirrell Team, Philip Pincus Collaboration

16:42 L19.009 Conformation of PNIPAM grafted chains at the silicon/water interface as a function of temperature by neutron reflectivity

Michael Kent, Hyun Yim, Dale Huber (Sandia National Labs.), Robert Ivkov, Sushil Satija (NIST), Jaroslaw Majewski, Greg Smith (Los Alamos National Labs.)

16:54 L19.010 Analysis of Force Interactions Between Comb Stabilized Colloidal Particles

Solar Olugebefola, Pallab Banerjee, Stella Park, Anne Mayes (MIT DMSE), J Iyer, Catherine Bembenek, Paula Hammond (MIT Dept. of Chemical Engineering)

17:06 L19.011 Dynamics in Adsorbed Homopolymer Layers: Entanglements and Osmotic Effects

Maria Santore, Ervin Mubarekyan (Lehigh University)

17:18 L19.012 Elasticity of Polymer-Grafted Membranes

Mohamed Laradji (Physics Department, University of Prince Edward Island, PEI, Canada)

Session L23. DBP: Biopolymer/Lipid Complexes.

Tuesday afternoon, 14:30, Room 606, Washington State Convention Center

Chair: Robjin Bruinsma, University of California, Los Angeles.

14:30 L23.001 Self-assembled phases of biopolymers, membranes, and counterions
Gerard Wong (University of Illinois)

15:06 L23.002 Cationic Lipid-Biopolymer Self Assembled Complexes as Templates for Nanofabrication

Hongjun Liang (Materials Science and Engineering Dept., University of Illinois at Urbana-Champaign), Thomas E. Angelini (Physics Dept., University of Illinois at Urbana-Champaign), James Ho (Bioengineering Dept., University of Illinois at Urbana-Champaign), Gerard C. L. Wong (Materials Science and Engineering Dept., Physics Dept., Bioengineering Dept., University of Illinois at Urbana-Champaign)

15:18 L23.003 Multivalent Cations and Biomembrane Stability

Bae-Yeun Ha (Department of Physics, Simon Fraser University, Burnaby, B.C., Canada, V5A 1S6)

15:30 L23.004 Interaction of Alzheimer's Amyloid-Beta Peptides with Lipid Membranes

Canay Ege (Department of Chemistry, The University of Chicago), Adrian Muresan (Department of Physics, The University of Chicago), Ka Yee C. Lee (Department of Chemistry and Institute for Biophysical Dynamics, The University of Chicago)

15:42 L23.005 Membrane Skeleton Properties: actin filament rotations, thermal fluctuations, and perhaps spectrin unfolding in the Red Cell

Dennis Discher, James C-M. Lee, Philippe Carl, Catherine Picart (University of Pennsylvania)

15:54 L23.006 DNA-Lipid Complexes and Interactions with Cells: Supramolecular Assembly and Gene Delivery

Cyrus R. Safinya (Materials and Physics Departments, Biochemistry and Molecular Biology Program, University of California, Santa Barbara, CA 93106)

16:30 L23.007 DNA-Cationic Liposome Complex Size, Density and Transfection Efficiency

Eva Lai (Department of Chemical Engineering, Johns Hopkins University), John van Zanten (Chemical Engineering Department, North Carolina State University)

16:42 L23.008 Structure Function Studies of Cationic Lipid:DNA Complexes Containing Ternary Lipid Mixtures Demonstrate Improved Gene Delivery

A. Ahmad, Heather M. Evans, N.L. Slack, A.J. Lin, K. Ewert (UC Santa Barbara), H.W. Schmidt (Universitat Bayreuth, Germany), C.R. Safinya (UC Santa Barbara)

16:54 L23.009 Universal Behaviors of Cationic Lipid DNA-Carriers – Optimizing Nonviral DNA Delivery in Mammalian Cells

Alison J. Lin, N. L. Slack, A. Ahmad, Heather M. Evans, Cyril X. George, Charles E. Samuel, Cyrus R. Safinya (UC Santa Barbara)

17:06 L23.010 Caveolar budding on cell membranes

Alun Evans, Matthew Turner (University of Warwick), Pierre Sens (Institut Charles Sadron, CNRS)

17:18 L23.011 Novel Poly(ethylene glycol) (PEG) containing lipids for gene delivery: Synthesis and characterization

Kai Ewert, A. Ahmad, H. Evans, A. Martin, U. Schulze (UC Santa Barbara), H.-W. Schmidt (Universitaet Bayreuth), C. R. Safinya (UC Santa Barbara)

Session N4. FIAP/DPOLY: Organic Optoelectronic Devices.

Wednesday morning, 08:00, Ballroom 6E, Washington State Convention Center

Chair: Federico Capasso, Bell Laboratories.

08:00 N4.001 Fast polymer modulators

Larry Dalton (University of Washington and University of Southern California)

08:36 N4.002 Electro-phosphorescence

Marc Baldo (Princeton University)

09:12 N4.003 Electronic paper

Magnus Berggren (University Linköping, Sweden)

09:48 N4.004 Polyfluorene Light Emitting Devices

Donal Bradley (Imperial College, London)

10:24 N4.005 Organic solid state injection laser

Bertram Batlogg (Bell Labs, Lucent Technologies, Murray Hill, NJ 07974 and ETH Zürich, Switzerland)

Session N9. DFD: Liquid Crystals II: Smectics and Related Layered Systems.

Wednesday morning, 08:00, Room 201, Washington State Convention Center

Chair: Peter Palffy-Muhoray, Kent State University/Liquid Crystal University.

08:00 N9.001 Phase behavior of Banana Shaped Molecules

Yves Lansac, Prabal K. Maiti, Matthew A. Glaser, Noel A. Clark (Department of Physics and Ferroelectric Liquid Crystal Materials Research Center, University of Colorado, Boulder, CO 80309)

08:12 N9.002 Ordering of Bent-Core Molecules in a Smectic Solvent

Matthew A. Glaser, Prabal K. Maiti, Yves Lansac, Noel A. Clark (Department of Physics and Ferroelectric Liquid Crystal Materials Research Center, University of Colorado at Boulder, CO 80309)

08:24 N9.003 Liquid Crystal Phases Lacking Point Group Symmetry

Nattaporn Chattham, Renfan Shao, Joseph E. MacLennan, Noel A. Clark (Department of Physics and FLCMRC, University of Colorado, Boulder, Colorado 80309), Eva Korblova, David M. Walba (Department of Chemistry and FLCMRC, University of Colorado, Boulder, Colorado 80309)

08:36 N9.004 Domain Switching in Achiral Smectic C Liquid Crystals

Christopher Jones, Renfan Shao, Noel Clark (Ferroelectric Liquid Crystal Materials Research Center, Dept of Physics, Univ of Colorado, Boulder, USA)

08:48 N9.005 Electroclinic Liquid Crystals with Large Tilt Angles for Gray Scale Applications

Mark Spector (Naval Research Laboratory), Paul Heiney (University of Pennsylvania), Jawad Naciri, R. Shashidhar (Naval Research Laboratory)

09:00 N9.006 Resonant x-ray scattering measurements on a ferroelectric liquid crystal phase

R. Pindak, J. Pitney (Bell Labs), L. Matkin, H. Gleeson (Univ. of Manchester), A. Cady, C.C. Huang (Univ. of Minnesota), P. Barois (Univ. of Bordeaux), W. Caliebe, P. Siddons (National Synchrotron Light Source)

09:12 N9.007 Effect of mosaicity correction on the value of critical exponents at the nematic-smectic A Transition

Andrew Primak, Mike Fisch, Satyendra Kumar (Department of Physics and Liquid Crystal Institute, Kent State University, Kent, OH 44242)

09:24 N9.008 Effect of Quenched Random Disorder on Smectic Ordering

S. Park, R. L. Leheny, R. J. Birgeneau (Department of Physics, MIT)

09:36 N9.009 Interlayer interactions in enantiomeric anticlinic liquid crystalline mixtures

Mohammad Reza Dodge, Charles Rosenblatt (Case Western Reserve University, Cleveland, Ohio)

09:48 N9.010 Controlling Defect Structures of 8CB by SI Microchannels

T. Pföhl, Y. Li, C.R. Safinya (University of California at Santa Barbara), M.C. Choi, M.W. Kim (Korean Advanced Institute of Science and Technology), Z. Wen (Chongqing University, China)

10:00 N9.011 TGB_C phases near h_c2

Arindam Kundagrami (Department of Physics and Astronomy, University of Pennsylvania), Tom Lubensky

10:12 N9.012 Self-Lasing in Cholesteric Liquid Crystals

Bahman Taheri, Peter Palffy-Muhoray, Antonio Munoz (Liquid Crystal Institute, Kent State University, Kent, Ohio 44242-0001, USA.)

10:24 N9.013 Coherence and Diffraction in a Nanosecond Liquid Crystal Laser

Wenyi Cao, Antonio Munoz, Peter Palffy-Muhoray, Bahman Taheri (Liquid Crystal Institute, Kent State University, Kent, Ohio 44242-0001, USA.)

N9.014 Self-Assembly in Lyotropic Chromonic Liquid Crystals

Prabal K. Maiti, Yves Lansac, Matthew A. Glaser, Noel A. Clark (Department of Physics and Ferroelectric Liquid Crystal Materials Research Center, University of Colorado at Boulder, CO 80309)

Session N17. DPOLY: Processing Effects on Polymer Structure and Properties.

Wednesday morning, 08:00, Room 304, Washington State Convention Center

Chair: Karen I. Winey, University of Pennsylvania.

08:00 N17.001 Dynamics of Kink Bands in a Lamellar Diblock Copolymer

Lei Qiao (Department of Materials Science, University of Pennsylvania), David Morse (Department of Chemical Engineering and Materials Science, University of Minnesota), Anthony Ryan (Department of Chemistry, University of Sheffield), Karen Winey (Department of Materials Science, University of Pennsylvania)

08:12 N17.002 Dynamic Properties of Block Copolymer Single Crystal

Hyeok Hahn, Nitash Balsara (Dr.)

08:24 N17.003 Cell Dynamics Simulations of Lamellar Phases

Ian Hamley, Shaoran Ren (School of Chemistry, University of Leeds, Leeds LS2 9JT, UK)

08:36 N17.004 Orientation-induced morphology and structure development in i-PP melt after step shear using synchrotron SAXS and WAXD

R. H. Somani, L. Yang, L. Liu, B. S. Hsiao (Department of Chemistry, State University of New York, Stony Brook, NY 11794), S. Srinivas, A. Tsou, H. Fruitwala (ExxonMobil Chemical Company, Baytown Polymers Center, Texas 77522)

08:48 N17.005 Study of the Effect of Comonomer Type on the Properties of Rapidly Crystallized and Annealed Random Ethylene Copolymers

Rufina Alamo, Adriane Simanke (FAMU-FSU College of Engineering, Department of Chemical Engineering, Tallahassee, FL 32310), Griselda Galland, Raquel Mauler (Instituto de Quimica, Universidade Federal do Rio Grande do Sul, Porto Alegre, Brazil)

09:00 N17.006 Shear-induced crystallization of isotactic polypropylene with different molecular weight distributions: in-situ synchrotron SAXS and WAXD studies

F. Balta-Calleja, T. Ezquerra, A. Nogales (Instituto de Estructura de la Materia, Spain), R. Somani, B. Hsiao (Dept. of Chemistry, SUNY, Stony Brook, New York 11794), S. Srinivas, A. Tsou, H. Fruitwala (ExxonMobil Chemical Company, Baytown Polymers Center, TX 77522)

09:12 N17.007 Effect of Extended Elasticity on Polymer Single Crystal Growth During Isothermal Crystallization

Rujul Mehta, Wirunya Keawwattana, Andrew Guenther, Thein Kyu (Institute of Polymer Engineering, The University of Akron, Akron OH 44325)

09:24 N17.008 Mechanical Properties of EPS Foam Do Not Behave As Material Constants

P. Rusemee, K. L. DeVries (University of Utah)

09:36 N17.009 The Influence Of Orientation On The Elmendorf Tear Resistance Of LLDPE Blown Films

Rajendra K. Krishnaswamy, Ashish M. Sukhadia (Chevron Phillips Chemical Company, LP)

09:48 N17.010 Role of tacticity on the rheological and orientation behavior of metallocene-catalyzed semi-syndiotactic polypropylenes

Vivek Maheshwari, Gautam Parthasarathy (Chemical Engineering, Wayne State University, Detroit, MI), A. R. Siedle (3M Corporate Research Laboratories, St. Paul, MN), Rangaramanujam Kannan (Chemical Engineering, Wayne State University, Detroit, MI)

10:00 N17.011 Cross Deformation of Biaxially Oriented Polystyrene Films

C.C. Chau (The Dow Chemical Company), J.C.M. Li (The University of Rochester)

10:12 N17.012 Spall response of plasticized Estane at 400 and 800 MPa impact pressure

Jerry Dick, A. Richard Martinez (DX-1, Los Alamos National Laboratory)

10:24 N17.013 Orientation And Physical Properties Of Blown Films From Binary Blends Of Metallocene-Catalyzed LLDPEs

Rajendra K. Krishnaswamy (Chevron Phillips Chemical Company, LP)

10:36 N17.014 The mass spectral density in quantitative time-of-flight mass spectrometry of polymers

Ranjeet S. Tate (Dept of Chemical Engg., Univ of Wisconsin - Madison), Dan Ebeling, Lloyd M. Smith (Dept of Chemistry, Univ of Wisconsin - Madison)

10:48 N17.015 Thermal Stress in a Polymer Coated Optical Glass Fiber with Low Modulus Coating at the Ends

Ephraim Suhir (APS)

Session N18. DPOLY: Perspectives on the Glass Transition in Bulk and Thin Film Materials.

Wednesday morning, 08:00, Room 307-308, Washington State Convention Center

Chair: Sanat Kumar, The Pennsylvania State University.

08:00 N18.001 Elastic Neutron Scattering and the Glass Transition in Thin Polycarbonate Films

Christopher Soles (NIST Polymers Division), Robert Dimeo (NIST Center for Neutron Research), Jack Douglas, Wen-li Wu (NIST Polymers Division)

08:12 N18.002 Quasielastic neutron scattering studies of thin free-standing films of polystyrene

B. Frick (Institut Laue-Langevin, 6, rue Jules Horowitz, F-38042 Grenoble, Cedex, France), K. Dalnoki-Veress (Department of Physics and Astronomy, McMaster University, Hamilton, ON, L8S 4M1, Canada), J.A. Forrest (Department of Physics, University of Waterloo, Waterloo, ON, N2L 3G1, Canada), J.R. Dutcher, C. Murray (Department of Physics, University of Guelph, Guelph, ON, N1G 2W1, Canada), A. Higgins (Department of Physics and Astronomy, University of Sheffield, Sheffield S3 7RH, United Kingdom)

08:24 N18.003 Segmental Dynamics and Glass Transition of PolyStyrene Confined in 2-nm Slit Pores

Evangelos Manias, Vikram Kuppa (Penn State University, University Park)

08:36 N18.004 Meso-scale model for structural relaxation in the glass transition region

Grisha Medvedev, James Caruthers (Purdue University, School of Chemical Engineering)

08:48 N18.005 New Insights into the Fragility Dilemma in Glass Forming Liquids

Gregory B. McKenna, Dinghai Huang (Texas Tech University)

09:00 N18.006 Volume Recovery of Polystyrene: Evolution of Characteristic Relaxation Time

Sindee Simon, Paul Bernazzani (Chemical Engineering, Texas Tech University)

09:12 N18.007 Tuning Fragility: The Quest for Strong Polymeric Glass Formers

Brian Erwin, Ralph Colby (Materials Science and Engineering, Penn State), Jeremy Lizotte, Timothy Long (Chemistry, Virginia Tech)

09:24 N18.008 Nano-scale non-exponential relaxation near the glass transition

Ezequiel Vidal Russell, Konesh Sinnathamby, Nathan Israeloff (Northeastern University)

09:36 N18.009 Molecular Motions During Physical Aging in Polystyrene

Courtney T. Thureau, M.D. Ediger (University of Wisconsin, Madison, 1101 University Ave., Madison, WI 53706)

09:48 N18.010 Deviations from the fluctuation dissipation relation in a structural glass

Shomeek Mukhopadhyay, Nathan Israeloff (Physics Department, Northeastern University)

10:00 N18.011 Thermodynamic Signature to the onset of caging in Glass-forming systems.

Sudesh Kamath, Ralph Colby, Sanat Kumar (Penn State University)

10:12 N18.012 Simulation of the effect of a nano-particle on melt structure and dynamics

Francis W. Starr (N.I.S.T., Gaithersburg, MD), Sharon C. Glotzer (), Thomas B. Schroder

10:24 N18.013 Theory for the Structure and Thermodynamics of Polymers in Confined Geometries.

John D. McCoy, Melody A. Teixeira (Materials Dept., New Mexico Tech, Socorro NM, 87801), John G. Curro (Sandia National Labs, Albuquerque NM 87185)

10:36 N18.014 Surface glass transition measured on ultrathin homopolymer systems with a nanorheological method

Cynthia Buenviaje, Rene M. Overney (University of Washington)

10:48 N18.015 Surface Glass Transition Temperature of Amorphous Polystyrene Measured by SFM

Valery Bliznyuk, Hazel Assender (Department of Materials, Oxford University, Oxford, OX1 3PH, UK), Yusuke Tsukahara (Toppan Printing Company, 4-2-3 Takanodai-Minami, Sugito, Saitama 345-8508, Japan), Andrew Briggs (Department of Materials, Oxford University, Oxford, OX1 3PH, UK)

Session N19. DPOLY: Computer Simulations of Polymers I.

Wednesday morning, 08:00, Room 310, Washington State Convention Center

Chair: Arun Yetharaj, University of Wisconsin.

08:00 N19.001 Ab initio molecular dynamics study of topological defects in polymers

Michael L. Klein (Laboratory for the Research in the Structure of Matter and Dept. of Chemistry, Univ of Pennsylvania, Philadelphia (PA) 19104, USA), Antonino Marco Saitta (Physique des Milieux Condensés, Univ Pierre et Marie Curie, Paris, France)

08:12 N19.002 Viscoelasticity near the gel point: a molecular dynamics study

Michael Plischke, D.C. Vernon (Simon Fraser University), Bela Joos (University of Ottawa)

08:24 N19.003 Parallel Tempering for Dense Polymer Systems

Alex Bunker, Thijs Vlugt, Burkhard Duenweg (Max Planck Institute for Polymer Research, Mainz, Germany)

08:36 N19.004 Sampling of Conformational Properties of Polybutadiene Melts. How Much Does the Parallel Tempering Help?

Dmitry Bedrov, Grant Smith (Department of Materials Sci amp; Eng, University of Utah)

08:48 N19.005 Study of Phase Equilibria of Petrochemical Fluids using Gibbs Ensemble Monte Carlo Methods

Shyamal Nath (Molecular Simulations Inc.)

09:00 N19.006 Comparison of partitioning of bimodal polymer mixture into micropores in good and theta solvent. A Monte Carlo study.

Peter Cifra (Slovak Academy of Sciences, 842 36 Bratislava, Slovakia), Yongmei Wang (North Carolina Aamp ;T State University, Greensboro, NC 27411), Iwao Teraoka (Polytechnic University, Brooklyn, NY 11201)

09:12 N19.007 Partitioning of Bimodal Polymer Mixtures into Microscopic pores: Effect of Compositions and Slit Widths

Yongmei Wang, Qiang Lin (North Carolina Agricultural and Technical State University, Greensboro, NC 27411), Iwao Teraoka (Polytechnic University, Brooklyn, NY 11201), Peter Cifra (Slovak Academy of Sciences, 842 36 Bratislava, Slovak Republic)

09:24 N19.008 Computer Simulation of Dendrimers and Hyperbranched Polymers

D.B. Adolf, G.R. Davies (University of Leeds Department of Physics and Astronomy Leeds LS2 9JT United Kingdom), A.V. Lyulin (Eindhoven University of Technology Department of Applied Physics Postbus 513 5600 MB Eindhoven The Netherlands)

09:36 N19.009 Brownian Dynamics Investigations of Dendrimer Structures.

Peter Sheridan (Polymer IRC, University of Leeds), Alexey Lyulin (Eindhoven University of Technology), David Adolf, Geoff Davies (Polymer IRC, University of Leeds)

09:48 N19.010 Monte Carlo Simulations of a Polymer Blend Modified by Copolymers of Varying Monomer Composition and Copolymer Structure

Dean Waldow, Jason Higbee (Pacific Lutheran University), Mark Dadmun (University of Tennessee)

10:00 N19.011 Crystal Growth Rates for Alkanes by Molecular Simulations

Numan Waheed, Marc S. Lavine, Gregory C. Rutledge (M.I.T.)

10:12 N19.012 Methanol-Induced Swelling and Plasticization in PMMA Studied by Molecular Dynamics Simulations

Mesfin Tsige, P. L. Taylor (Case Western Reserve University)

10:24 N19.013 The Volume Dependence of Cohesive Energy for Nonpolar to Polar Molecules from Molecular Dynamics

B.E. Eichinger (Molecular Simulations Inc.), David Rigby, Huai Sun

10:36 N19.014 Excess Thermodynamic Quantities of Perfluoroalkane-Containing Mixtures from Atomistic Simulations

David Rigby (Molecular Simulations, Inc., San Diego CA 92121-3752), B.E. Eichinger, Huai Sun

10:48 N19.015 A Dynamic Self-Consistent Field Lattice Model of Polymer Fluids.

Yitzhak Shnidman, Maja Mihailovic (Polytechnic University, Brooklyn, NY, and the NSF MRSEC on Polymers at Engineered Interfaces)

Session Q1. DPOLY: Polymeric Nanostructures.

Wednesday morning, 11:00, Ballroom 6A, Washington State Convention Center

Chair: Peter Green, University of Texas at Austin.

11:00 Q1.001 Templating the Ordering in Block Copolymer Thin Films

Edward J. Kramer (UCSB)

11:36 Q1.002 Functional Nanoarrays from Cylindrical-Phase Diblock Copolymer Films

Mark Tuominen (University of Massachusetts Amherst)

12:12 Q1.003 Surface Reconstruction of a Complex Fluid

Georg Krausch (Universitaet Bayreuth - 95440 Bayreuth - Germany)

12:48 Q1.004 Block Copolymer Thin Films: Patterns and Patterning

Richard A. Register (Princeton University)

13:24 Q1.005 Controlled Structure Formation by Film Instabilities

Ullrich Steiner (Dept. of Polymer Chemistry, University of Groningen, The Netherlands)

Session Q9. DMP: Organic Electronic Materials and Devices IV: Single Crystals and Molecular Films.

Wednesday morning, 11:00, Room 201, Washington State Convention Center

Chair: Sue Carter, University of California, Santa Cruz.

11:00 Q9.001 Single Crystals of Organic Semiconductors

Christian Kloc (Bell Laboratories, Lucent Technologies, Murray Hill, NJ)

11:36 Q9.002 Electron-Phonon Coupling Spectrum in Photodoped Pentacene Crystals

Mark Lee, Hendrik Schon, Christian Kloc, Bertram Batlogg (Bell Laboratories - Lucent Technologies)

11:48 Q9.003 Properties of Photoexcited States in Ultrapure Polyacene Single Crystals at High Excitation Intensities

O. Korovyanko, M. Delong, Z.V. Vardeny (University of Utah), S. Frolov, Ch. Kloc, B. Batlogg (Bell Laboratories, Lucent Technology)

12:00 Q9.004 Hexathiophene Single Crystals: Luminescence and Magnetic Resonance

Z.V. Vardeny, M. Wohlgenannt, X.M. Jiang (Department of Physics, University of Utah, Salt Lake City, Utah 84112), S.V. Frolov, Ch. Kloc, B. Batlogg (Bell Laboratories, Lucent Technologies, 600 Mountain Ave., Murray Hill, NJ 07974)

12:12 Q9.005 Pressure effects on the Davydov splitting of T6 single crystal

Maria Antonietta Loi (Dipartimento di Fisica and INFM, Università di Cagliari, I-09042 Monserrato (CA), Italy), C. Martin, H. R. Chandrasekhar, M. Chandrasekhar (Department of Physics and Astronomy, University of Missouri, Columbia, MO 65211, USA), W. Graupner (Department of Physics and Astronomy, Virginia Tech, Blacksburg, VA 24060, USA), F. Garnier (Laboratoires des Matériaux Moléculaires (CNRS), Thiais, France), A. Mura, G. Bongiovanni (Dipartimento di Fisica and INFM, Università di Cagliari, I-09042 Monserrato (CA), Italy)

12:24 Q9.006 Optical studies of anthracene single crystals

Yuhong Jiang, Matthew DeLong, Z. Vally Vardeny (Department of Physics, University of Utah, 115 S 1400E Salt Lake City, UT 84112-0830)

12:36 Q9.007 Theoretical Considerations for the Design of Molecularly-Doped Nanostructures with Tunable Field-Dependent Mobility

V. M. Kenkre (Center for Advanced Studies and Department of Physics and Astronomy, University of New Mexico), P. E. Parris (Department of Physics,

University of Missouri Rolla), and D. H. Dunlap (Department of Physics and Astronomy, University of New Mexico)

12:48 Q9.008 Direct Patterning of Organic Molecular Crystals

Sergey Li (Department of Physics, University of Utah), Xiaomei Jiang, Matthew DeLong, Vally Vardeny (University of Utah)

13:00 Q9.009 Triplet Photoexcitations in Highly Conjugated Porphyrinic Arrays

Paul J. Angiolillo (St. Joseph's University), H. Tetsuo Uyeda, Michael J. Therien (University of Pennsylvania)

13:12 Q9.010 Adsorbate Orbital Mediated Tunneling Spectroscopy in an STM

K. W. Hipps (Materials Science Program, Washington State University), Dan E. Barlow (Department of Chemistry, Washington State University), Louis Scudiero (Materials Science Program, Washington State University)

13:24 Q9.011 Large electro-optic coefficient in single-crystal film of a novel organic salt, DASMS

Shida Tan, Ayayi Ahyi, Alpana Mishra, Mrinal Thakur (Photonic Materials Research Lab, 202 Ross Hall, Auburn University, Auburn, AL 36849)

13:36 Q9.012 Self-consistent field calculations of conductance through conjugated molecules at finite bias

Magnus Paulsson, Sven Stafström (Linköping University)

13:48 Q9.013 Contact-Potential Difference and Trapping States on Self-Assembled Monolayers

Xiaodong Cui, Stuart Lindsay (Department of Physics & Astronomy, Arizona State University)

Session Q18. DPOLY: Semi-Crystalline Polymers.

Wednesday morning, 11:00, Room 307-308, Washington State Convention Center

Chair: Stephen Z. D. Cheng, University of Akron.

11:00 Q18.001 Radial Distribution Function (RDF) Analysis of the Semi-crystalline Isotactic Poly(1-butene)

Man-Ho Kim, Anton Habenschuss (Oak Ridge National Laboratory)

11:12 Q18.002 Helical Single Crystals Grown in Confined Space

Christopher Li, Stephen Cheng, John Zhang, Frank Harris (The Maurice Morton Institute and Department of Polymer Science, The University of Akron, Akron, Ohio 44325-3909), Liang-Chy Chien (Liquid Crystal Institute, Kent State University, Kent, Ohio 44010-0001), Bernard Lotz (Institut Charles Sadron, 6 Rue Boussingault, Strasbourg 67083)

11:24 Q18.003 Spatial Distribution of Metal Cations and Oxygen in Polyethylene Ionomers by Analytical TEM

Karen I Winey, Andreas Taubert (Dept. of Materials Science, University of Pennsylvania, Philadelphia PA 19104)

11:36 Q18.004 Crystal Morphology Control By Melt Phase Separation in Biodegradable Polymer Blends

Y. A. Akpalu (New York State Center for Polymer Synthesis, Department of Chemistry, Rensselaer Polytechnic Institute), J. C. Meredith (Georgia Institute of Technology), E. J. Amis (Polymers Division, National Institute of Standards and Technology)

11:48 Q18.005 Molecular Weight Dependence of Crystal Growth Rate and Its Corresponding States

Norimasa Okui (Department of Organic and Polymeric Materials, Tokyo Institute of Technology)

12:00 Q18.006 The Mechanism of Crystallization in Random Copolymers of Ethylene with Octene

Paul Phillips, Samir Abu Iqyas (University of Tennessee)

12:12 Q18.007 High temperature phase-change in the network phase of PE

Geneviève H. Phuong-Nguyen, Phuong Marigot, Raphael Ferhat (), Zohra Banu (Center for Building Studies, Concordia University, Montréal, H3M 4G8)

12:24 Q18.008 Lamellar morphology of narrow molecular weight PCL fractions

Marcel Dosière, Stéphane Hocquet (Université de Mons-Hainaut)

12:36 Q18.009 Mosaic structure of alpha phase syndiotactic polystyrene single crystals

Bernard Lotz, Cyrille Mathieu, Annette Thierry (Institut Charles Sadron, 6, Rue Boussingault, F 67000 Strasbourg, France), Edwin L. Thomas (Polymer Physics Lab, DMSE, Room 13-5094, MIT, Cambridge, MA 02139)

12:48 Q18.010 Nano-Scale Lamellar Orientation in Semi-Crystalline Polymers

G. Skillas, G. Beaucage, A. Bafana, S. Sukumaran (Dept. of Materials Science and Engineering, University of Cincinnati)

13:00 Q18.011 A Model Semi-Crystalline Polymer With a Strictly Monodisperse Distribution of Lamellar Thickness.

Alain M. Jonas, Cedric Le Fevere de ten Hove (Department of Materials Science, Université catholique de Louvain), Jacques Penelle (Department of Polymer Science and Engineering, University of Massachusetts.)

13:12 Q18.012 The Role of Fluid Instabilities in Electrospinning of Polymer Nanofibers

Y.M. Shin (MIT), M.M. Hohman (University of Chicago), M.P. Brenner, G.C. Rutledge (MIT)

13:24 Q18.013 SANS Studies of Liquid- Liquid Phase Separation in Heterogeneous and Metallocene-Based Linear Low-Density Polyethylenes

George D. Wignall (Solid State Division, Oak Ridge National Laboratory, Oak Ridge TN37931-6393), Rufina G. Alamo (Chemical Engineering Department, Florida A&M University and Florida State University College of Engineering, Tallahassee FL), Leo Mandelkern (Department of Chemistry, Florida State University, Tallahassee, FL), Dietmar Schwahn (Institut für Festkörperforschung, Forschungszentrum Jülich D-52425 Germany)

13:36 Q18.014 Numerical Study of Amorphous Layers in Semicrystalline Polymers

Hiroya Kodama, Takashi Honda (Japan Chemical Innovation Institute, Nagoya University), Toshihiro Kawakatsu, Masao Doi (Nagoya University)

Session Q19. DPOLY: Phase Behavior.

Wednesday morning, 11:00, Room 310, Washington State Convention Center

Chair: Jack Douglas, National Institute of Standards and Technology.

11:00 Q19.001 Nucleation in Binary Polymer Blends

Amy Lefebvre, Joon-Hyung Lee, Nitash Balsara (University of California, Berkeley), Boualem Hammouda (National Institute of Standards and Technology)

11:12 Q19.002 Thermodynamics of Square Well Polymers.

Sergey Fridrikh, Jane Lipson (Chemistry Department, Dartmouth College)

11:24 Q19.003 Solubility of monomers and comonomers in linear and branched polyolefins

Roland Faller, Brian Banaszak, Juan de Pablo (Department of Chemical Engineering, University of Wisconsin, Madison)

11:36 Q19.004 Calculation of the Heat of Mixing of Selected Polyolefin Blends

John G. Curro (Sandia National Laboratories, Albuquerque, NM), Mathias Puetz (Max Planck Institute, Mainz, Germany), Jeffrey D. Weinhold (The Dow Chemical Co., Freeport, TX)

11:48 Q19.005 Predicting Pressure Effects on Polymer Miscibility Based on Pure Component Properties

You-Yeon Won (MIT), Anne-Valerie G. Ruzette (Elf-Atochem, France), Juan A. Gonzalez, Anne M. Mayes (MIT)

12:00 Q19.006 Macroscopic and Microscopic SCF-Polymer Solution Behavior

Mark McHugh (VCU/Dept of Chemical Engineering), John van Zanten (NC State/Chemical Engineering Department North Carolina State University), Il-Hyun Park (Kumoh University/Dept of Polymer Science), Todd DiNoia (WR Grace)

12:12 Q19.007 Phase Separation in Polymer-Colloid Mixtures

Ken Schweizer (University of Illinois), Matthias Fuchs (University of Edinburgh)

12:24 Q19.008 Correlation Effects in Thermotropic Liquid Crystal Polymers

Galen T. Pickett (Department of Physics and Astronomy, California State University Long Beach), Kenneth S. Schweizer (Department of Materials Science and Engineering, University of Illinois at Urbana-Champaign)

12:36 Q19.009 Modelling the Phase Behavior of Liquid Crystalline - Amorphous Diblock Copolymers

Mitchell Anthamatten, Paula T. Hammond (MIT, Dept. of Chemical Engineering)

12:48 Q19.010 Orientational and Domain Ordering in Disordered Liquid Crystalline Heteropolymers

Lorin Gutman, Eugene Shakhnovich (Harvard University)

13:00 Q19.011 Reversibility of Melting of Polyethylene of Different Mass

Bernhard Wunderlich (Department of Chemistry, The University of Tennessee, Knoxville, TN 37996-1600, and Chemical and Analytical Sciences Div., Oak Ridge National Lab., Oak Ridge, TN 37831-6197)

13:12 Q19.012 Competing kinetics of simultaneous crystallization and phase-separation in polymer blends

Howard Wang, Erik K. Hobbie, Katsumi Shimizu, Charles C. Han (National Institute of Standards and Technology, Polymer Division, Gaithersburg, MD 20899)

13:24 Q19.013 Physics of Orientation-Induced Crystallization in Isotactic Polypropylene

Benjamin Hsiao, Rajesh Somani (State University of New York at Stony Brook), Richard Stein (University of Massachusetts)

13:36 Q19.014 Cohesion Effects in Thermotropic Liquid Crystalline Polymers

Galen T. Pickett (Dept. of Physics, CSU Long Beach), Kenneth S. Schweizer (Dept. of Materials Science & Engineering, University of Illinois Urbana-Champaign)

13:48 Q19.015 The reentrant coil-to-globule-to-coil transition of a single linear homopolymer chain in a water/methanol mixture

Guangzhao Zhang (Department of Chemistry, The Chinese University of Hong Kong), Chi Wu (Department of Chemistry, The Chinese University of Hong Kong)

Session Q23. DBP/DCMP: Molecular Imaging in Deep Tissue.

Wednesday morning, 11:00, Room 606, Washington State Convention Center

Chair: Ed Uzgiris, GE Research and Development Center.

11:00 Q23.001 Seeing is Believing: Visualizing In Vivo Gene Expression and Secondary Messengers by Magnetic Resonance Imaging.

Thomas J. Meade (Division of Biology and the Beckman Institute, California Institute of Technology, Pasadena, CA 91125)

11:36 Q23.002 Near Infrared Imaging of Molecular Beacons in Cancers

Britton Chance (University of Pennsylvania)

12:12 Q23.003 Gene Expression Imaging in Small Animals

Sanjiv Gambhir (UCLA School of Medicine)

12:48 Q23.004 Real-time confocal and two photon fluorescence microscopy in vivo

Charles Lin (Massachusetts General Hospital)

Session R40. Poster Session III.

Wednesday afternoon, 13:30, Exhibit Hall, Washington State Convention Center

Chair: Ron Jones, National Institute of Standards and Technology

R40.076 Effect of Segmental Chain Dynamics on Interface Growth in Electrophoretic Deposition of Polymer Chains

Frank Bentrem (University of Southern Mississippi), Grace Foo (National University of Singapore), Ras B. Pandey (University of Southern Mississippi)

R40.077 Density, Conformation, and Roughening at the Interface in Electrophoretic Deposition of Polymer Chains

Frank Bentrem, Ras B. Pandey (University of Southern Mississippi)

R40.078 Mechanisms of Ordering of Block Copolymer Microdomains

Christopher Harrison, Matthew Trawick, P.M. Chaikin (Physics Department), John Sebastian, Richard A. Register (Chemical Engineering Department), Douglas H. Adamson (Princeton Materials Institute, Princeton University, Princeton NJ 08544), Harrison, Zhengdong Cheng (ExxonMobil Research and Engineering Company, 1545 Route 22 East, Annandale, NJ 08801-0998)

R40.079 Investigation of the Mechanical and Surface Properties of Adhesive Films Made from Discrete Polymer Nanoparticles

Elizabeth F. Fabbroni, Kenneth R. Shull (Northwestern University, Dept. of Materials Science & Engineering)

R40.080 Preparing high-density polymer brushes by mechanically assisted polymer assembly (MAPA)

Tao Wu, Kirill Efimenko, Jan Genzer (NC State University)

R40.081 What is the distance to the wall in lattice Monte Carlo simulations?

Iwao Teraoka (Polytechnic University), Peter Cifra (Slovak Academy of Sciences), Yongmei Wang (North Carolina A&T State University)

R40.082 The Influence of molecular weight on nanoporous polymer films

Ting Xu, Ho-Cheol Kim, Jason DeRouchey (University of Mass., Amherst), Chevey Seney (Frontier Regional High School, S.Deerfield, MA), Cathy Levesque (Wilbraham Middle School, Wilbraham, MA), Paul Martin (Boston Lation Academy, Boston, MA), Chris Stafford, Thomas Russell (University of Mass., Amherst)

R40.083 Polymer mediated aggregation of Gold nanoparticles

Irene Tsai, Scott Kennedy (University of Mass. at Amherst-PSE), Andrew K. Boal, Faysal Ilhan, Vincent M. Rotello (University of Mass. at Amherst), Thomas P. Russell (University of Mass. at Amherst - PSE), Irene Y. Tsai, Scott Kennedy, Andrew K. Boal, Faysal Ilhan, Vincent M. Rotello, Thomas P. Russell

R40.084 Effect of surface roughness on failure mechanisms of soft adhesive layers

Arnaud Chiche, Jacob Hooker, Costantino Creton (Laboratoire PCSM-ESPCI, France), Yong Chen (CNRS-L2M, Bagnex, France)

R40.085 Effects of Heterogeneity on the Adsorption of Poly(ethylene oxide) at a Solid-Liquid Interface

Yu-Wen Huang, Vinay K. Gupta (University of Illinois at Urbana-Champaign, Department of Chemical Engineering)

R40.086 Patterned Attachment of Ultrathin Polymer Layers to Solid Substrates

Matthew R. Hammond, Edward J. Kramer (UCSB)

R40.087 Confined Asymmetric Diblock Copolymers

Qiang Wang, Paul Nealey, Juan De Pablo (Department of Chemical Engineering, University of Wisconsin - Madison)

R40.088 Confinement-Induced Shifts in the Dielectric Response of a Conductive Polymer

Ken Kojio, Sangmin Jeon, Steve Granick (Department of Materials Science and Engineering, University of Illinois at Urbana-Champaign)

R40.089 Alignment Mechanisms of Diblock Copolymers in Electric Fields

Jason DeRouchey, Thomas Thurn-Albrecht, Ting Xu (University of Massachusetts Amherst, MA), S.K. Satija (NIST, Gaithersburg, MD), Thomas Russell (University of Massachusetts Amherst, MA)

R40.090 'Parachute' Studies of Adsorption onto Polymer Surfaces: Comparison with Contact Angle Measurements

Neil Moe (Osmonics, Inc.)

R40.091 UV/ozone induced modification of silicone rubber surfaces

Kirill Efimenko, Jan Genzer (North Carolina State University)

R40.092 Thermal probe assignments of the glass transition temperature of ultrathin polymer films and the effects of thickness, interfacial energy and grafting

Ranjeet S. Tate, Tushar Jain, David S. Fryer, Paul F. Nealey, Juan J. de Pablo (Dept. of Chemical Engg., UW-Madison)

R40.093 Surface Passivation: A Route to Nonpreferential Surfaces

Ho-Cheol Kim, Christopher M. Stafford, Thomas P. Russell (Polymer Science and Engineering Department, University of Massachusetts at Amherst)

R40.094 Thin Film Morphologies of SBM Triblock Copolymers

K. Amanda Leach, Ho-Cheol Kim, Thomas P. Russell (Univ. of Massachusetts at Amherst - Polymer Science and Eng. Dept.), Ludwik Leibler, Francois Court (Elf Atochem)

R40.095 Characterization by Atomic Force Microscopy of Capillary Wave Fluctuations at Free Polymer Surfaces.

Cecile Bollinne, Stephane Cuenot, Bernard Nysten, Alain M. Jonas (Department of Materials Science, Universite catholique de Louvain.)

R40.096 Monte Carlo Simulations of Pattern Recognition of Copolymers near Heterogeneous Surfaces

James Semler, Jan Genzer (North Carolina State University)

R40.097 Controlling Self-Assembly of Helical, Rod-Like Polypeptides on Solid Surfaces

Alveda J. Williams (University of Illinois at Urbana-Champaign, Department of Chemistry), Vinay K. Gupta (University of Illinois at Urbana-Champaign, Department of Chemical Engineering)

R40.098 Surface Segregation and Nanostructure Formation in Ionomer Films

Russel Walters, Russell Composto (Materials Sci. & Eng and LRSM, Univ. of Pennsylvania), Joon-Seop Kim (Chosun University)

R40.099 Guided self-assembly of symmetric diblock copolymer films on chemically nanopatterned substrates

R. D. Peters, X. M. Yang, P. F. Nealey (University of Wisconsin)

R40.100 Growth routes of multicomponent thin organic films: the case of PTCDA and decanethiols deposited on gold.

Jens Pflaum, Giacinto Scoles, Antoine Kahn (Princeton Materials Institute, Princeton University, New Jersey 08544)

R40.101 Dynamics of Thermally Induced Phase Separation in Main-Chain Liquid Crystalline Polymer Solutions

Do Kim, Thein Kyu (Institute of Polymer Engineering, The University of Akron, Akron OH 44325)

R40.102 Polymer Mixtures by Molecular Design

Anne Mayes, Juan Gonzalez, Anne-Valerie Ruzette, You-Yeon Won (Department of Material Science and Engineering, MIT)

R40.103 Phase Behavior of Alkane Monolayers Ionically Bonded to Mica

Rahmi Ozisik, Maged A. Osman, Ulrich W. Suter (Institute of Polymers, Swiss Federal Institute of Technology (ETH))

R40.104 Molecular Dynamics Simulations of the Phase Behavior of a Soft-core Repulsion Liquid Crystal Model

Pu Tian, Grant Smith, Ramanathan Karthik (Department of Materials Science and Engineering and Department of Chemical and Fuels Engineering, University of Utah, Salt Lake City, Utah)

R40.105 Liquid Crystal / Liquid Crystalline Diblock Copolymer Binary Blends

Mitchell Anthamatten, Andres A. Tamez, Paula T. Hammond (MIT, Dept. of Chemical Engineering)

R40.106 Effect of Polymer Molecular Weight on the Phase Behavior of Polymer/Small Molecule Liquid Crystal Mixtures

Nathan Crawford, Mark Dadmun, Gary Lynn (University of Tennessee-Knoxville)

R40.107 Kinetics of Order-to-Order Transitions in Block Copolymers
Chia-Ying Wang, Timothy P. Lodge (Department of Chemistry, University of Minnesota, Minneapolis, MN 55455)

R40.108 The phase behavior and viscoelastic properties of block copolymers with hydrogenated aromatic hydrocarbon resins
Duyeol Ryu, Jin Kon Kim, WoonYong Jeong (Department of Chemical Engineering, Polymer Research Institute, Pohang University of Science and Technology, Pohang, Kyungbuk 790-784, Korea)

R40.109 Depletion Phenomena in Suspensions of Rigid Rods and Colloids
Yeng-Long Chen, Kenneth Schweizer (University of Illinois at Urbana-Champaign)

R40.110 Critical Chain Length for the Need of Supercooling of Extended-chain Crystals of Oligomers by Calorimetry
Jeongihm Pak, Marek Pyda, Bernhard Wunderlich (Department of Chemistry, The University of Tennessee, Knoxville, TN 37996-1600, and Chemical and Analytical Sciences Div., Oak Ridge National Lab., Oak Ridge, TN 37831-6197)

R40.111 Cylinder-sphere epitaxial transitions in block copolymer melts
M.W. Matsen (University of Reading)

R40.112 Computer Simulation of Copolymer Phase Behavior
Andrew Schultz, Carol Hall, Jan Genzer (NCSSU)

R40.113 Phase Behavior of Liquid-Crystalline/Isotropic Diblock Copolymer
Michael C.-Y. Huang (Dept. of Chemical Engineering, New Jersey Institute of Technology)

R40.114 Effects of Oscillating Electrophoretic Field on Mobility, Conformation, and Segregation of Polymer Chains in a Porous Medium
Grace Foo (National University of Singapore), Ras Pandey (University of Southern Mississippi)

R40.115 Solvation Thermodynamics of Ethers in Aqueous Solutions. A Molecular Dynamics Simulation Study
Yi Feng, Dmitry Bedrov, Grant Smith (Department of Materials Sci. and Eng., University of Utah)

R40.116 On the Validity of the Ogston Obstruction Model for Diffusion and Electrophoresis in Gels
Jean-Francois Mercier, Gary W. Slater (University of Ottawa)

R40.117 Heat Capacity of the Liquid-Liquid Mixture Perfluoroheptane and 2,2,4-Trimethylpentane Near the Critical Point
Emily R. Oby, D. T. Jacobs (Physics Department, The College of Wooster, Wooster, Ohio)

R40.118 Phase Transitions in Nanostructured Polyelectrolyte-Surfactant Complexes

Michael Leonard, Helmut Strey (Department of Polymer Science and Engineering, University of Massachusetts at Amherst)

R40.119 Adhesive and Elastic Properties of DOPA-Containing Hydrogels
Rebecca Webber, Ken Shull, Phillip Messersmith, Priti Madhav (Northwestern University)

R40.120 Electroviscous effects of Xanthan in water
David Norwood, Tamara Pearson, Catherine diBenedetto (Southeastern Louisiana University)

R40.121 The effects of LiClO₄ on the overall internal relaxation mode of polyethylene oxide (PEO) in methanol solution
Gregory Piet, Jim Selser, Rainer Walkenhorst, Rene Walter (University of Nevada, Las Vegas)

R40.122 Network viscoelastic behavior in poly(ethylene oxide) melts: effects of dissolved lithium perchlorate on the network structure and dynamic behavior
Rene Walter, Rainer Walkenhorst, Jim Selser, Malcolm Smith, Radoslav Bogoslovov, Greg Piet (Department of Physics, University of Nevada, Las Vegas)

R40.123 Dendrimer Electrophoresis in Free Solution
David Hoagland, Cynthia Welch (Polymer Sci. and Eng., U. of Mass. Amherst)

R40.124 PEO-PPO-PEO Block Copolymer Micelles in Aqueous Electrolyte Solutions: Effect of Anions and Temperature on the Micelle Structure and Interaction
Sathish Sukumaran (University of Cincinnati), Guomin Mao (Argonne National Laboratory), Gregory Beaucage (University of Cincinnati), Marie-Louise Saboungi, P Thiyagarajan (Argonne National Laboratory)

R40.125 Stabilizing Co-continuous Morphologies in Polymer Blends with Particles
B.Y. Asoo, G.H. Fredrickson, E.J. Kramer (UCSB)

R40.126 Intercalation of polymer melts in layered nanostructures: A coarse-grained molecular dynamics simulation study
B. L. Farmer, R. A. Vaia (Air Force Research Lab), R. K. Bharadwaj (Avery Research Center)

R40.127 Dynamics of plate-like and spherical microparticles in evaporating solutions
Andrew Guenther, Thein Kyu (The University of Akron, Department of Polymer Engineering)

R40.128 Relaxation of a Polymer Chain in a Melt
Katsumi Hagita, Hiroshi Takano (Dept. of Phys., Fac. of Sci. and Tech., Keio Univ.)

R40.129 Optimized Mechanical Behavior of Vinyl Ester Resins
Manisha Ganglani, John Torkelson, Stephen Carr (Northwestern Univ.)

R40.130 An Optical Rheometer for Simultaneous Study of Structures and Rheological Properties of Polymer Solutions under High Shear Rates
Khaled S. Mriziq, James Dai, Mark D. Dadmun (University of Tennessee/Knoxville), Hank D. Cochran (Oak Ridge National Laboratory/Oak Ridge)

R40.131 Elongational Relaxation of Polymer Fluids
D. H. Reneker (The University of Akron), A.L. Yarin (Technion-Israel Institute of Technology), Han Xu (The University of Akron)

R40.132 Slow Dynamics at the Glass Transition in Semicrystalline Polymers Studied by Pure-Exchange ^{13}C NMR

Tito J. Bonagamba, Eduardo R. deAzevedo, Fabio Becker-Guedes (Instituto de Fisica de São Carlos, Univ. de São Paulo, Brasil), Klaus Schmidt-Rohr (Dept. of Chemistry, Iowa State Univ., Ames IA)

R40.133 Dewetting Dynamics in Filled Polymeric Systems
Luo Haobin, Dilip Gersappe (Dept of Materials Science, SUNY Stony Brook)

R40.134 Positron Annihilation Lifetime Spectroscopy and the Boson Peak in Polycarbonate Copolymers

Christopher Soles (NIST Polymers Division), Robert Dimeo (NIST Center for Neutron Research), Alexander Kisliuk, Alexei Sokolov (University of Akron), Jianwei Liu, Albert Yee (University of Michigan), Wen-li Wu (NIST Polymers Division)

R40.135 Pressure Dependence of the Segmental Dynamics of Anthracene-Labelled Polyisoprene in Dilute Solution

Benjamin Punchard, David Adolf (The University of Leeds)

R40.136 Coexistence of Islands and Holes in Block Copolymer Thin Films
Seung-Heon Lee, Huiman Kang, Jinhan Cho, Yeon Sang Kim, Kookheon Char (School of Chemical Engineering, Seoul National University, Seoul 151-744, Korea)

R40.137 Glass Transition in CO_2 Treated Polysulfones by DSC and PAS

Y.C. Jean, J. P. Yuan, E.W. Hellmuth (University of Missouri-Kansas City)

R40.138 Effect of Functionality of Reactive Polymers on Reaction Kinetics and Structure of Copolymers at Immiscible Polymer Interface

Yooseong Yang, Char Kookheon (School of Chemical Engineering, Seoul National University)

Session S9. DMP/DPOLY: Organic Electronic Materials and Devices V: Photovoltaics and LEDs.

Wednesday afternoon, 14:30, Room 201, Washington State Convention Center

Chair: Willie Graupner, eMagin.

14:30 S9.001 Highly Efficient Conjugated Polymer/Fulleren Solar Cells
Christoph J. Brabec (Christian Doppler Laboratory for Plastic Solar Cells, Johannes Kepler University Linz)

15:06 S9.002 Optical and Electrochemical Characterization of Hybrid Inorganic/Organic Photovoltaics

Melissa Kreger, Jin Zhang (Chemistry Dept Univ of California Santa Cruz), Sue Carter (Physics Dept Univ of California Santa Cruz), H. Tillmann, H.-H. Horhold (Institute of Organic Chemistry, Univ of Jena)

15:18 S9.003 Highly efficient photoinduced charge transfer at the polymer/polymer interfaces of nanolayered heterojunctions of donor/acceptor pi-conjugated polymers
Maksudul M. Alam, Samson A. Jenekhe (Department of Chemical Engineering, Benson Hall, Box 351750, University of Washington, Seattle, WA 98195-1750)

15:30 S9.004 The Enhanced Photocurrent in UV region in MEH-PPV

Chao-Yi Tsai, Shu-Chun Yang, Wunshain Fann, Pei-Hsi Tsao (Institute of Atomic and Molecular Sciences, Academia Sinica, and Department of Physics, National Taiwan University, Taipei, Taiwan)

15:42 S9.005 New method to measure carrier drifting mobility in dispersive organic and polymer semiconductors

Xiaoming Zou, Arthur Epstein (Department of Physics, The Ohio State University)

15:54 S9.006 The Role of Sidechain Length on Luminescence Efficiency

Subramanian Vaidyanathan, Hanpeng Dong, Mary Galvin (Dept of Matls Sc and Engg, Univ of Delaware, Newark DE 19716)

16:06 S9.007 Effects of Side Branching, End Capping and Hole Transport Layer on Polyfluorene Light Emitting Diodes

Yuko Nakazawa (University Of California Santa Cruz, Dept. of Physics), Heinz-Georg Nothofer, Ullrich Scherf (Max Planck Institute for Polymer Research), Victor Lee, Campbell Scott, Robert Miller (IBM Almaden Research Center), Sue Carter (University of California Santa Cruz, Dept. of Physics), University of California Santa Cruz Collaboration, Max Planck Institute for Polymer Physics Collaboration, IBM Almaden Research Center Collaboration

16:18 S9.008 The Morphological Dependence of Charge Transport in a Luminescent Conjugated Polymer

Czek-Haan Tan (Institute of Atomic and Molecular Sciences, Academia Sinica, Taiwan), Anto Regis Inigo (Department of Physics, National Taiwan University, Taiwan), Wunshain Fann (Institute of Atomic and Molecular Sciences, Academia Sinica, Taiwan), Pei-Kuen Wei Collaboration (Institute of Applied Science and Engineering, Academia Sinica, Taiwan), Gung-Yeong Perng and Shaw-An Chen Collaboration (Department of Chemical Engineering, National Tsing Hwa University, Taiwan)

16:30 S9.009 Optical and Electronic Properties of MEH-DOO-PPV Red Emitting LEDs

J.M. Leger (University of California, Santa Cruz), H.-H. Hoerhold, H. Tillmann (Universitat Jena), S.A. Carter (University of California, Santa Cruz)

16:42 S9.010 Role of Average Conjugation Length in Conducting Polymers

Hanpeng Dong, Mary Galvin (Department of Materials Science and Engineering, Univ. of Delaware)

16:54 S9.011 The role of energetic disorders in conjugated polymers

Anoop Menon, Zukhra Niazimbetova (University of Delaware, Materials Science and Engineering), Rachel Jakubuiak, Christine Liberatore, Chris Collison, Lewis Rothberg (University of Rochester, Department of Chemistry), Mary Galvin (University of Delaware, Materials Science and Engineering)

17:06 S9.012 Emission in Pinwheel Aggregates of p-phenylene vinylene Oligomers

Frank Spano (Temple University)

17:18 S9.013 Transparent Oxides for Improved Polymer Optoelectronic Device Performance

Sue Carter (University of California, Santa Cruz), Alison Breeze (National Renewable Energy Laboratory), Melissa Kreger (University of California, Santa Cruz), Hans Horhold (University of Jena, Germany)

17:30 S9.014 High efficiency organic light emitting diodes using electrophosphorescence

Chihaya Adachi (Center for Photonics and Optoelectronic Materials (POEM), Department of Electrical Engineering, Princeton University, Princeton, NJ 08544)

Session V1. DPOLY: The Glass Transition: Bulk and Thin Film.

Thursday morning, 08:00, Ballroom 6A, Washington State Convention Center

Chair: Wen-Li Wu, National Institute of Standards and Technology.

08:00 V1.001 The character of the glass transition in thin polymer films

Richard Jones (Dept of Physics and Astronomy, University of Sheffield, UK)

08:36 V1.002 The Glass Transition at the Nano-Meter Scale: Considerations of Confinement and Size Effects

Gregory B. McKenna (Department of Chemical Engineering, Texas Tech University, Lubbock, Texas 79409-3121)

09:12 V1.003 Spatially Heterogeneous Dynamics in Polymer Melts and Glasses

M.D. Ediger (University of Wisconsin-Madison)

09:48 V1.004 A Monte Carlo Method for Characterizing the Structure of Glasses

Isaac C. Sanchez (Chemical Engineering Department, University of Texas at Austin)

Session V18. DPOLY: Nanoparticles.

Thursday morning, 08:00, Room 307-308, Washington State Convention Center

Chair: Evangelos Mania, The Pennsylvania State University.

08:00 V18.001 Elastic modulus of polypyrrole nanotubes: AFM measurement
Stéphane Cuenot, Sophie Demoustier-Champagne, Bernard Nysten (Unité POLY - UCL, place Croix du Sud, 1, B-1348 Louvain-la-Neuve, Belgium)

08:12 V18.002 Polymer-Induced Phase Separation of Nanoparticles in Lamellar Polymers
Jaep Kim (Dept. Physics, Columbia University, New York, NY 10027), Ben O'Shaughnessy (Dept. Chemical Engineering, Columbia University, New York, NY 10027)

08:24 V18.003 Selective Semiconductor Nanocluster Deposition on Epitaxially Patterned Semicrystalline Block Copolymer Film
Cheolmin Park, Jinwook Lee (Department of Materials Science and Engineering, MIT), Klavs F. Jensen (Department of Chemical Engineering, MIT), Mounqi G. Bawendi (Department of Chemistry, MIT), Edwin L. Thomas (Department of Materials Science and Engineering, MIT)

08:36 V18.004 Processing and Characterization of Polymers Containing Single-Wall Carbon Nanotubes
Reto Haggmueller, Jack Fischer, Karen Winey (Department of Material Science and Engineering, University of Pennsylvania, Philadelphia)

08:48 V18.005 Semiconducting Polymer Nanostructures: Synthesis, Self-assembly, and Properties
Samson A. Jenekhe (University of Washington, Dept. of Chemical Eng., Box 351750, Seattle, WA 98195-1750)

09:00 V18.006 Formation of Polystyrene Nanochannels on Corrugated Substrates
Nicolaus Rehse, Chun Wang, Mark Geoghegan, Robert Magerle, Georg Krausch (Universitaet Bayreuth - Physikalische Chemie II - 95440 Bayreuth - Germany)

09:12 V18.007 Self-assembling Nanoparticle Array Using Block Copolymer
Sanjun Niu, Brian Thurmond, Ravi Saraf (Virginia Tech, Blacksburg, VA 24061)

09:24 V18.008 Nanoparticles in Polymers: Particle Distribution in Lamellar Block Copolymer Films
Jane Cerise, Liu Zhen, C.J. Durning, R. Levicky (Department of Chemical Engineering and Applied Chemistry, Columbia University), A. Hoffmann, G.S. Smith (Los Alamos National Laboratory)

09:36 V18.009 Organization of Nanoparticles Using Holographic Photopolymerization

T.J. Bunning, C.L. Dennis (Air Force Research Laboratory/MLPJ, WPAFB, OH), V.P. Tondiglia, L.V. Natarajan (SAIC, Dayton, OH), D.W. Tomlin (MCI, Dayton, OH), H. Jeon, R.A. Vaia (Air Force Research Laboratory/MLBP)

09:48 V18.010 Ordering of Nanometer-Sized Particles in Polymer Brushes and Thin Homopolymer Films.

Rastislav Levicky, Zhen Liu, Jane Cerise, Christopher Durning (Dept. of Chemical Engineering, Columbia University)
10:00 V18.011 Real Time Measurement of Nano-particle Diffusion in Thin Polymer Films by X-ray Standing Waves

Rodney Guico (Argonne National Laboratory, Northwestern University), Andrew Richter, Jin Wang (Argonne National Laboratory), Kenneth Shull (Northwestern University)

10:12 V18.012 Nanoparticle diffusion at and near surfaces
Jiang Zhao, Sungchul Bae, Feng Xie, Steve Granick (Department of Materials Science and Engineering, University of Illinois at Urbana-Champaign, Urbana, IL 61801)

Session V19. DPOLY: Polymer Surface Structure and Molecular Orientation.

Thursday morning, 08:00, Room 310, Washington State Convention Center

Chair: Darrin Pochan, University of Delaware.

08:00 V19.001 AFM Imaging of Polymer Surfaces: What is the "true" surface morphology ?

Armin Knoll, Robert Magerle, Georg Krausch (Universitaet Bayreuth - Physikalische Chemie II - 95440 Bayreuth - Germany)

08:12 V19.002 Morphological Changes in Polymer Thin Films During X-Irradiation

Andrew Richter, Jin Wang (Advanced Photon Source, Argonne National Laboratory), Rodney Guico, Ken Shull (Department of Materials Science, Northwestern University)

08:24 V19.003 Surface Structure of Polystyrenes: Comparison of Lattice Chain Simulations and Scanning Probe Microscopy

Gerhard Goldbeck-Wood (Molecular Simulations Ltd), Valery Bliznyuk, Victor Burlakov, Hazel Assender, Andrew Briggs, Yusuke Tsukahara (University of Oxford), Kelly Anderson, Alan Windle (University of Cambridge)

08:36 V19.004 Surface Structures of UV-Irradiated Polymers

Renwu Zhang, Hongmin Chen, Li Ying, Chia-Ming Huang, Junjie Zhang, Peter Mallon, D.M. Zhu, Y.Y. Huang, T.C. Sandreczki (University of Missouri-Kansas City), Q. Peng, J.R. Richardson (University of Missouri-Columbia), Yichu Wu, Y.C. Jean (University of Missouri-Kansas City)

08:48 V19.005 From Homogeneous to Homeotropic Alignment: Effects of low surface Tension Fluorinated Groups on the Alignment of LC thin Films.

Dennis Smith, Rakchart Traiphol, Dvora Perahia (Department of Chemistry and MSamp;E, Clemson University, Clemson, Sc 29634-0973), Gian Felcher (Intense Pulsed Neutron Source, Argonne National Laboratory, Argonne, IL 60439)

09:00 V19.006 Surface Morphologies and LC Ordering of Side-Chain Diblock Copolymer Thin Films

Jung-Sheng Wu (MIT, Dept of Chemical Engineering, Cambridge, MA), Sushil K. Satija (NIST, Gaithersburg, MD), Paula T. Hammond (MIT, Cambridge, MA)

09:12 V19.007 Tailoring elastomeric surfaces through "mechanically assembled monolayers"

Jan Genzer, Kirill Efimenko (NC State University)

09:24 V19.008 Molecular Structure of Hydrophobic Alkyl Side Chains at Comb Polymer-Air Interface

Keshav Gautam, Ali Dhinojwala (Department of Polymer Science, University of Akron)

09:36 V19.009 Molecular order at polymer interfaces measured by broad-bandwidth vibrationally-resolved sum frequency generation spectroscopy.

Philip T. Wilson, Kimberly A. Briggman, John C. Stephenson, William E. Wallace, Lee J. Richter (National Institute of Standards and Technology)

09:48 V19.010 Sum Frequency Vibrational Spectroscopy of Nylon Surfaces

Seok-Cheol Hong, Chun Zhang, Y. R. Shen (Department of Physics, University of California, Berkeley, CA 94720)

10:00 V19.011 Orientation of semiflexible polymers at a liquid/liquid interface

Alexandra Ten Bosch (Laboratoire de Physique de la Matière Condensée, CNRS 6622, Parc Valrose, F-6108 Nice, France)

10:12 V19.012 X-ray Reflectivity Study of Langmuir Films of Amphiphilic Monodendrons

Wen-Jung Pao, Paul Heiney, MacKenzie Stetzer, Wook-Dong Cho, Virgil Percec (University of Pennsylvania)

10:24 V19.013 Synchrotron X-Ray Reflectivity Study of Molecular Layering in Thin Poly(dimethylsiloxane) Films

Guennadi Evmnenko, Sarah Dugan, Jan Kmetko, Pulak Dutta (Northwestern University)

10:36 V19.014 Surface Segregation and Bulk Thermodynamics in Blends of Long-Branched and Linear Chains

T.D. Martter, M.D. Foster, S. Xu, T. Yoo, R.P. Quirk (Department of Polymer Science, The University of Akron, Akron, OH 44325-3909), K. Ohno, D.M. Haddleton (Department of Chemistry, The University of Warwick, Coventry, CV4 7AL, United Kingdom), C. Hawker (IBM Almaden Research Center, 650 Harry Road, San Jose, CA, 95120-6099), C. Majkrzak (National Institute of Standards and Technology, Gaithersburg, MD 20899-8562), P. Butler (Oak Ridge National Lab, Oak Ridge, TN 37831-6393)

10:48 V19.015 Is there a PS-Skin on Annealed Polystyrene/Poly(methyl methacrylate) Samples?

G. Appel, D. Winesett, K. Kaznacheyev, H. Ade (North Carolina State U.), S. Stadler (NRL), A. Marsh (U. of Michigan), D. Fischer (NIST), A. Scholl, F. Nolting (ALS), J. Luning (SSRL), C. Morin, A. Hitchcock (McMaster U.)

Session W7. DPOLY: Thin Film Phase Behavior and Morphology of Blends and Block Copolymers.

Thursday morning, 11:00, Room 609, Washington State Convention Center

Chair: Sushil Satiga, National Institute of Standard and Technology.

11:00 W7.001 High-Throughput Study of Surface Pattern Formation in Thin Diblock Copolymer Films

Archie P. Smith, J. Carson Meredith, Jack F. Douglas, Eric J. Amis, Alamgir Karim (Polymers Division, National Institute of Standards and Technology)

11:12 W7.002 Pattern Formation and Evolution in Diblock Copolymer Thin Films above Order-Disorder Transition

Peter Green, Ratchana Limary, Jean-Loup Masson (Graduate Program in Materials Science and Department of Chemical Engineering, the University of Texas at Austin)

11:24 W7.003 Alignment of Block Copolymer Spherical Microdomains Using Substrate Features

Matthew Trawick, Christopher Harrison, P. M. Chaikin (Physics Department), John Sebastian, Richard A. Register (Chemical Engineering Department), Douglas H. Adamson (Princeton Materials Institute, Princeton University, Princeton, NJ 08544), Zhengdong Cheng (ExxonMobil Research and Engineering Company, 1545 route 22 East, Annandale, NJ 08801-0998), Miri Park (Lucent Technologies, Murray Hill, NJ)

11:36 W7.004 Copolymer Thin Films on Corrugated Substrates

Iulia Podariu, Amit Chakrabarti (Kansas State University)

11:48 W7.005 Controlling the morphology of symmetric ABC triblock copolymer between flat plates

Hsuan-Yi Chen (Materials Research Laboratory, University of California, Santa Barbara), Glenn H. Fredrickson (Department of Chemical Engineering and Materials, University of California, Santa Barbara)

12:00 W7.006 Modelling Polar Self Assembly

Monica Olvera de la Cruz, Mehmet Sayar (Northwestern University), Francisco J. Solis (Hiram College), Samuel I. Stupp (Northwestern University), NU Mats Sci Collaboration

12:12 W7.007 Effects of Topographical Confinement on the Long Range Order of Asymmetric Diblock Copolymer Films

Rachel A. Segalman, Glenn H. Fredrickson, Edward J. Kramer (University of California, Santa Barbara)

12:24 W7.008 Crystallization in Block Copolymer Films

Ian Hamley, Stephen Collins (School of Chemistry, University of Leeds, UK), Vittoria Balsamo (Univ Símón Bólivar, Dept Ciencia Mat, Venezuela)

12:36 W7.009 Phase-Separating Thin Film Polymer Blends: The Effect of Film Thickness on Morphology Evolution

R.J. Composto, Hao Wang* (Materials Sci. and LRSM, Univ. of Pennsylvania, Philadelphia, PA.)

12:48 W7.010 Phase Behavior of Polymer Thin Films

Ronald Jones, Sanat Kumar (Pennsylvania State University), Holger Gruell, Charles Han (NIST), Robert Briber (University of Maryland), Thomas Russell (University of Massachusetts)

13:00 W7.011 Phase Morphology Map of Polymer Blend Thin Films Confined to Narrow Strips

Bi-min Zhang Newby, Russell Composto (Department of Materials Science and Engineering, and LRSM, University of Pennsylvania)

13:12 W7.012 Phase Segregation in Two-Dimensional Polymer Blend Films

Donald Winesett, Harald Ade (Department of Physics, North Carolina State University)

13:24 W7.013 Thin, binary polymer films: Interplay between wetting and phase behavior

Marcus Muller, Kurt Binder (Institut fuer Physik, WA331, Jo Gutenberg Universitaet, D55099 Mainz), E.V. Albano (INIFTA, Universidad Nacional de La Plata, La Plata, Argentina)

13:36 W7.014 Revisiting the Surface Properties of PS/PVME Blends

Jeff Koberstein (Department of Chemical Engineering, Columbia University), Forrey Chris (Polymer Program, University of Connecticut)

Session W18. DPOLY: Computer Simulation II.

Thursday morning, 11:00, Room 308-308, Washington State Convention Center

Chair: Dilip Gersappe, SUNY-Stone Brook.

11:00 W18.001 Effects of tethered chains on adhesion

Scott Sides, Gary Grest, Mark Stevens (Sandia National Laboratories)

11:12 W18.002 Stretching and Relaxation of Polymer Molecules: A Molecular Dynamics Study with an Explicit Fluid

G. W. Slater, S. J. Hubert, M. P. P  pin (University of Ottawa)

11:24 W18.003 Theoretical Analysis of Hydrogen Bonding and Behavior of PEO in Aqueous Solutions

Elena E. Dormidontova (Department of Chemical Engineering and Materials Science, University of Minnesota, Minnesota, MN 55455)

11:36 W18.004 Free Energy Self-Averaging in Protein-Sized Random Heteropolymers

Jeffrey Chuang, Mehran Kardar (MIT), Alexander Grosberg (University of Minnesota)

11:48 W18.005 Cluster Lifetime and Heterogeneity in a Glass-forming Liquids

Mo Li (Johns Hopkins University)

12:00 W18.006 Calculating the Toughness of Glassy Polymers from Atomic Scale Simulations

Mark. O. Robbins, Joerg Rottler, Sandra Barsky (Dept. Physics and Astronomy, Johns Hopkins University, 3400 N. Charles Street, Baltimore, MD 21218)

12:12 W18.007 Plastic deformation and yielding of amorphous polymer glasses

Joerg Rottler, Mark O. Robbins (Dept. of Physics and Astronomy, The Johns Hopkins University, 3400 N. Charles Street, Baltimore, MD 21218)

12:24 W18.008 Local friction in polyolefins - a small-scale simulation approach

Jutta Luettmmer-Strathmann (Department of Physics, The University of Akron)

12:36 W18.009 A Crossover Behavior between the Diffusion Coefficients of Linear and Cyclic Alkanes

Rahmi Ozisik (Institute of Polymers, Swiss Federal Institute of Technology (ETH)), Ernst D. von Meerwall (Department of Physics, The University of Akron), Wayne L. Mattice (Department of Polymer Science, The University of Akron)

12:48 W18.010 Local structure of a polymer melt and the glass transition

Francis W. Starr (N.I.S.T, Gaithersburg, MD), Srikanth Sastry (Jawaharlal Nehru Centre for Advanced Scientific Research, Bangalore, India), Sharon C. Glotzer, Jack F. Douglas (N.I.S.T.)

13:00 W18.011 Spatially correlated dynamics in a simulated glass-forming polymer melt

Yeshitila Gebremichael (Chemical Physics Program, IPST, University of Maryland, and Center for Theoretical and Computational Materials Science, and Polymer Division, National Institute of Standards and Technology, Gaithersburg, MD 20899), Thomas B. Schroeder, Francis W. Starr, Sharon C. Glotzer (Center for Theoretical and Computational Materials Science, and Polymer Division, National Institute of Standards and Technology, Gaithersburg, MD 20899)

13:12 W18.012 Molecular Dynamics Simulations of Polymer Bulk and Surface Properties

Neil Moe (Osmonics, Inc.)

Session X4. DPOLY: Polymer Nanostructures II.

Thursday afternoon, 14:30, Ballroom 6E, Washington State Convention Center

Chair: Robert Briber, University of Maryland.

14:30 X4.001 Block Copolymer Templates for Ordered Arrays of Nanoscopic Structures

Thomas Russell, Thomas Thurn-Albrecht, Hocheol Kim, Dong Ha Kim, Mustafa Bal, Mark Tuominen, James Goldbach, Jacques Penelle (University of Massachusetts Amherst, MA 01003), Craig Hawker (IBM Almaden Research Center, San Jose, CA)

14:42 X4.002 Characterization of Nanoporous Ultra-low Dielectric Constant Materials

Gai-Ying Yang, Robert M. Briber (University of Maryland, College Park, MD 20742), Elbert Huang, Robert Miller (IBM Almaden Research Center, 650 Harry Road, San Jose, CA 95120)

14:54 X4.003 Self-Assembled Triblock Copolymers as Templates to Fabricate Nanoporous Thin Films

Shu Yang, Peter Mirau, Chien-Shing Pai, Omkaram Nalamasu, Elsa Reichmanis (Bell Laboratories, Lucent Technologies), Eric Lin, Hae-Jeong Lee (National Institute of Standards and Technology, Polymers Division), David Gidley, William Frieze (Department of Physics, University of Michigan), Jianing Sun, Huagen Peng, Terry Dull, Albert Yee (Department of Materials Science and Engineering, University of Michigan)

15:06 X4.004 Propagation of Nanopatterned Substrate Templated Ordering of Block Copolymers in Thick Films

Lee D. Rockford (Intel LTD Components Research, UMass Amherst Dept. Polymer Science), Simon G. J. Mochrie (Yale Dept. Physics and Applied Physics), Thomas P. Russell (Umass Amherst, Dept. Polymer Science)

15:18 X4.005 The formation of nanometer scale structures by simultaneous exposure of polymer surfaces to solvents and mechanical stress

F. Stevens, R. Leach, J. T. Dickinson (Washington State University)

15:30 X4.006 Nanoscopic Dispersion of Minor-Phase Droplets in Polymer Blends via Pulverization

John Torkelson, Klementina Khait, Andrew Lebovitz (Northwestern Univ., Evanston, IL)

15:42 X4.007 Nanostructured Thermoset Epoxies

Jennifer Dean, Robert Grubbs, Walid Saad, Robert Cook, Frank Bates (Department of Chemical Engineering and Materials Science, University of Minnesota, Minneapolis, MN 55455)

15:54 X4.008 Rheological and rheo-optical characterization of the order-disorder transition in a thermotropic hexagonal columnar liquid crystalline polymer

H. Duan, S. D. Hudson (Case Western Reserve U.), M. Holerca, V. Percec (U. Pennsylvania)

16:06 X4.009 Electrically Tunable Microlens via Photopolymerization-Induced Phase Separation of Liquid Crystal/Monomer Mixtures Based on Four-Wave Mixing

Thein Kyu, Domasius Nwabunma (Institute of Polymer Engineering, The University of Akron, Akron OH 44325)

16:18 X4.010 Coils, beads, tubes, ribbons, and branches produced by electrospinning polymer fibers

Darrell H. Reneker, Sureeporn Koombhongse, Wenxia Liu (The University of Akron), Hao Fong (Universal Technology Corporation)

16:30 X4.011

16:42 X4.012 Crosslinked Polymer Lamellae with Tunable Elasticity and Stability

Dennis Discher, Harry Bermudez, Daniel Hammer, Frank Bates, Bohdana Discher (University of Pennsylvania and University of Minnesota)

16:54 X4.013 Grain Structure in Block Copolymers

Nitash Balsara (University of California, Berkeley), Won Kim, Bruce Garetz (Polytechnic University, Brooklyn)

17:06 X4.014 Stability of a Layered Block Copolymer Melt During Perpendicular Deformation

Yachin Cohen (Technion, Israel), Edwin L Thomas (MIT, Cambridge MA)

17:18 X4.015 Role of interaction range on the spontaneous self-assembly of block copolymer nanostructures

Sumeet Salaniwal, Sanat Kumar (Dept. of Material Science and Engineering, The Pennsylvania State University, University Park, PA 16801)

Session X18. DPOLY: Polymer Dynamics and Processing.

Thursday afternoon, 14:30, Room 307-308, Washington State Convention Center

Chair: Nitash Balsara, University of California, Berkeley.

14:30 X18.001 Scaling effects of shearing junctions

Delphine Gourdon, Jacob Israelachvili (UCSB)

14:42 X18.002 Watching Molecules under Confinement.

Ashis Mukhopadhyay, Jiang Zhao, Steve Granick (Materials Science and Engineering, University of Illinois at Urbana-Champaign), Sung Chul Bae (Pohang University of Science and Technology, Pohang, Korea)

14:54 X18.003 Where is the boundary of fluid flow past a surface?

Yingxi Zhu, Steve Granick (University of Illinois at Urbana-Champaign)

15:06 X18.004 Chain-Length Dependence of the Concentration Dependence of Polymer Self-Diffusion and Diffusion-Limited Reactions in Polymer Solutions

Brian P. Chekal, John M. Torkelson (Northwestern University)

15:18 X18.005 Molecular Weight Dependence of Polymer Melt Viscosity: Percolation basis for 3.4 Power

Richard P. Wool (Department of Chemical Engineering, University of Delaware)

15:30 X18.006 Rheology of Asymmetric Star Polymer Melts

Amalie L. Frischknecht, Scott T. Milner (ExxonMobil Research and Engineering Co., Annandale, NJ), Andrew Pryke, Ron N. Young (Dept. of Chemistry, University of Sheffield, Sheffield, UK), Rhoda Hawkins, Tom C. B. McLeish (IRC in Polymer Science and Technology, Dept. of Physics and Astronomy, University of Leeds, Leeds, UK)

15:42 X18.007 Rheo-optical Investigation of star-branched and hyperbranched polystyrene melts

Semen Kharchenko (Chemical Engineering, Wayne State University, Detroit, MI), Jeff Cernohous, Shivshankar Venkataramani (3M Corporate Research, St. Paul, MN), Rangaramanujam Kannan (Chemical Engineering, Wayne State University, Detroit, MI)

15:54 X18.008 Double Reptation Predictions of Linear Viscoelasticity in Melt Miscible Polymer Blends

Jai Pathak, Sanat Kumar, Ralph Colby (Mat. Sci. and Eng., Penn. State Univ., Univ. Park, PA)

16:06 X18.009 Molecular dynamics study of slip at the interface between immiscible polymers.

Sandra Barsky (Lawrence Berkeley National Lab, and University of California at Berkeley), Mark Robbins (Johns Hopkins University)

16:18 X18.010 Slip at an entangled polymer interface

Jacqueline Goveas (Rice University)

16:30 X18.011 Does a polymer chain probe solvent dynamics?

Steve Peterson, Isabel Echeverria, John Schrag (Dept. of Chemistry, University of Wisconsin Madison)

16:42 X18.012 Ultrasound Devulcanization of Poly(dimethyl siloxane) Rubber, Characterized by Molecular Mobility

J. C. Parr, S. E. Shim, A. I. Isayev, E. D. von Meerwall (Univ. Akron)

16:54 X18.013 The Diffusion of an Alternating Copolymer to the Biphasic Interface of an Immiscible Polymer Blend

Michael Arlen, Mark Dadmun (Chemistry Department, University of Tennessee), William A. Hamilton (Solid State Division, Oak Ridge National Laboratory)

15:06 X18.014 Elasticity of Active gels

Tanniemola Liverpool (Condensed Matter Theory Group, Blackett Laboratory, Imperial College, Prince Consort Road, London SW7 2BZ, U.K.), Anthony Maggs, Armand Ajdari (PCT, ESPCI, 10 rue Vauquelin, 75231 Paris cedex 05, France), PCT Collaboration, Blackett Collaboration

Session X19. DPOLY: Networks.

Thursday afternoon, 14:30, Room 310, Washington State Convention Center

Chair: Scott Milner, Exxon Research and Engineering.

- 14:30 X19.001 Entanglements in polymer networks: two-state invariant
Kristian Müller-Nedebock (Dept of Physics/Inst. for Theoretical Physics, University of Stellenbosch, Stellenbosch, South Africa)
- 14:42 X19.002 Physical Aging of Randomly Cross-Linked Polymer Systems
Tian Xie, Sanat Kumar (Pennsylvania State University)
- 14:54 X19.003 Conserved linking in single- and double-stranded polymers
Joseph Plewa, Thomas Witten (University of Chicago)
- 15:06 X19.004 Effect of volume exclusion on the critical behavior of the shear modulus of random networks.
Jordi Cohen, Michael Plischke (Simon Fraser University)
- 15:18 X19.005 Phase relations in poly (vinyl methyl ether) gels
Frank Meeussen, Yannick Bauwens, Rob Moerkerke, Erik Nies, Ron Koningsveld, Hugo Berghmans (Catholic University Leuven), Laboratory for polymer research Team
- 15:30 X19.006 A theory of thermoreversible gelation.
Grzegorz Szamel (Department of Chemistry, Colorado State University)
- 15:42 X19.007 Discrimination among Free Energy Functions by Swelling
Gregory McKenna (Texas Tech University)
- 15:54 X19.008 Chiral Sieve from Imprinted Networks
Yong Mao, Mark Warner (Cavendish Laboratory, Cambridge, CB3 0HE, UK), Polymers and Colloids Team
- 16:06 X19.009 Scaling Analysis of Surfactant Templated Polyacrylamide Gel Surfaces
D.H. Van Winkle, M. Chakrapani (Dept. of Physics and the Center for Materials Research and Technology, Florida State University, Tallahassee, Florida 32306 USA), S.J. Mitchell, P.A. Rikvold (Dept. of Physics, School of Computational Science and Information Technology, and the Center for Materials Research and Technology, Florida State University, Tallahassee, Florida 32306 USA), G. Buendia (Dept. of Physics, Universidad Simon Bolivar, Caracas, Venezuela, and the School of Computational Science and Information Technology, Florida State University, Tallahassee, Florida 32306 USA)
- 16:18 X19.010 Self-Assembly of Molecular Threads into Reversible Gels

Mehmet Sayar (Department of Materials Science and Engineering, Northwestern University, Evanston, Illinois 60208), Samuel I. Stupp (Department of Materials Science and Engineering, Department of Chemistry, Medical School, Northwestern University, Evanston, Illinois 60208)

- 16:30 X19.011 Hydrogen-Bonded Gels of Poly(ethylene oxide) in Water
B. Hammouda (National Institute of Standards and Technology), D. Ho (University of Maryland)
- 16:42 X19.012 Structure and Clustering of Associating Polymers in Solution
Kathleen Kolbet, Tony Huynh (Lebanon Valley College), Kenneth Schweizer (University of Illinois at Urbana-Champaign)
- 16:54 X19.013 Critical fluctuations near the vulcanization transition and the connection with percolation: A renormalization-group approach
Wei-qun Peng, Paul M. Goldbart (University of Illinois at Urbana-Champaign), Alan McKane (University of Manchester)
- 17:06 X19.015 Chain conformation dependence of the fractal dimension of polymer aggregates
Chi Wu, Shufu Peng (Department of Chemistry, The Chinese University of Hong Kong, Shatin, N.T. HONG KONG)

Session X21. DBP/DCP: From Protein Machines to Cellular Oscillators.

Thursday afternoon, 14:30, Room 604, Washington State Convention Center

Chair: Jonathan Howard, University of Washington.

- 14:30 X21.001 Motor Proteins: Observations and Theory
Michael E. Fisher (University of Maryland, Institute for Physical Science and Technology, College Park, MD 20742-2431)
- 15:06 X21.002 Studying Single Molecules Using Optical Tweezers
Carlos Bustamante (University of California, Berkeley)
- 15:42 X21.003 Polymerization-Driven Cell Motility
Julie Theriot (Stanford University)
- 16:18 X21.004 How hearing happens: mechano-electrical transduction and amplification by hair cells of the internal ear
A. J. Hudspeth (Howard Hughes Medical Institute and The Rockefeller University)

Session Y18. DPOLY: Optical Properties.

Friday morning, 08:00, Room 307-308, Washington State Convention Center

Chair: David Vanden Bout, The University of Texas at Austin.

- 08:00 Y18.001 Visible Wavelength Double Gyroid Photonic Crystals from Block Copolymers
Edwin Thomas, Augustine Urbas, Natalia Yufa, Peter DeRege, Timothy Swager (MIT)
- 08:12 Y18.002 Metallo-Dielectric Photonic Crystals Based on Self-Assembled Diblock Copolymers
Michael Bockstaller, Edwin L. Thomas (Dept. Materials Science and Engineering M.I.T.)
- 08:24 Y18.003 Near-Field Optical Imaging of Photonic Block Copolymer Morphology
Michael J. Fasolka, Jeeseong Hwang, Lori S. Goldner (Optical Technology Division - NIST, Gaithersburg, MD 20899), Augustine Urbas, Peter DeRege, Edwin L. Thomas (Dept. of Materials Science and Engineering, MIT)
- 08:36 Y18.004 Reyleigh-Brilluoin Scattering from Block Copolymer Photonic Crystals
Augustine Urbas, Peter DeRege, Edwin Thomas (MIT), George Fytas (F.O.R.T.H.)
- 08:48 Y18.005 Plasma Polymerized Multilayer Optical Interference Thin Films
Hao Jiang (Anteon Co., Dayton), W.E. Johnson (Air Force Research Laboratory/MLP, WPAFB), J.T. Grant (University of Dayton Research Institute, Dayton), K.G. Eyink (Air Force Research Laboratory/MLP, WPAFB), E.M. Johnson (U.Cincinnati, MSE), D. Tomlin (TMCI, Dayton), J Brown, T.J. Bunning (Air Force Research Laboratory/MLP, WPAFB)
- 09:00 Y18.006 Tunable Lasing in Cholesteric Liquid Crystalline Elastomers
Peter Palfy-Muhoray, Antonio Munoz, Bahman Taheri (Liquid Crystal Institute, Kent State University, Kent, Ohio 44242-0001, USA.), Heino Finkelmann, Sung Tae Kim (Institut für Makromolekulare Chemie, Albert-Ludwigs-Universität, Freiburg, 79104)
- 09:12 Y18.007 Spectrally narrowed laserlike emission in a novel organic salt, DEST: cooperative emission
Shida Tan, Alpana Mishra, Ayayi Ahyi, Achintya Bhowmik, Aditya Dharmadhikari, Mrinal Thakur (Photonic Materials Research Lab, 202 Ross Hall, Auburn University, Auburn, AL 36849)

09:24 Y18.008 Ultrafast Optical Kerr Effect Measurements of Third-Order Nonlinearities in Novel Polydiacetylene-Based Organic Chromophores

Aaron Slepko, Frank A. Hegmann (Department of Physics, University of Alberta), Rik R. Tykwinski (Department of Chemistry, University of Alberta)

09:36 Y18.009 On the Prediction of the Nonlinear Absorption in Reverse Saturable Absorbing Materials

Ruth Pachter, Kiet A. Nguyen, Paul N. Day, Joshua C. Kennel (Air Force Research Laboratory, Materials and Manufacturing Directorate, Wright-Patterson AFB, OH 45433-7702)

09:48 Y18.010 Measurement of the specific heat of a copolymer film of vinylidene fluoride and trifluoroethylene at low temperatures

R. W. Newsome Jr., E. Y. Andrei (Dept. of Physics, Rutgers University, NJ)

10:00 Y18.011 Infrared Spectroscopic Ellipsometry Study on PVDF Copolymer Langmuir-Blodgett Thin Films

Mengjun Bai (University of Nebraska-Lincoln), Jaewu Choi (Center for Advanced Microstructure and Devices, Louisiana, University of Nebraska-Lincoln), Daniel W. Thompson, P. A. Dowben, Stephen Ducharme (University of Nebraska-Lincoln), V. M. Fridkin (Institute of Crystallography, Russian Academy of Sciences, University of Nebraska-Lincoln), S. P. Palto, N. N. Petukora, S. G. Yudin (Institute of Crystallography, Russian Academy of Sciences)

10:12 Y18.012 Planarization of polyphenyls under hydrostatic pressure

Kirill Zhuravlev (Washington State University), Matthew McCluskey (Washington State University and Institute for Shock Physics)

10:24 Y18.013 Semiempirical and first-principles electronic-structure calculations for phases of nitromethane under pressure

Dionisios Margetis (Division of Engineering and Applied Sciences, Harvard University), Marcus Elstner (Division of Engineering and Applied Sciences, Harvard University, and Theoretische Physik, Universitat-GH, Paderborn, Germany), M. Riad Manaa (Chemistry and Materials Science Directorate, Lawrence Livermore National Laboratory), Efthimios Kaxiras (Department of Physics and Division of Engineering and Applied Sciences, Harvard University), Thomas Frauenheim (Theoretische Physik, Universitat-GH, Paderborn, Germany)

Session Y19. DPOLY: Electronic Properties of Organic Material.

Friday morning, 08:00, Room 310, Washington State Convention Center

Chair: Richard Vaia, Wright Patterson Air Force Base.

08:00 Y19.001 Phase-separated, conducting composites from polyaniline and benzobisthiazole rigid rod polymer.

L.S. Tan, R.A. Vaia, R.J. Spry (Air Force Research Laboratory-Materials Directorate), S.R. Simko, S.J. Bai, B.E. Taylor (University of Dayton Research Institute)

08:12 Y19.002 High Field Magnetoconductivity of Iodine Doped Helical Polyacetylene

D.-S. Suh, T. J. Kim, A. N. Aleshin, Y. W. Park (School of Physics, Seoul National Univ., Korea), G. Piao, K. Akagi, H. Shirakawa (Institute of Materials Science, Univ. of Tsukuba, Japan), J. S. Brooks (Dept. of Physics and National High Magnetic Field Lab., Florida State Univ.)

08:24 Y19.003 Fluctuation-Facilitated Charge Migration along DNA

Maria D'Orsogna, Joseph Rudnick, Robijn Bruinsma (Department of Physics, UCLA, Box 951547, Los Angeles, CA 90095-1547)

08:36 Y19.004 Origin of giant optical nonlinearity in charge-transfer-Mott insulators: A new paradigm for nonlinear optics

Guoping Zhang (Department of Physics and Astronomy, The University of Tennessee at Knoxville, TN 37996-1200), Thomas F. George (Office of the Chancellor, 213 Old Main, University of Wisconsin-Stevens Point, Stevens Point, WI 54481-3897)

08:48 Y19.005 The first hyperpolarizabilities of simple sulfur-containing charge transfer chromophores using the hyper-Rayleigh scattering at 1064 and 1907nm excitation wavelengths

D.-J. Jang, H.C. Wang, C.H. Wang (Department of Physics, National Sun Yat-sen University, Kaohsiung, Taiwan, R.O.C.), Ching-Fong Shu (Department of Applied Chemistry, National Chiao Tung University, Hsin-Chu, Taiwan, R.O.C.)

09:00 Y19.006 Quantum interference effect and charge-transport in the conducting Langmuir-Blodgett films of BEDO-TTF and stearic acid: a new example of organic quantum well?

Yasuo Ishizaki, Makoto Suzuki, Hitoshi Ohnuki (Laboratory of Applied Physics, Tokyo University of Mercantile Marine, Tokyo, Japan), Tatsuro Imakubo (Condensed Molecular Materials Laboratory, The Institute of Physical and Chemical

Research RIKEN, Saitama, Japan), Mitsuru Izumi (Laboratory of Applied Physics, Tokyo University of Mercantile Marine, Tokyo, Japan)

09:12 Y19.007 Studies of Surface Charging of Polymers by Indirect Triboelectrification

James Mantovani (Florida Institute of Technology), Carlos Calle, Ellen Groop (NASA Kennedy Space Center), Martin Buehler (Jet Propulsion Laboratory, California Institute of Technology)

09:24 Y19.008 Maximum Frictional Charge Generation on Polymer Surfaces

Carlos Calle, Ellen Groop (NASA Kennedy Space Center), James Mantovani (Florida Institute of Technology), Martin Buehler (Jet Propulsion Laboratory, California Institute of Technology)

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