# Session A8. DPOLY: Filled Polymer Systems I.

**Monday morning, 08:00, 101H, MCC**

08:00 A8.01 Microscopic Theory of Structure and Phase Behavior of Polymer-Particle Mixtures; K.S. Schweizer

08:36 A8.02 Dynamics of Nano and Macro Filled Polymer Systems; Ramanan Krishnamoorti

09:12 A8.03 Theoretical Modeling of Filled Polymer Systems and Nanocomposites; Anna Balazs

09:48 A8.04 Phase Separation and Wettability of Polymers Near Heterogeneous Boundaries; Alamgir Karim, Jack Douglas, Da-Wei Liu, Eric Amis

10:24 A8.05 Interactions between Phase Separation and Dendritic Crystal Growth in a Clay Filled Polymer Blends; Vincent Ferreiro, Jack F. Douglas, Alamgir Karim

10:36 A8.06 Diblock Copolymer/Layered Silicate Nanocomposite Thin Film Stability; Ratchana Limary, Peter Green

10:48 A8.07 Morphological Evolution under Shear of PS/PMMA/clay Nanocomposites using Synchrotron X-Ray Method; Weidong Liu, F. Medelline-Rodriguez, R. Somani, I. Sics, B. S. Hsiao, M. Rafailovich, B. Chu, J. Sokolov

# Session A22. DPOLY: Gelation and Associating Polymers.

**Monday morning, 08:00, 208C, MCC**

08:00 A22.01 What is the sol-gel transition in reversibly associating polymers; Sanat Kumar

08:12 A22.02 Phase diagram classification for associating systems of f-functional monomers; Aleksander Ermoshkin, Igor Erukhimovich

08:24 A22.03 Structure and thermodynamics of associated solutions; Narayan Variankaval, Tejas Sukhadia, Mary Rezac, Abhiraman Agaram

08:36 A22.04 Phase behavior of living polymer solutions; Jacek Dudowicz, Karl Freed, Jack Douglas

08:48 A22.05 Phase Transformations in Disordered Heteropolymer Gels; Lorin Gutman, Eugene Shakhnovich

09:00 A22.06 Renormalization-group approach to the vulcanization transition; Weiqun Peng, Paul M. Goldbart

09:12 A22.07 A New Mean-field Theory for Equilibrium Gel Swelling; Yanbin Huang, Nicholas A. Peppas

09:24 A22.08 Synthesis, characterization, and SANS investigations of poly(ethyl acrylate)-l-polyisobutylene bicomponent conetwork; Kristoffer Almdal, Kell Mortensen, Ib Johannsen, Béla Iván, JØrgen Kops

09:36 A22.09 Structural Characterization of templated polyacrylamide gels by small angle X-ray scattering; Mukundan Chakrapani, David H Van Winkle

09:48 A22.10 The strength of the gel effect in free radical polymerization: interplay of polymer physics and chain transfer; Brian P. Chekal, John M. Torkelson

10:00 A22.11 Hydrogels from Self-Assembly of Fluoroalkyl-Ended Poly(Ethylene Glycol): Phase Behavior, Rheology and Erosion Kinetics; Giyoong Tae, Julie Kornfiled, Jeff Hubbell

10:12 A22.12 Kinetic Simulation of Networks Synthesized by Free Radical Polymerizations; Jennifer H. Ward, Nicholas A. Peppas

10:24 A22.13 Morphology and Dynamics of Interpenetrating Polymeric Networks with Combined pH and Temperature Sensitivity; Jing Zhang, Nicholas Peppas

10:36 A22.14 Polysoaps within the p-Cluster Model: Solutions and Brushes; Oleg Borisov, Avraham Haperin

10:48 A22.15 Mechanism of Shear Thickening in Hydrophobically End-Capped Poly(ethylene oxide) in Aqueous Solutions; Sharon Ma, Stuart Cooper

# Session A23. DPOLY: Mechanical and Rheological Properties.

**Monday morning, 08:00, 208D, MCC**

08:00 A23.01 Fracture of Semicrystalline-Glassy Block Copolymers: Chain Architecture Effects; C.Y. Ryu, G.H. Fredrickson, E.J. Kramer, S.F. Hahn
08:12 A23.02 A Fresh Approach to a Constitutive Theory for Elastomers; Robert Landel, James Caruthers
08:24 A23.03 Investigation of the Beta Transition in Linear Low Density Polyethylene (LLDPE); Jesse Gavin, Maya Arnott, Christina Nieman, James Madsen, Kevin McLaughlin
08:36 A23.04 Adhesion and Bulk Mechanical Properties of Thermoreversible Gels Based on Acrylic Triblock Copolymers; Kenneth Shull, Alfred Crosby, Cynthia Flanigan
08:48 A23.05 Comparison of Dielectric and Viscoelastic Properties of cis-Polyisoprene: Test of Tube Dilation Mechanism; Hiroshi Watanabe, Yumi Matsumiya, Kunihiro Osaki
09:00 A23.06 Rheo-optical FTIR Spectroscopic Investigation of Thermoplastic Elastomers; Gerald Hofmann, Rangaramanujam Kannan
09:12 A23.07 A Brillouin scattering study of rubberlike networks; Moitreyee Sinha, H. E. Jackson, J. E. Mark, B. Erman, D. Walton
09:24 A23.08 Mechanical properties of pentablock poly(vinylcyclohexane)-poly(ethylene) (PVCH-PE) copolymer systems.; Theresa Hermel, Frank Bates, William Gerberich, Stephen Hahn
09:36 A23.09 Rheooptical Studies of the dynamic glass transition: observing the crossover to entropic elasticity.; Ravi K. Verma, Julia A. Kornfield
09:48 A23.10 Physical Aging, Coreset Curl, and Stress Relaxation of PETG Polyester; Dennis J. Massa, James M. O'Reilly, Dennis R. Perchak, Jeffrey R. Gillmor
10:00 A23.11 Nucleation and Propagation of Shear Bands in Semicrystalline Polyamide 6; Ghislaine Coulon, Vincent Ferreiro
10:12 A23.12 Glass and melting transitions of the mesophase in gel-spun, ultra high molar mass polyetheylene fibers; Bernhard Wunderlich
10:24 A23.13 Thickness Dependence of Surface Modes on a Gel; Keunho Ahn, Kyung Hwan Yoon, Mahn Won Kim
10:36 A23.14 A Solution Rheology Approach to Resolving Component Dynamics in Miscible A/B Blends: Tube Dilation and Friction Factors of Polymers A and B; Xiaoping Yang, Shi-Qing Wang
10:48 A23.15 A Molecular Design to Enhance Toughness of High T_g Glassy Polyesters and Polyestercarbonates; Xiangyang Li, Albert Yee

# Session B3. DBP: Biological Physics Prize Symposium.

**Monday morning, 11:00, 101FG, MCC**

11:00 B3.01 Molecular Mechanics of Single Protein Molecules Measured with the Atomic Force Microscope; Paul K. Hansma
11:36 B3.02 Sub-molecular resolution of single macromolecules with cryo atomic force microscopy; Zhifeng Shao
12:12 B3.03 The Micro-mechanics of Single Proteins Studied with AFM and Molecular Biology; Julio M. Fernandez
12:48 B3.04 In vitro Measurements of Cell Adhesion with the Manipulation Force Microscope; Ivar Giaever

# Session B8. DPOLY: Reversibly Associating Polymers: Applications to Synthetic and Biopolymers.

**Monday morning, 11:00, 101H, MCC**

11:00 B8.01 Dynamics of Entangled Solutions of Associating Polymers; Michael Rubinstein
11:36 B8.02 Multiparticle Microrheology Measurements of Biopolymers and Networks; D.A. Weitz
12:12 B8.03 Thermodynamics of the Polymerization of Actin; Sandra C. Greer
12:48 B8.04 Reversible Thermal Gelation of Hyperbranched Polymers; Dimitris Vlassopoulos
13:24 B8.05 Structure and Properties of Polysaccharide Based BioPolymer Gels; Robert K. Prud'homme

# Session B22. DPOLY: Pressure Effects on Polymers II.

**Monday morning, 11:00, 208C, MCC**

11:00 B22.01 Density Functional Calculations on the Structure of Crystalline Polyethylene under high pressures; M.S. Miao, M.L. Zhang, V.E. Van Doren, C. Van Alsenoy, J.L. Martins, Department of Physics University of Antwerp(RUCA) Team, Department of Chemistry University of Antwerp (UIA) Collaboration, INESC Portugal Collaboration
11:12 B22.02 Anomalous Pressure Dependence of the Critical Fluctuations in binary blends and diblock copolymers of PDMS and PEE.; Kell Mortensen, Dietmar Schwahn, Henrich Frielinghaus, Kristoffer Almdal
11:24 B22.03 Effect of pressure on the conformational dynamics in polyethylene: A molecular dynamics simulation study; R. K. Bharadwaj, R. H. Boyd
11:36 B22.04 Shock Wave Compression of Viscoelastic and Nanoporous Polymers; Selezion A. Hambir, Hackjin Kim, Dana D. Dlott
11:48 B22.05 On the Phase Diagram of Supercritical Polymer Solutions; Yuri B. Melnichenko, George D. Wignall
12:00 B22.06 Impact of Solvent Quality and Polymer Architecture on Supercritical Fluid-Polymer Phase Behavior: A Small-Angle Neutron Scattering Investigation; Todd DiNoia, John van Zanten, Mark McHugh

# Session B23. DPOLY: Polyelectrolytes.

**Monday morning, 11:00, 208D, MCC**

11:00 B23.01 Control of ionization in weak polyelectrolytes by applying external DC and AC electric fields; Sung Chul Bae, Svetlana Sukhishvili, Steve Granick
11:12 B23.02 Mechanical Properties of Electroactive Polymer Gels and Their Behavior in DC Electric Fields; Li Yao, Sonja Krause
11:24 B23.03 Electromechanical Actuation of Encapsulated Polymer Hydrogels in an Electric Field; Patrick T. Mather, Seung B. Chun
11:36 B23.04 Structure of Polymer Electrolyte PEO-TFSI in Liquid State: A Neutron Scattering Study; Guomin Mao, M.-L. Saboungi, D. L. Price, M. B. Armand
11:48 B23.05 Ordered Phases of Polyelectrolyte-Surfactant Complexes in Aqueous Solution; Michael Leonard, Helmut Strey
12:00 B23.06 A simple model for the conformations and structure of polyelectrolytes with acid-base equilibria; Chwen-Yang Shew, Arun Yethiraj
12:12 B23.07 A Scaling Method to Estimate the Chain Conformations of Polyelectrolytes in the Semidilute Region; King-Fu Lin, Horng-Long Cheng
12:24 B23.08 Model Studies of Polyelectrolyte Electrophoresis in a Dilute Solution of Neutral Polymers; David Hoagland, Margaret Starkweather, M. Muthukumar
12:36 B23.09 Effective intra- and inter-macroion interactions due to counterions; Kristian Müller-Nedebock, Frederik Scholtz
12:48 B23.10 Phase behavior of aqueous solutions of sodium poly(styrene sulfonate); Vivek Prabhu, M. Muthukumar, Yu.B. Melnichenko, G.D. Wignall
13:00 B23.11 Stepwise unwinding of polyelectrolytes under stretching; Mário Noboru Tamashiro, Helmut Schiessel
13:12 B23.12 Small Angle Neutron Scattering of Core-Shell Arborescent Graft Polymers; Seok I. Yun, Robert M. Briber, Barry J. Bauer, Mario Gauthier
13:24 B23.13 Collapse of Flexible Polyelectrolytes with Multivalent Salt.; Francisco Solis, Monica Olvera de la Cruz
13:36 B23.14 Screening of a macroion by multivalent ions: Correlation induced inversion of charge.; Boris Shklovskii
13:48 B23.15 Reentrant Condensation of DNA induced by Multivalent Counterions; Ioulia Rouzina, Toan Nguyen, Boris Shklovskii

# Session C4. DCMP: Cytoskeleton of the Cell: Self-Assembled Structures and Interactions.

**Monday afternoon, 14:30, 102EF, MCC**

14:30 C4.01 Networks, Bundles, and Rings of Cytoskeletal Filaments; Paul Janmey
15:06 C4.02 Self-assembly of condensed actin rod phases; Gerard C. L. Wong
15:42 C4.03 Microtubule dynamics and organization; Marileen Dogterom
16:18 C4.04 The Cytoskeleton and Cancer Diagnostics; Josef A. Kas
16:54 C4.05 The Polyelectrolyte Nature and the Large Scale Self-assembly of Actin; Jay Tang

# Session C13. DBP: Modeling Protein Structure.

**Monday afternoon, 14:30, 103F, MCC**

14:30 C13.01 Predicting Protein Structures Using Springs and Traveling Salesmen; Ken Dill
15:06 C13.02 Hill's Microtubule Dynamic Instability Model, Giddings-Eyring Chromatography Model, and Two-State Random Walks; Robert J. Rubin
15:18 C13.03 Two State Behavior in a Solvable Model of \beta-hairpin folding; Chin-lin Guo, Herbert Levine, David Kessler
15:30 C13.04 Parameter Optimization for the Gaussian Model of Folded Proteins; Burak Erman, Albert Erkip
15:42 C13.05 How Permissive Are Protein Structures?; Michael Hecht
16:18 C13.06 Complexity of design as a factor which breaks the mirror symmetry in protein evolution; Erik Nelson, Jose' Onuchic
16:30 C13.07 Elastic Net Algorithms for the Prediction of Tertiary Protein Structure; Keith D. Ball, Ken A. Dill, Burak Erman
16:42 C13.08 Configurational Entropy, Compressibility and Packing Density in Globular Proteins; Voichita M. Dadarlat, Carol B. Post
16:54 C13.09 Knowledge-based self-consistent scheme to design proteins with a reduced number of amino acid classes.; Andrea Rossi, Amos Maritan, Cristian Micheletti
17:06 C13.10 Force Generation by Actin Filament Growth*; A. E. Carlsson
17:18 C13.11 Control of Actin Polymerization Kinetics; Ben O'Shaughnessy, Dimitris Vavylonis

# Session C19. DPOLY: Control of Polymer Structure Through Flow and Reactions.

**Monday afternoon, 14:30, 207AB, MCC**

14:30 C19.01 Ordering Kinetics of a Block Copolymer under Shear Flow Studied by Depolarized Light Scattering; Nitash Balsara, Bruce Garetz, Maurice Newstein, Mei-Ying Chang, Hao Wang
14:42 C19.02 Superstrings in Sheared Polymer Blends; Kalman Migler
14:54 C19.03 Orientation of polymeric hierarchical nanostructures by oscillatory shear flow; Karin de Moel, Riikka Mäkinen, Olli Ikkala, Gerrit ten Brinke, Manfred Stamm Collaboration
15:06 C19.04 Modeling of Coalescence in Polymer Blends during Shearing; Suping Lyu, Frank Bates, Christopher Macosko
15:18 C19.05 Reaction induced phase separation: Smart polymer processing; Anthony J Ryan, Yoshiyuki Ishii
15:30 C19.06 Rheology, Morphology and Phase Behavior in Amphiphilic Block Copolymer/microemulsion Systems; Moshe Gottlieb, Liora Braun, Zeng-rong Zhang
15:42 C19.07 Ordering of Viscous Liquid Mixtures Under a Steady Shear Flow; Zhenyu Shou, Amitabha Chakrabarti
15:54 C19.08 Effect of Reaction Rate on Morphological Change and interfacial tension of Reactive Blends; Jin Kon Kim, Woon Young Jeoung, Jeong Man Sohn, Hyun Kyoung Jeon
16:06 C19.09 Evolution of Structure of a Nematic PBG/M-Cresol Solution in Transient Shear Flows Measured by in situ X-ray Scattering from the Vorticity Plane; Franklin E. Caputo, Wesley R. Burghardt
16:18 C19.10 Bending Instability of Charged Liquid Jets of Polymer Solutions During Formation of Nanofibers; Darrell H. Reneker
16:30 C19.11 Oriented Crystallization in Fiber Formation: Inferences Regarding Melt Spinning of Syndiotactic Polypropylene; Ravi Sura, Prashant Desai, A.S. Abhiraman
16:42 C19.12 Structure Development During the Melt Spinning of Poly(oxymethylene) Fiber; Joshua M. Samon, Jerold M. Schultz, Benjamin S. Hsiao, Jing Wu, Shrikant Khot
16:54 C19.13 In-situ Study of Structure Development in Poly(trimethylene terephthalate) Fibers During Spinning and Drawing, Using Simultaneous Synchrotron Small- and Wide-Angle X-ray Scattering; Jing Wu, Joshua Samon, Jerold Schultz, Adriano Pangelinan, Hoe Chuah
17:06 C19.14 Electrostatic Fabrication ("Electrospinning") of Nano-Fibers of Polyaniline Blends With Conventional Polymers; Ian D Norris, Alan G MacDiarmid, Manal Shaker, Frank K Ko

# Session C21. DMP: Organic Electronic Materials and Devices I: Transistors and Other Devices.

**Monday afternoon, 14:30, 208B, MCC**

14:30 C21.01 Organic electronics: from device physics to complex circuits; Brian Crone
15:06 C21.02 Direct Visualization of Submolecular Conducting and Insulating Pathways in a Thin-Film-Transistor Material; Andrew J. Lovinger, H. E. Katz, A. Dodabalapur, Bell Laboratories Lucent Technologies Collaboration
15:18 C21.03 Crystal Growth, Structure, Electronic Band Structure and Electrical Properties of a Pentacene Polymorph; Christian Kloc, Theo Siegrist, Hendrik J. Schon, Bertram Batlogg, Robert C. Haddon, Steffen Berg, Gordon Thomas
15:30 C21.04 Photovoltaic Studies of Polymeric LED's Constructed from the Non-Conjugated Polymer 6FPBO-OD; B. E. Taylor, J. Burkett, R. J. Spry, F. S. Mobley, G. Du, B. Reinhardt
15:42 C21.05 Organic Field Effect Transistors; Tom Jackson
16:18 C21.06 Measurement of Nonlinear Optical Properties of Single-Crystal Thin-Films of 3-Methyl-4-Methoxy-4\prime-Nitrostilbene (MMONS); Shida Tan, Achintya Bhowmik, Mrinal Thakur
16:30 C21.07 The mechanism of reversible conductance transitions induced in nanometer-scale regions of a crystalline thin-film; Hongjun Gao, Karl Sohlberg, Z. Q. Xue, H. Y. Chen, L. P. Ma, S. J. Pang, Stephen J. Pennycook
16:42 C21.08 Theoretical Studies of the Electronic Features of Norbornadiene on Silicon; Blair Tuttle
16:54 C21.09 Non-linear conduction and electric field suppression of the SDW in (TMTSF)_2PF_6; J.I. Oh, D. Vignolles, M.J. Leone, Yu.V. Sushko, M.J. Naughton, I.J. Lee
17:06 C21.10 Demonstration of 40 MHz thin-film electro-optic modulator using an organic molecular salt; Achintya Bhowmik, Ayayi Ahyi, Shida Tan, Alpana Mishra, Mrinal Thakur

# Session C22. DPOLY: Patterned Surfaces.

**Monday afternoon, 14:30, 208C, MCC**

14:30 C22.01 Phase Transitions in Block Copolymer Thin Films; Henk Huinink, Jose Brokken-Zijp, Menno van Dijk, Agur Sevink
14:42 C22.02 Lateral Patterning of Polymer films Using Electric Fields; Eric Schaeffer, Ullrich Steiner, Thomas Thurn-Albrecht, Thomas Russell
14:54 C22.03 Hierarchical Pattern Formation in a Block Copolymer above the Bulk ODT; Peter Green, Ratchana Limary
15:06 C22.04 Pattern Formation in a Thin Polymer Film: A new morphology; Jean-Loup Masson, Peter Green
15:18 C22.05 Substrate chemical pattern recognition by copolymers; Jan Genzer
15:30 C22.06 Pattern-Directed Spinodal Dewetting.; Amit Sehgal, Vincent Ferreiro, Jack F. Douglas, Alamgir Karim
15:42 C22.07 Surface induced polymer walls and islands in a polymer/liquid crystal mixture; E.Y. Park, Bahman Taheri, John West, Peter Palffy-Muhoray
15:54 C22.08 Lamellar Orientation in Thin Films of Symmetric Diblock Copolymers on Chemically Stripe-Patterned Surfaces; Qiang Wang, Qiliang Yan, Paul Nealey, Juan de Pablo
16:06 C22.09 Self-Assembled Biomolecular Materials Confined on Lithographic Surfaces; Thomas Pfohl, Joon Heon Kim, Ryan Case, Youli Li, Cyrus R. Safinya
16:18 C22.10 Design of Heteropolymer-Surface Systems by Simulated Annealing; Aaron Golumbfskie, Arup K. Chakraborty
16:30 C22.11 Novel Patterned Films by Free-Radical Polymerization Techniques; Jennifer H. Ward, Nicholas A. Peppas

# Session C23. DPOLY: Ordering of Copolymers.

**Monday afternoon, 14:30, 208D, MCC**

14:30 C23.01 Defects in Ordered Block Copolymers; Edwin L. Thomas
14:42 C23.02 Order-Order Transitions of miktoarm star block copolymer - homopolymer blends.; Lizhang Yang, Samuel P. Gido, David Uhrig, Stergios Pispas, Jimmy W. Mays
14:54 C23.03 The order-disorder transition for poly(ethylenepropylene-b-dimethylsiloxane) spheres; Xiaohui Wang, Kenneth J. Hanley, Timothy P. Lodge
15:06 C23.04 Anomalous Difference in the Order-Disorder Transition Temperature of Symmetric AB Diblock Compared to A2B2 Star Block Copolymer; D. Martin Buzza, Ian Hamley, Adnan Fzea, Monir Moniruzzaman, Jurgen Allgaier, Ronald Young, Peter Olmsted, Tom McLeish
15:18 C23.05 Sequencing Effects On Phase Transitions in ABC Triblock Copolymers; Cordell Hardy, Terri Shefelbine, Frank Bates
15:30 C23.06 Order Transitions in Side-Chain Liquid Crystalline Diblock Copolymers; Mitchell Anthamatten, Paula T. Hammond
15:42 C23.07 Orientational Phase Ordering in Disordered Liquid Crystalline Heteropolymers; Lorin Gutman, Eugene I. Shakhnovich
15:54 C23.08 Phase Transformation from Smectic to Crystalline a-Form in Isotactic Polypropylene during Heating Process; Zhi-Gang Wang, Benjamin S. Hsiao, Srivatsan Srinivas, SUNY at Stony Brook Collaboration, Exxon Chemical Company Collaboration
16:06 C23.09 Sub-Micron Orientation in As-Dawn and Annealed Thermotropic Liquid Crystal Polymer Fibers; Jennifer Taylor, Matthew Libera
16:18 C23.10 Comparative Study of Liquid Crystalline Ordering in Monomers, Linear Polymers, and Grafted Copolymers via the Photon Transmission Technique; Sevtap Yildiz, Haluk Özbek, Önder Pekcan, Yesim Hepuzer, Yusuf Ya\ugci
16:30 C23.11 Flow Induced Structures in Liquid Crystalline Polymers as Studied by Neutron Scattering; Mark Dadmun
16:42 C23.12 Undulation, Dilation and Folding in Lamellar Block-Copolymer Structures; Yachin Cohen, Ramon J. Albalak, Martin Brinkmann, Edwin L. Thomas
16:54 C23.13 Morphology and Ordering of Ultrathin Smectic LC Block Copolymer Films; Jung-Sheng Wu, Paula Hammond
17:06 C23.14 Degenerated HEX Cylinders from Twinned BCC in Oscillatory-Shear Aligned SIS Triblock Copolymer; Jin Kon Kim, Hee Hyun Lee, Julie A. Kornfield, Zhen-Gang Wang
17:18 C23.15 Phase Behavior of Block Copolymer Solutions Across the Complete Concentration and Composition Range; K.J. Hanley, T.P. Lodge

# Session C30. DCMP: Complex Fluids.

**Monday afternoon, 14:30, 212A, MCC**

14:30 C30.01 Liquid Crystalline Microemulsions; Chien-Yueh Huang, Rolfe G. Petschek
14:42 C30.02 Structure of Fluid Membranes under Confinement and Shear Studied in the Second Generation X-ray Surface Forces Apparatus (XSFA-II); Yuval Golan, Youli Li, Ana Martin, Jacob Israelachivilli, Cyrus R. Safinya
14:54 C30.03 Aggregation of non-bonding molecules in a rapidly growing gel; J.C. Lee
15:06 C30.04 Reactions in Microemulsions: Effect of Thermal Fluctuations on Reaction Kinetics; Venkat Ganesan, Glenn Fredrickson
15:18 C30.05 The structure of the critical interface of dipolar fluid mixtures.; Ashis Mukhopadhyay, Bruce Law
15:30 C30.06 Shear-Thickening in Wormlike Micelle Solutions; David Pine, Jacqueline Goveas
15:42 C30.07 Two-point Microrheology of Two Inhomogeneous Soft Materials---Guar and F-Actin; John C. Crocker, Arjun G. Yodh, Megan T. Valentine, Eric R. Weeks, David A. Weitz, Thomas Gisler, Peter D. Kaplan
15:54 C30.08 Lyotropics Under Extensional Flow; Stefan H.J. Idziak, Sarah E. Welch, Marsha Kisilak, Chas Mugford, Eric B. Sirota
16:06 C30.09 Structure of a Lamellar Lyotropic Flowing Through Capillaries; Sarah E. Welch, Marsha Kisilak, Pauline J. Bonnici, Stefan H.J. Idziak, Eric B. Sirota
16:18 C30.10 Micro-rheology of the transient polymer network in aqueous solutions.; Lawrence Hough, H. Daniel Ou-Yang, A. Knaebel, J-P Munch
16:30 C30.11 What is being measured in microrheology experiments?; Alex J. Levine, Tom C. Lubensky
16:42 C30.12 Linear Viscoelastic Behavior of Perfluorooctyl Sulfonate Micelles: Effects of Counter-Ion; Hiroshi Watanabe, Mutsuo Matsumoto, Dobrin Bossev, Masaru Nakahara
16:54 C30.13 Equilibrium Dynamics in the Non-Diffusive Regime of an Entangled Polymer Blend; Dirk Lumma, Matthew A. Borthwick, Peter Falus, Laurence B. Lurio, Simon G. J. Mochrie
17:06 C30.14 Stability boundaries of lamellar structures in a diblock copolymer under oscillatory shear; Peilong Chen, Jorge Vinals
17:18 C30.15 Recent Results From a Lattice-Gas Model of Microemulsions; Bruce Boghosian

## Session E3. DBP: What Physics Can Do for Biology and What Biology Can Do for Physics.

**Tuesday morning, 08:00, 101FG, MCC**

08:00 E3.01 Protein quakes and protein states; Hans Frauenfelder
08:36 E3.02 the robustness of biological networks.; Stanislav Leibler
09:12 E3.03 Reading Genomes and Controlling Gene Expression; Albert Libchaber
09:48 E3.04 Single molecule statistics and dynamics.; Steven Chu

## Session E4. DPOLY: DPOLY Ford Prize Session.

**Tuesday morning, 08:00, 102EF, MCC**

08:00 E4.01 Block Copolymer Based Photonic Materials; Edwin L. Thomas
08:36 E4.02 Dynamics of Homo- and Blockcopolymer Melts - Recent Advances from Neutron Spin echo -; Dieter Richter
09:12 E4.03 Polyolefin Blend Miscibility and Packing; David J. Lohse
09:48 E4.04 Diffusion and Flow in Branched Polymer Melts; William Graessley
10:24 E4.05 The Prediction of Melt State Rheological Properties; Lewis Fetters

# Session E13. DBP: Protein Dynamics in Folding and Function I: Theory.

**Tuesday morning, 08:00, 103F, MCC**

08:00 E13.01 Energy Landscapes in Protein Folding; Peter Wolynes
08:36 E13.02 How native state topology affects the folding of Dihydrofolate Reductase and Interleukin-1\beta; Cecilia Clementi, Patricia Jennings, Jose' Onuchic
08:48 E13.03 Glassy Dynamics and Distribution of Energy States for Protein Folding via Hydrophobic Collapse; Erkan Tuzel, Ayse Erzan
09:00 E13.04 Heterogeneity and Broken Symmetry in Protein Folding; Steven Plotkin, Jose Onuchic
09:12 E13.05 Single Molecule Folding Dynamics; Jin Wang, Jose Onuchic, Peter Wolynes
09:24 E13.06 Structure and Dynamics of Myoglobin: from DFT Calculations to Unfolding; Benjamin H. McMahon, Branko P. Stojkovi\'c, Hans Frauenfelder, Angel Garcia, Richard Martin, Uli Nienhaus, Jochen Muller, Kelvin Chu, Robert Austin
09:36 E13.07 First-Principles Investigation of Hyperfine and Magnetic Properties of Horse Heart Cyt c and Determination of \mu^+ and Mu Trapping Sites; D. Cammarere, R. H. Scheicher, N. Sahoo, T. P. Das, K. Nagamine
09:48 E13.08 First-Principles Investigation of \mu^+ and Mu Trapping in Polyglycine and in Groups of Cytochrome c; R. H. Scheicher, D. Cammarere, T. M. Briere, N. Sahoo, T. P. Das, F. L. Pratt, K. Nagamine
E13.09 Electrochemical model of the function of the cytochrome c oxidase proton pump; Branko P. Stojkovi\'c, Benjamin H. McMahon, R.L. Martin, Robert B. Gennis

# Session E22. DPOLY: Polymer Mixtures.

**Tuesday morning, 08:00, 208C, MCC**

08:00 E22.01 Towards Controlled Miscibility in Block Copolymers; Anne M. Mayes, Anne-Valerie G. Ruzette, Pallab Banerjee
08:12 E22.02 Blends of Linear and Branched Polymers: Bulk and Surface Behavior; T. D. Martter, C. Greenberg, M. D. Foster, G. Lizzaraga, S. Xu, R. P. Quirk, P. Butler, C. F. Majkrzak, J. D. Demaree, C. Hawker
08:24 E22.03 Polyepoxyisoprene-Polybutadiene Block Copolymers with Adjustable Segregation Strengths; Robert B. Grubbs, Margaret E. Broz, Jennifer M. Dean, Frank S. Bates
08:36 E22.04 Random destruction of diblock copolymers; Christiaan Kok, S. I. Kuchanov, Gerrit ten Brinke
08:48 E22.05 Chain Trapping in Diblock Copolymers near the Ordering Transition; Spiros H. Anastasiadis, Kiki Chrissopoulou, George Fytas, Frank Rittig, Gerald Fleischer, Alexander N. Semenov, Maria Xenidou, Nick Hadjichristidis
09:00 E22.06 Theory of Phase Separation in a Polydisperse Polymerizing Mixture; Philip Taylor, Robert Kraig
09:12 E22.07 Effects of PEO Content on the Morphological Behavior of PS-PI-PEO Triblock Copolymers; Travis S. Bailey, Frank S. Bates
09:24 E22.08 Molecular factors governing the miscibility of polymer blends; Karl Freed, Jacek Dudowicz
09:36 E22.09 Microphase Separation of Poly(urethane urea) Copolymers: A Small-Angle X-ray Scattering Investigation; J.T. Garrett, J. Runt, J.S. Lin
09:48 E22.10 Controlling Morphology of ABC Triblocks by Blending Homopolymer; T. A. Shefelbine, M. Sugiyama, G. H. Fredrickson, F. S. Bates
10:00 E22.11 Miscibility in Heavily Branched/Linear Polyolefin Blends; Yingying Chen, Frank S. Bates, Timothy P. Lodge
10:12 E22.12 The Ability of Multi-block Copolymers to Compatibilize Polymer Blends; Eric Eastwood, Mark Dadmun

# Session E23. DPOLY: Optical and Electronic Properties I.

**Tuesday morning, 08:00, 208D, MCC**

08:00 E23.01 Charge, spin and bond ordering in quasi-1D, quasi-2D and 2D organic charge-transfer solids; S. Mazumdar, R. Torsten Clay, D. K. Campbell
08:12 E23.02 Stable and Metastable Quantized Hall Plateaus in (TMTSF)_2PF_6; M. Chen, B. Zhang, W. Kang
08:24 E23.03 Orientational Anisotropy of Negative Quantum Hall States in (TMTSF)_2PF_6; M. Rohde, W. Kang
08:36 E23.04 Magnetic breakdown at high magnetic fields: semi-classical and quantum mechanical treatments; So-Y. Han, J.~S. Brooks, Ju~H. Kim
08:48 E23.05 Far-infrared reflectance of (TMTSF)_2ClO_4: absence of a sharp reflectivity dip for the stacking axis; A. Ugawa, D.B. Tanner, M. Tokumoto, J. Yamada, H. Anzai
09:00 E23.06 Anisotropic Critical Field Study of \alpha(ET)_2NH_4Hg(SCN)_4 Using rf Penetration; T. Coffey, Z. Bayindir, L. De Viveiros, H. Gao, C. C. Agosta, M. Tokumoto, H. Anzai
09:12 E23.07 Optical Properties of \beta^\prime^\prime-(ET)_2SF_5\itRSO_3 where \itR = CH_2CF_2, CHFCF_2 and CHF: Changing Physical Properties by Chemical Tuning of the Counterion; B.R. Jones, I. Olejniczak, J. Dong, J.M. Pigos, Z. Zhu, A. Garlach, J.L. Musfeldt, J.A. Schlueter, B.H. Ward, E. Morales, U. Geiser, H.-J. Koo, M.-H. Whangbo, P.G. Nixon, R.W. Winter, G.L. Gard
09:24 E23.08 ; Yoichi Okimoto, Reiji Kumai, Makoto Izumi, Eiji Saitoh, Tokura Yoshinori
09:36 E23.09 Photoluminescence Quenching Studies of MEH-PPV; Jian Wang, Deli Wang, Dan Moses, Alan Heeger
09:48 E23.10 The Nature of Chemical Impurities Formed during Degradation o Aluminum(III) 8-Hydroxyquinoline: Implications for Organic Light-Emitting Diodes; Fotios Papadimitrakopoulos, D. L. Thomsen, Keith Higginson
10:00 E23.11 Measurements of the Superconducting Phase Diagram of \lambda-(BETS)_2GaCl_4in Short Pulsed Magnetic Fields; Z. Bayindir, T. Coffey, J. DeCarolis, I. Mihut, C. C. Agosta, M. Montgomery, Clark University Team, Indiana University Collaboration
10:12 E23.12 Orbital Induced Electronic Subphase in the Organic Conductor alpha-(ET)2MHg(SCN)4; J. S. Qualls, J. S. Brooks, L. Balicas, N. Harrison, L. K. Montgomery, M. Tokumoto

# Session G4. DCMP: Control and Order of Co-Polymer Films for Lithography.

**Tuesday morning, 11:00, 102EF, MCC**

11:00 G4.01 Controlling microdomain orientation in block copolymer thin films; Paul Mansky
11:36 G4.02 The Kinetics of Pattern Coarsening in Two Dimensional Smectics and Hexatics; Christopher Harrison

# Session G13. DBP: Protein Dynamics in Folding and Function II: Experiment and Computations.

**Tuesday morning, 11:00, 103F, MCC**

11:00 G13.01 Ligand Binding and Conformational Changes in Myoglobin; Gerd Ulrich Nienhaus
11:36 G13.02 Infrared Crystallographic Calibration of Vibrational Probes in Proteins; J.T. Sage, O. Fenerci, D.A. Moss
11:48 G13.03 Intrinsic polarizabilities of amino acids and protein dielectric properties; Hyung-June Woo, Xueyu Song
12:00 G13.04 Long-Lived Amide I Vibrational Modes in Myoglobin: Breathers in Biology; Aihua Xie, Lex van der Meer, Wouter Hoff, Robert Austin
12:12 G13.05 Energetic Frustration and the Nature of the Transition State; Joan-Emma Shea, III Brooks, Jose N. Onuchic
12:24 G13.06 Simulation of mechanical unfolding and refolding of protein; Jian-Min Yuan, Feng-Yin Li, Chung-Yuan Mou
12:36 G13.07 Off-Lattice Protein Design; Mehul Khimasia, Robin C. Ball, Thomas M. A. Fink, Yong Mao
12:48 G13.08 Chiral Self-Propulsion of Biological Filaments; Charles Wolgemuth, Neil Mendelson, Joelle Sarlls, Raymond Goldstein
13:00 G13.09 Ultrafast Multi-Color Pump-Probe Experimental Studies on Photolysis of Ferrous Cytochrome C; Wei Wang, Xiong Ye, Andrey Demidov, Florin Rosca, Theodore Sjodin, Paul M. Champion
13:12 G13.10 Femtosecond Coherence Spectroscopy of Myoglobin and Heme Model Compounds: A Comparative Study; Theodore Sjodin, Florin Rosca, Paul M. Champion
13:24 G13.11 Low Frequency Modes in Heme Proteins; Florin Rosca, Andrey Demidov, Theodore Sjodin, Paul Champion
13:36 G13.12 Proximal and Distal Influences on Ligand Binding to Heme Proteins; Wenxiang Cao, Theodore Sjodin, J. T. Sage, Xiong Ye, Andrey A. Demidov, Paul M. Champion, Doug. Barrick

# Session G19. DPOLY: Dynamical Properties of Polymer Thin Films.

**Tuesday morning, 11:00, 207AB, MCC**

11:00 G19.01 Force-Free Nanorheology of Polymers Confined Between Nonwetting Surfaces; SANGMIN JEON, Steve Granick
11:12 G19.02 Molecular Relaxations in Ultra-Thin Polystyrene Films; Alexander Schwab, Ali Dhinojwala, Dena Mae Agra, Jae-Hoon Kim, Satyendra Kumar
11:24 G19.03 X-Ray Reflectivity Study of the Effects of Surface Chemistry on the Tg of Ultra-Thin Polymer Films.; Christopher C. White, Wen-li Wu, Richard D. Peters, Paul F. Nealey
11:36 G19.04 Thin film calorimetry of polymer films; Wenhua Zhang, Miriam Rafailovich, Jonathan Sokolov, William Salamon
11:48 G19.05 Using Atomic Force Microscopic Adhesion Measurement to Study the Surface Dynamics of Polymer Thin Films; O.K.C. Tsui, X.P. Wang, T.K. Ng, XuDong Xiao
12:00 G19.06 Atomic Force Microscopy Measurement; Y. Pu, W. Zhang, M. Rafailovich, J. Sokolov, C. Buenviaje, R. Overney
12:12 G19.07 Reorganization of Glassy Polymer Surfaces; Patricia O'Rourke Muisener, Derek A. Wong, Claire Jalbert, Jeffrey T. Koberstein
12:24 G19.08 Measurements of Hole Growth Dynamics in the Glassy State; Y. Pu, J.H. Xavier, M. Rafailovich, J. Sokolov, W. Salamon, Y. Shnidman
12:36 G19.09 Probing the Onset of Chain Mobility in Annealed Freely-Standing Polystyrene Films Using a Differential Pressure Experiment; Connie Roth, John R. Dutcher
12:48 G19.10 Investigation of Freestanding Polystyrene Thin Films by X-ray Scattering; K. Shin, M. Rafailovich, J. Sokolov, M. Tolan, H.O. Seeck, D.R. Lee, S.K. Sinha, R. Kolb
13:00 G19.11 Dewetting Dynamics on Modified Surfaces ; Sarika Sharma, Mariam Rafailovich, Jonathan Sokolov, A. Winesett, H. Ade
13:12 G19.12 Scanning Force Microscopy of Polymer Thin-Film Dewetting Dynamics; Ronald Schmidt, Wayne Gladfelter, Greg Haugstad
13:24 G19.13 Dynamics of Perfluoropolyether Thin Films on Amorphous Carbon Substrates by NMR; Charles Wade, Gyunggoo Cho, Mark Sherwood, Bing Yen, Chris Klug, Yoojin Kim, IBM Almaden Research Center-CPIMA Collaboration, Stanford University-CPIMA Collaboration
13:36 G19.14 NMR Characterization of the Glass-Polymer Interface; Peter Mirau, Sharon Heffner, Marcia Schilling
13:48 G19.15 Direct Observation of Stress Build-up in Thin Polymer Coatings: A New Approach; Shaw L. Hsu, Andrei A. Stolov, Tao Xie, Jacques Penelle

# Session G22. DPOLY: Filled Polymers II.

**Tuesday morning, 11:00, 208C, MCC**

11:00 G22.01 Effects of a Fumed Silica Network on Kinetics of Phase Separation in Polymer Blends; Amitabha Chakrabarti

11:12 G22.02 Dynamics of Morphology Development in Systems Containing Plate-like and Spherical Particles; A. Guenthner, T. Kyu, E. von Meerwall, L. Jackson, V. Rassavong

11:24 G22.03 Preparation and Characterization of Clay-Thermoset Nanocomposite; S.N. Boen, M.E. Galvin, F. Beyer, N. Beck Tan

11:36 G22.04 Crystallization of Polymers in Confined Environments: Structural Development of Semi-crystalline Polymer-Layered Silicate Nanocomposites; Richard A Vaia, Derek M. Lincoln, Zhi-Gang Wang, Benjamin S. Hsiao, Ramanan Krishnamoorti

11:48 G22.05 Inelastic Neutron Scattering From Filled Elastomers; P. Papanek, A.I. Nakatani, R. Ivkov, H. Yang, M. Gerspacher

12:00 G22.06 Two Simple Models Of Filled Polymers Investigated By Molecular Dynamics Simulations; Thomas B. Schroeder, Francis W. Starr, Sharon C. Glotzer

12:12 G22.07 Effects of Treatment History on the Viscosity of Carbon Black-Polybutadiene Suspensions; J. C. Massey, N. Mahmood, E. D. von Meerwall, F. N. Kelley

12:24 G22.08 The Influence of Block Copolymers on the Rheology of Silica-Filled Polyisoprene; Daniel Gurovich, Christopher Macosko, Matthew Tirrell

12:36 G22.09 Modeling the dynamics of diblock copolymer/particle mixtures; Valeriy Ginzburg, Corey Gibbons, Feng Qiu, Gongwen Peng, Anna Balazs

12:48 G22.10 Phase Behavior of Particle/Block Copolymer Mixtures; June Huh, Valeriy V. Ginzburg, Anna C. Balazs

13:00 G22.11 Molecular Dynamics Study of the Intercalation of Diblock Copolymers into Layered Silicates; Jae Youn Lee, Arlette Baljon, Dotsevi Sogah, Roger Loring

13:12 G22.12 Structural Evolution of Silsesquioxane-Based Organic/Inorganic Nanocomposite Network; Eric Lin, Christopher Soles, Wen-li Wu, Chunxin Zhang, Richard Laine

13:24 G22.13 Time-Resolved Steady Shear Study of End-Tethered Nylon 6-Clay Nanocomposites Followed by Non-Isothermal Crystallization; Francisco Medellin-Rodriguez, Benjamin Hsiao, Benjamin Chu, Richard Vaia, Shawn Phillips, Department of Chemistry at SUNY Stony Brook , Air Force Research Laboratory

13:36 G22.14 Carbon-Coated Silica and Silica-Coated Carbon for Elastomer Reinforcement; D. J. Kohls, G. Beaucage, S. E. Pratsinis, H. Kammler

13:48 G22.15 Lowering the Percolation Threshold of Conductive Composites Using Particulate Polymer Microstructure; Jaime Grunlan, William Gerberich, Lorraine Francis

# Session G23. DPOLY: Padden Award Symposium.

**Tuesday morning, 11:00, 208D, MCC**

11:00 G23.01 Adhesion of Triblock Copolymer-Based Pressure Sensitive Adhesives; Alfred Crosby, Kenneth Shull

11:12 G23.02 A Comprehensive Approach to Photonic Crystal Formation in One, Two, and Three Dimensions Using Self Assembled Block Copolymer Structures.; Yoel Fink, John D. Joannopoulos, Edwin L. Thomas

11:24 G23.03 Structure and Phase Behavior of Thin Film Polymer Blends; Ronald Jones, Sanat Kumar, Derek Ho, Robert Briber, Thomas Russell

11:36 G23.04 The role of melt relaxation dynamics in shear enhanced crystallization of semicrystalline polymers; G. Kumaraswamy, A.M. Issaian, R.K. Verma, J.A. Kornfield, F. Yeh, B.S. Hsiao

11:48 G23.05 Templated Crystallization in Block Copolymer Mesophases; Y.-L. Loo, R. A. Register, A. J. Ryan

12:00 G23.06 Local and Global Dynamics of Polyolefin Melts Measured by 13C NMR; XH Qiu, M.D. Ediger

# Session I2. DPOLY: Dillon Medal Symposium.

**Tuesday afternoon, 14:30, 102AB, MCC**

14:30 I2.01 Optical and X-ray Probes of Molecular Orientation in Sheared Liquid Crystalline Polymers * Dillon Medal Talk; Wesley R. Burghardt
15:06 I2.02 Transport of DNA Chains Constrained to Two Dimensions; Gerald Fuller, David Olson
15:18 I2.03 Intimate Mixing and Compatibilization of Polymer Blends via Novel, Continuous Mechanical Alloying: Shear Pulverization; John M. Torkelson, Albert Davydov, Naomi Furgiuele, Klementina Khait, Andrew H. Lebovitz
15:30 I2.04 Oscillatory Shear Alignment and Rheology of a Main-chain Thermotropic Liquid Crystalline Polymer.; Julia A. Kornfield, Weijun Zhou, Victor M. Ugaz, Nitin Vaish, Wesley R. Burghardt
15:42 I2.05 Self-Concentrations and the Dynamics of Polymer Blends; Timothy Lodge
15:54 I2.06 Domain growth during phase separation in binary and ternary fluids; Monica Olvera de la Cruz, Francisco J. Solis, Kurt A. Smith
16:06 I2.07 Dynamics of Pentablock Copolymers near the Order-Disorder Transition; Frank Bates, Martin Vigild, Chin Chu
16:18 I2.08 Influence of Polymeric Species on the Structure and Rheology of Worm-like Micelles; Lynn Walker, My Hang Truong
16:30 I2.09 A Rouse-like model of linear viscoelasticity and director dynamics in liquid-crystalline polymer melts; Didier Long, David Morse
16:42 I2.10 Rheology of Spherical Phase Block Copolymer Melts and Solutions; John M. Sebastian, William W. Graessley, Richard A. Register
16:54 I2.11 Interfacial Slip in Melt Rheology of Immiscible Polymer Blends; Rui Zhao, Christopher Macosko
17:06 I2.12 Binary Blends of Thermotropic Polymers Under Shear; Patrick T. Mather, C.D. Han, D.-O. Kim
17:18 I2.13 A Tri-Layer Model for Block Copolymer Dynamics; Karen Winey

# Session I9. FIAP/DPOLY: The Polymer Physics of Adhesion.

**Tuesday afternoon, 14:30, 102D, MCC**

14:30 I9.01 Controlled Adhesion of Silicone Elastomer Surfaces; MICHAEL OWEN
15:06 I9.02 Contact Mechanics Measurements of Adhesion; Matthew Tirrell
15:42 I9.03 Adhesion at polymer/solid interfaces: Implications for fabricating nanocomposites; Valeriy Ginzburg
16:18 I9.04 Polymer Assembly From Alignment to Patterning; Thomas Russell
16:54 I9.05 Adhesion of Dental Materials to Tooth Structure; Sumita B. Mitra

# Session I22. DPOLY: Polymer Solutions and Micellar Systems.

**Tuesday afternoon, 14:30, 208C, MCC**

14:30 I22.01 Dillon Medal Break
15:06 I22.02 Phase Separation in Polymer Solutions; Jacqueline Goveas
15:18 I22.03 Network Domain Structure in Phase Separating Polymer Solutions; Hong Liu, Aniket Bhattacharya, Amitabha Chakrabarti
15:30 I22.04 Applicability of Regular Solution Theory to Polymer Mixtures; Janna K. Maranas, Ananth Indrakanti, Sanat Kumar
15:42 I22.05 On the induction time for spinodal-assisted nucleation in polymers; A. Nogales, T.A. Ezquerra, Z. Denchev, F.J. Baltá-Calleja
15:54 I22.06 Surfactant Uptake in CoPolymer BiLamellar Vesicle Membranes: A Means to Control Lysis and Other Properties; Maria Santore, Daniel Hammer
16:00 I22.07 Structural Properties of Block Copolymer Micelles; You-Yeon Won, Frank S. Bates, H. Ted Davis
16:18 I22.08 Self Assembled Photonic Crystals from Concentrated Block Copolymer Solutions; Augustine Urbas, Yoel Fink, Peter DeRege, Tim Swager, Maria Xenidou, Lewis Fetters, Edwin Thomas
16:30 I22.09 Variation of persistence length with concentration in a hydrogen bonding polymer solution; S. Sukumaran, G. Beaucage
16:42 I22.10 Control of Pore Size in Amphiphilic Block Copolymer Templated Mesoporous Silica by Polymer Swelling Agent; Chang-Sik Ha, Xiuguo Cui, Gohyup Yoo, Won-Jei Cho
16:54 I22.11 Interaction Strengths of Difluorocarbene-Modified Polystyrene-Polyisoprene Block Copolymers; Yu Ren, Timothy Lodge, Marc Hillmyer
17:06 I22.12 Structure of Highly Branched Polyethylenes Obtained with a Chain-Walking Catalyst; Patricia Cotts, Zhibin Guan, Eric Kaler, Carlos Co
I22.13 Transient-gel formation during viscoelastic phase separation in polymer solutions; Takehito Koyama, Hajime Tanaka

# Session I23. DPOLY: Glass Transition and Dynamical Heterogeneity in Cooled Polymer Liquids.

**Tuesday afternoon, 14:30, 208D, MCC**

14:30 I23.01 Dillon Medal Break
15:06 I23.02 The Dynamic Scaling Approach to Glass Formation; Ralph H. Colby
15:18 I23.03 Simulating the Glass Transitions in Polymers; Sudesh Kamath, Sanat Kumar, Ralph Colby, Joerg Baschnagel
15:30 I23.04 Fourth-order, time-dependent density correlation function as a probe of dynamical heterogeneity in a glass-forming polymer melt; Naida Lacevic, Thomas B. Schroeder, Sharon C. Glotzer
15:42 I23.05 Crossover in dynamics of polymeric liquids: back to Tll?; Alexei Sokolov, Alexander Kisliuk
15:54 I23.06 Inelastic Neutron Scattering of Polycarbonate Copolymers; Christopher Soles, Robert Dimeo, Jianwei Liu, Alexei Sokolov, Albert Yee, Wen-li Wu
16:06 I23.07 Anomalous Translational Diffusion: A New Constraint for Models of Molecular Motion Near the Glass Transition Temperature; Chia-Ying Wang, M. D. Ediger
16:18 I23.08 Characterizing heterogeneity on single-molecule and macroscopic scales in polymeric systems via fluorescence; Jason C. Quirin, John M. Torkelson
16:30 I23.09 Lesser Temperature-Dependence of Dye Diffusion in Polymers in the Rubbery State near Tg Than in the Quenched Glass and Other Odd Behavior Associated with Thermorheological Complexity; X. Liu, D.B. Hall, D.D. Deppe, K.H. Hamilton, A. Dhinojwala, J.M. Torkelson
16:42 I23.10 Molecular Dynamics study of the glass transition in PMMA; Mesfin Tsige, M. Mahajan, C. Rosenblatt, P.L. Taylor
16:54 I23.11 The Kinetics of Structural Recovery of Polymer Solutions in Nanometer Size Pores; Gregory McKenna, Joon-Yong Park
17:06 I23.12 Universal Aging Features in the Restructuring of Fractal Colloidal Gels; Luca Cipelletti, Suliana Manley, R. C. Ball, D. A. Weitz
17:18 I23.13 Conformational transition behavior around glass transition temperature; Xiaozhen Yang

# Session J2. DPOLY: DPOLY Business Meeting.

**Tuesday afternoon, 17:30, 102AB, MCC**

# Session K2. FIAP/DPOLY: PEM Fuel Cells I.

**Wednesday morning, 08:00, 102AB, MCC**

08:00 K2.01 Welcome
08:12 K2.02 PEM Fuel Cell Mechanisms and Processes; Mahlon Wilson
08:48 K2.03 Proton transport mechanisms in confined regions: a broad perspective on proton-conducting ionomers; Thomas Zawodzinski
09:24 K2.04 Structure and Dynamics of Thin Ionomer Films: a Key to A Stable Fuel Cell Membrane.; Dvora Perahia
10:00 K2.05 Fuel Cell Electocatalysts: Anodes and Cathodes; Philip Ross

# Session K8. DPOLY: Pressure Effects on Polymers (I).

**Wednesday morning, 08:00, 101H, MCC**

08:00 K8.01 Phase Behavior of Block Copolymers and Blends in the Presence of Compressed CO2 and Ethane; James Watkins
08:36 K8.02 Pressure-Induced Nucleation in Binary Polymer Blends; Nitash Balsara
09:12 K8.03 Self-Assembly in Aqueous Solution at Kilobar Pressures; Michael Paulaitis
09:48 K8.04 Effect of Pressure and Temperature on the Phase Behavior of Homopolymers and Blockcopolymer Amphiphiles in Supercritical Carbon Dioxide; George D. Wignall
10:24 K8.05 Effect of Pressure on Phase Behavior of Semi-Crystalline Polymer Blends; Maulik Modi, Ramanan Krishnamoorti
10:36 K8.06 The Effect of Pressure on Polyolefin Blend Miscibility; Jane E.G. Lipson , K. Willets, J. Luettmer-Strathmann
10:48 K8.07 Temperature- and Pressure- dependent Composition Fluctuations in a d-PB/PS Polymer Blend and Diblock Copolymer; Dietmar Schwahn , Henrich Frielinghaus , Basil Abbas, Lutz Willner

# Session K13. DBP: Lipids and Membranes.

**Wednesday morning, 08:00, 103F, MCC**

08:00 K13.01 Molecular Adsorption and Transport across Membrane-like Bilayer Structures; Elsa C. Y. Yan, Yan Liu, Kenneth B. Eisenthal

08:12 K13.02 Self-Assembled Structures of Tubulin and Microtubules Complexed with Oppositely Charged Molecules; Ryan Case, Thomas Pfohl, Joon Heon Kim, Alison Lin, Cyrus R. Safinya, Herb P. Miller, Les Wilson

08:24 K13.03 Confocal Microscopy Studies of Cationic Lipid/DNA Complexes Reveal Distinct Pathways of Gene Delivery in Cells as a Function of Strucutre; Alison J. Lin, Nelle L. Slack, Ayesha Ahmad, Heather M. Evans, Cyril X. George, Charles E. Samuel, Cyrus R. Safinya

08:36 K13.04 The Relation between the Physical Properties of Self-Assembling Cationic Lipid:DNA Complexes and Gene Delivery; A. Ahmad, N.L. Slack, Heather M. Evans, Alison Lin, A. Martin, C.R. Safinya

08:48 K13.05 Formation of Supported and Anchored Phospholipid Bilayers by Fusion of Unilamellar Vesicles: An AFM Study.; Ilya Reviakine, Alain Brisson

09:00 K13.06 Probing Single Molecule Orientations in Model Membranes with Near-Field Scanning Optical Microscopy; Christopher W. Hollars, Robert C. Dunn

09:12 K13.07 Single Molecules as Probes of Lipid Membrane Microenvironments; Chad E. Talley, Robert C. Dunn

09:24 K13.08 Poking Vesicles; Thomas R. Powers, Greg Huber, Raymond E. Goldstein

09:36 K13.09 Single Lipid Diffusion in Langmuir Monolayers; Martin Forstner, Doug Martin, Josef A. Kas

09:48 K13.10 Lipid and Lipid-Polymer Mixtures at an Interface; Joon Heon Kim, Mahn Won Kim

10:00 K13.11 Structural properties of the ripple phase formed in lipid membranes containing phopholipids with covalently attached poly(ethylene glycol); David Wolfe, Beth Cunningham, Justin Likar, Stephanie Sydorko, W. Patrick Williams

10:12 K13.12 Phase Separation Induced Morphology Evolution in Lipid Membranes; Yi Jiang, Turab Lookman, Avadh Saxena

10:24 K13.13 Modes of counterion density-fluctuations and counterion-mediated attractions between like-charged fluid membranes; Bae-Yeun Ha

10:36 K13.14 A New Model of Outer Hair Cell Electromotility; Robert Raphael, Aleksander Popel, William Brownell

10:48 K13.15 Theory of the Phases and Fluctuations of Lipid Mixtures; Xiao-jun Li, M. Schick

K13.16 Charge correlation and the stability of membranes against pore growth; Bae-Yeun Ha

# Session K22. DPOLY: Phase Behavior, Morphology and Thermodynamics of Polymer Thin Films.

**Wednesday morning, 08:00, 208C, MCC**

08:00 K22.01 Suppression of lateral phase separation in thin polyolefin blend films; Yvonne A. Akpalu, Alamgir Karim, Sushil Sajita, Nitash Balsara

08:12 K22.02 Evolution of Phase Morphology and Capillary Fluctuations in Thin Film Polymer Blends; Howard Wang, Russell Composto

08:24 K22.03 Phase Behavior in Thin Film Blends of Polystyrene and Poly (bromo-styrene); Russell Gorga, Erin Jablonski, Balaji Narasimhan, P. Thiyagarajan Collaboration

08:36 K22.04 Phase segregation of PS and PMMA blend under confinement; Y.S. Seo, K.W. Shin, M.H. Rafailovich, J. Sokolov, D.A. Winesett, H. Ade

08:48 K22.05 Phase-Separating Thin Film Polymer Blends: The Effect of Film Thickness on Roughening; Russell Composto, Howard Wang

09:00 K22.06 Influence of Lateral Confinement on Phase Separation in Thin Film Polymer Blends; Bi-min Zhang Newby, Russell Composto

09:12 K22.07 Morphology of Annealed Metastable Bilayer and Trilayer Polymer Films; Christian Schultz-Nielsen, John R. Dutcher, Kari Dalnoki-Veress

09:24 K22.08 Dispersion-Driven Morphology and Hole Formation in Freely-Standing Trilayer Polymer Films; Christopher Murray, John R. Dutcher

09:36 K22.09 Compatibilizing Effect of Block Copolymers Added to the Polymer / Polymer Interface: Effects of Additive MW, Architecture, and Composition; Haralambos Retsos, Spiros H. Anastasiadis

09:48 K22.10 The Segregation of Alternating Copolymers to the Biphasic Interface of an Immiscible Polymer Blend; Mike Arlen, Mark Dadmun, William Hamilton

10:00 K22.11 Compatibilization of Polymer Blends with POSS; E. Schrag, W. Zheng, X. Fu, H. White, Ben Hsiao, M. Rafailovich, J. Sokolov, A. Winesett, H. Ade, D. Gersappe, S. Schwarz

10:12 K22.12 Effect of Compressibility in an Athermal Blend Near a Surface; Mukesh Chhajer, Robert Briscar, P. D. Gujrati

10:24 K22.13 Vapor-Liquid Phase Equilibria in Alkane Monolayers Physisorbed on a Metal Surface; Jeffrey Potoff, Ilja Siepmann

# Session K23. DPOLY: Biopolymers.

**Wednesday morning, 08:00, 208D, MCC**

08:00 K23.01 Structure and Interactions of Condensed Actin Phases; G. C. L. Wong, A. Lin, Y. Li, C. R. Safinya, J. X. Tang, P.A. Janmey

08:12 K23.02 The Effect of a Helix-Coil Transition on the Extension Elasticity; Arnaud Buhot, Avi Halperin

08:24 K23.03 Chromatin: structure and dynamical properties; H. Schiessel, R. Bruinsma, W. M. Gelbart

08:36 K23.04 Molecular Modeling of Cell Motility; Premkumar Rallabandi, Sanat Kumar, Evangelos Manias

08:48 K23.05 The Self-Assembly of Block Polypeptides for Potential Biomembrane, Biomaterial, and Biopatterning Applications; Darrin Pochan, Tim Deming

09:00 K23.06 Polymer-induced DNA Condensation in the Lamellar Phase of DNA-Lipid Complexes; Ana Martin, Alison J. Lin, Uwe Schulze, Cyrus R. Safinya, Hans-Werner Schmidt

09:12 K23.07 Micro-phase Separation in Bioerodible Polyanhydrides: Consequences for Vaccine Delivery; Balaji Narasimhan, Elizabeth Shen, Robert Piszczek, Brianne Dziadul

09:24 K23.08 Separations of Short DNA in Agarose Gels: What Model Applies?; Afshin Beheshti, Dr. David H. Van Winkle Team, Dr. Bruce R. Locke Team, Dr. Randolph L. Rill Team

09:36 K23.09 Dynamic Structure in Artificial Protein Hydrogels; Scott B. Kennedy, Mei Hong, Eduardo de Azevedo, David A. Tirrell, Thomas P. Russell

09:48 K23.10 Phase Transition in Biopolymer Hydrogels based on Glycine (G), Valine (V), Proline (P), and Isoleucine (I); Jonghwi Lee, Dan W. Urry, Christopher W. Macosko

10:00 K23.11 Mechanics of red-blood-cell shapes; Ranjan Mukhopadhyay, Michael Wortis

10:12 K23.12 Conformational Contribution to the Heat Capacity of Starch and Starch-Water; Marek Pyda, Bernhard Wunderlich

10:24 K23.13 Spontaneous formation of fibronectin network on charged surfaces; Nadine Pernodet, Dilip Gersappe, Jonathon Sokolov, Miriam Rafailovich, Kenneth McLeod

10:36 K23.14 The Role of Electrostatics in the Partitioning Behavior of Proteins into Polymer Hydrogels; Upma Sharma, Jeffrey Carbeck

10:48 K23.15 Electrophoresis of DNA-protein complexes in polymer solutions: from free-flow to gels; Gary W. Slater, Claude Desruisseaux, Guy Drouin

# Session L36. General Poster Session II.

**Wednesday morning, 10:00, Exhibit Hall, MCC**

L36.57 Droplet Vorticity Alignment in Model Polymer Blends; Kalman Migler

L36.58 Multilayer Coextrusion Reveals Slip at Polymer-polymer Interfaces; Rui Zhao, Christopher W Macosko

L36.59 Electrospinning from a Polymer Melt in a Vacuum; Ratthapol Rangkupan, Darrell H. Reneker

L36.60 Jet-Splitting Instability in Electrospinning of Poly(2-Hydroxyethyl Methacrylate); Sureeporn Koombhongse, Darrell H. Reneker

L36.61 Collection of Electrospun Polymer Nanofibers; Woraphon Kataphinan, Darrell H. Reneker

L36.62 In situ x-ray scattering study of a main-chain thermotropic liquid crystalline polymer under oscillatory shear flow; Nitin Vaish, Wesley R. Burghardt, Weijun Zhou, Julia A. Kornfield

L36.63 Nucleation in Microcellular Thermoplastic Foams; Pieter Spitael, Christopher W. Macosko

L36.64 Electrospun high performance nanofibers; Wenxia Liu, Zongquan Wu, Darrell H. Reneker

L36.65 Flipping from the Perpendicular to Parallel Orientation in Block Copolymers: An Electron Microscopy Study; Lei Qiao, Karen Winey

L36.66 Processing Effects on Block-Copolymer–Based Pressure-Sensitive Adhesives; A. E. O'Connor, C. W. Macosko

L36.67 Achieving microkelvin control at room temperature; Amy L. Lytle, D.T. Jacobs

L36.68 Roughening and De-roughening of the Interface Width in an Electrophoretic Deposition of Polymer Chains; Frank Bentrem, Ras B. Pandey

L36.69 Pattern Coarsening of Spherical Copolymer Microdomains; Christopher Harrison, Zhengdong Cheng, Paul M. Chaikin, David A. Huse, Richard A. Register, Douglas H. Adamson

L36.70 Simulation of a Liquid Crystal at an Amorphous Polymer Surface; T. P. Doerr, P. L. Taylor

L36.71 Structural Properties of a Two-Dimensional Coulomb System; Girija S. Dubey, Godfrey Gumbs

L36.72 Propagation of Heterogeneous Substrate Induced Ordering in Thick Block Copolymer Films; Lee D. Rockford, Thomas P. Russell, M. Yoon, S. G. J. Mochrie

L36.73 Modeling the Molecular Packing of Copper Phthalocyanine / Poly (1-lysine) Multilayer Thin Films; Angela L. Campbell

L36.74 Spinodal dewetting in polymer/polymer systems; A. M. Higgins, R. A. L. Jones, M. Sferrazza, P. Jukes, J. Sharp, L. Dryden, J. Webster

L36.75 Novel method of tailoring the surface properties of elastic materials; Kirill Efimenko, Jan Genzer

L36.76 Mobility of polymer chains at the polymer/air interface; Tobias Kerle, Zhiqun Lin, Ho-Cheol Kim, Thomas P. Russell

L36.77 Microstructure of a new Poly[(A-r-B)_x-b-B_y] (y>x) gradient copolymer; Zhiqun Lin, Thomas P. Russell, Elbert E. Huang, Didier Benoit, Craig Hawker

L36.78 Rheology of Confined Telechelic Chain under Shear; June Huh, Anna C. Balazs

L36.79 Thickness dependence of the glass transition temperature in thin polymer films; Wang-Cheol Zin, Jae Hyun Kim, Jyongsik Jang

L36.80 Investigation of p-quaterphenyl layers vapor deposited on KCl (001) by Atomic Force Microscopy (AFM); Jr. Kintzel, D.H. Van Winkle, J.G. Skofronick, S.A. Safron, F. Flaherty, D.-M. Smilgies, Valdosta State University Collaboration, European Synchrotron Radiation Facility Collaboration

L36.81 Interfaces of two immicible polymer thin films studied by X-ray Scattering; K. Shin, Y. Seo, M. Rafailovich, J. Sokolov, H.O. Seeck, S.K. Sinha, R. Jones, S. Kumar, R. Kolb

L36.82 Surface Segregation of Fluorine in Thin Films of Poly (Methyl Methacrylate-co-Tetrahydroperfluorooctylacrylate) (PMMA/TAN) Random Copolymers.; Nora Beck Tan, Wendy Kosik, Joseph Deitzel, Steve McKnight, Stephanie Crette, Joseph DeSimone

L36.83 Surface Segregation and Bulk Thermodynamics of Polybutadiene Star/Linear Blends; T. D. Martter, M. D. Foster, G. Lizarraga, S. Xu, R. P. Quirk, P. Butler, C. F. Majkrzak, J. D. Demaree

L36.84 Diffusion Behavior in Metal/Polymer Nanocomposites; Rodney Guico, Kenneth Shull, Jin Wang, Lynn Rehn, Peter Baldo

L36.85 Effect of Strain on the adsorption of CO on Pd(100); H. Metiu, M.W. Wu

L36.86 Tuning the wetting behavior of block copolymers on self-assembled monolayers exposed to ionizing radiation; Richard Peters, Xiao Yang, Paul Nealey

L36.87 Symmetric Diblock Copolymer Thin Films Confined Between Two Hard Surfaces: Simulations and Theory; Qiliang Yan, Qiang Wang, Paul Nealey, Juan de Pablo

L36.88 Phase transition of LB films of mixed diblock copolymer at the air/water interface; Y.S. Seo, K.S Kim, V. Samuilov, M.H. Rafailovich, J. Sokolov, Rob G.H. Lammertink, G.J. Vancso

L36.89 Brushes and Mushrooms in Diblock Copolymer/Homopolymer Mixtures; Andreas Terzis, Doros N. Theodorou, Chris Toprakcioglu , Haralambos Retsos, Spiros H. Anastasiadis , Greg Smith , Alain Menelle , Yves Gallot , Georges Hadziioannou

L36.90 Anisotropic Buckling in a Confining Coverlayer Directs Island and Hole Formation in an Underlying Lamellar Block Copolymer Thin Film; M. R. Hammond, G. H. Fredrickson, E. J. Kramer

L36.91 Long-Range Order of Symmetric Block Copolymer Thin Films; Ho-Cheol Kim, Thomas Russell

L36.92 Controlling the Long Range Ordering of Block Copolymer Micelle Films; R.A. Segalman, H. Yokoyama, E.J. Kramer

L36.93 Alignment mechanisms of diblock copolymers in electric fields; Jason DeRouchey , Thomas Thurn-Albrecht, Tom Russell , Sushil Satija

L36.94 Fracture of interfaces between glassy polymers in a trilayer geometry; Nicolas Passade, Costantino Creton

L36.95 The Relationship of Pretilt Angle and Chemical Structure of Rubbed Organo-Soluble Side-Chain Polyimides; Ian K. Mann, F. Bai, Z. Bai, J. Ge, L. Sun, H. Wang, Z. Zhang, Frank W. Harris, Stephen Z.D. Cheng

L36.96 Reactive Processing with Difunctional Oligomers to Increase Interfacial Adhesion in Polymer Blends; Charles O'Brien, Kevin Rice+, Mark Dadmun

L36.97 Fracture Toughness of Modified Poly(ethylene terephthalate)/Gelatin Interfaces; B.Y. Asoo, E.J. Kramer , C.-A. Dai

L36.98 Experimental and theoretical investigation of random copolymer segregation; W Li, B Tang, Y Zhang, D Gersappe, M Rafailovich, J Sokolov , D Peiffer, M Lin , J A Dias, K O MacElrath

L36.99 Numerical Investigation of Monodisperse Polymer in an Athermal Solution Between Two Surfaces; Matthew Yi, Mukesh Chhajer, P. D. Gujrati

L36.100 Structure Within Thin Epoxy Films Revealed by Solvent Swelling: A Neutron Reflectivity Study; Hyun Yim, Michael Kent, W. Frere McNamara , Robert Ivkov, Sushil Satija , Jaroslaw Majewski

L36.101 Interdiffusion of Polyethylenes in Microlayers; Sergei Nazarenko, Eugene Stepanov, Anne Hiltner, Eric Baer

L36.102 Patterning of a Semicrystalline Block Copolymer Thin Film via Epitaxial Crystallization; Cheolmin Park , Claudio De Rosa , Lewis J. Fetters , Bernard Lotz , Edwin L. Thomas

L36.103 Size induced glass transition in ultra-thin films and its impact in diffusive and elastic behavior.; J. Andres Torres, David S. Fryer, Paul F. Nealey, Juan J. de Pablo

L36.104 Understanding the morphology and dynamics of ordering of thin films of diblock copolymers on chemically heterogeneous surfaces; Xiao Yang, Richard Peters, Qiang Wang, Juan dePablo, Paul Nealey

L36.105 Thermal Expansion Behavior of Thin Polycarbonate Films; Christopher Soles, Wen-li Wu

L36.106 Molecular dynamics simulation study of Norbornene-POSS polymers; R. J. Berry , R. K. Bharadwaj , B. L. Farmer

L36.107 Synthesis and Characterization of High Performance Polyheterocycles; Shuxin Cong, Shi Jin, Stephen Z. D. Cheng

L36.108 Analysis of Sub-nanometer Defects Near Coating Surfaces by Positron Annihilation; Hongmin Chen, Renwu Zhang, Huimin Cao, Peter Mallon, Ying He, Thomas Sandreczki, Y.C. Jean , R. Suzuki, T. Ohdaira , Bent Nielsen

L36.109 Oxygen Diffusion In Physically Modified PET; Eugene Stepanov, Sergei Nazarenko, Anne Hiltner, Eric Baer , Center for Applied Polymer Research Collaboration

L36.110 Mesoscale modeling study of nematic liquid crystals confined to ellipsoidal domains; B. L. Farmer, R. K. Bharadwaj , T. J. Bunning

L36.111 QSPR Calculations of Tg of Electroactive Molecular Glasses; James M. O'Reilly, Santosh Putta, Priyan Patkar

L36.112 Photoresist Outgassing in EUV; Maharshi M. Chauhan, Paul F. Nealey , Harun Solak, Franco Cerrina

L36.113 Competing Silicon Backbone Conformations in Poly(di-n-octyl silane); W. Chunwachirasiri, M.J. Winokur , R. West

L36.114 Studies of the Structure of Poly(silylenemethylene)s; Soo-Young Park , Tao Zhang, Leonard V. Interrante , Barry L. Farmer

L36.115 Structure and Properties of Modified Poly(urethane urea)s: Polyisobutylene Comb Polymers and Nanocomposites; D.M. Weisberg, R. Xu, J.T. Garrett, C.A. Siedlecki, A.J. Snyder, G. Rosenberg, J. Runt

L36.116 Microdomain Morphology of Poly(urethane urea) Multiblock Copolymers; J.T. Garrett, C.A. Siedlecki, J. Runt

L36.117 Crystallization and Solid State Structure of Poly(lactide) Copolymers; S. Baratian, J. Runt , E. Hall , J.S. Lin

L36.118 Distortions Near Edge Dislocations in Conjugated Crystalline Polymers; David Martin, Lawrence Drummy, Lebzylisbeth Gonzalez-Ronda, Christian Kübel

L36.119 A Morphological Investigation of Dry and Solvent Swollen Nafion; Sandra Young, Samuel Trevino, Nora Beck Tan, Don Rivin , Rick Paul

L36.120 What Does the SAXS Experiment Tell Us?; Buckley Crist

L36.121 The Structure and Phase Behavior of the Novel Dendritic Liquid Crystalline Polymers; Zhen Liu, Stephen Z. D Cheng , Peiwei Chu, Virgil Percec

L36.122 Melting and Crystallization of Amorphous-Crystalline Diblock Copolymer; Yan Chen, Lei Zhu, Stephen Z.D. Cheng

L36.123 New X-ray and Neutron Diffraction Data and PRISM Theory for Polyethylene Melts; Anton Habenschuss, Brian K. Annis , J. David Londono , John G. Curro, Jeffrey D. Weinhold, Mathias Puetz

L36.124 Achieving Finely Dispersed Minority Phases in Immiscible Polymer Blends via Pulverization; Andrew Lebovitz, Manuel Anguiano, Klementina Khait, John Torkelson

L36.125 Studies on Single Lamellar Crystals of Short Chain Branched Polyethylene Copolymers Crystallized From Solution; Qiang Wang, Stephen Z. D. Cheng , Qiang Fu

L36.126 Novel Banded Structures in a Combined Main-Chain/Side-Chain Crystalline Polyester: from Liquid Crystals to Confined Crystals; Jason J. Ge, Wensheng (William) Zhou, John Z. Zhang, Shy-Yeu Wang, Frank W. Harris, Stephen Z.D. Cheng

L36.127 The Growth and Morphology of Syndiotactic Polypropylene Lamellar Crystals Studied by AFM with Heating Stage; Wensheng (William) Zhou, Stephen Z. D. Cheng, Darrell H. Reneker Reneker , Sergei Magonov

L36.128 Sporadic Nucleation and Growth in the Microphase Separation Process of an I2S Miktoarm Star Block Copolymer and its Blends with Homopolymer; Lizhang Yang, Darrin J. Pochan, Samuel P. Gido , Stergios Pispas, Kunlun Hong, Jimmy W. Mays

L36.129 New synthetic route for nanoporous ceramic films based on silicon-containing block-copolymers.; Martin Brinkmann, Vanessa Z.-H. Chan, Edwin L. Thomas , Apostolos Avgeropoulos, Nikos Hadjichristidis , Victor Lee, Robert D. Miller

L36.130 Moisture Diffusion in Poly(Bismaleimide) and its Composites; L. Bao, A. F. Yee

L36.131 Study of Shear-induced orientation in polyethylene melt near the melting temperature using synchrotron SAXS and WAXD; R.H. Somani , I. Sics , B.S. Hsiao, Z.G. Wang , F. Balta-Calleja , T. Ezquerra , S. Srinivas, A. Tsou , SUNY at Stony Brook Team, Instituteo de Estructura de la Materia Madrid Spain Team, Exxon Chemical Company Collaboration

L36.132 Effect of Reaction Rate on Morphological Change of Reactive Blends; Hyun Kyoung Jeon, Jin Kon Kim

L36.133 Full Pattern WAXD Refinement of Oriented Polymer Structures Using Simulated Annealing; Jing Wu, Jerold Schultz

L36.134 Macromorphology of Polypropylene Homopolymer Tacticity Mixtures; Roger Phillips

L36.135 Confined crystallization in a lamellar forming PEO-b-PS diblock copolymer; Lei Zhu, Stephen Z. D. Cheng*, Bret H. Calhoun, Qing Ge, Roderic P. Quirk , Benjamin Hsiao, Fengji Yeh

L36.136 Structural Study of Poly(ferrocenyldimethylsilane) in Electrospun Nanofibers and Poly(ferrocenyldimethylsilane)-b-Poly(isoprene) Diblock Copolymer in Bulk; Zhihao Chen, Mark Foster, Hao Fong, Darrell Reneker, Tae Hee Chang, Roderic Quirk , Rui Resende, Ian Manners

L36.137 Comparison of Scattering Data and Molecular Dynamics Simulations for Liquid Poly(ethylene oxide) PEO and Small Molecule Analogs; Brian K. Annis, Anton Habenschuss , Christopher J. Benmore , Oleg Borodin, Dmitry Bedrov, Grant D. Smith

L36.138 Mixing Efficiency, Coarsening, and Self-Compatibilization in Immiscible Polymer Blends Processed via Solid-State Shear Pulverization; Albert Davydov, Klementina Khait, John Torkelson

L36.139 Polymerization peak in polystyrene: A molecular dynamics simulation study; Chakravarthy Ayyagari, Dmitry Bedrov, Grant Smith

L36.140 Structure and Ordering of Micelles in Triblock Copolymer Solutions; Yong Li, Guangdong Liao, Karl Ludwig, Rama Bansil , Cestmir Konak , Jyotsana Lal

L36.141 Morphological Investigation of Two-Phase LC/Polymer Films Formed via Reaction-induced Phase Separation; Greg Hostetter, Greg Beaucage , Barry Farmer, Timothy Bunning

L36.142 Detection of Cocontinuity in Immiscible Polymer Blends; Jeffrey Galloway, Christopher Macosko

L36.143 Morphology of semicrystalline/amorphous diblock copolymer on thin film; Sheng Hong, William J. MacKnight, Thomas P. Russell, Samuel P. Gido

L36.144 Morphology of Covalent and Hydrogen Bonded Side Group Liquid Crystalline Block Copolymers: Orientation by Oscillatory Shear and Device Applications; Chinedum O. Osuji , Chiyang Chao, Christopher K. Ober , Edwin L. Thomas

L36.145 Mechanical Behavior of Energetic Materials During High Acceleration; Y. D. Lanzerotti , J. Sharma

L36.146 Diffusion of methanol into PMMA studied by molecular dynamics simulations; Mesfin Tsige, M. Mahajan, C. Rosenblatt, P.L. Taylor

L36.147 Molecular Modeling of the Deformation of Polymer Chains; W. W. Adams, R. Pachter, B. L. Farmer , R. J. Young

L36.148 Electronic Structure and Properties of Strained Polymers; W. N. Sivak, R. Pachter, B. L. Farmer, W .W. Adams

L36.149 Craze Growth Monitoring Using Light Scattering; Tom Krupenkin

L36.150 NMR Characterization of Segmental Dynamics in Glassy Poly(alkyl methacrylate)s Using Centerband-Only Detection of Exchange (CODEX); Tito J. Bonagamba , Fabio Becker-Guedes, Eduardo R. deAzevedo , Weiguo Hu, Klaus Schmidt-Rohr

L36.151 Prediction of the Time-Dependent Shear Modulus of Poly(vinylidene fluoride) from Simulation and Theory; Oleksiy Byutner , Grant Smith

L36.152 Effect of Crosslinking and Morphology on Properties of Rigid-rod Polymers; Shawn Jenkins, Karl I. Jacob, Malcolm B. Polk, Satish Kumar , Thuy Dang, F. E. Arnold

L36.153 Structure and Properties of a Hydrogen Bonded, Rigid-rod Polymer - Methyl Pendant PBI; Shawn Jenkins, Karl I. Jacob, Malcolm B. Polk, Satish Kumar , Thuy Dang, F. E. Arnold

L36.154 Influence of local segmental motions on diffusion of small molecules through glassy polymers; Vijay Natarajan, Albert F. Yee

L36.155 Crystal Modulus of Silk Fibers: Bombyx mori; Anuchai Sinsawat, R. K. Eby , Ruth Pachter

L36.156 Adhesive Properties of Model, Filled Elastomeric Adhesives Peter Drzal, Elizabeth Cheang, Kenneth Shull

L36.157 Viscoelasticity of Ethylene-Styrene Interpolymers: Molecular Interpretation; Eugene Stepanov, Hong-Yu Chen, Anne Hiltner, Eric Baer , Center for Applied Polymer Research Collaboration

L36.158 Adhesion and Stress Relaxation of Coalesced Latex Blends; E. Fabbroni, K.R. Shull , A.C.I.A. Peters

L36.159 Molecular Motions During Physical Aging in Polystyrene; C.L. Thompson, M.D. Ediger

L36.160 Neutron scattering study of electron-irradiated P(VDF-TrFE); Edward Balizer , Aime DeReggi , Dan Neumann , Fred Bateman

L36.161 Star vs Linear ABC Block Copolymer Self-Assembly; Eric Flewelling, Glenn H. Fredrickson, Francois Drolet

L36.162 Polymerization-Induced Phase Separation in Vinyl Ester Resins; Manisha Ganglani, John Torkelson, Stephen Carr

L36.163 SIMS studies of Finite Film Thickness Effects on Polymer and Probe Diffusion in Free-Standing Ultra-Thin Polymer Films; Ankit Patel , Chris White, Wen-li Wu , Yuxie Pu, M. Rafailovich, J. Sokolov

L36.164 Anisotropy in a DH\alphaMS Copolyester LC Polymer; Robert Bubeck, James Brewbaker

L36.165 Stabilization and carbonization of mesophase pitch nanofiber; Hao Fong, Darrell H. Reneker

L36.166 Time-dependent Orientational Coupling in Uniaxially Stretched Bimodal Melts: A Molecular Dynamics Study.; Marc P. Pepin, Gary W. Slater

L36.167 Dynamics of Fibrillation in Polymer Fibers; Andrew Guenthner, Thein Kyu

# Session M13. DMP/DBP: Biological/Biomimetic Materials I: Model Membranes.

**Wednesday morning, 11:00, 103F, MCC**

11:00 M13.01 Model Membranes for Investigations of Biological Adhesion Deborah Leckband
11:36 M13.02 Biomembrane mimics made from block copolymers; Bohdana Discher, You-Yeon Won, James Lee, Harry Bermudez, Frank Bates , Dan Hammer, Dennis Discher, *Univ.Minn. and Univ.Pennsylvania Collaboration
11:48 M13.03 Generation of a Photopolymerized Membrane Mimetic Monolayer on a Hydrogel Substrate; Elliot Chaikof, Hongbo Liu, Janine Orban
12:00 M13.04 Self-assembled monolayers of phosphorylcholine alkylthiols on gold Vassiliki Tegoulia, Weisun Rao , Stuart Cooper
12:12 M13.05 Unique Determination of Biomimetic Membrane Profiles by Inversion of Neutron Specular Reflectivity; C.F. Majkrzak, N.F. Berk, S. Krueger , C.W. Meuse, V. Silin, J. Woodward, A. Plant , M. Tarek
12:24 M13.06 Phase Determination in Neutron Specular Reflectivity as a Tool for Assaying Film Quality; N.F. Berk, C.F. Majkrzak
12:36 M13.07 Atomic Force Microscopy of Hybrid Bilayer Membranes; John T. Woodward , Marlon L. Walker , Anne L. Plant

# Session M19. DPOLY: Crystallization I.

**Wednesday morning, 11:00, 207AB, MCC**

11:00 M19.01 Oriented Crystallization of Random Copolymers; Prameela Susarla , A.S. Abhiraman , Stephen Michielsen
11:12 M19.02 Templated crystallisation: soft phases controlling hard materials J Patrick A Fairclough, Simon C Turner , Wim Bras , Shao-min Mai, Colin Booth , Anthony J Ryan
11:24 M19.03 Large-scale Normal Coordinate Analysis of Macromolecular Systems: Thermal Properties of Polymers and Crystals; Robert E. Tuzun , Kazuhiko Fukui, Bobby G. Sumpter, Chao Yang, Donald W. Noid
11:36 M19.04 Low Dose HREM Imaging of Lattice Distortions in Uniformly Twisted MPDI Polymer Crystals; Christian Kübel, Daniel Lawrence , David Martin
11:48 M19.05 Crystal Structure and Banded Spherulite of Poly(trimethylene terephthalate); Rong-Ming Ho , Kae-Zen Ke, Ming Chen
12:00 M19.06 Lamellar Morphology of Crystalline/Crystalline Poly(vinylidene fluoride)/Poly(3-hydroxybutyrate) Blends Probed by Small Angle X-ray Scattering; Hsin-Lung Chen, Hsiue-Jung Chiu , J. S. Lin
12:12 M19.07 Nucleation and Crystal Growth of Alkanes from Dilute Solution; David T. Wu , Jr. King , M. Varma-Nair
12:24 M19.08 Controlling the solid-state microstructure of semi-crystalline polymers through chemical design of the chains; C. Le Fevere de Ten Hove, A. M. Jonas , J. Penelle
12:36 M19.09 Polymorphism, Structure and Chromism in Poly(di-n-decylsilane); M.J. Winokur, W. Chunwachirasiri , R. West
12:48 M19.10 Segmental Packing in Polycarbonate Studied by Two- and Three-Dimensional Solid-State NMR; Klaus Schmidt-Rohr , Hironori Kaji
13:00 M19.11 Characterization of Sidegroup Packing in Methacrylates and Poly(Vinyl Acetate) by Solid-State NMR; Douglas J. Harris, Tito J. Bonagamba , Klaus Schmidt-Rohr
13:12 M19.12 Simultaneous measurements of small angle X-ray scattering, wide angle x-ray scattering, and dielectric spectroscopy during crystallization of polymers; T.A. Ezquerra, I. Sics, A. Nogales, Z. Denchev, F.J. Baltá-Calleja
13:24 M19.13 Crystallization Behavior of Aromatic Copolyesters: Time-Resolved X-Ray Scattering and DSC Studies; Moonhor Ree, Byeongdu Lee, Tae Joo Shin, Xiaodong Wang, Hwa Shik Youn
13:36 M19.14 The Crystallization Phase Behavior and the Chain Dimensions of Semicrystalline and Amorphous Polymer Blends; Ching-I Huang, Wei-Tsung Chuang

# Session M22. DPOLY: Polymer Interfaces and Adhesion.

**Wednesday morning, 11:00, 208C, MCC**

11:00 M22.01 Nanoindentation and Microindentation Studies of Pressure Sensitive Adhesives; Adriana Paiva, Mark Foster , Alfred Crosby, Kenneth Shull
11:12 M22.02 Interfacial Behavior between Acrylic Pressure Sensitive Adhesives and a Release Coating; Lihua Li , Matthew Tirrell , Alphonsus V. Pocius , Christopher Macosko , Gary L. Korba
11:24 M22.03 Adhesion Enhancement Via Interfacial Entanglements Phillip Cole, Christopher Macosko
11:36 M22.04 Self-Adhesion of Polyethylene Copolymers in the Melt Eugene Stepanov, Nadim Qureshi, Anne Hiltner, Eric Baer , Center for Applied Polymer Research Collaboration
11:48 M22.05 Use of Self-Assembled Monolayers to Control Interface Bonding in a Model Study of Interfacial Fracture; Michael Kent, Hyun Yim, E. David Reedy, Aaron Matheson, Cory Cogdill
12:00 M22.06 Subcritical Crack Growth along Polymer Interfaces; C.K Gurumurthy, E.J. Kramer , C.-Y. Hui
12:12 M22.07 Electron Beam Processed SIN and seq-IPN Adhesives; James M. Sands, Steven H. McKnight, Bruce K. Fink
12:24 M22.08 Large-scale simulations of a polymer melt/brush interface: Adhesion enhancement due to surface-tethered chains; Scott Sides, Gary Grest, Mark Stevens
12:36 M22.09 The Surface Free Energy of Hard Chain Fluids Against a Hard Planar Wall; Frank van Swol
12:48 M22.10 Polymer Transport in Ultrathin Membranes; Alan Esker , Holger Gruell , Sushil Satija, Charles Han
13:00 M22.11 Reaction Kinetics of End-functionalized Chains at a Polystyrene/Poly(methyl methacrylate) Interface; J. S. Schulze, T. P. Lodge, C. W. Macosko
13:12 M22.12 The width of the poly(styrene)-poly(2-vinyl pyridine) homopolymer interface; Matthew Libera , Krisda Siangchaew
13:24 M22.13 A Study of Polymer Entanglement Density: The Effect of Interfacial Width between Two Immiscible Polymers; Robert Oslanec, Hugh R. Brown
13:36 M22.14 Structural, Thermodynamic and Dynamic Properties of Surfaces and Thin Flims of Polymer Melts from Atomistic Molecular Dynamics Simulations J. Chang, D.Y. Yoon , L. Yang, J. Han, R.L. Jaffe

# Session M23. DPOLY: Simulations and Theory of Polymeric Systems.

**Wednesday morning, 11:00, 208D, MCC**

11:00 M23.01 Comparison Between Integral Equation Theory and Molecular Dynamics Simulations for Realistic Models of Polyolefin Melts Mathias Puetz , John G. Curro, Gary S. Grest, Jeffrey D. Weinhold, Edmund B. Webb III
11:12 M23.02 Accurate, Coarse-Grained Simulation Models for Polymers Ananth Indrakanti , Sanat Kumar , Janna Maranas
11:24 M23.03 Simulation of Vinyl Polymers on the 2nnd Lattice; Thomas c. Clancy, Wayne L. Mattice
11:36 M23.04 Large Scale Molecular Dynamics Simulations of a Liquid Crystalline Material Model; R. Pachter, Z. Wang, J. A. Lupo
11:48 M23.05 3D Numerical Simulation of Viscoelastic Phase Separation; Takeaki Araki, Hajime Tanaka
12:00 M23.06 Thermodynamic properties of lattice polymer melts. Monte Carlo simulations and mean-field theories.; Dorel Buta, Karl F. Freed , Igal Szleifer
12:12 M23.07 Applying Lattice-Boltzmann Methods to Phase Inversion Polymer Membranes; Ariya Akthakul, Alexander Wagner, Chris Scott, Anne Mayes
12:24 M23.08 Connection Between Microscopic and Coarse-Grained Inter-Chain Interactions; Edwin David
12:36 M23.09 Simulations of Shear at Polymer/Polymer Interfaces; Sandra Barsky, Mark O. Robbins
12:48 M23.10 Cell Dynamics Simulations of Block Copolymer Films; Ian Hamley, Shaoran Ren
13:00 M23.11 Numerical Investigation of a Binary Interacting Blend of Fixed Length Polymers Next to a Surface; Purushottam Gujrati, Richard Batman
13:12 M23.12 A simple and efficient search method for discovering new ordered phases of block copolymers; Yardena Bohbot-Raviv, Zhen-Gang Wang

# Session P2. FIAP/DPOLY: PEM Fuel Cells II.

**Wednesday afternoon, 14:30, 102AB, MCC**

14:30 P2.01 Bi-polar plates, flow fields and stack design criteria
Frano Barbir
15:06 P2.02 Gas Diffusion Layers
J.M. Larson
15:42 P2.03 Panel Discussion

# Session P13. DMP/DBP: Biological/Biomimetic Materials II: Characterization and Properties.

**Wednesday afternoon, 14:30, 103F, MCC**

14:30 P13.01 Function of Amphiphilic Biomolecular Machines: Elastic Protein-based Polymers; Dan W. Urry
15:06 P13.02 A molecular machine made and powered by DNA; Bernard Yurke , Andrew J. Turberfield , Jr. Mills
15:18 P13.03 Rapid, Simultaneous Multianalyte Detection with a Nanopore John Kasianowicz , Sarah Henrickson, Baldwin Robertson , Howard Weetall , Biosensing and Cellular Control Team
15:30 P13.04 Structure and mechanical properties of biogenic single calcite crystals Joanna Aizenberg , Steve Weiner, Lia Addadi
15:42 P13.05 AFM Manipulation of Single Crystal Biomaterials using Combined Chemical and Mechanical Stimulation: Nanometer Wear and Tip-Controlled Deposition; S. C. Langford, R. Hariadi, J. T. Dickinson
15:54 P13.06 Structure and free energy of cholesteric DNA droplets; Helmut strey , Helen Hong, Nalini Easwar
16:06 P13.07 Microelasticity of Single Mitotic Chromosomes; Michael Poirier, Sertac Eroglu, Didier Chatenay, John F. Marko , Tatsuya Hirano
16:18 P13.08 Polycationic antimicrobial dendrimers: a comparison of alkyl pyridinium,quaternary ammonium, quaternary phosphonium and tertiary sulfonium salts; Chris Chen , Stuart Cooper

## Session R2. FIAP/DPOLY: Polymer Structure and Dynamics at Interfaces: Molecules to Device Applications.

**Thursday morning, 08:00, 102AB, MCC**

08:00 R2.01 Diblock co-polymers and surface patterning
Paul Chaikin
08:36 R2.02 Theoretical Insight into Polymer Structure near Interfaces
John G. Curro
09:12 R2.03 The Glass Transition at Polymer Surfaces
Miriam Rafailovich
09:48 R2.04 Motion of Molecularly Thin Polymer Films under Boundary Lubrication
Marchon Bruno
10:24 R2.05 Capillary Driven Penetration of Microporous Coatings by Viscoelastic Fluids
David Yarusso

## Session R8. DCOMP: Computational Physics Across Disciplines.

**Thursday morning, 08:00, 101H, MCC**

08:00 R8.01 Computational physics of protein folding and design
Cristian Micheletti - Via Beirut 2A - Trieste - Italy)
08:36 R8.02 Molecular dynamics of fluid flows in the Knudsen regime
Marek Cieplak
09:12 R8.03 Computational Compexity and Phase Transitions
Scott Kirkpatrick
09:48 R8.04 Computational Physics and Evolutionary Dynamics
Walter Fontana
10:24 R8.05 Maria Goeppert-Mayer Award Prize Talk--Computer simulation studies of emerging dynamical structure in glass-forming liquids and polymers
Sharon C. Glotzer

# Session R22. DPOLY: Crystallization II.

**Thursday morning, 08:00, 208C, MCC**

08:00 R22.01 Probing the Early Stages of Polymer Crystallization: from Quiescent State to Flow; Benjamin Hsiao

08:12 R22.02 Conjugated Phase Separation and Crystallization in Polyolefin Blends Howard Wang, Charles C. Han , Polymer Blend Team

08:24 R22.03 Reversible Crystallization and Melting of Poly(ethylene-co-octene) Rene Androsch , Bernhard Wunderlich

08:36 R22.04 A Comparative Study of the Melting and Crystallization Behavior of a Metallocene and a Ziegler Fraction of iPP with the Same Overall Defect Content; R.G. Alamo, T.W. Huang , L. Mandelkern , M.H. Kim

08:48 R22.05 Effect of polydispersity on the evolution of density fluctuations to lamellar crystals in linear polyethylene; Yvonne A. Akpalu, Eric J. Amis

09:00 R22.06 Time-Resolved WAXD and FTIR Studies on Imidization-Induced Molecular Ordering in Polyimide Precursors; Moonhor Ree, Tae Joo Shin, Byeongdu Lee, Xiaodong Wang, Hwa Shik Youn, Ki-Bong Lee

09:12 R22.07 Crystallization of Linear Polyethylene and its Copolymers at Very High Supercooling; Paul Phillips, John Wagner

09:24 R22.08 Crystallization Kinetics of Nylon Blends and Copolymers Using Simultaneous Small- and Wide-Angle X-ray Measurements
N. Sanjeeva Murthy , Zhi-Gang Wang , M.K. Akkapeddi , Benjamin S. Hsiao

09:36 R22.09 Unusual temperature dependence of nucleation kinetics involving the rotator phase of alkanes; Amy B. Herhold, Jr. King, E.B. Sirota

09:48 R22.10 Melting and Crystallization of Paraffins by Calorimetry Jeongihm Pak , Bernhard Wunderlich

10:00 R22.11 Recrystallization and Reorganization of Linear Low Molecular Weight Poly(ethylene oxide); Er-Qiang Chen, Stephen Z. D. Cheng , Benjamin S. Hsiao

10:12 R22.12 Wide Angle X-ray Scattering and Fourier Transform Infrared Spectroscopy Studies during the Secondary Crystallization of Polymers with Low to Intermediate Degree of Crystallinity; Azar Alizadeh, Jiannong Xu, Seungman Sohn, Herve Marand

10:24 R22.13 Structure of the Molten Stereo-regular Polyolefins with Different Side Chain Size: linear polyethylene, polypropylene, poly(1-butene), poly(4-methyl-1-pentene); M.-H. Kim, A. Habenschuss , Team

10:36 R22.14 Shear-induced orientation and subsequent crystallization in the undercooled melt of polypropylene by synchrotron SAXS; R.H. Somani , I. Sics , B.S. Hsiao, Z.G. Wang , F. Balta-Calleja, T. Ezquerra , S. Srinivas, A. Tsou , SUNY at Stony Brook Team, Instituteo de Estructura de la Materia Madrid Spain Team, Exxon Chemical Company Collaboration

10:48 R22.15 Conformation-density coupling in spinodal-assisted crystallization of polymer melts; Anna Maidens, Peter Olmsted

# Session R23. DPOLY: Optical and Electronic Properties II.

**Thursday morning, 08:00, 208D, MCC**

08:00 R23.01 Steady State Photoinduced Absorption Studies of PDPA-nBu and PDPA-Cz Solutions and Films; H. Lim, D.K. Wang, A.J. Epstein

08:12 R23.02 Femtosecond transient photoluminescence of the substituted poly(diphenylacetulene)s.; N.V. Piskun, D.K. Wang, H. Lim, A.J. Epstein, L.D. VanWoerkom, T.L. Gustafson

08:24 R23.03 Polarized photoluminescence of a liquid crystalline monosubstituted polyacetylene upon photoexcitation with an ultraviolet laser; Yuanming Huang, Jiannong Wang, Weikun Ge , Jacky W. Y. Lam, Ben Zhong Tang

08:36 R23.04 Dielectric Polarizability of Low-Dimensional Polymeric Structures Vladimir N. Prigodin, Arthur J. Epstein

08:48 R23.05 Polarization of Excitons in a Conjugated Polymer Chain; R.L. Fu , N. Dai , X. Sun

09:00 R23.06 Anion Environment in an Ionic Conducting Polymer; R. Fernandez-Perea, Guomin Mao, S. D. Shastri, M.-L. Saboungi, D. L. Price

09:12 R23.07 Excitonic couplings and electronic coherence in bridged naphthalene dimers; Sergei Tretiak , Wei Min Zhang, Vladimir Chernyak, Shaul Mukamel

09:24 R23.08 A time-dependent approach for exciton localization dynamics in conjugated polymers; Eric Bittner , Mark Kobrak

09:36 R23.09 NMR Measurements of Electronic Conduction in Ppy-PF_6
W.G. Clark, K.B. Tanaka, F. Wudl, R. Menon , S.R. Williams, B. Chmelka , M. Horvatic, C. Berthier , W.G. Moulton, P. Kuhns

09:48 R23.10 Thin film thickness determination with Beam PALS
J.N. Sun, T.L. Dull, A.F. Yee , W. E. Frieze, D.W. Gidley

10:00 R23.11 Morphology of Nanoporous Ultralow Dielectric Materials Sangwook Choi, Robert M. Briber , Elbert Huang, Willie Volksen, Robert Miller

10:12 R23.12 Electron Correlation Effects; G. P. Zhang , Thomas F. George

10:24 R23.13 Structure/property Relationships in Polymers for Light Emitting Diodes; Mary Galvin , Anoop Menon , Zuhkra Niazinbetova

10:36 R23.14 Fabrication and Characterization of 3-D Periodic Ferroelectric Polymer-Silica Opal Composites and Inverse Opal for Photonic Crystals Tian-Bing Xu, Zhong-Yang Cheng, QiMing Zhang, Ray H. Baughman, Changxing Cui, Anvar A. Zakhidov, Ji Su, Materials Research Laboratory and Department of Electrical Engineering at The Pennsylvania State University and AlliedSignal Inc. Morristown NJ Collaboration

10:48 R23.15 Static and dynamic effects of correlated dipolar disorder on charge transport in organic solids; David H. Dunlap , Paul E. Parris

# Session S36. General Poster Session III.

## Thursday morning, 10:00, Exhibit Hall, MCC

S36.01 Structure and Properties for Two-Photon Absorbing Materials
P. N. Day, K. A. Nguyen, R. Pachter

S36.02 The Design of Reverse Saturable Absorbing Materials Using First Principle Calculations; K. A. Nguyen, P. N. Day, R. Pachter

S36.03 Analysis of Dielectric Spectra of Polymers as a Function of Frequency and Temperature; A. Bello, M. Grimau

S36.04 Molecular Hyperpolarizabilities of Dithienyl Polyenes from First Principle Calculations; S. Trohaklaki, R. J. Zellmer, R. Pachter

S36.05 Transport in Polypyrrole in the Presence of Gases; N.T. Kemp, A.B. Kaiser, H.J. Trodahl , B. Chapman, R.G. Buckley, A.C. Partridge

S36.06 Effect of Confinement on the Dielectric Perimttivity of Emeraldine Base and Weakly Doped Polyaniline at Radio Frequencies; Angel Acosta, Nicholas Pinto , Ghanshyam Sinha, Fouad Aliev

S36.07 Effect of Source Bandwidth, Focusing and Fluence on the Depth Of Cure in Polymer Dental Composites; Ranjit Pradhan, Noureddine Melikechi , Frederick Eichmiller , Applied Optics Center of Delaware Collaboration, Paffenbarger Research Center Collaboration

S36.08 Polymer-Containing Droplets in a Matrix, Dielectric Constant, Conductivity, and Electric Fields; Nikolaos Bentenitis, Sonja Krause

S36.09 Self-Assembly of ABC Triblock and ABCA Tetrablock Copolymers: Theory and Experiment; G.H. Fredrickson, F. Drolet, E. Flewelling, C.Y. Ryu, E.J. Kramer

S36.10 Modeling Block Copolymer Self-Assembly through a New Approach to Density Functional Theory; J. D. Weinhold, A. G. Salinger, L. J. Douglas Frink

S36.11 Designing Polymeric Bicontinuous Microemulsions; Mark W. Matsen , Russell B. Thompson

S36.12 Phase separation in 3d-binary mixtures with hard mobile particles; Aman Gulati, Valeriy Ginzburg, Feng Qiu, Gongwen Peng, Anna Balazs

S36.13 Comicellization in the Block Copolymer/Surfactant Mixtures in Polar Selective Solvent; Alexander Borovinskii, Alexei Khokhlov

S36.14 Microstructural change and phase behavior in hydrogen bonding polymer solutions hydrogen bonding polymer solutions; S Rane , S Sukuamran, G Beaucage

S36.15 Effect of Added Star copolymer on the Phase Behavior of Immscible Polymer Blends; June Huh, Anna C. Balazs

S36.16 Study of Miscibility in Binary Mixtures by Molecular Simulations Soumya Patnaik, Ruth Pachter

S36.17 Phase behavior of a compressible polymer solution.; F. Semerianov, P. D. Gujrati

S36.18 Dynamics of Spherullitic Growth in Blends of Semicrystalline and Non-Crystalline Polymers; Thein Kyu, Rujul Mehta

S36.19 Phase Transitions, Relaxation Behaviors, and Structures of Hairy-Rod Polyimides; Zhihao Shen, Huabin Wang, Jason Ge, Frank Harris, Stephen Cheng

S36.20 Characterization of Laterally Attached Main-Chain Liquid Crystals; Bret H Calhoun, Coleen R Pugh, Stephen Z.D. Cheng

S36.21 How do we extract the three chi's that describe a compressible blend from SANS ?; P. D. Gujrati, Sagar Rane

S36.22 Use of Parallel Tempering for the Simulation of Polymer Melts; Alex Bunker, Burkhard Duenweg , Doros Theodorou

S36.23 Structural properties of self-assembled polymers with H-bonding in solution Aissa Ramzi, Ky Hirschberg, Luc Brunsveld, Rint Sijbesma, Bert Meijer , Kell Mortensen

S36.24 Structural Transitions Induced by a Recombinant Methionine-Trigger in Silk Spidroin; Donna Wilson, Stefan Winkler, Regina Valluzzi, David Kaplan

S36.25 Molecular Dynamics Simulations of Poly(ethylene oxide)/LiI Melts:Molecular Weight Dependence.; Oleg Borodin, Grant Smith

S36.26 Investigation of the Effect of an Alkali Salt on the Conformation of Poly(ethylene oxide) in the Melt by Small Angle Neutron Scattering and Molecular Dynamics Simulations; Man-Ho Kim, Brian Annis, George Wignall , Oleg Borodin, Grant Smith

S36.27 Diffusion of hard spherical particles in gel-like systems: Reaching the continuum limit on a lattice; Jean-Francois Mercier, Gary W. Slater

S36.28 Electrophoresis of Composite Molecular Objects: The Relation between Friction, Charge and Ionic Strength in Free-Solution; Claude Desruisseaux , Didier Long , Guy Drouin, Gary W. Slater

S36.29 Migration of Long Polyelectrolytes in a Structured Microfluidic Channel; Frederic Tessier, Marc P. Pepin, Gary W. Slater

S36.30 Structure Formation in Salt-Free Solutions of Amphiphilic Sulfonated Polyelectrolytes; Michael Bockstaller , Werner Koehler

S36.31 Molecular Dynamics Study of Poly(ethylene oxide) in Aqueous Solutions; Dmitry Bedrov, Oleg Borodin, Grant D. Smith

S36.32 Competitive adsorption of polyelectrolytes and model proteins; Marcelo Carignano , Iga Szleifer

S36.33 Use of a gradient programmer to study the polyelectrolte effect; David Norwood, Catherine diBenedetto

S36.34 Effective-Medium Gaussian Chain Theory for Nondilute Polymer Solutions Confined to a Slit; Iwao Teraoka , Yongmei Wang

S36.35 Influence of Water Molecules on the Structure and Dynamics of a Polymer Electrolyte; Guomin Mao, R. Fernandez-Perea, M.-L. Saboungi, D. L. Price

S36.36 Comparison of STEM and SAXS Data from Ethylene-Based Ionomers K.I. Winey, B.P. Kirkmeyer

S36.37 Ionic Nano-Aggregates in Styrenic Ionomers: Influence of Ion-Pairs, Neutralization Method and Thermal History; B.P. Kirkmeyer, K.I. Winey , J.-S. Kim

S36.38 Modeling Failure in Filled Polymer Composites; Dilip Gersappe

S36.39 Organically Modified Aero-Sol Gel Silica for Elastomer Reinforcement
S. E. Pratsinis , D. J. Kohls, G. Beaucage
S36.40 Percolation of Filled Rods in a Phase-separating Blend; Gongwen Peng, Qiu Feng, Valeriy V. Ginzburg , David Jasnow , Anna Balazs
S36.41 Photo-Induced Morphology Development in Free-Radical Initiated Polymer Dispersed Liquid Crystal Films; Richard A. Vaia , David Tomlin , Timothy Bunning
S36.42 Polymer Adsorption from Supercritical Fluids: Technique Development and Preliminary Results; Shawn E. Conway , Mark A. McHugh
S36.43 Effects of pressure and temperature on the static and dynamic properties of PE via NpT Molecular Dynamics Simulations; Stewart Hotston, Kostas Karatasos, David Adolf
S36.44 Effect of Solvent Structure and Polymer Architecture on Polymer Conformational Behavior Using High-Pressure Dynamic Light Scattering
Thomas Kermis , John van Zanten , Mark McHugh
S36.45 A study of the annealing of poly(ethylene-co-octene) by standard DSC
Rene Androsch , Bernhard Wunderlich
S36.46 In-situ X-ray scattering study on melting of polybutylene succinate
Hyun Hoon Song , Eui Sang Yoo, Seung Soon Im
S36.47 Crystallization of polyethylene blends at high Peclet numbers
June H. Luke, Jerold M. Schultz, Annette D. Shine
S36.48 Flory Model of Polymer Crystallization, Kauzmann Paradox and Gibbs-DiMarzio Theory of Glass Transition; A. Corsi, P.D. Gujrati
S36.49 Relationship between Crystal Thickness and Isothermal Crystallization Temperature for Determination of Equilibrium Melting Temperature for Syndiotatic Polypropylene; Zhi-Gang Wang, Benjamin Hsiao Hsiao , Srivatsan Srinivas , Buckley Crist , SUNYSB Collaboration, Exxon Collaboration, NWU Collaboration
S36.50 Dynamical heterogeneity and non-Gaussianity in glassforming liquids and polymers; Yeshitila Gebremichael , Thomas B. Schroeder, Vladimir Novikov, Sharon C. Glotzer
S36.51 NMR relaxation study of components dynamics of PI/PVE blend system
Bumchan Min, M. D. Ediger
S36.52 Effect of Linkage Groups on Motional Cooperativity in Secondary Relaxations of Some Glassy Polymers; Lei Li , Albert F Yee
S36.53 Segmental Dynamics in a Model Blend of Alkanes; C. M. Raphael , M. D. Ediger
S36.54 Test for Dispersion of Hypersonic Wave Velocities in Nitrobenzene Using Brillouin Scattering Techniques
Earl Babcock, Aaron Breneman
S36.55 Solvent-Induced Crystallization in Poly(Ethylene Terephthalate)
Hao Ouyang

# Session V8. DPOLY: Proteins and Polymers with Random Disorder.

**Thursday afternoon, 14:30, 101H, MCC**

14:30 V8.01 Self-Assembly of Disordered Heteropolymers Near Interfaces and in Solution; Arup K. Chakraborty
15:06 V8.02 Folding mechanism of proteins and protein-like polymers; Vijay Pande
15:42 V8.03 Statistical design of folding heteropolymers; Jeffery Saven
16:18 V8.04 Statistical Physics of Heteropolymers and Protein Folding Problem
Eugene Shakhnovich
16:54 V8.05 Sequence disorder and topological disorder in polymer systems
Alexander Grosberg

# Session V22. DPOLY: Rheology of Solutions, Branched Polymers and Melts.

**Thursday afternoon, 14:30, 208C, MCC**

14:30 V22.01 Brownian Dynamics Simulations of Polymer Configurations, Stress, Birefringence, and Light Scattering Under Flow; Ronald Larson, Lei Li, Hua Hu , Polymer Simulations Collaboration

14:42 V22.02 Torque and Normal Force Measurements in Concentrated Ortho-terphenyl/Polystyrene Solutions; Vannarong Soulivong, Xiangfu Shi, Gregory McKenna

14:54 V22.03 Molecular Motors Fluidize Polymer Networks; Josef A. Kas, David Humphrey, Cynthia Duggan, David Smith, Devjani Saha

15:06 V22.04 Watered-down Nanorheology; Yingxi Zhu, Steve Granick

15:18 V22.05 Concentration fluctuations and flow instability in sheared polymer solutions; William Black, Michael Graham

15:30 V22.06 Hydrophobic surfaces against hydrophilic surfaces with intervening electrolyte solution; Xueyan Zhang, Steve Granick

15:42 V22.07 Dimensional Recovery in Biaxially Oriented Amorphous Polymer Films.; C. C. Chau , J. C. M. Li

15:54 V22.08 Molecular Rheological Calculations for Long Chain Branched Polyolefins; ab initio Calculation of Molecular Structures via Single Site Catalysis; Daniel Read, Tom McLeish

16:06 V22.09 Rheological and Rheo-optical Behavior of Hyper-branched and Star-branched Polymer Melts; Semen Kharchenko, Rangaramanujam Kannan , Jeffrey Cernohous , Shivshankar Venkataramani , Gaddam Babu

16:18 V22.10 Molecular Drag-Strain Coupling in Branched Polymer Melts Richard Blackwell, Tom McLeish, Oliver Harlen

16:30 V22.11 A Lagrangian flow solver for complex flows in polymers Timothy Nicholson , Oliver Harlen , Tom McLeish

16:42 V22.12 Microscopic Theory of Convective Constraint Release Alexei E. Likhtman , Scott T. Milner , Tom C.B. McLeish

16:54 V22.13 Exploring Specific Origins of Die Swell Justin Barone, Shi-Qing Wang

17:06 V22.14 A Thermo-Viscoelastic Model of Cure Stress Development in Constrained Thermosetting Resins; Sindee Simon , Patricia Prasatya , Gregory McKenna

17:18 V22.15 Near-Surface Friction, Dynamics, and Apparent Slip of Entangled Polymer Liquids; Tien Dao, Lynden Archer

# Session V23. DPOLY: Physically and Chemically Absorbed Polymer Layers.

**Thursday afternoon, 14:30, 208D, MCC**

14:30 V23.01 Experimental and Theoretical Study of End-Tethered Polymers in Good and Theta Solvents: Crossover Between the "Mushroom" and "Brush" Limits; Michael Kent , Marc Pepin , Jack Douglas , Mark Whitmore

14:42 V23.02 Clustering induced collapse of polymer brushes; Chi Wu , Tengjiao Hu

14:54 V23.03 Direct-force measurements between polymer-coated colloidal particles; Solar Olugebefola, Pallab Banerjee, Anne Mayes , J. Iyer, Catherine Bembenek, Paula Hammond, Department of Materials Science and Engineering MIT Collaboration, Department of Chemical Engineering MIT Collaboration

15:06 V23.04 Two-dimensional Diffusion of PEO Adsorbed from Dilute Solution to a Solid Surface; Svetlana Sukhishvili, Yan Chen, Joachim Müller, Kenneth Schweizer, Enrico Gratton, Steve Granick

15:18 V23.05 Small Angle Neutron Scattering of Polymer Solutions under Strong Confinement in Controlled Pore Glass; Mu-Ping Nieh, Sanat Kumar , Derek L. Ho, Robert M. Briber

15:30 V23.06 Adsorption of Polyelectrolytes at the Air/Liquid Interface Studied by Neutron Reflectivity and Surface Tension Measurements; Hyun Yim, Michael Kent , Robert Ivkov, Sushil Satija , Jarek Majewski, Greg Smith

15:42 V23.07 Adsorption of Polyampholytes on a Charged Spherical Particle Andrey Dobrynin, Ekaterina Zulina, Michael Rubinstein

15:54 V23.08 Controlled Regulation of Ionization in Polyelectrolyte Multilayer --- an electrostatically responsive material; Feng Xie , Svetlana Sukhishvili , Steve Granick

16:06 V23.09 DNA molecules condense on the positive surface making it strongly negative; Toan Nguyen, Alexander Grosberg, Boris Shklovskii

16:18 V23.10 Effect of non-uniform surface charge distribution on protein adsorption; Stella Y. Park, Anne M. Mayes, Christopher Barrett, Jeffrey Endelman, Michael F. Rubner , Dept. Materials Science amp; Engineering Collaboration

16:30 V23.11 Thermodynamic vs kinetic control of protein adsorption by grafted polymer layers; Igal Szleifer , Marcelo Carignano, Javier Satulovski

16:42 V23.12 Multi-layer Adsorption of Poly(amido amine) Dendrimers on Gold Chris Durning, Anis Rahman, Nick Turro, George Flynn , Don Tomalia, Lou Balogh

16:54 V23.13 Amphiphilic Linear-Dendritic Block Copolymers at the Air-Water Interface; Mark Johnson , Sushil Satija , Paula Hammond

V23.14 Tethered Polymer Chains Contribute to Gel-Gel Adhesion; Yanbin Huang , Igal Szleifer, Nicholas A. Peppas

# Session Y8. DPOLY: Semicrystalline Polymers: New Perspectives on an old Problem.

**Friday morning, 08:00, 101H, MCC**

08:00 Y8.01 The Initial Stage of Polymer Crystallization
K. Kaji
08:36 Y8.02 Crystallization in Confined Nano-Length Scale Environments
Stephen Z. D. Cheng
09:12 Y8.03 Structure and Properties of the Interlamellar Phase in Semicrystalline Polymers by Molecular Simulations
Gregory Rutledge
09:48 Y8.04 Origin and Features of the Secondary Crystallization Process in Homopolymers and Copolymers
Herve Marand
10:24 Y8.05 Double-twist in helical polymer ``soft'' crystals
Christopher Li, Stephen Cheng

# Session Y22. DPOLY: Modification and Reactivity of Surfaces.

**Friday morning, 08:00, 208C, MCC**

08:00 Surface Properties of Fluorosilane-Terminated Polystyrene with Polystyrene; J. Koberstein , P. Muisener , C. Yuan, J. P. Baetzold
08:12 Correlation of Surface and Bulk Order in Low Surface-Energy Perfluoroalkyl-Methacrylate Polymers; D.Y. Yoon , J. Lüning, J. Stöhr, K.Y. Song, C.J. Hawker, P. Iodice , C.V. Nguyen
08:24 Surface Topology of Liquid Crystalline Semi-Fluorinated Diblock Copolymers; E. Sivaniah, E.J. Kramer , J. Wang, M. Xiang, X. Li, C.K. Ober , S. Magonov
08:36 Surface Segregation of Fluorine in Electrospun Fibers of Poly(Methyl Methacrylate-co-Tetrahydroperfluorooctylacrylate) (PMMA/TAN) Random Copolymers.; Joseph Deitzel, Wendy Kosik, Nora Beck Tan, Steve McKnight , Phil Gibson, Heidi Gibson
08:48 Photodegradation of Polymer Coatings Studied by Positron Annihilation; Renwu Zhang, Hongmin Chen, Huimin Cao, Peter Mallon, Ying He, Thomas Sandreczki, Y.C. Jean , Bent Nielsen , R. Suzuki, T. Ohdaira
09:00 Influence of Rubbing on Self-Assembled Triethoxysilane Monolayers Studied With Vibrational Sum-Frequency Generation; T. E. Furtak, B. C. Chow, T. L. Copp
09:12 Second Harmonic Generation Study of the Surface of a Rubbed Side-Chain Polymer and Liquid Crystal Adsorbates; Seok-Cheol Hong, Y.R. Shen , Jason Ge, F.W. Harris, S.Z.D. Cheng
09:24 Direct Evidence of Molecular Orientation and Packing of Hydrophobic Alkyl Chains at Comb Copolymer Surfaces; Keshav Gautam, Ali Dhinojwala
09:36 Vibrationally-Resonant Sum-Frequency Generation Studies of Polystyrene Interfaces; William E. Wallace, Kimberly A. Briggman, Lee J. Richter, John C. Stephenson
09:48 Time-Resolved Infrared Spectra of Polymers During Oscillatory Shear; Jiang Zhao, Steve Granick
10:00 Arborescent graft polystyrene particle size and shape under confinement; T.M. Chou , M. Gauthier , R. Briber , M. Libera
10:12 Interfacial behavior of electro-active surface layers based on thiophene-capped SAMS; S. Michael Kilbey, Katherine E. Harrison
10:24 Formation of Thin Polymeric Films in Direct-Current Plasma
Charles Niederriter, Jason Smerdon, Daniel Asleson, Matthew Cunningham
10:36 Aluminum doping of vinylidene fluoride with trifluoroethlene copolymers; Bo Xu, S. Ducharme, A.V. Sorokin, P.A. Dowben , V.W. Fridkin, S.P. Palto, N. Petukhova, S.G. Yudin
10:48 Ultraviolet Laser Ablation of Fluorinated Polymers; Graciela Blanchet, Curtis Fincher, Patricia Cotts

# Session Y23. DPOLY: Diffusion in Polymers.

**Friday morning, 08:00, 208D, MCC**

08:00 Y23.01 Dynamic Properties of Linear and Cyclic Alkane Melts
Rahmi Ozisik, Wayne L. Mattice, Ernst D. von Meerwall
08:12 Y23.02 Self-Diffusion in Polybutadiene Melts: Effect of Vinyl Content
E. D. von Meerwall, J. H. Jang, W. L. Mattice
08:24 Y23.03 Self-Diffusion of Symmetric Star Polymers
Amalie Frischknecht, Scott T. Milner
08:36 Y23.04 Dynamics of star polymers
Scott Brown, Grzegorz Szamel
08:48 Y23.05 Local Friction in PS/PMMA Block Copolymer Melts
Jodi M. Milhaupt, Timothy P. Lodge
09:00 Y23.06 Photo-generated Acid Diffusion in Polymer Photoresist Thin Films
Eric Lin, Christopher Soles, Wen-li Wu , Qinghuang Lin
09:12 Y23.07 The diffusion of simple penetrants in tangent site polymer melts.
John D. McCoy, Dana R. Rottach, Patrick A. Tillman , Steven J. Plimpton, John G. Curro
09:24 Y23.08 Analysis of Interdiffusion at Partially Miscible Polymer Interfaces using Rutherford Backscattering Spectroscopy
Erin Jablonski , Robert Pfeffer , Russell Gorga, Balaji Narasimhan
09:36 Y23.09 Self-Diffusion and Interactions of Polymer Blends in Solution Probed by Quasielastic Light Scattering
C.H. Wang , Z Sun
09:48 Y23.10 Segmental mobility of compressible polymer melts
Jutta Luettmer-Strathmann
10:00 Y23.11 Water sorption effects on dielectric properties of poly(\epsilon-caprolactone)
E. Laredo, M.C. Perez Y., M.C. Hernandez, M. Grimau
10:12 Y23.12 Spatial and Temporal Dependence of the Diffusion Coefficient in Polystyrene Thin Films on a Carbon-Black Surface
Y. Strzhemechny, V. Zaitsev, K. Zhou, V. Shapovalov, S. A. Schwarz , J. Sokolov, M. H. Rafailovich , R. DiNardo

# Session Z10. DMP: Combinatorial Materials Science.

**Friday morning, 11:00, 103C, MCC**

11:00 Z10.01 Combinatorial Materials Science: Accelerating Materials Discovery and Optimization Processes
James R. Engstrom
11:36 Z10.02 Combinatorial Measurement of Dewetting and Phase Behavior of Polymer Thin Films
Carson Meredith , Alamgir Karim, Eric Amis
11:48 Z10.03 Composition-spread exploration of electronic materials
R B van Dover, L F Schneemeyer

# Session Z14. DCP: General: Polymers, Bioplolymers, Complex Systems.

**Friday morning, 11:00, 205A, MCC**

11:00 Z14.01 Collapse of Stiff Polyelectrolytes due to Counterion Fluctuations Ramin Golestanian , Mehran Kardar , Tanniemola Liverpool

11:12 Z14.02 Charge inversion in DNA--amphiphile complexes: Applications for gene therapy; Marcia C. Barbosa, Paulo Kuhn, Yan Levin

11:24 Z14.03 Integral Equation Approach to Polymer Square Well Fluids Sergey Fridrikh, Jane Lipson

11:36 Z14.04 A kinetic proofreading mechanism for disentanglement of DNA by topoisomerases; Jie Yan , Marcelo O. Magnasco , John Marko

11:48 Z14.05 Sequence, Conformation and Hierarchical Self-Assembly in Model Collagens; Regina Valluzzi, David Kaplan

12:00 Z14.06 Single Molecule Spectrin Mechanics in Relation to In Situ Function; Dennis Discher, Carol Kwok, James Lee, Philippe Carl , Univ. Pennsylvania

12:12 Z14.07 Scaling Theory For End-Functionalized Polymers Confined Between Two Surfaces: Equilibrium Behavior and Phase Diagrams; Dmitri V. Kuznetsov, Anna C. Balazs

12:24 Z14.08 Electronic Structure and Atomistic Modelling of Amorphous LiMPSA-Cryptand[2,2,2] electrolyteolyte; Z.N. Ding, D.E. Ellis, E.E. Sigmund, W.P. Halperin, R.E.A. Dillon, D.F. Shriver , Mark A. Ratner

12:36 Z14.09 Measurements of Cationic and Anionic Diffusivities and of Conductivity, in a Novel Liquid Electrolyte; Burkhard Geil , Marcelo Videa , Robert F. Marzke , C. Austen Angell

12:48 Z14.10 Nuclear Magnetic Resonance studies of Molecular Dynamics in the Amorphous Electrolyte LiMPSA + [2.2.2] Cryptand; E. E. Sigmund, W. P. Halperin, Z. N. Ding, D. E. Ellis, R. E. A. Dillon, D. F. Shriver, M. A. Ratner

13:00 Z14.11 Component Dynamics in Miscible Blends; Xiaoping Yang, Shi-Qing Wang

13:12 Z14.12 Hyper-Parallel Tempering Monte Carlo Method and It's Applications; Qiliang Yan, Juan de Pablo

13:24 Z14.13 A new approach to the dynamics of polymer fluids: Rouse dynamics with intermolecular interactions.; Marina Guenza

13:36 Z14.14 Time Averaged Normal Coordinate Analysis of Polymer Particles and Crystals; Robert E. Tuzun , Kazuhiko Fukui, Bobby G. Sumpter, Chao Yang, Donald W. Noid