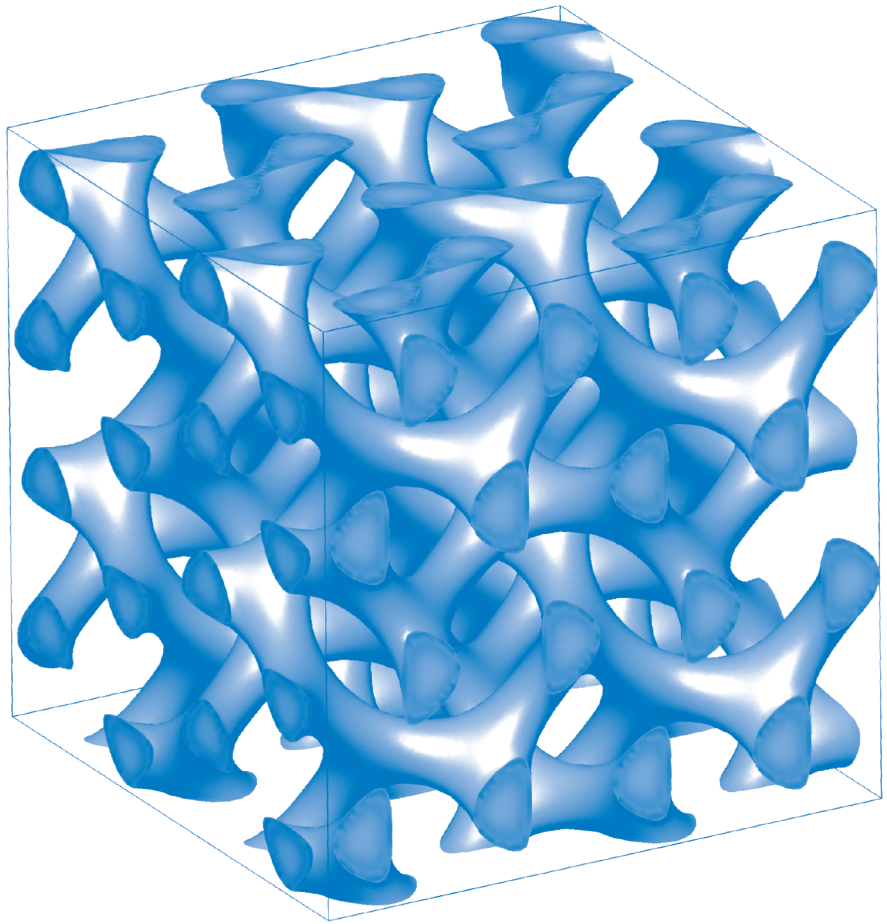
FIRST CLASS
US Postage
PAID
Bowie, MD
Permit #4434

APS physics

American Physical Society
Division of Polymer Physics
One Physics Ellipse
College Park, MD 20740-3844

MARCH MEETING DPOLY PROGRAM



DPOLY

DIVISION of POLYMER PHYSICS

2007 APS March Meeting • March 5–9 • Denver, Colorado

DPOLY Short Course

Advances in the Use of Atomic Force Microscopy for Studies of the Physics of Macromolecular Materials

Saturday, March 3rd 2007, 8:30 AM – 5:00 PM
Sunday, March 4th 2007, 8:30 AM – 3:00 PM
Registration fees: $400 ($200 for students); pre-registration required, no on-site registration.

Course description

Atomic force microscopy (AFM) is now a ubiquitous tool for studying the ultrastructure and physics of both technological and biological materials. This short course will cover recent advances in the application of AFM for studies of the physics of macromolecular materials (both synthetic and biological) including single macromolecules, assemblies of macromolecules, stimulus-responsive macromolecular films, single cells, and whole biological tissues. New instrumentation development will also be covered.

Who should attend

Graduate students and postdocs conducting research in this area or faculty and scientists from industry looking to begin to apply AFM methods to their current research areas. A B.S. level training in physical science or engineering and a general knowledge of the basics of AFM will be assumed.

Topics to be covered

A wide range of topics will be covered. On overview will be given contrasting the challenges in studying the physics of biological and synthetic macromolecular systems with AFM. For biological systems, topics will include; AFM for imaging, measuring and manipulating soft matter in the human body, single cell viscoelasticity, and the measurement of energy dissipation by sacrificial bonds in biological tissues. For synthetic systems, topics will include combinatorial material mechanics:high-throughput polymer synthesis and nanomechanical screening, and nanopatterning of functional macromolecules. Instrumentation lectures will be given on new advances in nanoindentation using AFM-based probes, integration of AFM with Raman, SEM, and FIB, developments in friction force measurements and calibration, and nanoelectro-mechanics of piezoresponse force microscopy.

Speakers list

Ueli Aebi (University of Basel, Switzerland), Phil Attard (University of Sydney, Australia), Paul Hansma (UCSB), Sergei V. Kalinin (Oak Ridge National Lab), Aaron Lewis (Hebrew University, Israel), Christine Ortiz (MIT), Krystyn van Vliet (MIT), Stefan Zauscher (Duke University)

Course Organizer

Christine Ortiz
Department of Materials Science & Engineering
Massachusetts Institute of Technology
Room 13-4022
77 Massachusetts Avenue
Cambridge, MA 02139 USA

Phone: (617) 452 3084
Fax : (617) 258 6936
Email : cortiz@mit.edu
WWW : http://web.mit.edu/cortiz/www/

Table of contents

Table of contents (cont.)

Legend:

(B)	business meeting
(C)	contributed session
(F)	focus session
(I)	invited session
(P)	poster session

DBP	Division of Biological Physis
DCOMP	Division of Computational Physics
DPOLY	Division of Polymer Physics
DMP	Division of Materials Physics
FIAP	Forum on Industrial and Applied Physics
GSNP	Topical Group on Statistical and Nonlinear Physics

Session A4. Responsive and Adaptable Polymeric Materials (DPOLY/DMP/GSNP)

Monday morning, 8:00 AM, Colorado Convention Center, Korbel 2B-3B

Chair: Timothy Bunning, Air Force Research Laboratory

8:00 AM A4.00001: Adaptive and Responsive Polymer NanoComposites
Invited Speaker: Richard Vaia

8:36 AM A4.00002: Hydrophobic Hydration of Stimulus-Responsive Polyproteins Measured by Single Molecule Force Spectroscopy
Invited Speaker: Stefan Zauscher

9:12 AM A4.00003: Nature's Mechanisms for Tough, Self-healing Polymers and Polymer Adhesives
Invited Speaker: Paul Hansma

9:48 AM A4.00004: Cell microrheology in health and disease" be suitable for your session
Invited Speaker: Denis Wirtz

10:24 AM A4.00005: Is experimental heteropolymer sequence design practical, or does it belong to the realm of science fiction?
Invited Speaker: Alexander Grosberg

Session A17. Charged and Ion-Containing Polymers (DPOLY)

Monday morning, 8:00 AM, Colorado Convention Center, 102

Chair: Bulent Ozbas, Princeton University

8:00 AM A17.00001: Solvent effects on polyelectrolyte charge and conformation in solution
Ralph Colby, Shichen Dou

8:12 AM A17.00002: Electrostatic Properties of an Entirely Hydrophilic Polyelectrolyte
David Hoagland, Alexei Popov

8:24 AM A17.00003: Formation, Structure and Electrochemical Impedance Analysis of Microporous Polyelectrolyte Multilayers
Jodie Lutkenhaus, Kathleen McEnnis, Paula Hammond

8:36 AM A17.00004: Influence of humidity and crystallization time on the conductivity of nanoparticle-filled solid polymer electrolytes
Susan Fullerton, Janna Maranas

8:48 AM A17.00005: Counterion Effects on Ion Mobility and Mobile Ion Concentration of Doped Polyphosphazenes and Polyphosphazene Ionomers
Jim Runt, Robert Klein

9:00 AM A17.00006: Ion mobility and mobile ion concentration in PEO-based polyurethane ionomers
Daniel Fragiadakis, Shichen Dou, Ralph Colby, James Runt

9:12 AM A17.00007: Conformational structures in dry ionomers
Elshad Allahyarov, Philip Taylor

9:24 AM A17.00008: Water Diffusion in Ultrathin Ionomer Thin Films: Neutron Reflectivity Study
Lilin He, Erik B. Watkins, Jaroslaw Majewski, Cy H. Fujimoto, Christopher J. Cornelius, Dvora Perahia

9:36 AM A17.00009: Nanoscale Morphology of Sulfonated Polystyrene Ionomers
Nancy C. Zhou, Karen I. Winey

9:48 AM A17.00010: Morphology and Proton Transport in Polyimide-Polysiloxane Segmented Copolymers
Lijun Zou, Mitchell Anthamatten

10:00 AM A17.00011: Morphological Study of Model Poly(Ethylene-Acrylic Acid) Ionomers
Christopher D. Chan, Travis W. Baughman, Kathleen L. Opper, Kenneth B. Wagener, Karen I. Winey

10:12 AM A17.00012: Proton Conducting Membranes from Fluorinated Poly(Isoprene)-b-Sulphonated Poly(Styrene): Structure and Transport Properties
Akinbode Isaacs-Sodeye, Samuel Gido, Tianzi Huang, Jimmy Mays

10:24 AM A17.00013: Polyelectrolyte Interfacial Swelling and Film Stability
Vivek Prabhu, Ashwin Rao, Shuhui Kang, Eric Lin, Sushil Satija

10:36 AM A17.00014: ATRP-derived functional polymers for electronic applications
Tracy Bucholz, Joung Eun Yoo, Sally Peng Li, Yueh-Lin Loo

10:48 AM A17.00015: The nature of water in hydrated acid-form Nafion membranes
G. Polizos, Z. Lu, D.D. Macdonald, E. Manias

Session A18. Photophysics of Electronic Polymers (DPOLY/DMP)

Monday morning, 8:30 AM, Colorado Convention Center, 103

Chair: Rachel Segalman, University of California, Berkeley

8:00 AM A18.00001: Identification of the Possible Defect States in Poly(3-hexylthiophene) Thin Films
Danqin Feng, Anthony Caruso, Yaroslav Losovyj, Douglas Schulz, Peter Dowben

8:12 AM A18.00002: Ab intio study of ladder-type metallic polymers
Simon Pesant, Guillaume Dumont, Sebastien Langevin, Michel Cote

8:24 AM A18.00003: Illumination induced metastable polaron-supporting phase in poly p-phenylene- vinylene films
E. Ehrenfreund, E. Gershman, Y. Eichen, T. Drori, C.X. Sheng, Z.V. Vardeny

8:36 AM A18.00004: Ultrafast and Nonlinear Optical Spectroscopies of Excited States in Pristine and Doped π-Conjugated polymers
Invited Speaker: Valy Vardeny

9:12 AM A18.00005: Temperature dependence and anisotropy of charge-carrier mobilities in crystalline durene
Frank Ortmann, Karsten Hannewald, Friedhelm Bechstedt

9:24 AM A18.00006: Ultrafast polarization memory dynamics of photoexcitations in π-conjugated polymers
Sanjeev Singh, Minghong Tong, Josh Holt, Zeev Vardeny

9:36 AM A18.00007: Experimental Determination of Charge/Neutral Branching Ratio in π-Conjugated Polymers by Broad-band Ultrafast Spectroscopy
Chuanxiang Sheng, Minghong Tong, Sanjeev Singh, Z. Valy Vardeny

9:48 AM A18.00008: In-situ characterization of the mesophase of a high performance semiconducting polymer
L.J. Richter, A.J. Moad, D.M. Delongchamp, R.J. Kline, D.J. Gundlach, D.A. Fischer

10:00 AM A18.00009: Electro-optic Measurements in Single-Crystal Films of a Combination of Materials Involving DAST and IR-125
A. Narayanan, J. Titus, M. Thakur

10:12 AM A18.00010: Nonlinear Refractive Index in a Novel Nano-optical Material Based on the Nonconjugated Conductive Polymer, Poly(β-pinene)
A. Narayanan, J. Titus, Mrinal Thakur

10:24 AM A18.00011: Quadrupolar dyes for NLO applications: solvent-induced symmetry breaking and huge TPA cross-sections in aggregates
Anna Painelli, Gabriele D'Avino, Francesca Terenziani

10:36 AM A18.00012: Infrared probe of charge dynamics in single crystal rubrene organic field-effect transistors
Zhiqiang Li, Vitaly Podzorov, Na Sai, Michael Martin, Michael Gershenson, Massimiliano Di Ventra, Dimitri Basov

Session A24. Particle Dynamics & Organization: Polymer Mediated, Polymer Particles & Anisotropic Particles (DPOLY)

Monday morning, 8:00 AM, Colorado Convention Center, 201

Chair: Richard Register, Princeton University

8:00 AM A24.00001: Self-Assembly of Amphiphilic Colloids
Invited Speaker: Steve Granick

8:36 AM A24.00002: Dynamics of polymer microgel nanoparticles and polymer chains
Kiril Streletzky, John McKenna, Gerald Hillier

8:48 AM A24.00003: Icosahedral packing of polymer-tethered nanospheres and stabilization of the gyroid phase
C.R. Iacovella, A.S. Keys, M.A. Horsch, S.C. Glotzer

9:00 AM A24.00004: Bicontinuous Morphologies in Block Copolymer-Nanoparticle Composites
Victor Pryamitsyn, Venkat Ganesan

9:12 AM A24.00005: Control of Nanoparticle Distribution with Directed Assembly of Block Copolymer Films
Huiman Kang, Francois Detcheverry, Andrew Mangham, Mark Stoykovich, Robert Hamers, Juan de Pablo, Paul Nealey

9:24 AM A24.00006: Controlling Nanoparticle Location and Morphology in Polymer Blend and Copolymer Films
Russell Composto, Aysenur Corlu, Ranjan Deshmukh, Hyun-joong Chung, Kohji Ohno

9:36 AM A24.00007: Molecular Theory Studies of Polymer/Nanoparticle Blends Near Surfaces
Erin McGarrity, Amalie Frischknecht, Michael Mackay

9:48 AM A24.00008: Particle Dynamics in Polymer/Metal Nanocomposite Thin Films on Nanometer Length Scales
Suresh Narayanan, Dong Ryeol Lee, Aleta Hagman, Xuefa Li, Sunil Sinha, Jin Wang

10:00 AM A24.00009: Investigation of Gold Nanoparticle Diffusion in Polymer Thin Films using X-ray Standing Waves
Martin Tolkiehn, Ward Lope, Xuefa Li, Suresh Narayanan, Aleta Hagman, Heinrich Jaeger, Jin Wang

10:12 AM A24.00010: The Effect of Nanoparticle Shape on Polymer-Nanocomposite Rheology and Tensile Strength
Scott T. Knauert, Jack F. Douglas, Francis W. Starr

10:24 AM A24.00011: Stabilization of nanorods in polymer melts by end-adsorbed chains
Amalie L. Frischknecht

10:36 AM A24.00012: Dispersion and Percolation Transitions of Nanorods in Polymer Solutions
Megha Surve, Victor Pryamitsyn, Venkat Ganesan

10:48 AM A24.00013: Self-assembly of anisotropic nanoparticles at oil/water interfaces
Jinbo He, Qingling Zhang, Suresh Gupta, Todd Emrick, Thomas Russell, Zhongwei Niu, Qian Wang

Session A25. Mechanical Properties, Fracture & Adhesion (DPOLY)

Monday morning, 8:00 AM, Colorado Convention Center, 203

Chair: Alfred Crosby, University of Massachusetts at Amherst

8:00 AM A25.00001: Mechanics of polymer interfaces
Invited Speaker: Krystyn Van Vliet

8:36 AM A25.00002: Investigation of molecular structure during sliding of an elastomer on solid surfaces
Kumar Nanjundiah, Ali Dhinojwala

8:48 AM A25.00003: A novel approach to friction measurements using dewetted polymer droplets
Andrew B. Croll, Kari Dalnoki-Veress

9:00 AM A25.00004: Capillary wrinkling of thin floating films
Jiangshui Huang, Wim H. de Jeu, Narayanan Menon, Thomas P. Russell

9:12 AM A25.00005: Nanometer voids prevent crack growth in polymer thin films
Hideaki Yokoyama, Cedric Dutriez, Kotaro Satoh, Masami Kamigaito

9:24 AM A25.00006: Aging with Applied Strain of a Black-Filled Natural Rubber Vulcanizate: Intrinsic Flaw Sizes
Crittenden Ohlemacher, Gary Hamed

9:36 AM A25.00007: Physical Aging and Non-Exponentiallily in a Crosslinked Coating Subjected to Degradative Weathering
B.M.D. Fernando, X. Shi, S.G. Croll

9:48 AM A25.00008: The Elastic Properties of Polymer Nanofibers: Influence of Confinement on Conformation State of Macromolecules and Supermolecular Structures
Arkadi Arinstein, Michael Burman, Eyal Zussman

10:00 AM A25.00009: Predicting Structure-Property Relationship in Segmented Polyurethanes
Valeriy Ginzburg, Alan Schrock, Christopher Christenson, Jozef Bicerano, Alexander Patashinski

10:12 AM A25.00010: Compliance Effects of a Modern Rheometer
Stephen Hutcheson, Gregory McKenna

10:24 AM A25.00011: Entanglements of End Grafted Polymer Brushes in a Polymeric Matrix
Gary S. Grest, Robert S. Hoy

10:36 AM A25.00012: High Strength Development at Incompatible Semicrystalline Polymer-Polymer Interfaces
C.H. Hong, Richard Wool

10:48 AM A25.00013: Elastic breakup in extensional flow of entangled melts
Yangyang Wang, Pouyan Boukany, Shi-Qing Wang

Session B6. Control and Architecture in Directed Macromolecular Self-Assembly (GSNP/DPOLY)

Monday mid-day 15 AM, Colorado Convention Center, 207

Chair: Alex Travesset, Iowa State University and Ames National Laboratory

11:15 AM B6.00001: Geometry and universality in self-assembly
Invited Speaker: Mark Bowick

11:51 AM B6.00002: Colloidal atoms and molecules
Invited Speaker: David Pine

12.27 PM B6.00003: Colloidal Armor
Invited Speaker: Howard Stone

1:03 PM B6.00004: Recent Advances in Solution-state Assembly of Synthetic Polymers into Well-defined Nanostructures
Invited Speaker: Karen Wooley

1:39 PM B6.00005: Non-ionic micelles and encapsulation
Invited Speaker: Paschalis Alexandridis

Session B17. Pentacene and Field Effect Transistors (DMP/DPOLY)

Monday mid-day, 11:15 AM, Colorado Convention Center, 102

Chair: Chang Y. Ryu, Rensselaer Polytechnic Institute

11:15 AM B17.00001: Organic Field Effect Transistors
Invited Speaker: C. Daniel Frisbie

11:51 AM B17.00002: Growth of pentacene on inorganic and organic dielectrics and sub-micron channel oTFT fabrication
G. Leising, B. Stadlober, U. Haas, A. Haase, H. Gold

12:03 PM B17.00003: The improvement of out of plane crystalline size of pentacene thin films on plastic substrates by transfer printing
S.A. Solin, Y. Shao, D.R. Hines, E.D. Williams

12:15 PM B17.00004: Enantiotropic Polymorphs in Pentacene
Theo Siegrist, Celine Besnard, Simon Haas, Mark Schiltz, Philip Pattison, Dmitry Chernyshov, Bertram Batlogg, Christian Kloc

12:27 PM B17.00005: Effect of impurities on pentacene thin film growth for field-effect transistors
Elba Gomar-Nadal, Brad R. Conrad, Ellen D. Williams

12:39 PM B17.00006: Aggregation of pentacene molecules on SiO2 substrates and its influence on the FET characteristics
Genki Yoshikawa, J. T. Sadowski, A. Al-Mahboob, Y. Fujikawa, T. Sakurai, Y. Tsuruma, S. Ikeda, K. Saiki

12:51 PM B17.00007: Orientation of Pentacene Molecules on SiO_2: From a Monolayer to the Bulk
Fan Zheng, Byoung-Nam Park, Soonjoo Seo, Paul G. Evans, Franz J. Himpsel

1:03 PM B17.00008: Structure of a pentacene monolayer deposited on SiO$_{2}$: Role of trapped interfacial water
Songtao Wo, Binran Wang, Hua Zhou, Yiping Wang, Jonathan Bessette, Randall L. Headricka, Alex C. Mayer, George G. Malliaras, Alexander Kazimirov

1:15 PM B17.00009: Molecular Scale Structure of Pentacene Interfaces
Soonjoo Seo, Paul Evans

1:27 PM B17.00010: Pentacene Molecules on Inert Surfaces
Yina Mo, Paul Maragakis, Efthimios Kaxiras

1:39 PM B17.00011: Charge-Transport Parameters in Molecular Organic Semiconductors
Veaceslav Coropceanu, Pavel Paramonov, Roel S. Sánchez-Carrera, Demetrio A. da Silva Filho, Jean-Luc Bredas

1:51 PM B17.00012: Scanning Tunneling Microscopy and Spectroscopy of Pentacene films Deposited on SiC
Sandeep Gaan, Roberto Duca, Randall Feenstra

2:03 PM B17.00013: Time Resolved Microscopy of Charge Trapping in Polycrystalline Pentacene
Michael Jaquith, Erik Muller, John Marohn

Session B18. Structure and Dynamics in Polymer Nanocomposites (DPOLY)

Monday mid-day, 11:15 AM, Colorado Convention Center, 103

Chair: Mitch Anthamatten, University of Rochester

11:15 AM B18.00001: Externally Activated, Thermodynamically Governed Dispersion Behavior of Silica Nanoparticles in PMMA
Frederick Beyer, Philip Costanzo

11:27 AM B18.00002: Single Chain Mean Field Theory (SCMF) in Polymer Nanocomposites
Sudeepto Sen, Sanat Kumar, Igal Szleifer

11:39 AM B18.00003: Improved Mechanical Properties by Grafting Nylon 6, 10 to Single Wall Carbon Nanotubes
M. Moniruzzaman, Jayanta Chattopadhay, William E. Billups, Karen I. Winey

11:51 AM B18.00004: Mechanical properties of nanocomposite systems
George Papakonstantopoulos, Manolis Doxastakis, Mihail Vladkov, Jean-Louis Barrat, Juan de Pablo

12:03 PM B18.00005: Morphological dependence on the conductance of polymer/MWNT electrospun mats
Derrick Stevens, Satyajeet Ojha, Wesley Roberts, Seth McCullen, Russell Gorga, Laura Clarke

12:15 PM B18.00006: Effect of MWNT and Carbon Nanofiber Orientation in Polymer Nanocomposites on Electrical Conductivity
Karen I. Winey, Lai-Ching Chou, Minfang Mu

12:27 PM B18.00007: Controlling the Average and Local Glass Transition Temperatures of PMMA-SWCNT Nanocomposites
Perla Rittigstein, T. Ramanathan, L. Catherine Brinson, John M. Torkelson

12:39 PM B18.00008: The Aging Effect on Segmental Dynamics of PMMA brushes Studied by Incoherent Neutron Scattering
Pinar Akcora, Victoria Garcia-Sakai, Linda Schadler, Sanat Kumar

12:51 PM B18.00009: Polymer Diffusion in Single Wall Nanotube / Polystyrene Nanocomposites
Minfang Mu, Russell J. Composto, Karen I. Winey

1:03 PM B18.00010: Origin of dynamical properties in PMMA-C_{60} nanocomposites
Jamie Kropka, Peter Green

1:15 PM B18.00011: Instabilities in Nanoporous Media
Jiun-Tai Chen, Mingfu Zhang, Thomas Russell

1:27 PM B18.00012: Dynamic Consequences of the Fractal Network of Nanotube - Poly(ethylene oxide) Nanocomposites
Tirtha Chatterjee, Ramanan Krishnamoorti

1:39 PM B18.00013: Gelation of Freely Associating Single-Wall Carbon Nanotube Networks
Daniel Chen, Larry Hough, Mohammad Islam, Arjun Yodh

1:51 PM B18.00014: Preparation and rheology of supercritical CO_2-based dispersed polymer-clay nanocomposites
Rangaramanujam Kannan, Steven Horsch, Esin Gulari

2:03 PM B18.00015: Insight into Surface Rhelogy of Soft-nano Composites
Jaydeep Basu, Sunita Srivastava

Session B24. Reversibly Associating Polymers: Theory & Experiments (DPOLY/DBP)

Monday mid-day, 11:15 AM, Colorado Convention Center, 201

Chair: Sanat Kumar, Columbia University

11:15 AM B24.00001: Reversible Associating Polymers as Biological Mimics
Invited Speaker: Virgil Percec

11:51 AM B24.00002: Architectural effect on the self-assembly of supramolecular triblock copolymer melts
Won Bo Lee, Richard Elliott, Kirill Katsov, Glenn H. Fredrickson

12:03 PM B24.00003: Osmotic Properties of Acrylic Triblock Copolymer Gels
Rafael E. Bras, Kenneth R. Shull

12:15 PM B24.00004: Computational study of gel transition and jamming in an ensemble of reversible associating polymers
Arlette Baljon, Danny Flynn, David Krawzsenek

12:27 PM B24.00005: Phase Behavior of Semi-Flexible Polymer Gels
Venkatram H. Padmanabhan, Sanat K. Kumar

12:39 PM B24.00006: Modeling the Crystallization of Proteins
Hongjun Liu, Sanat Kumar, Shekhar Garde

12:51 PM B24.00007: Physical Properties of Anionic Peptide Amphiphile Fibers Grown in the Presence of Polyion Salt
Megan Greenfield, Yuri Velichko, Samuel Stupp, Monica Olvera de la Cruz

1:03 PM B24.00008: Reversible and Tunable Network Formation of Ca^{2+}-Sensitive Biomaterials
Shana Topp, Vikram Prasad, Gianguido C. Cianci, Eric R. Weeks, Justin P. Gallivan

1:15 PM B24.00009: Folding and Aggregation of Mucin Domains
Brigita Urbanc, Rama Bansil, Bradley Turner

1:27 PM B24.00010: Shape-Memory Network Polymers Containing Reversible H-Bonding Associating Groups
Jiahui Li, Mitchell Anthamatten

1:39 PM B24.00011: Miscibility studies on blends containing telechelic supramolecular polymers
Michelle Wrue, Mitchell Anthamatten

1:51 PM B24.00012: Design and characterization of well-defined supramolecular polymers
Kathleen Schaefer, Matthew Kade, Craig Hawker, Edward Kramer

2:03 PM B24.00013: Structure and stability of oligomer/α-cyclodextrin inclusion complexes
Marcus Hunt, Silvia Villar, Marian Gomez, Alan Tonelli, Maury Balik

Session B25. Adhesion, Swelling, and Elastic Properties of Thin Polymer Films (DPOLY)

Monday mid-day, 11:15 AM, Colorado Convention Center, 203

Chair: Theresa Hermel-Davidock, Dow Chemical

11:15 AM B25.00001: Interaction and Viscoelastic Deformation of Polymeric Surfaces Measured with the Atomic Force Microscope
Invited Speaker: Phil Attard

11:51 AM B25.00002: Surface wrinkling of grafted polymer brushes and its effect on interfacial adhesion
Christopher M. Stafford, Heqing Huang, Jun Young Chung

12:03 PM B25.00003: Experiments of compaction of an elastic sheet closely-packed in a rigid container
Deboeuf Stephanie, Boue Laurent, Adda-Bedia Mokhtar, Boudaoud Arezki

12:15 PM B25.00004: Dependence of the in-plane modulus of thin free-standing polymer films
Adam N. Raegen, Kari Dalnoki-Veress

12:27 PM B25.00005: Measuring Correlation Functions and Elastic Constants of 2D Layers of Block Copolymers by Single Crystal Diffraction
Gila Stein, Edward Kramer, Xuefa Li, Jin Wang

12:39 PM B25.00006: Polymer-Solid Interface Connectivity and Adhesion: Design of a Pressure Sensitive Adhesive
Shana P. Bunker, Richard P. Wool

12:51 PM B25.00007: Adhesion of soft polymers with gradients in composition
Clara Carelli, Costantino Creton, Fanny Deplace

1:03 PM B25.00008: Welding Immiscible Polymer with Supercritical Fluid
Xiaochu Wang, Isaac Sanchez

1:15 PM B25.00009: Off-Specular Neutron and X-ray Reflectometry for the Structural Characterization of Buried Interfaces
Kristopher Lavery, Vivek Prabhu, Eric Lin, Wen-li Wu, Kwang-Woo Choi, Sushil Satija, Matthew Wormington

1:27 PM B25.00010: Confinement Effects on the Swelling Behavior of Thin Polymer Films
Aleta Hagman, Kenneth R. Shull, Jin Wang, Martin Tolkiehn, Xuefa Li, Suresh Narayanan

1:39 PM B25.00011: Equilibrium and Kinetic Water Uptake in Ultrathin Chitosan Film
Chris Murray, John Dutcher

1:51 PM B25.00012: Grafting of Telechelic Polymers onto Functionalized Substrate in Polymeric Matrices
Rujul Mehta, Zhenyu Huang, Haining Ji, Jimmy Mays, Mark D. Dadmun

2:03 PM B25.00013: Kinetics of Grafting and Loop Formation of Telechelic Polymers on Solid Substrate
Mark Dadmun, Zhenyu Huang, Haining Ji, Jimmy Mays

Session D4. Polymer Crystallization: 50 years of Chain Folding (DPOLY)

Monday afternoon, 2:30 PM, Colorado Convention Center, Korbel 2B-3B

Chair: Buck Crist, Northwestern University

2:30 PM D4.00001: Fifty (Plus) Years of Polymer Nano-Science (Art)
Invited Speaker: Phillip Geil

3:06 PM D4.00002: The Morphology of Crystallizable Polymers: Past and Present
Invited Speaker: Freddy Khoury

3:42 PM D4.00003: Insights provided by the build-up, structure and morphology of polymer single crystals
Invited Speaker: Bernard Lotz

4:18 PM D4.00004: Laws controlling crystallization and melting in bulk polymers
Invited Speaker: Gert Strobl

4:54 PM D4.00005: Growth kinetics and morphology of polymer crystals
Invited Speaker: Akihiko Toda

Session C1. Poster Session I (DPOLY)

Monday afternoon, 2:00 PM, Colorado Convention Center, Exhibit Hall F

C1.00002: Characteristic Time Scales of Pre-Glassy Dynamics
Julieanne Heffernan, J. Budzien, Aaron T. Wilson, Robert J. Baca, Francisco Avila, John D. McCoy, Doug B. Adolf

C1.00003: Theory of Relaxation, Physical Aging and Nonlinear Mechanical Properties of Polymer Glasses
Kang Chen, Kenneth Schweizer

C1.00004: Changes in Segmental dynamics of PMMA Glass during Nonlinear Creep Deformation
Hau-Nan Lee, Keewook Paeng, Stephen Swallen, Mark Ediger

C1.00005: Physical Aging in Confined Geometries: The Role of Stiff Backbone and Bulky Side Groups
Connie B. Roth, Rodney D. Priestley, Manish K. Mundra, John M. Torkelson

C1.00006: Polymer Nanocomposites Leading to the Suppression of Physical Aging: Effects of Attractive or Covalent Polymer-Nanofiller or Polymer-Substrate Interactions
Perla Rittigstein, Rodney D. Priestley, John M. Torkelson

C1.00007: Functionalized Carbon Nanotubes in Modified Plant Oil Composites
Ian M. McAninch, Richard P. Wool

C1.00008: The effect of soxhlet extraction on morphology and mechanical properties of Poly(DVB)polyHIPE
Pornsri Pakeyangkoon, Manit Nithitanakul

C1.00009: A Mean Field Theoretic Study of Friction between Polyelectrolyte Polymer Brushes
Jeffrey Sokoloff

C1.00010: Collapse and Aggregation of Polymers in Solvents with Varing Molecular Sizes below θ-Temperatures
Gi Xue, Fangfang Tao, Xiaoliang Wang, Dongshan Zhou

C1.00011: Lyotropic Phase Behavior of Concentrated Solutions of Diblock Copolymers in an Ionic Liquid
Peter M. Simone, Timothy P. Lodge

C1.00012: Correlation length of a near-critical, eight-arm star polystyrene in methylcyclohexane
Henry Timmers, Sarah Suddendorf, Angie Triplett, Nithya Venkataraman, D.T. Jacobs

C1.00013: The Glass Transition and Kinetics in Stacked Polystyrene Ultrathin Films
Yung P. Koh, Sindee L. Simon

C1.00014: Adhesion of Polymer Composite Melt to PTFE at Elevated Temperature
David Pan, Thomas Debies, Dan McVeigh

C1.00015: Nanomechanical Measurements on Ultra-thin Polymer Films
Shanhong Xu, Paul OConnell, Greg McKenna

C1.00016: Effects of Thickness, Molecular Weight and Temperature on Kinetics of Photo-induced Trans-to-Cis Isomerization for Azobenzene Tagged to Polystyrene in Films
Yohei Tateishi, Keiji Tanaka, Toshihiko Nagamura

C1.00017: Influence of Annealing and Solvent Treatment on Surface Structure of Diblock Copolymer Brushes
Akira Otaka, Gokce Ugur, Bulent Akgun, Mark Foster

C1.00018: Surface Dynamics of Highly Branched Polystyrene in Melt
Sewoo Yang, Jaesik Lee, Zhang Jiang, Sunil K. Sinha, Sanghoon Song, Hyunjung Kim, Suresh Narayanan, Mark D. Foster

C1.00019: Interface Characterization of Photonic Films Created by Plasma Enhanced Chemical Vapor Deposition (PECVD)
Someshwara Peri, Hyeonjae Kim, Mark Foster

C1.00020: Spincoating Deposition of Thickness Gradient Polymer Films
Monika Michalek, John Dutcher

C1.00021: Surface Dynamics of Molten Homopolymer Brushes
Gokce Ugur, Bulent Akgun, William J. Brittain, Mark D. Foster, Suresh Narayanan, Heeju Lee, Sanghoon Song, Hyunjung Kim, Zhang Jiang, Sunil K. Sinha

C1.00022: Impact of Residual Stresses on the Molecular Mobility of Supported Thin Polymer Films
Kipchirchir A. Boit, Gregory B. McKenna

C1.00023: Capillary waves at polymer/polymer interface studied by resonant soft x-ray reflectivity (RSoXR)
C. Wang, T. Araki, B. Watts, H. Ade

C1.00024: Synthesis of Polymeric Nanoparticles by Self-Assembly in Solution of Living Block Copolymers and Application of the Particles in Rubber Compounds
Xiaorong Wang, James Hall, Sandra Warren, James Krom, Jeffery Magistrelli, Mindaugas Rackaitis, Georg Bohm

C1.00025: Interpretation of small angle neutron scattering measurements for LDOT-type styrenic block copolymers
Junhan Cho, Inho Lee, Gangyoung Lee, Donghyun Lee, Doyeol Ryu, Jinkon Kim

C1.00026: Dynamic Structure Formation in Evaporating Bound Diblock Copolymer Solutions
Suck Won Hong, Zhiqun Lin

C1.00027: Relationship between mechanical properties and chain architectures of semicrystalline thermoplastic elastomeric triblock polyolefins
Zhigang Wang, Glenn H. Fredrickson, Edward J. Kramer, Akio Tannna, Jeffrey Rose, Geoffrey W. Coates

C1.00028: Characterization of interactions in weakly interacting block copolymer by two-dimensional heterospectral analysis of WAXS and FTIR
Hye Jeong Kim, Jin Kon Kim, Young Mee Jung, Seung Bin Kim

C1.00029: Phase Behavior of poly(2-vinyl pyridine)-\textit{block}-poly(4-vinyl pridine) Copolymers
Sung Hyun Han, Dong Hyun Lee, Jin Kon Kim

C1.00030: Rheology On A Triblock Copolymer: Mechanical Hole Burning Spectroscopy
Qian Qin, Gregory McKenna

C1.00031: Symmetric Diblock Copolymers under Nano-Confinement
Dong Meng, Qiang Wang

C1.00032: Depth Profiling using Nexafs Spectroscopy
Karen Sohn, Sitaraman Krishnan, Marvin Paik, Christopher Ober, Ed Kramer, Daniel Fischer

C1.00033: Composition Dependence on the Closed-loop Phase Block Copolymer by Interaction Chromatography
S.W. Hwang, S. Na, D.Y. Ryu, D.H. Lee, J.K. Kim, S. Park, T. Chang

C1.00034: Surface Characterization of Aliphatic Polyester \textit{-g-} Phosphorylcholine Copolymers
Xiongfei Zhang, Todd Emrick, Shaw L. Hsu

C1.00035: Isolated nanomagnetic clusters formed by diblock copolymer phase separation inside nanopores of aluminum oxide membrane
Priyanka Dobriyal, Thomas P. Russell, David Rider, Ian Manners

C1.00036: Fabrication of Highly Distensible, Nanostructured Elastic Hydrogels from Block Copolymer Based Self-Assembly
Chih-Yu Teng, Travis Bailey

C1.00037: Phase structures of a series of bent-core mesogen jacketed liquid crystalline block polymers
Kishore Tenneti, Xiaofang Chen, Christopher Li, Lixia Rong, Benjamin Hsiao

C1.00038: Phase Behavior of Rod-Coil Block Copolymer Blends
Y. Tao, B.D. Olsen, Venkat Ganesan, R.A. Segalman

C1.00039: pH-Responsive Nanostructures Assembled from Amphiphilic Block Copolymers
Chen Xu, Bradford Wayland, Michael Fryd, Karen Winey, Russell Composto

C1.00040: Characterization of Nanostructures with Internal Phase Separation from Triblock Copolymers of PAA-b-PMA-b-PS
Kelly Hales, Honggang Cui, Darrin Pochan, Zhiyun Chen, Karen Wooley

C1.00041: Dual responsive PPO-P(Lys) block copolymer assemblies
Gopal Venkatachalam, Sandeep S. Naik, Daniel A. Savin

C1.00042: Block Copolymer Templates for Structured Nanocomposites
Rafal A. Mickiewicz, Apostolos Avgeropoulos, Edwin L. Thomas

C1.00043: Phase Transitions and Honeycomb Morphology in an Incompatible Blend of Enantiomeric Polylactide Block Copolymers
Lu Sun, Jorge Ginorio, Lei Zhu, Lixia Rong, Igor Sics, Benjamin Hsiao

C1.00044: Spin-on Di-block Copolymer Films for Covalent DNA Attachment
Hernan Rengifo, Cristian Grigoras, Jingyue Ju, Jeffrey Koberstein

C1.00045: Zone Annealed Thin Block Copolymer Films on Chemical Micropatterns
Sangcheol Kim, Brian C. Berry, Ronald L. Jones, Alamgir Karim, Robert M. Briber, Ho-Cheol Kim

C1.00046: Block copolymer lithography for growth of wide band gap nanostructures: Process control and optimization
Kasiraman Krishnan, Azar Alizadeh, Oliver Boomhover, Kenneth Conway, Lauraine Denault, David Hays, Christopher Keimel, Rosalyn Neander, Seth Taylor, Andreas Stintz, Jay Brown, Sanjay Krishna, Edit Braunstein, Colin Jones

C1.00047: Alignment of spherical block copolymer microdomains with substrate features: effects of step edge height and film thickness
Nathaniel T. Lawrence, Matthew L. Trawick, John M. Yarbrough, Gary M. Atkinson, Michael J. Fasolka, Douglas H. Adamson, Richard A. Register

C1.00048: Holographic patterning of block copolymers
Michael Birnkrant, Christopher Li, Lalgudi Natarajan, Vincent Tondiglia, Pamela Lloyd, Richard Sutherland, Timothy Bunning

C1.00049: Mechanism of Thermal Crystallization in Silk Fibroin
Xiao Hu, David Kaplan, Peggy Cebe

C1.00050: Rigid Amorphous Fraction and Lamellar Structure in Nylon-6
Huipeng Chen, Peggy Cebe

C1.00051: Tethered Polymer Chains on Single Crystal Surfaces
Ryan Van Horn, Joseph X. Zheng, Huiming Xiong, Roderic P. Quirk, Bernard Lotz, Edwin L. Thomas, An-Chang Shi, Stephen Z. D. Cheng

C1.00052: The effect of SAM interlayer on the crystalline orientation of PVDF-TrFE thin film in ferroelectric polymer capacitor
Youn Jung Park, Seok Ju Kang, Cheolmin Park

C1.00053: Influence of Confinement on Crystallization of Isotactic Polypropylene
Xiaofeng Chen, Rahmi Ozisik, Sanat K. Kumar

C1.00054: A Comparative Study of Self-Seeding and Isothermal Crystallization in Polyethylene Solutions
Howard Wang, Narayan Ch Das, Kaikun Yang, Boualem Hammouda

C1.00055: Semicrystalline/carbon nanotube nanohybrid shish-kebabs
Christopher Li, Lingyu Li, Bing Li, Kishore Tenneti

C1.00056: Spectroscopic Analysis of Amorphous Fluorinated Polymers
Yuning Yang, Shaw L. Hsu

C1.00057: Phonons and Heat Capacity of Biodegradable Poly(lactic Acid)
R. Stagraczynski, M. Pyda

C1.00058: Polymer Surface Modification by Adsorbing Functional Block Copolymer from a Supercritical Fluid
Yong Chen, Jeiran Jahani, Jeffrey Koberstein

C1.00059: Self-Organization and Chain-Folding in Hybrid Coil-Coil-Cube Triblock Oligomers of Polyethylene-b-Poly(ethylene oxide)-b-Polyhedral Oligomeric Silsesquioxane (POSS)
Jianjun Miao, Li Cui, Lei Zhu

Session H2. Polymer Physics Prize (DPOLY)

Tuesday morning, 8:00 AM, Colorado Convention Center, Four Seasons 4

Chair: Steve Granick, University of Illinois at Urbana-Champaign

8:00 AM H2.00001: Challenges for Polymer Theory and Simulation
Invited Speaker: Glenn H. Fredrickson

8:36 AM H2.00002: Self-Assembly of Monolayer and Multilayer Films of Spherical-Domain Diblock Copolymers
Invited Speaker: Edward J. Kramer

9:12 AM H2.00003: On the consequences of interacting with Glenn Fredrickson
Invited Speaker: Frank Bates

9:48 AM H2.00004: Supramolecular concepts in self-assembly of complex polymer systems
Invited Speaker: Raffaele Mezzenga

10:24 AM H2.00005: PE Crystallization and Rotator Phases
Invited Speaker: Scott Milner

Session H17. Theory and Simulation - Polyelectolytes & Brushes (DPOLY)

Tuesday morning, 8:36 AM, Colorado Convention Center, 102

Chair: Kevin Cavicchi, University of Akron

8:36 AM H17.00002: Wigner Crystallization of Chiral Polyelectrolyte Bundles
Gregory Grason, Robijn Bruinsma

8:48 AM H17.00003: Variable length condensing agents in polyelectrolyte condensation
Richard Guaqueta, Erik Luijten

9:00 AM H17.00004: Complexation in poly-electrolyte solutions: field theoretic simulations of fluctuation induced phase transition
Jonghoon Lee, Yuri Popov, Glenn Fredrickson

9:12 AM H17.00005: Field Theory of Polyelectrolyte Complexation
Yuri Popov, Glenn Fredrickson

9:24 AM H17.00006: Rouse Dynamics of Polyelectrolyte Solutions: Molecular Dynamics Study
Andrey Dobrynin, Qi Liao, Michael Rubinstein

9:36 AM H17.00007: Effect of Interfacial Curvature on the Miscibility of Mixed Charged and Neutral Polymer Brushes
You-Yeon Won, Kevin Witte

9:48 AM H17.00008: Anisotropic Fluctuation Effects in Polyelectrolyte Adsorption
Ying Jiang, Qiang Wang

10:00 AM H17.00009: Local algorithms for Coulomb's law in molecular dynamics
Joerg Rottler

10:12 AM H17.00010: Adaptive Resolution in Molecular Dynamics Simulations
Matej Praprotnik, Luigi Delle Site, Kurt Kremer, Silvina Matysiak, Cecilia Clementi

10:24 AM H17.00011: Transitions of tethered polymer chains
Jutta Luettmer-Strathmann, Federica Rampf, Wolfgang Paul, Kurt Binder

10:36 AM H17.00012: Finite-Stretching Corrections to the Strong-Stretching Theory of Polymer Brushes in Solvent
Jaeup Kim, Mark Matsen

Session H18. De Novo Designed Peptides as Building Nanostructural Blocks (DPOLY/DBP)

Tuesday morning, 8:36 AM, Colorado Convention Center, 103

Chair: Darrin Pochan, University of Delaware

8:36 AM H18.00002: Responsive Polypeptide-based Block Copolymer Assemblies
Daniel A. Savin, Gopal Venkatachalam, Sandeep S. Naik, Kay E. Gebhardt

8:48 AM H18.00003: Early Stages of De Novo Designed Beta-Hairpin Peptide Self-Assembly
Tuna Yucel, Joel P. Schneider, Darrin J. Pochan

9:00 AM H18.00004: Effect of Strand Symmetry on the Nanostructure and Material Properties in Beta-Hairpin Peptide Hydrogels
Rohan Hule, Darrin Pochan, Radhika Nagarkar, Joel Schneider

9:12 AM H18.00005: Self-assembling, bioactive protein hydrogels via engineered coiled-coil aggregation
James Harden, Stephen Fischer, Lixin Mi

9:24 AM H18.00006: Planar peptide processing
Kirk Baldwin, Robert Willett

9:36 AM H18.00007: Self-Assembling Octa-peptides
Aline Miller, Antonios Konstantopolous, Laurent Caron, Alberto Saiani

9:48 AM H18.00008: Sequence Dependent Peptide Self-Assembly and Beta-Sheet Fibrils as Templates for Inorganic Material
Matthew Lamm, Darrin Pochan, Joel Schneider

10:00 AM H18.00009: Incorporation of Designed Extended Chromophores into Amphiphilic 4-helix Bundle Peptides for Biomolecular Materials
Ting Xu, Jiayu Wang, Joe Strzalka, Thomas Russell, Michael Therien, J. Kent Blasie

10:12 AM H18.00010: Turning protein into room temperature molecular magnet
Chia-Ching Chang, Shang-Fan Lee, Kien-Wen Sun, Lou-Sing Kan

10:24 AM H18.00011: Interaction of the synthetic polypeptide poly(FFDD) with single-walled carbon nanotubes
Yachin Cohen, Merav Granite, Amram Mor, Wim Pyckhout-Hintzen

10:36 AM H18.00012: Investigating the specificity of adsorption of onto gold by gold-binding peptides using molecular dynamics simulations
Ana Vila Verde, Janna Maranas

10:48 AM H18.00013: Direct Assembly of Periplasmic Binding Proteins on Gold Surfaces
Cristian Staii, David Wood, Giacinto Scoles

Session H24. Molecular Electronics and Quantum Dots (DMP/DPOLY)

Tuesday morning, 8:36 AM, Colorado Convention Center, 201

Chair: Antoine Kahn, Princeton University

8:36 AM H24.00002: Fixed PIN junction polymer light-emitting electrochemical cells based on self-assembled doping monolayers
Daniel Simon, David Stanislowski, Sue Carter

8:48 AM H24.00003: Thermopower and Electrical Conductance Measurements of Single Molecule Junctions
Pramod Sangi Reddy, Sung-Yeon Jang, Rachel Segalman, Arun Majumdar

9:00 AM H24.00004: Quantum Dots Tailored with Conjugated Polymer
Jun Xu, Zhiqun Lin

9:12 AM H24.00005: Plasmonically Enhanced Second-Harmonic Generation from Metallic/Organic Hybrid Self-Assembled Films
Kai Chen, Cemil Durak, Randy Heflin, Hans Robinson

9:24 AM H24.00006: Theoretical study of photoisomerization of azobenzene derivatives on Au(111)
David A. Strubbe, Matthew J. Comstock, Niv Levy, Armen Kirakosian, Jongweon Cho, Michael F. Crommie, Steven G. Louie

9:36 AM H24.00007: Magnetic Field Effect on Hybrid Exciton in a Quantum Dot Coated by an Organic Shell
Justin Angus, Que Huong Nguyen

9:48 AM H24.00008: Reversible Photomechanical Switching of Individual Engineered Molecules at a Surface
Matthew Comstock, Niv Levy, Armen Kirakosian, Jongweon Cho, Frank Lauterwasser, Jessica Harvey, David Strubbe, Jean Fréchet, Dirk Trauner, Steven Louie, Michael Crommie

10:00 AM H24.00009: Reliable and Versatile Molecular Electrodes
Pawan Tyagi, Dongfeng Li, Stephen Holmes, Bruce Hinds

10:12 AM H24.00010: Manipulation of Kondo Effect via Two-Dimensional Molecular Self-Assembly
Violeta Iancu, Aparna Deshpande, Saw-Wai Hla

10:24 AM H24.00011: Spatial correlation of photoisomerization of functionalized azobenzene molecules on a surface
Niv Levy, Matthew J. Comstock, Jongweon Cho, Armen Kirakosian, Luis Berbil-Bautista, Frank Lauterwasser, Jean M. J. Fréchet, David Strubbe, Steven G. Louie, M. F. Crommie

10:36 AM H24.00012: Electron transport through the building blocks of proteins
David Cardamone, George Kirczenow

Session J4. Polymer-based Composite Materials (DPOLY/FIAP)

Tuesday mid-day, 11:15 AM, Colorado Convention Center, Korbel 2B-3B

Chair: Karen Winey, University of Pennsylvania

11:15 AM J4.00001: Nanostructure Evolution in Polymer/Nano-object Hybrids
Invited Speaker: Kookheon Char

11:51 AM J4.00002: Curved Brushes: Ordering and Dynamics of Silica Polymer Nanocomposites
Invited Speaker: Ramanan Krishnamoorti

12:27 AM J4.00003: The phase stability and properties of polymer - nanoparticle blends
Invited Speaker: Michael Mackay

1:03 PM J4.00004: Aggregation,Steric Stabilization,Bridging and Miscibility of Polymer Nanocomposites
Invited Speaker: Kenneth Schweizer

1:39 PM J4.00005: Polymer brushes on nanoparticles: their positioning in and influence on block copolymer morphology
Invited Speaker: Bumjoon Kim

Session J17. Elastomers & Gels (DPOLY)

Tuesday mid-day, 11:15 AM, Colorado Convention Center, 102

Chair: Ronald Hedden, Pennsylvania State University

11:15 AM J17.00001: Depth Dependence of Shear Properties in Articular Cartilage
Mark Buckley, Jason Gleghorn, Lawrence Bonassar, Itai Cohen

11:27 AM J17.00002: Determining Local Mechanical Properties of Soft Materials with Cavitation Rheology
Jessica A. Zimberlin, Alfred Crosby

11:39 AM J17.00003: Soft Segment Orientation Effects on the Morphology
Ryan Waletzko, Paula Hammond

11:51 AM J17.00004: Structure and mechanical properties of hydrophobically modified hydrogels
Guillaume Miquelard-Garnier, Dominique Hourdet, Costantino Creton

12:03 PM J17.00005: Molecular Origins for the Superior Toughness of Double-Network Hydrogels
Taiki Tominaga, Vijay Tirumala, Eric Lin, Wen-li Wu, Jian Ping Gong, Hidemitsu Furukawa, Yoshihito Osada

12:15 PM J17.00006: Neutron scattering from polyelectrolyte solutions in the presence of a hydrophilic polymer
Wen-li Wu, Sanghun Lee, Taiki Tominaga, Vijay Tirumala, Eric Lin, Jian Ping Gong, Hidemitsu Furukawa, Yoshihito Osada

12:27 PM J17.00007: Neutron scattering from double-network hydrogels subjected to uniaxial extension
Vijay Tirumala, Taiki Tominaga, Steven Hudson, Eric Lin, Wen-li Wu, Jian Ping Gong, Hidemitsu Furukawa, Yoshihito Osada

12:39 PM J17.00008: The Conformational Elasticity Theory and Its Applications
Xiaozhen Yang

12:51 PM J17.00009: Modeling mechanochemical transduction in chemo-responsive gels
Olga Kuksenok, Victor Yashin, Anna C. Balazs

1:03 PM J17.00010: Thermoreversible Ion Gels by Block Copolymer Self-assembly in Ionic Liquids
Yiyong He, Timothy Lodge

1:15 PM J17.00011: Diblock copolymers containing compositionally-uniform poly(HEMA-co-DMAEMA)
Kyle Guice, Raymond Teoh, Yueh-Lin Loo

1:27 PM J17.00012: Small Angle Neutron Scattering Studies of the Counterion Effects on the Molecular Conformation and Structure of Charged G4 PAMAM Dendrimers in Aqueous Solutions
Wei-Ren Chen, Lionel Porcar, Yun Liu, Paul Butler

1:39 PM J17.00013: Creasing of soft surfaces under compression
Ryan Hayward, Veronica Trujillo, Genevieve Tucker, Emine Memis

1:51 PM J17.00014: Schallamach Wave Periodicity in Soft Elastomer Friction
Charles Rand, Alfred Crosby

2:03 PM J17.00015: Complex diffusion in biopolymer networks with added molecular crowding
Daniel R. Sisan, Jeffrey S. Urbach

Session J24. Frank J. Padden Award Symposium (DPOLY)

Tuesday mid-day, 11:15 AM, Colorado Convention Center, 201

Chair: Azar Alizadeh, General Electric Research Center

11:15 AM J24.00001: How ideal are the ideal-like polymers
David Shirvanyants, Sergey Panyukov, Michael Rubinstein

11:27 AM J24.00002: Self-Assembly of Block Copolymers in a Nematic Liquid Crystal Solvent
Neal Scruggs, Rafael Verduzco, Julia Kornfield

11:39 AM J24.00003: Threading Synthetic Polyelectrolytes through Protein Pores
Ryan Murphy, Murugappan Muthukumar

11:51 AM J24.00004: Order and Disorder in Polydisperse Block Copolymer Melts
Nathaniel Lynd, Marc Hillmyer

12:03 PM J24.00005: Morphological Evolution of Poly (caprolactone) Dendrites during Isobaric Relaxation of Metastable Monolayers at the Air/Water Interface
Bingbing Li, Alan Esker

12:15 PM J24.00006: How Polymers Diffuse in Molecularly-Thin Films
Liang Hong, Steve Granick

12:27 PM J24.00007: Phononics and elastic moduli in polymeric and biological nanostructures
Ryan Hartschuh, Johnathan Neiswinger, Huiming Xiong, Alexander Kisliuk, Alexei Sokolov, Stephen Wargacki, Richard Vaia

12:39 PM J24.00008: Surface Dynamics of Glassy Polymer Films and Its Effect on Glass Transition Temperature
Zahra Fakhraai, James A. Forrest

12:51 PM J24.00009: Thermodynamic and Kinetic Control of Charged Triblock Copolymer Assembly into Complex Nanostructures
Honggang Cui, Darrin Pochan, Zhiyun Chen, Karen Wooley

1:03 PM J24.00010: Structured Interfaces of Surface Wrinkles for Adhesion, Optics and Sensors
Edwin Chan, Alfred Crosby

Session J25. Hybrid Organic, Inorganic Nanomaterials: Synthesis, Assembly (DPOLY/FIAP)

Tuesday mid-day, 11:15 AM, Colorado Convention Center, 203

Chair: Rich Vaia, Air Force Research Laboratory

11:15 AM J25.00001: Directing and Orienting Nanoparticles and Nanorods at Fluid Interfaces, within Templates, and on Substrates
Invited Speaker: Todd Emrick

11:51 AM J25.00002: Formation of Giant Meso-Polymers from Magnetic Nanoparticles Using Fossilized Liquid Assembly
Jason Benkoski, Steven Bowles, Ronald Jones, Jack Douglas, Jeffrey Pyun, Alamgir Karim

12:03 PM J25.00003: Nanoparticle Alignment and Repulsion During Failure of Glassy Polymer Nanocomposites
Alfred Crosby, Jong-Young Lee, Qingling Zhang, Todd Emrick

12:15 PM J25.00004: Solvent-Mediated Plasmon-Tuning in a Nanoparticle-Poly(Ionic Liquid) Organogels and Hydrogels
Millicent Firestone, Dolly Batra, Soenke Seifert

12:27 PM J25.00005: Immobilizing Au Nanoparticles with Polymer Single Crystals, Patterning and Asymmetric Functionalization
Bing Li, Christopher Li

12:39 PM J25.00006: High-Energy Density Capacitors using Nanoparticle-Polymer Composite Dielelectrics
Kristin Kraemer, Jiangyu Li, Lei Zhang, D.J. Sellmyer, X. Wei, Stephen Ducharme

12:51 PM J25.00007: Fabrication of Patterned Mesoporous Silica Films Templated From Chemically Amplified Block Copolymers
Sivakumar Nagarajan, Joan Bosworth, Christopher Ober, James Watkins, Thomas Russell

1:03 PM J25.00008: Metal nanocrystals incorporated within pH-responsive microgel particles
Maria Vamvakaki, D. Palioura, S.H. Anastasiadis, S.P. Armes

1:15 PM J25.00009: Self-Assembly of Magnetic Nanoparticles at the Surface and Within Block Copolymer Films
Chen Xu, Kohji Ohno, Russell Composto

1:27 PM J25.00010: Effect of Nanoparticles on the Phase Morphology of Block copolymers
David Bucknall, Deepali Palta

1:39 PM J25.00011: Limitations of electric field assisted patterning of nanoparticle filled polymers
Hilmar Koerner, Richard Vaia, Wei Lu, Evangelos Manias

1:51 PM J25.00012: Separation of Ionic Solutes Using Nanoparticle-Crosslinked Polymer Hydrogels
Peter Thomas, Bani Cipriano, Srinivasa Raghavan

2:03 PM J25.00013: Molecular Dynamics Simulations of Cubic Phases in Pluronics Systems and Their Role in Templating Nanoparticles
Joshua Anderson, Alex Travesset, Chris Lorenz

Session L2. Organic and Molecular Bistability and Memory Devices (FIAP/DPOLY)

Tuesday afternoon, 2:30 PM, Colorado Convention Center, Four Seasons 4

Chair: Yongli Gao, University of Rochester

2:30 PM L2.00001: Organic electrical bistable devices and applications as electronic digital memory
Invited Speaker: Yang Yang

3:06 PM L2.00002: Evaluation of switchable organic devices for nonvolatile memory applications
Invited Speaker: J. Campbell Scott

3:42 PM L2.00003: Nonvolatile Memory in Organic Thin Films
Invited Speaker: Ghassan Jabbour

4:18 PM L2.00004: Controlling nanostructure in organic films to achieve high photovoltaic efficiency
Invited Speaker: Stephen Forrest

4:54 PM L2.00005: Large-Scale Molecular and Nanoelectronic Circuits \& Associated Opportunities
Invited Speaker: Jim Heath

Session L17. Rheology, Transport, and Processing (DPOLY)

Tuesday afternoon, 3:06 PM, Colorado Convention Center, 102

Chair: Erik Hobbie, National Institute of Standards and Technology

3:06 PM L17.00002: A new molecular theory beyond tube model to describe cohesive breakdown in nonlinear flow of entangled polymers
Shi-Qing Wang

3:18 PM L17.00003: Image Correlation Spectroscopy of Actin Networks
Jeffrey Urbach, Dan Sisan

3:30 PM L17.00004: Shape instabilities in absorbed polymer condensates
Gerald Pereira

3:42 PM L17.00005: Structure and Interactions in Neurofilament Networks
Jayna Jones, Joanna Deek, Cyrus Safinya

3:54 PM L17.00006: Large-scale diffusion in thick photopolymer systems
Matthew W. Grabowski, Amy C. Sullivan, Robert R. McLeod

4:06 PM L17.00007: Mechanisms for achieving high energy density in PVDF: a first-principles investigation
V. Ranjan, L. Yu, Marco Buongiorno Nardelli, J. Bernholc

4:18 PM L17.00008: Interfacial Density Profiles of Poly(methyl Methacrylate) with Liquids
Keiji Tanaka, Yoshihisa Fujii, Hironori Atarashi, Masahiro Hino, Toshihiko Nagamura

4:30 PM L17.00009: Initiated Chemical Vapor Deposition of Poly(methyl methacrylate)
Xichong Chen, Mitchell Anthamatten

4:42 PM L17.00010: Molecular Dynamics Simulations of Nanomolding Process
Jan-Michael Carrillo, Andrey Dobrynin

4:54 PM L17.00011: Morphology development in electrospun nanofibers
Thein Kyu, Pratyush Dayal

5:06 PM L17.00012: Production of bi-component core-sheath nanofibers using Chitosan and Polyethylene oxide
Satyajeet Ojha, Derrick Stevens, Laura Clarke, Russell Gorga

5:18 PM L17.00013: Coarse Grained Modelling of Nanotube Stabilization by PEO Adsorption and Grafting
Justin Hooper, Dmitry Bedrov, Grant Smith

Session L24. John H. Dillon Award Symposium (DPOLY)

Tuesday afternoon, 2:30 PM, Colorado Convention Center, 201

Chair: Timothy Bunning, Wright Patterson Air Force Base

2:30 PM L24.00001: Swell Gels to Dumbbell Micelles: Construction of Materials and Nanostructure with Self-assembly
Invited Speaker: Darrin Pochan

3:06 PM L24.00002: Morphological Characterization of Silicone Hydrogels
Samuel Gido

3:18 PM L24.00003: The Application of Specular X-ray Reflectivity to Characterize Patterned Surface
Wen-li Wu, Hae-Jeong Lee, Christopher L. Soles

3:30 PM L24.00004: Collaborative Investigations of Supramolecular Polymer Assembly Processes
Karen Wooley

3:42 PM L24.00005: Self-Generated Fields and Morphogenesis in Polymer Crystallization
Jerold Schultz

3:54 PM L24.00006: Propagating Waves of Self-Assembly in Organosilane Monolayers
Jack Douglas, Kirill Efimenko, Daniel Fischer, Fredrick Phelan, Jan Genzer

4:06 PM L24.00007: Receptor-Ligand Interactions and Adsorption at the Oil Water Interface
Kenneth Shull, Daniel Carvajal, Chi-Yang Chao

4:18 PM L24.00008: Microstructure foundations of high carrier mobility in polymers
Eric Lin, Dean DeLongchamp, R. Joseph Kline, Daniel Fischer, Lee Richter, Andy Moad, Martin Heeney, Iain McCulloch, John Northrup

4:30 PM L24.00009: Phase Separated Polymer Systems on Surfaces and Some Applications in Super-Hydrophobicity
Charles C. Han, Yonghua Yao, Xia Dong

4:42 PM L24.00010: Multicompartment micelles from ABC copolymers
Tim Lodge

4:54 PM L24.00011: Gold Nanoparticle Liquids and Dispersions: Structure and Phase Stability
Richard Vaia, Stephen Diamanti, Robert MacCuspie, Hilmar Koerner, Mitra Yoonessi, Mark Pender

5:06 PM L24.00012: Thin Film Composites of Block Copolymers and Bio-Nanoparticles
Thomas Russell, Dongseok Shin, Ting Xu, Seung Hyun Kim, Qian Wang

5:18 PM L24.00013: Structure and Rheology of Shear-Banding Wormlike Micellar Solutions
Norman Wagner

Session L25. Organic Spintronic Materials and Nano-Spintronic Materials (DPOLY/DMP)

Tuesday afternoon, 3:06 PM, Colorado Convention Center, 203

Chair: Joseph Shinar, Iowa State University

3:06 PM L25.00002: Understanding electronic properties at organic/silicon interfaces from first principles
Invited Speaker: Leeor Kronik

3:42 PM L25.00003: Ferromagnetism in a Porphyrin-based Organic Semiconductor
J. Moreno, M.A. Majidi, W.A. Schwalm, R.S. Fishman

3:54 PM L25.00004: Self-Assembly of Magnetic Molecules on GaN(0001)
Saw W. Hla, Danda P. Acharya, Violeta Iancu, Erdong Lu, Arthur R. Smith

4:06 PM L25.00005: Atomic and Electronic Structure of a Novel Two-Dimensional Molecular Magnet System
Anthony Caruso, Trevor Tyson, Douglas Schulz, Wolfgang Caliebe

4:18 PM L25.00006: Growth and electronic structure of tetracyanoethylene on noble metals studied by scanning tunneling microscopy
Daniel Wegner, Ryan Yamachika, Yayu Wang, Bart Bartlett, Jeff Long, Mike Crommie

4:30 PM L25.00007: Strong electron-phonon interaction in e-e correlated molecular systems
Yuri Dahnovsky

4:42 PM L25.00009: Electron Spin Relaxation in Hole Polaron States of Conjugated Porphyrin Arrays
Paul J. Angiolillo, Paul R. Frail, Nora Graneto, Devlin Murdock, Michael J. Therien

4.54 PM L25.00010: Spin states and their relaxation in transition-metallorganic self-assembled molecules
Zhi-Gang Yu

5:06 PM L25.00011: Low Temperature STM Investigation of Molecular Kondo Effect
Gayani Perera, Violeta Iancu, Saw-Wai Hla

Session M24. DPOLY Business Meeting followed by Discussion on Research Funding from the National Science Foundation (DPOLY)

Tuesday afternoon, 5:45 PM, Colorado Convention Center, 201

Chair: Steve Granick, University of Illinois at Urbana-Champaign

5:45 PM DPOLY Business Meeting
Steve Granick, Barry Farmer

6:45 PM Discussion on Research Funding from the National Science Foundation
Andrew J. Lovinger

Monday, March 5th 2007

Session	A4.	A17.	A18	A24.	A25.
Room	*Korbel 2B-3B*	*102*	*103*	*201*	*203*
Chair	*Bunning*	*Ozbas*	*Segalman*	*Register*	*Crosby*
8:00 AM	Vaia	Colby	Feng	Granick	van Vliet
8:12 AM		Hoagland	Pesant		
8:24 AM		Lutkenhaus	Ehrenfreund		
8:36 AM	Zauscher	Fullerton	Vardeny	Streletzky	Nanjundiah
8:48 AM		Runt		Iacovella	Croll
9:00 AM		Fragiadakis		Pryamitsyn	Huang
9:12 AM	Hansma	Allahyarov	Ortmann	Kang	Yokoyama
9:24 AM		He	Singh	Composto	Ohlemacher
9:36 AM		Zhou	Sheng	McGarrity	Fernando
9:48 AM	Wirtz	Zou	Richter	Narayanan	Arinstein
10:00 AM		Chan	Narayanan	Tolkiehn	Ginzburg
10:12 AM		Isaacs-Sodeye	Narayanan	Knauert	Hutcheson
10:24 AM	Grosberg	Prabhu	Painelli	Frischknecht	Grest
10:36 AM		Bucholz	Li	Surve	Hong
10:48 AM		Polizos		He	Wang

Session	B6.	B17.	B18.	B24.	B25.
Room	*207*	*102*	*103*	*201*	*203*
Chair	*Travesset*	*Ryu*	*Anthamatten*	*Kumar*	*Hermel-Davidcock*
11:15 AM	Bowick	Frisbie	Beyer	Percec	Attard
11:27 AM			Sen		
11:39 AM			Moniruzzaman		
11:51 AM	Pine	Leising	Papakonstantop.	Lee	Stafford
12:03 PM		Solin	Stevens	Bras	Stephanie
12:15 PM		Siegrist	Winey	Baljon	Raegen
12:27 PM	Stone	Gomar-Nadal	Rittigstein	Padmanabhan	Stein
12:39 PM		Yoshikawa	Akcora	Liu	Bunker
12:51 PM		Zheng	Mu	Greenfield	Carelli
1:03 PM	Wooley	Wo	Kropka	Topp	Wang
1:15 PM		Seo	Chen	Urbanc	Lavery
1:27 PM		Mo	Chatterjee	Li	Hagman
1:39 PM	Alexandridis	Coropceanu	Chen	Wrue	Murray
1:51 PM		Gaan	Kannan	Schaefer	Mehta
2:03 PM		Jaquith	Basu	Hunt	Dadmun

Session	D4.	**C1. Poster session I:** 2:00-5:00 PM, *Exhibit Hall F*			
Room	*Korbel 2B-3B*	Heffernan	Peri	Teng	Chen
Chair	*Crist*	Chen	Michalek	Tenneti	Wang
2:30 PM	Geil	Lee	Ugur	Tao	Li
2:42 PM		Roth	Boit	Xu	Yang
2:54 PM		Rittigstein	Wang	Hales	Stagraczynski
3:06 PM	Khoury	McAninch	Wang	Venkatachalam	Chen
3:18 PM		Pakeyngkoon	Cho	Mickiewicz	Miao
3:30 PM		Sokoloff	Hong	Sun	
3:42 PM	Lotz	Xue	Wang	Rengifo	
3:54 PM		Simone	Kim	Kim	
4:06 PM		Timmers	Han	Krishnan	
4:18 PM	Strobl	Koh	Qin	Lawrence	
4:30 PM		Pan	Meng	Birnkrant	
4:42 PM		Xu	Sohn	Hu	
4:54 PM	Toda	Tateishi	Hwang	Chen	
5:06 PM		Otaka	Zhang	Van Horn	
5:18 PM		Yang	Dobriyal	Park	

Tuesday, March 6th 2007

Session	H2.	H17.	H18.	H24.
Room	*Four Seasons 4*	*102*	*103*	*201*
Chair	*Granick*	*Cavicchi*	*Pochan*	*Kahn*
8:00 AM	Fredrickson	BREAK	BREAK	BREAK
8:12 AM				
8:24 AM				
8:36 AM	Kramer	Grason	Savin	BREAK
8:48 AM		Guaqueta	Yucel	Reddy
9:00 AM		Lee	Hule	Xu
9:12 AM	Bates	Popov	Harden	Chen
9:24 AM		Dobrynin	Baldwin	Strubbe
9:36 AM		Won	Miller	Angus
9:48 AM	Mezzenga	Jiang	Lamm	Comstock
10:00 AM		Rottler	Xu	Tyagi
10:12 AM		Praprotnik	Chang	Iancu
10:24 AM	Milner	Luettmer-Strahm.	Cohen	Levy
10:36 AM		Kim	Verde	Cardamone
10:48 AM			Staii	

Session	J4.	J17.	J24.	J25.
Room	*Korbel 2B-3B*	*102*	*201*	*203*
Chair	*Winey*	*Hedden*	*Alizadeh*	*Vaia*
11:15 AM	Char	Buckley	Shirvanyants	Emrick
11:27 AM		Zimberlin	Scruggs	
11:39 AM		Walerzko	Murphy	
11:51 AM	Krishnamoorti	Miquelard-Garnier	Lynd	Benkoski
12:03 PM		Tominaga	Li	Crosby
12:15 PM		Wu	Hong	Firestone
12:27 PM	Mackay	Tirumala	Hartschuh	Li
12:39 PM		Yang	Fakhraai	Kraemer
12:51 PM		Kuksenok	Cui	Nagarajan
1:03 PM	Schweitzer	He	Chan	Vamvakaki
1:15 PM		Guice		Xu
1:27 PM		Chen		Bucknall
1:39 PM	Kim	Hayward		Koerner
1:51 PM		Rand		Thomas
2:03 PM		Sisan		Anderson

Session	L2.	L17.	L24.	L25.
Room	*Four Seasons 4*	102	201	203
Chair	*Gao*	*Hobbie*	*Bunning*	*Shinar*
2:30 PM	Yang	BREAK	Pochan	BREAK
2:42 PM				
2:54 PM				
3:06 PM	Scott	Wang	Gido	Kronik
3:18 PM		Urbach	Wu	
3:30 PM		Pereira	Wooley	
3:42 PM	Jabbour	Jones	Schultz	Moreno
3:54 PM		Grabowski	Douglas	Hla
4:06 PM		Ranjan	Shull	Caruso
4:18 PM	Forrest	Tanaka	Lin	Wegner
4:30 PM		Chen	Han	Dahnovsky
4:42 PM		Carrillo	Lodge	Angiolillo
4:54 PM	Heath	Kyu	Vaia	Yu
5:06 PM		Ojha	Russell	Perera
5:18 PM		Hooper	Wagner	

5:45 PM	**M24. DPOLY Business meeting** (Rm. 201)
6:45 PM	**Discussion on Research Funding from the National Science Foundation** (Rm 201)

Wednesday, March 7th 2007

Session	N4.	N17.	N24.	N25.
Room	*Korbel 2B-3B*	*102*	*201*	*203*
Chair	*Genzer*	*Yokoyama*	*Lin*	*Xu*
8:00 AM	Khokhlov	Yan	Kena-Cohen	Kalinin
8:12 AM		Hudson	Szymanski	
8:24 AM		Han	Ding	
8:36 AM	Tew	Wong	Bradley	Choi
8:48 AM		Loppinet		Lai
9:00 AM		Ryu		Lin
9:12 AM	Kiick	Chervanyov	Lee	Volkmer
9:24 AM		Gottlieb	Dorn	Goswami
9:36 AM		Lin	Arif	Yan
9:48 AM	Kane	Ziebarth	Williams	He
10:00 AM		Kohlstedt	Volz	Liang
10:12 AM		Ilie	Lupton	Rehfeldt
10:24 AM	Hawker	Johnston	Liu	Seol
10:36 AM		Foltz	Tong	Hinsch
10:48 AM		Li	Gangilenka	Heussinger

Session	P24.	P25.	R1. Poster session II: 11:15 AM-2:15 PM, *Exhibit Hall F*			
Room	*201*	*203*	Yang	Bunning	Robles	Wang
Chair	*Kippelen*	*Krishnamoorti*	*Ong*	Hachmann	Robles	Park
11:15 AM	Brédas	Robbins	Ong	Graham	Tripatanasuwan	Kim
11:27 AM			Jain	Watts	Wang	Pisitsak
11:39 AM			Chervanyov	Araki	Shin	Ramalingam
11:51 AM	Buxton	Medvedev	Tatek	Fong	Shin	Zeng
12:03 PM	Bouduoris	Wool	Starovoytov	Farmer	Park	Hall
12:15 PM	Park	Kawaguhi	Kingsburry	Gozen	Grzesik	Yu
12:27 PM	Shaheen	Khare	Hickey	McKenna	Sharma	Sun
12:39 PM	Ndobe	Saltzman	Yin	Zheng	Petrie	Miller
12:51 PM	Yang	Jiang	Pinna	Meng	Anctil	Anuchai
1:03 PM	Gupta	Schweizer	Hore	Hong	Lee	Varothai
1:15 PM	Holt	McCoy	Pandey	Li	Feizabadi	Tassanawat
1:27 PM	Drori	Li	Kim	Zhan	Whitelam	Prakobna
1:39 PM	Watts	Xue	Zhu	Han	Carrillo	Kohpaiboon
1:51 PM	Reese	Kim	Belak	Kalaitzidou	Fenley	Fagan
2:03 PM	Kopidakis		Choi	Mohapatra	Li	Sandberg
					Hong	Mu
					Gauthier	Ozisik

Session	S17.	S18.	S24.	S25.		
Room	*102*	*103*	*201*	*203*	Urayama	Liu
Chair	*Ganesan*	*Krikorian*	*Kannan*	*Epps*	Russo	Stokes
2:30 PM	Detcheverry	Cheng	Olvera dela Cruz	Son	Ougizawa	Hu
2:42 PM	Smith	Hsiao		Kim	Badrinarayanan	Thipdech
2:54 PM	Capehart	Chen		Kim	Wang	Hiamtup
3:06 PM	Sides	Li	Zhu	Checco	Takano	Juntanon
3:18 PM	Qian	Wang	Zupancich	Wang	Ozair	Niamlang
3:30 PM	Wu	Aou	Diamanti	Ding	Carbone	Phumman
3:42 PM	Benetatos	Myers	Ismail	Karim	Osa	Lee
3:54 PM	Bitsanis	Schultz	Chelikani	Tang	Hernandez	Singh-Miller
4:06 PM	Vincenzi	Xie	Meuse	Bang	Yashin	Kunanuruksap.
4:18 PM	Taylor	Dalnoki-Veress	Kayitmazer	Park	Isahoh	Alfonso
4:30 PM	Titievsky	Kuppa	Tung	Hexemer	Chantarak	Jhon
4:42 PM	Rissanou	Zhu	Khodadadi	Olsen	Kistler	Karim
4:54 PM	Kalb	Shin	Krause	Chantawansri	Wang	Genzer
5:06 PM	Gopinathan	Lipp	Chen	Crossland	Jiang	Pettersson
5:18 PM	Iliev	Ince-Gunduz	Dasmahapatra	Li	Xia	Ade
5:30 PM				Stoykovich	Lee	Crist
5:42 PM				Carvalho		
5:54 PM				Kim		

Thursday, March 8th 2007

Session	U4.	U17.	U24.	U25.
Room	*Korbel 2B-3B*	*102*	*201*	*203*
Chair	*Ortiz*	*Prabhu*	*Karim*	*Loo*
8:00 AM	Leckband	Tirrell	Han	Stassen
8:12 AM		Akcora		Lenski
8:24 AM		Roan		Kalb
8:36 AM	Kumar	Tsui	Müller	Heston
8:48 AM		Zhao	Watkins	Prigodin
9:00 AM		Qian	Segalman	Smith
9:12 AM	Kannan	Brass	Bowman	Panzer
9:24 AM		Anastasiadis	Park	Andrienko
9:36 AM		Holmes	Cochran	Sai
9:48 AM	Szleifer	Meng	Clarke	Dunlap
10:00 AM		Barrett	Ganesan	Lee
10:12 AM		Carroll	Abbas	Wang
10:24 AM	Abbott	Riedo	Pinna	Chen
10:36 AM		Akgun	Saiani	Minari
10:48 AM		Prasad	Lü	

Session	V4.	V17.	V24.	V25.
Room	*Korbel 2B-3B*	*102*	*201*	*203*
Chair	*Tsui*	*Hayward*	*Lavery*	*Hu*
11:15 AM	Ediger	Eisele	Wang	Wang
11:27 AM		Enlow		Liu
11:39 AM		Manias		Sheung
11:51 AM	Lodge	Lin	McHugh	Awaga
12:03 PM		Tasanatanachai	Kim	
12:15 PM		Ratnaweera	Patel	
12:27 PM	Larson	Maheshwari	Liu	Osterbacka
12:39 PM		Ozisik	Edmonds	Yoo
12:51 PM		Li	Tenneti	Sheng
1:03 PM	Dutcher	Hess	Yang	Pi
1:15 PM		Sato-Cantu	Kim	Sun
1:27 PM		Wakabayashi	Palta	Yang
1:39 PM	McKenna	Zhang	Oyerokun	Wesely
1:51 PM		Berret	Miao	Campbell
2:03 PM		Rao		

Session	W4.	W17.	W24.	W25.
Room	*Korbel 2B-3B*	*102*	*201*	*203*
Chair	*Smith*	*Stafford*	*Hudson*	*Shin*
2:30 PM	Shi	Riggleman	Spontak	Seery
2:42 PM		Mannava		Cheng
2:54 PM		Lipson		Jose
3:06 PM	de Pablo	Green	Handlin	Ramirez-Santiago
3:18 PM		Peter	Gomez	Hanna
3:30 PM		Raphael	Lee	Watanabe
3:42 PM	Fraaije	Farrar	Li	Jiang
3:54 PM		Pristley	Wang	Emmons
4:06 PM		Ata	Maniadis	Pyda
4:18 PM	Balazs	Mundra	Kim	von Meerwall
4:30 PM		Roth	Staudinger	Bhattacharyya
4:42 PM		Liao	Takano	Yu
4:54 PM	Gersappe	Foster	Li	Wu
5:06 PM		Lal	Chen	Wang
5:18 PM		Shi		An

Friday, March 9th 2007

Session	X17.	X18.	X24.	X25.
Room	*102*	*103*	*201*	*203*
Chair	*Bang*	*Savin*	*Kahol*	*Dobrynin*
8:00 AM	Deshmukh	Pandey	Zimbovskaya	Urayama
8:12 AM	Wilbur	Wahba	Yoo	Xing
8:24 AM	Virgili	Olmsted	Khan	Patil
8:36 AM	Cho	Aragon	Kose	Jeong
8:48 AM	Asakawa	Hu	Haas	Verploegen
9:00 AM	Torkelson	Reichhardt	Vardeny	Golemme
9:12 AM	Lane	Liu	Tulek	Srinivasarao
9:24 AM	Hu	Schmit	Preiner	He
9:36 AM	Sharma	Kreft	Sharoni	McKenna
9:48 AM	Bochinski	Levine	Xiao	Caruthers
10:00 AM	Kim	Yuan	Xue	Hoy
10:12 AM	Fontecchio	Jain	Kang	Badrinarayanan
10:24 AM	Cornelius	Licata	Reece	Thomsen
10:36 AM	Perahia	Nguyen	Cacciuto	Kim
10:48 AM		Velichko		Nunalee

Session	Y4.	Y17.	Y18.
Room	*Korbel 2B-3B*	*102*	*103*
Chair	*Douglas*	*Rubinstein*	*Ginzburg*
11:15 AM	Pojman	Dobrynin	Wanakule
11:27 AM			Nedoma
11:39 AM			Ade
11:51 AM	Hudson	Lang	Wang
12:03 PM		Lennon	Elliot
12:15 PM		Guenza	Rathi
12:27 PM	Krausch	Bedrov	Dong
12:39 PM		Picu	Sharma
12:51 PM		Depa	Ashcraft
1:03 PM	Eisenberg	Lacevic	Kamath
1:15 PM		Budzien	Feng
1:27 PM		Dorgan	Zhao
1:39 PM	Ortiz	Shnidman	Curro
1:51 PM		Xu	Zheng
2:03 PM		Chen	Wang

You are invited to attend a discussion forum on funding in polymers from the National Science Foundation (NSF).

Dr. Andrew Lovinger, Polymers Program Director in the Division of Materials Research at NSF, will discuss current research opportunities and answer questions on polymer-related funding at NSF.

The discussion forum will take place immediately after the Business Meeting of the Division of Polymer Physics of the American Physical Society on Tuesday, March 6th, 2007.

All students and new faculty are particularly encouraged to attend both meetings and participate in the discussion.

Date: March 6th, 2007
Location: Colorado Convention Center, Rm. 201
Business meeting: 5:45-6:45 PM
Discussion forum: 6:45-7:45 PM

Session N4. Novel Approaches Aimed at Rational Design of Functional Polymeric Materials (DPOLY)

Wednesday morning, 8:00 AM, Colorado Convention Center, Korbel 2B-3B

Chair: Jan Genzer, North Carolina State University

8:00 AM N4.00001: Conformation-Dependent Design of Copolymer Sequences
Invited Speaker: Alexei R. Khokhlov

8:36 AM N4.00002: Novel Antimicrobial Materials
Invited Speaker: Gregory N. Tew

9:12 AM N4.00003: Biosynthetic Polypeptides as Templates in Materials Design
Invited Speaker: Kristi Kiick

9:48 AM N4.00004: Polyvalent Recognition of Biopolymers:The Design of Potent Inhibitors of Anthrax Toxin
Invited Speaker: Ravi Kane

10:24 AM N4.00005: Recent Advances in the Synthesis of Polymeric Nanostructured Materials
Invited Speaker: Craig Hawker

Session N17. Adsorption Phenomena (DPOLY)

Wednesday morning, 8:00 AM, Colorado Convention Center, 102

Chair: Hide Yokoyama, Advanced Industrial Science and Technology, Japan

8:00 AM N17.00001: Adsorption of polymers on colloid particles
Dadong Yan, Shuang Yang, Charles C. Han, An-Chang Shi

8:12 AM N17.00002: Colloidal Lithography and Particle Decoration Metrology
Steven Hudson, Thuy Chastek, Barry Bauer

8:24 AM N17.00003: Adsorption and Fractionation of RAFT-polymerized PS-b-PMMA Block Copolymers for 2D Liquid Chromatography
Junwon Han, Chang Y. Ryu, Ho-Cheol Kim, Greg Breyta, Hiroshi Ito

8:36 AM N17.00004: Direct Fluorescence Measurements of Polymer Surface Diffusion and Intramolecular Rearrangements
Janet Wong, Liang Hong, Sung Chul Bae, Steve Granick

8:48 AM N17.00005: Brownian diffusion close to polymer brushes
Benoit Loppinet, Emma Filippidi, Vassilik Michailidou, George Fytas, Juergen Ruehe

9:00 AM N17.00006: Displacer Effects on Pre-adsorbed Polystyrenes In Nanoporous Silica
Chang Y. Ryu, Chansu Kim, Joel Batson, Sanat Kumar

9:12 AM N17.00007: Theory of the adsorption of polymers onto chemically non-uniform surfaces with applications to the polymer adsorption onto the mixed brushes
Alexander Chervanyov, Gert Heinrich

9:24 AM N17.00008: Effect of Silane Sizing on Polymer-Glass Adhesion
Moshe Gottlieb, Haim Dvir

9:36 AM N17.00009: Dynamic Self-Assembly of Polymers from a Sphere-on-Flat Geometry
Zhiqun Lin, Suck Won Hong, Jun Xu

9:48 AM N17.00010: Monte Carlo Simulations of the Selective Adsorption of Heteropolymers on Heterogeneous Surfaces
Jesse Ziebarth, Jennifer Williams, Yongmei Wang

10:00 AM N17.00011: The breaking of chiral symmetry using long-range electrostatic forces
Kevin Kohlstedt, Francisco Solis, Graziano Vernizzi, Monica Olvera de la Cruz

10:12 AM N17.00012: Activated Desorption of Water from a Polymer Surface
Carolina C. Ilie, P.A. Jacobson, I.N. Yakovkin, L.G. Rosa, Matt Poulsen, D. Sahadeva Reddy, J.M. Takacs, S. Ducharme, Peter A. Dowben

10:24 AM N17.00013: Understanding Polymer Adhesion: First-principles calculations of the adsorption of organic molecules onto Si surfaces
Karen Johnston, Risto M. Nieminen

10:36 AM N17.00014: Quartz Microbalance Measurement of Adsorption Potential Well-Depths
Ryan Foltz, Rafael Garcia

10:48 AM N17.00015: Phonon-induced Anisotropy in Dispersion Forces on a Metallic Substrate
Je-Luen Li

Session N24. Organic LEDS and Light Emission (DPOLY/DMP)

Wednesday morning, 8:00 AM, Colorado Convention Center, 201

Chair: Eric Lin, National Institute of Standards and Technology

8:00 AM N24.00001: Green polariton photoluminescence in organic microcavities containing the red-emitting phosphor PtOEP
Stephane Kena-Cohen, Stephen R. Forrest

8:12 AM N24.00002: Morphology, structure and photoluminescence properties of thin films of a conjugated polymer poly(2,5-dinonyl para phenyleneethynylene)
Craig Szymanski, Yunfei Jiang, Jasson McNille, Dvora Perahia, Uwe H. F. Bunz

8:24 AM N24.00003: Photoemission study of tris(8-hydroxyquinoline) aluminum/aluminum oxide/tris(8-hydroxyquinoline) aluminum interface
Huanjun Ding, Serkan Zorba, Yongli Gao, Liping Ma, Yang Yang

8:36 AM N24.00004: Hybrid Organic/Inorganic Semiconductor Structures: Efficient Förster Energy Coupling and Prospective Optical Devices
Invited Speaker: Donal Bradley

9:12 AM N24.00005: Study of thermal degradation of organic light emitting device structures by X-ray scattering
Young Joo Lee, Heeju Lee, Youngsuk Byun, Sanghoon Song, Je-Eun Kim, Daeyong Eom, Wonsuk Cha, Hyunjung Kim, Seong-Sik Park, Jinwoo Kim

9:24 AM N24.00006: Luminescence from single colloidal nanocrystals embedded in organic light emitting devices
August Dorn, Hao Huang, Vladimir Bulovic, Moungi Bawendi

9:36 AM N24.00007: Charge injection and Raman scattering studies from polyfluorene-based light-emitting diodes
M. Arif, S. Guha

9:48 AM N24.00008: Multi-walled carbon nanotube sheets as transparent anodes in organic light-emitting diodes
Christopher Williams, Raquel Ovalle Robles, Mei Zhang, Sergey Li, Ray Baughman, Anvar Zakhidov

10:00 AM N24.00009: Conformations in di-octyl substituted polyfluorene: a combined theoretical and experimental Raman scattering study
C. Volz, M. Arif, S. Guha

10:12 AM N24.00010: Influence of Environment on the Electronic Structure of Polyfuorenes
Elizabeth M. Lupton, Feng Liu

10:24 AM N24.00011: NEXAFS measurements of chain alignment in order polyfluorene thin films
Xiaosong Liu, Hyeunseok Cheun, Frank Galbrecht, F. J. Himpsel, Ullrich Scherf, Michael Winokur

10:36 AM N24.00012: Optical studies of platinum-containing conjugated polymers
Minghong Tong, Alessio Gambetti, Tomer Drori, Zeev Vardeny

10:48 AM N24.00013: Crystalline PTCDA waveguides grown by organic molecular beam deposition
V.R. Gangilenka, J. Markus, H. Schmitzer, H.P. Wagner

Session N25. Biopolymers I: Mechanical Properties (DPOLY/DBP)

Wednesday morning, 8:00 AM, Colorado Convention Center, 203

Chair: Ting Xu, University of California, Berkeley

8:00 AM N25.00001: Electromechanical imaging of structure and polarization dynamics in macromolecular system on the nanoscale
Invited Speaker: Sergei Kalinin

8:36 AM N25.00001: Synchrotron X-ray Diffraction Study on the Effect of the Tau protein on the Mechanical Properties of Microtubules
Myung Chul Choi, Uri Raviv, Herbert Miller, Michelle Massie, Youli Li, Leslie Wilson, Stuart Feinstein, Mahn Won Kim, Cyrus Safinya

8:48 AM N25.00003: Time-resolved studies of actin organization by multivalent ions and actin-binding proteins
Ghee Hwee Lai, Kirstin Purdy, James R. Bartles, Gerard Chee Lai Wong

9:00 AM N25.00004: Elastic Behavior of Composite Actin and Microtubule Networks
Yi-Chia Lin, Gijsje Koenderink, Frederick Mackintosh, David Weitz

9:12 AM N25.00005: Mechanics of actin networks crosslinked with mutant human α-actinin-4
Sabine Volkmer, Daniel Blair, Karen Kasza, David Weitz

9:24 AM N25.00006: Viscoelastic properties of Ionomer Melt
Monojoy Goswami, Sanat Kumar

9:36 AM N25.00007: Controlling the Properties of Thermoreversible Protein Hydrogels
Hui Yan, Alberto Saiani, Aline Miller

9:48 AM N25.00008: Electrospinning of Hyaluronic acid (HA) and HA/Gelatin Blends
Aihua He, Junxing Li, Charles Han, Dufei Fang, Benjamin Hsiao, Benjamin Chu

10:00 AM N25.00009: Rheology and lubricity of hyaluronic acid
Jing Liang, Wendy E. Krause

10:12 AM N25.00010: Physical Control of Stem Cells via Matrix Elasticity
Florian Rehfeldt, Dennis Discher

10:24 AM N25.00011: Elasticity of Short DNA Molecules: Quantitative Agreement Between Theory and Experiment
Yeonee Seol, Jinyu Li, Philip Nelson, Thomas Perkins, M. D. Betterton

10:36 AM N25.00012: Tube Radius in Entangled Networks of Semiflexible Polymers
Hauke Hinsch, Jan Wilhelm, Erwin Frey

10:48 AM N25.00013: Stretching and bending in cross-linked biopolymer networks
Claus Heussinger, Erwin Frey

Session P24. Organic Heterojuncture Photovoltaics (DPOLY/DMP)

Wednesday mid-day, 11:15 AM, Colorado Convention Center, 201

Chair: Bernard Kippelen, Georgia Institute of Technology

11:15 AM P24.00001: Organic Semiconductors: A Molecular Picture of the Charge-Transport and Energy-Transport Processes
Invited Speaker: Jean-Luc Brédas

11:51 AM P24.00002: Predicting structure/property relations in polymeric photovoltaic devices
Gavin Buxton, Nigel Clarke

12:03 PM P24.00003: Synthesis and Application of Conducting Block Copolymers in Organic Photovoltaics
Bryan W. Boudouris, Marc A. Hillmyer, C. Daniel Frisbie

12:15 PM P24.00004: Fluorescence of Dendrons based on Donors and Accepter with Different Linkages
J.H. Park, Y. Wu, D.A. Modarelli, J.R. Parquette, A.J. Epstein

12:27 PM P24.00005: The interplay of morphology and carrier recombination in dendrimer-based organic photovoltaics
Sean Shaheen, Nikos Kopidakis, William Mitchell, William Rance, Jao van de Lagemaat, Garry Rumbles

12:39 PM P24.00006: Below gap external quantum efficiency of organic solar cells
Alexandre Ndobe, Valy Vardeny

12:51 PM P24.00007: Nanocrystalline organic solar cells
Fan Yang, Kai Sun, Stephen Forrest

1:03 PM P24.00008: Fabrication and characterization of photovoltaic devices based on 'self corralled' CdSe nanorods functionalized with polythiophene
Suresh Gupta, Qingling Zhang, Ali Cirpan, Frank Karasz, Todd Emrick, Thomas P. Russell

1:15 PM P24.00009: Femtosecond transient studies of photoinduced charge transfer in polymers doped with strong acceptor molecules; applications for organic solar cells
Josh Holt, Tomer Drori, Chuanxiang Sheng, Z. Valy Vardeny

1:27 PM P24.00010: Photoinduced charge transfer from polymers to fullerene molecules revisited
Tomer Drori, Chuanxiang Sheng, Alex Ndobe, Cungeng Yang, Minghong Tong, Valy Vardeny

1:39 PM P24.00011: Nanoscale Composition and Efficiency of Conjugated Polymer Based Photovoltaic Devices
Benjamin Watts, Chris McNeill, Lars Thomsen, Warwick Belcher, Harald Ade, Neil Greenham, Paul Dastoor

1:51 PM P24.00012: Optimization of the Negative Electrode in Organic Photovoltaic Devices
Matthew Reese, Matthew White, Garry Rumbles, David Ginley, Sean Shaheen

2:03 PM P24.00013: Time-Resolved Microwave Photoconductivity study of the Photophysics of Bulk Heterojunction Organic Photovoltaic Devices
Nikos Kopidakis, Andrew Ferguson, Sean Shaheen, Garry Rumbles

Session P25. Dynamics and Structure in Polymer Melts and Glasses (DPOLY)

Wednesday mid-day, 11:15 AM, Colorado Convention Center, 203

Chair: Ramanan Krishnamoorti, University of Houston

11:15 AM P25.00001: Evolution of stress and entanglements during deformation of glassy polymers
Invited Speaker: Mark Robbins

11:51 AM P25.00002: Role of Fluctuations in Predicting the Glass Formation Line
Grigori Medvedev, James Caruthers

12:03 PM P25.00003: Entanglement Theories: Packing vs. Percolation
Richard Wool

12:15 PM P25.00004: Interdiffusion at Ring-Shaped Polystyrene / Its Deuterated Counterpart Bilayer Interfaces
Daisuke Kawaguhi, Atsushi Takano, Keiji Tanaka, Toshihiko Nagamura, Naoya Torikai, Robert Dalgliesh, Yushu Matsushita

12:27 PM P25.00005: Monte Carlo Simulation of the Glass Transition in Polyethylene
Rajesh Khare, Orestis Alexiadis, Vlasis Mavrantzas, Job Beckers, Arlette Baljon

12:39 PM P25.00006: Glassy Dynamics and Pressure Effects in Polymer Melts
Erica J. Saltzman, Kenneth S. Schweizer

12:51 PM P25.00007: Anomalous Surface Dynamics Near T_g in Supported Polystyrene Films by XPCS
Zhang Jiang, Mrinmay Mukhopadhyay, Sunil Sinha, Sanghoon Song, Hyunjung Kim, Laurence Lurio

1:03 PM P25.00008: Theory of Segmental Relaxation and Physical Aging in Polymer Glasses
Kenneth Schweizer, Kang Chen

1:15 PM P25.00009: Power Law Behavior of Dynamics in Simple Glass Formers
John McCoy, Julieanne Heffernan, Joanne Budzien, Douglas Adolf

1:27 PM P25.00010: Cure of Bisphenol M Dicyanate Ester/Polycyanurate under Nanoscale Constraint
Qingxiu Li, Sindee Simon

1:39 PM P25.00011: Probing Chain Entanglement in Polymer Glasses in Sub-nano Level
Gi Xue, Xiaoliang Wang, Dongshan Zhou, Pinchuan Sun

1:51 PM P25.00012: Synchrotron X-ray scattering study of structure and dynamics of thin block copolymer films
Hyunjung Kim, Heeju Lee, Young Joo Lee, Sanghoon Song, Youngsuk Byun, Zhang Jiang, Sunil K. Sinha, Adrian Rühm, Suresh Narayanan

Session R1. Poster Session II (DPOLY)

Wednesday mid-day, 11:15 AM, Colorado Convention Center, Exhibit Hall F

R1.00002: Computer Simulation Studies of Polyurethane Film Formation
Shihai Yang, Ras Pandey, Marek Urban

R1.00003: A ring graph method for approximating atomic short-range order in disordered multi-component systems
Zhun-Yong Ong

R1.00004: Predicting Short-Range Order in Multicomponent Alloys from an Improved Mean-Field Theory
Zhun-Yong Ong, Duane Johnson

R1.00005: Brownian dynamics simulation of polymer chains incorporating bending and torsion potentials
Semant Jain, Ronald Larson

R1.00006: Density structure of polymers in the layered host system: the effect of the excluded volume
Alexander Chervanyov, Gert Heinrich

R1.00007: Origin of Bends in Unperturbed Vinyl Polymers
Yergou Tatek, Wayne Mattice

R1.00008: Molecular dynamics simulations of Poly (Ethylene Oxide) and Poly (Propylene Oxide) Aqueous Solutions as a function of temperature
Oleg Starovoytov, Dmitry Bedrov, Oleg Borodin, Grant Smith

R1.00009: Effective molecular diffusion coefficient in a two-phase gel medium
Christine Kingsburry, Gary W. Slater

R1.00010: Surprising non-monotonic dependence of a polymer's diffusion coefficient on the degree of disorder of the medium
Owen Hickey, Gary Slater

R1.00011: Langevin dynamics simulations of PEO brushes in aqueous solutions
Fang Yin, Dmitry Bedrov, Grant Smith

R1.00012: Parallel simulation for block copolymer mesophases
Marco Pinna, Xiaohu Guo, Andrei Zvelindovsky

R1.00013: Microphase Separation Induced by Interfacial Segregation of Isotropic, Spherical Nanoparticles
Michael J. A. Hore, Mohamed Laradji

R1.00014: Multi-scale dynamical modes of a tethered membrane by Monte Carlo simulations
Ras Pandey, Kelly Anderson, Barry Farmer

R1.00015: Dynamics of a Charged, Semi-flexible Polymer with Hydrodynamic Interaction
Won Kyu Kim, Oyeon Kum, Wokyung Sung

R1.00016: Lamellar to inverted hexagonal phase transition in DNA complexes with calamitic, discotic, and cubic shaped cationic lipids
Lei Zhu, Li Cui

R1.00017: An investigation of the photovoltaic properties of poly-(3-alkylthiophene):fullerene bulk heterojunction solar cells
Anna A. Belak, Michael W. Rowell, Shawn R. Scully, Michael D. McGehee

R1.00018: Organic Thin Film Transistors with Gate Dielectrics via Sol-Gel Process
June Whan Choi, Sungwon Choi, Jae-Woong Yu, Ho Gyu Yoon, Jai-Kyeong Kim

R1.00019: Polarization-dependent Bragg gratings formed by shearing of polymer-dispersed liquid crystals *in situ* during holographic recording
Timothy Bunning, Vincent Tondiglia, Lalgudi Natarajan, Richard Sutherland, Pamela Lloyd

R1.00020: On the nature of the oligoacene ground state
Johannes Hachmann, Jonathan Dorando, Michael Aviles, Garnet Kin-Lic Chan

R1.00021: Development of High Refractive Index Conjugated Materials
Matthew Graham, Shi Jin, Stephen Z. D. Cheng

R1.00022: Nanoscale Efficiency Maps for Organic Solar Cell Devices - Initial Results
Benjamin Watts, Andrew Minor, Francis Hellman, Harald Ade

R1.00023: NEXAFS Spectra of Conjugated Polymers: Contrast Mechanisms for Soft X-ray Characterization of Electronic Polymer Structures
Tohru Araki, Benjamin Watts, Jan Luning, Harald Ade

R1.00024: Charge injection and transport in fluorene-based copolymers
Hon Hang Fong, George G. Malliaras, Tianjian Lu, David Dunlap

R1.00025: Exfoliation and intercalation in a layer of clay platelets: effects of solvent and temperature by a Monte Carlo simulation
Barry Farmer, Ras Pandey

R1.00026: Patterning of microgel particles on polymer surfaces controlled by autophobicity and interfacial tension
Arif Gozen, Bin Wei, Richard Spontak, Jan Genzer, Paul Gurr, David Solomon, Greg Qiao

R1.00027: Microgels: Structure, Dynamics, and Possible Applications
John McKenna, Kiril Streletzky

R1.00028: Confinement effects on the glass transition of the hydrogen bonded liquids
Wei Zheng, Sindee Simon

R1.00029: A New Pressurizable Dilatometer for Measuring the Time-Dependent Bulk Modulus of Polymers
Yan Meng, Paul O'Connell, Gregory McKenna, Sindee Simon

R1.00030: Polymeric Template Assisted Formation of Gradient Concentric Metal and Metal Oxide Rings
Suck Won Hong, Zhiqun Lin

R1.00031: The Shear Response and Structure in Polycyanurate Networks
Qingxiu Li, Sindee Simon

R1.00032: A New Bio-based Dielectric Material
Mingjiang Zhan, Richard P. Wool

R1.00033: Electrical Bending and Mechanical Buckling Instabilities in Electrospinning Jets
Tao Han, Darrell H. Reneker

R1.00034: Polymer Micro-scrolls
Kyriaki Kalaitzidou, Alfred J. Crosby

R1.00035: The Elastic Constants and Related Mechanical Properties of the Monoclinic Polymorph of the Carbamazepine Molecular Crystal
Himansu Mohapatra, Craig J. Eckhardt

R1.00036: Organic Light Emitting Diodes with Opal Photonic Crystal Layer and Carbon Nanotube Anode
Raquel Ovalle Robles, Maria del Rocio Nava, Christopher Williams, Mei Zhang, Shaoli Fang, Sergey Lee, Ray Baughman Baughman, Anvar Zakhidov

R1.00037: Flexible OLED with Transparent Multiwall Carbon Nanotubes Electrodes
Raquel Ovalle Robles, Christopher Williams, Mei Zhang, Shaoli Fang, Sergey Lee, John Ferraris, Ray Baughman, Anvar Zakhidov

R1.00038: Controlling solidification and fiber diameter of Polyethylene oxide nanofibers electrospun from agueous solution by controlling the partial pressure of water vapor
Sureeporn Tripatanasuwan, Zhenxin Zhong, Darrell Reneker

R1.00039: Nanoparticles induce raft formation in phospholipid liposomes
Bo Wang, Liangfang Zhang, Steve Granick

R1.00040: 2-D Hierarchical Structure of a Block Copolymer and Bio-nanoparticle Composites
Dongseok Shin, Yao Lin, Qian Wang, Thomas Russell

R1.00041: Block Copolymer for Patterning Bio-molecules
Dongseok Shin, Yao Lin, Michael Scholle, Liaohai Chen, Brian Kay, Lee Makowski, Thomas Russell

R1.00042: Block Copolymer Films for Organizing Charged Biopolymers
Jung Hyun Park, Yujie Sun, Yale Goldman, Russell Composto

R1.00043: Evolution of the Elastic Modulus and Hardness of Benzocyclobutene During the Curing Process
Michael Grzesik, Shivashankar Vangala, William Goodhue, Walter Buchwald

R1.00044: Hybrid Nanomaterials: One Dimensional Nanoparticle Assemblies
Nikhil Sharma, Darrin Pochan

R1.00045: Bicontinuous Mesostructured Inorganic Films from Gold Nanoparticle Induced Phase Transitions in Self-Assembled Polystyrene-b-poly(2-vinylpyridine) Diblock-Copolymer Templates
Joshua Petrie, Bumjoon Kim, Glenn Fredrickson, Craig Hawker, Ed Kramer

R1.00046: Carbon Nanotubes for Polymer Photovoltaics
Annick Anctil, Roberta DiLeo, Chris Schauerman, Brian Landi, Ryne Raffaelle

R1.00047: Direct self-catalytic lateral grown NiSi nanowire bridge and their electrical transport
Yun-Hi Lee, Hyuk-Sang Kwon

R1.00048: Target Finding Mechanism of Microtubules in a Confined Geometry
Mitra Shojania Feizabadi

R1.00049: There and (slowly) back again: Entropy-driven hysteresis in a model of DNA overstretching
Stephen Whitelam, Sander Pronk, Phillip Geissler

R1.00050: Molecular Dynamics Simulations of Nanopropulsion Engine
Jan-Michael Carrillo, Junhwan Jeon, Andrey Dobrynin

R1.00051: Electrostatic Analysis of The Nucleosome Stability
Andrew Fenley, David Adams, Alexey Onufriev

R1.00052: Development of a Constitutive Model for Shape-Memory Polymers Containing Reversible H-Bonding Associating Groups
Jiahui Li, James Viveros, Mitchell Anthamatten

R1.00053: Ultrafiltration of Polymeric Micelles through Nanopores
Liangzhi Hong, Chi Wu

R1.00054: Polymer moving through a small channel: A new Monte Carlo approach to study binding effects and chaperones-assisted
Michel Gauthier, Gary W. Slater

R1.00056: Effect of Cross-linking History on Slow Shape Recovery of Disordered Nematic Elastomers
Kenji Urayama, Seiji Honda, Toshikazu Takigawa

R1.00057: Effect of Length on the Diffusion of Rodlike Polymers at Concentrations Spanning the Isotropic-Liquid Crystal Transition
Paul Russo, Garrett Doucet

R1.00058: Control of three dimensional alignment in liquid crystalline polymer by magnetic field
Toshiaki Ougizawa, Jun Takeda, Keiichi Kuboyama, Tetsuya Uesaka, Takehiro Toyooka

R1.00059: Isoconversion Analysis of the Glass Transition
Prashanth Badrinarayanan, Wei Zheng, Sindee Simon

R1.00060: Entanglement in Fullerene End-Capped Linear Polymers
Xiaorong Wang, Yuan-Yong Yan

R1.00061: Precise Characterization of Cyclization Reaction Product Obtained from A Telechelic Polystyrene by HPLC
Atsushi Takano, Yuuki Kushida, Yutaka Ohta, Donghyun Cho, Yushu Matsushita

R1.00062: PEO Chain Dynamics in PEO/PMMA Blends
Sahban Ozair, Ilan Zeroni, Timothy Lodge

R1.00063: Photochemical Crosslinking of Macromolecules in Solution with a Benzophenone Derivative
Nicholas Carbone, Gregory Carroll, Nicholas Turro, Jeffrey Koberstein

R1.00064: Temperature Coefficients of Unperturbed Chain Dimensions for Flexible Polymers
Masashi Osa, Hidetsugu Kanda, Takenao Yoshizaki, Hiromi Yamakawa

R1.00065: Microstructural organization of polydimethylsiloxane based polyurethane block copolymers
Rebeca Hernandez, Jadwiga Weksler, Ajay Padsalgikar, James Runt

R1.00066: Dynamics of self-oscillating polymer gels under boundary constraints
Victor Yashin, Anna Balazs

R1.00067: The Rheological Behavior of Natural Rubber Modified by Admicellar Polymerization Technique of Styrene
Saman Isahoh, Rathanawan Magaraphan

R1.00068: Synthesis and Characterization of Polypyrrole Coated Latex Particles by Admicellar Polymerization
Sirinya Chantarak, Rathanawan Magaraphan

R1.00069: Reversible Self-Assembly of Hydrophilic Inorganic Polyelectrolytes into Highly Conservative, Vesicle-like Structures
Melissa Kistler, Anish Bhatt, Guang Liu, Tianbo Liu

R1.00070: Polyelectrolyte Adsorption and Multilayer Formation: Effects of Fluctuation and pH
Qiang Wang, Ying Jiang

R1.00071: Stimuli-Responsive Surfaces from Two-Component Polymer Brushes
Ying Jiang, Dong Meng, Qiang Wang

R1.00072: Electrostatic force microscopy of DNA under controlled humidity
Guoqiang Xia, Nina Markovic

R1.00073: Small Angle Neutron Scattering of Mixtures of Linear and Network Polyelectrolyes with an Oppositely Charged Surfactant
Wonjoo Lee, Peter Kofinas, Robert M. Briber

R1.00074: Morphology and Rheology of Poly(styrene-co-methacrylic acid) Ionomers: Effect of Acid Content, Degree of Neutralization and Cation Type
Wenqin Wang, Tsung-Ta Chan, Karen I. Winey

R1.00075: Photopolymerization Induced Directional Crystal Growth in Polymer and Photo Reactive Mixtures
Soo Jeoung Park, Thein Kyu

R1.00076: Phase Behavior and Polymerization-Induced Phase Transition of Liquid Crystal Mixtures
Namil Kim, Thein Kyu

R1.00077: Rheology-morphology relationships in polytrimethylene terepthalate/liquid crystalline polymer blends
Penwisa Pisitsak, Rathanawan Magaraphan

R1.00078: Molecular Interpretation of Polymer-Polymer Adhesion
Suriyakala Ramalingam, Guolin Wu, Shaw L Hsu

R1.00079: Effects of Composition and Crystallinity on the Mechanical Properties of Reactive Ternary Blends
Xiguo Zeng, Jayaraman Krishnamoorthy, Shaw L. Hsu, Charles W. Paul, Brigitte Wang

R1.00080: Statistical Mechanical Theory of Effective Interactions, Structure and Phase Behavior of Polymer Nanocomposites
Lisa Hall, K.S. Schweizer

R1.00081: Dielectric and Mechanical Relaxation Behavior of PVDF/OMS Nanocomposites
Lei Yu, B. Seyhan Ince-Gunduz, Peggy Cebe

R1.00082: Thermal and Rheological Properties of Polypropylene/Organoclay/Poly(ethylene-co-octene) Nanocomposites
Tongchen Sun, Xia Dong, Kai Du, Kun Meng, Charles C. Han, Ke Wang, Qiang Fu

R1.00083: Carbon Microtubes from Chicken Feathers
Melissa M. Miller, Richard P. Wool

R1.00084: Strain Sensitive Photonic Natural Rubber
Ketsuda Anuchai, Christoph Weder, Rathanawan Magaraphan

R1.00085: Organobentonite / Polypropylene Nanocomposite for Packaging Application
Yukhanthorn Varothai, Atinuch Phandee, Manit Nithitanakul, Rathanawan Magaraphan, Hathaikarn Manuspiya

R1.00086: PP/Clay Nanocomposites as Smart Packaging for Evaluating Milk Spoilage
Sakkarin Tassanawat, Manit Nithitanakul, Rathanawan Magaraphan, Hathaikarn Manuspiya

R1.00087: Polypropylene Nanocomposites from Porous Clay Materials: Application in Ethylene Scavenger Packaging Films
Kasinee Prakobna, Rathanawan Magaraphan, Hathaikarn Manuspiya

R1.00088: 0-3 Connectivity of PVDF/BST Piezoelectric Composites
Kittikun Kohpaiboon, Hathaikarn Manuspiya

R1.00089: Polymer composites of aligned carbon nanotubes
J. A. Fagan, J. R. Simpson, B. J. Landi, L. J. Richter, I. Mandelbaum, R. Raffaelle, A. R. Hight Walker, B. J. Bauer, E. K. Hobbie

R1.00090: The Effect of Dielectric Constant on Polyelectrolyte Brushes Grafted to a Spherical Substrate
Daniel Sandberg, Thomas Seery, Andrey Dobrynin

R1.00091: Electrical Conductivity in Polymer Nanocomposites with Heterogeneous Spatial Distributions of Nanotubes
Minfang Mu, Thomas J. Acchione, Jena Deng, Henry Friedman, Karen I. Winey

R1.00092: Novel Nanostructures Created by Supercritical Fluid Processing of Polymers
Rahmi Ozisik, Kumin Yang, Tong Liu

R1.00093: Preparation, Structure and Properties of Carbon Nanotube Polymer Composites
Yayong Liu, Howard Wang, Kaikun Yang, Zhiyong Xu, Narayan Das, Kunlun Hong, Gyula Eres, David Uhrig

R1.00094: Dispersion of Carbon Nanotubes in Polymer Matrices using Trifluoroacetic Acid as a Co-solvent
Paul Stokes, Harish Mutharaman, Hui Chen, Qun Huo, Saiful Khondaker

R1.00095: Pigment dispersion And Optical property of a TiO_2 pigmented epoxy coating
Haiqing Hu, Lipiin Sung, Xiaohong Gu, Cyril Clerici, Derek Ho

R1.00096: Development of Polythiophene/Acrylonitrile-Butadiene Rubbers for Artificial Muscle
Pacharavalee Thipdech, Anuvat Sirivat

R1.00097: Creep and Recovery Behaviors of Polyaniline/Silicone Oil Suspensions under Electric Field
Piyanooth Hiamtup, Anuvat Sirivat

R1.00098: Preparation and Characterization of PPy/PVA blend films
Kanokporn Juntanon, Anuvat Sirivat

R1.00099: The electro-responsive drug delivery from salicylic acid -loaded polyacrylamide hydrogels
Sumonman Niamlang, Anuvat Sirivat

R1.00100: Fabrication of Poly(p-phenylene)/Zeolite Composite as a Gas Sensor Material
Pimchanok Phumman, Anuvat Sirivat

R1.00101: Fabrication of Conducting Polymer Nanowires using Blockcopolymer Nano-Porous Templates
Jeong In Lee, Phillip Anthony, Jin Kon Kim, Jae Woong Ryu

R1.00102: Polymer actuators from first principles
Nicholas Singh-Miller, Damian Scherlis, Nicola Marzari

R1.00103: Effect of Temperature on the Electromechanical Properties of Elastomers
Ruksapong Kunanuruksapong

R1.00104: Theoretical study of sulfur overlayers on transition metal surfaces
Dominic Alfonso

R1.00105: Adsorption kinetics of random copolymers with tunable monomer sequences onto flat surfaces
Young Jhon, James Semler, Igal Szleifer, Jan Genzer

R1.00106: UVO Tunable Superhydrophobic to Superhydrophilic Wetting Transition on Biomimetic Nanostructured Surfaces
Alamgir Karim, Joong Tark Han, Sangcheol Kim

R1.00107: In silico polymerization: Computer simulation of controlled radical polymerization in bulk and on surfaces
Jan Genzer

R1.00108: Shear stress measurements on InAs nanowires by AFM manipulation
Hakan Pettersson, M. Bordag, A. Ribayrol, G. Conanche, L.E. Fröberg, L. Samuelson, L. Montelius

R1.00109: PS/PMMA Blends in the Presence of Cyclohexane: Selective Solvent Washing or Equilibrium Adsorption?
Harald Ade, S. E. Harton, J. Luning, H. Betz

R1.00110: Homogeneous Crystal Nucleation: To Fold or Not to Fold?
Buckley Crist

Session S17. Modeling of Polymers: Blocks, Networks and Solutions (DPOLY/DCOMP)

Wednesday afternoon, 2:30 PM, Colorado Convention Center, 102

Chair: Venkat Ganesan, University of Texas at Austin

2:30 PM S17.00001: Single-Chain in Mean-Fied simulations for Block Copolymer/Nanoparticle Composites
Francois Detcheverry, Yioryos Papakonstantopoulos, Huiman Kang, Paul Nealey, Juan De Pablo, Kostas Daoulas, Marcus Mueller

2:42 PM S17.00002: Multiscale Simulations of Pluronic Micelles
Grant Smith, Dmitry Bedrov

2:54 PM S17.00003: Spinodal Decomposition of Polydispersed ABA' Triblock Copolymers Determined from the Random Phase Approximation
T.W. Capehart, Armand Soldera

3:06 PM S17.00004: Architecture phase diagram for branched block copolymers
Scott Sides, Bobby Sumpter

3:18 PM S17.00005: Theoretical Investigation of Hydrogen Bonding Networks in Cellulose α and β
Xianghong Qian

3:30 PM S17.00006: Percolation and Diffusivity of Ideal Polymer Networks
Yong Wu, Beate Schmittmann, Royce Zia

3:42 PM S17.00007: Random Networks of Semiflexible Polymers
Panayotis Benetatos, Annette Zippelius

3:54 PM S17.00008: Collapse transition of a chain in the bulk and next to adsorbing surfaces
I.A. Bitsanis, A.N. Rissanou, S.H. Anastasiadis

4:06 PM S17.00009: Polymer relaxation in flow: dynamical slowdown around the coil-stretch transition
D. Vincenzi, E. Bodenschatz, A. Puliafito, A. Celani

4:18 PM S17.00010: Solvation potentials for polymer chains in solution
Mark Taylor

4:30 PM S17.00011: Model-specific features of random walk polymers beyond the mean field limit
Kirill Titievsky

4:42 PM S17.00012: Amorphous and crystalline states of ultrasoft colloids: A Molecular Dynamics study
A.N. Rissanou, M. Yiannourakou, I.G. Economou, D. Vlassopoulos, I.A. Bitsanis

4:54 PM S17.00013: Polymer Statics and Dynamics Under Box Confinement
Joshua Kalb, Bulbul Chakraborty

5:06 PM S17.00014: Polymer Translocation in Crowded Environments
Ajay Gopinathan, Yong Woon Kim

5:18 PM S17.00015: Models of polymers subject to a force
Gerasim Iliev

Session S18. Semi-Crystalline Polymers (DPOLY)

Wednesday afternoon, 2:30 PM, Colorado Convention Center, 103

Chair: Vahik Krikorian, Massachusetts Institute of Technology

2:30 PM S18.00001: Tuning Surface and Interface Properties Through Crystal Engineering
Stephen Z. D. Cheng, Ryan Van Horn, Wenbin Zhang

2:42 PM S18.00002: Temperature Effects on Interlamellar Chain Entanglement and Structural Changes in Isotactic Polypropylene during Uniaxial Tensile Deformation
Benjamin Hsiao, Feng Zuo, Jongkahk Keum, Xuming Chen, Hongyu Chen, Jing Li

2:54 PM S18.00003: Influence of Stereotacticity Defects on the crystallization of Isotactic Polypropylene
Xiaofeng Chen, Rahmi Ozisik, Sanat K. Kumar, Phillip Choi, Wayne L. Mattice

3:06 PM S18.00004: Polymer crystallization enabled carbon nanotube functionalization
Christopher Li, Lingyu Li, Bing Li, Cristin Yavorsky

3:18 PM S18.00005: A Second Harmonic Generation Study of Polyethylene Crystallization
Howard Wang, Narayan Ch Das, Hongtao Bian, Yuan Guo, Hongfei Wang

3:30 PM S18.00006: Spectroscopically Deciphering the Difference in Stabilizing Interactions of Poly(lactic acid) Polymorphs
Kaoru Aou, Xiguo Zeng, Shaw Ling Hsu

3:42 PM S18.00007: Effects of Confinement on the Crystallization of Perfectly Linear Polyethylene
Sasha Myers, Richard Register

3:54 PM S18.00008: AFM Study of the Beta to Alpha Transition in Isotactic Polypropylene
Jerold Schultz, Huihui Li, Xiaoli Sun, Shouke Yan

4:06 PM S18.00009: An investigation of the effect of processing conditions on the lamellar and spherulitic morphology of polyhydroxyalkanoates
Yuping Xie, Yvonne A. Akpalu

4:18 PM S18.00010: Confinement effects in polymer crystal nucleation from the bulk to “few-chain” systems
Kari Dalnoki-Veress, Michael V. Massa, Jessica L. Carvalho

4:30 PM S18.00011: Architecture dependence of crystallizable sequences in semicrystalline polymers
Vikram K. Kuppa, Gregory C. Rutledge

4:42 PM S18.00012: Tailor-Made Onion-Like Stereocomplex Crystals in Incompatible Enantiomeric Polylactide Containing Block Copolymer Blends
Lei Zhu, Lu Sun, Lixia Rong, Benjamin Hsiao

4:54 PM S18.00013: Crystallization of linear polyethylene in nanoporous cylindrical pores
Kyusoon Shin, Euntaek Woo, June Huh, Young-Gyu Jeong

5:06 PM S18.00014: Crystallization of Nucleator Nanofibrils in Polypropylene Melt
J. Lipp, Y. Cohen, R.L. Khalfin, M. Shuster, A.E. Terry

5:18 PM S18.00015: Effect of OMS on Crystal Phases of PVDF Crystallized From the Melt
B.S. Ince-Gunduz, R. Alpern, D. Amare, K. Burke, P. Cebe, J. Crawford, B. Dolan, S. Jones, R. Kobylarz, M. Koplitz, M. Meleski, M. Reveley, A. Sagiv

Session S24. Interaction of Polymers with Biological Structures (DPOLY/DBP)

Wednesday afternoon, 2:30 PM, Colorado Convention Center, 201

Chair: R. Kannan, Wayne State University

2:30 PM S24.00001: Theoretical and Numerical Modeling of faceted Ionic crystalline vesicles
Invited Speaker: Monica Olvera de la Cruz

3:06 PM S24.00002: Microchannels with adhesive posts trap cells with specific mechanical properties
Guangdong Zhu, Alexander Alexeev, Anna Balazs

3:18 PM S24.00003: Biomimetic Micellar Networks
John Zupancich, Marc Hillmyer, Frank Bates

3:30 PM S24.00004: Post-Functionalized Polymer Brushes for Bio-Separation: Tuning GFP Adsorption via Functional Group Display
Steve Diamanti, Shafi Arifuzzaman, Jan Genzer, Rajesh Naik, Richard Vaia

3:42 PM S24.00005: Structure and dynamics of water near the interface with oligo(ethylene oxide) self-assembled monolayers
Ahmed E. Ismail, Gary S. Grest, Mark J. Stevens

3:54 PM S24.00006: Development of novel antibiofouling materials from natural phenol compounds
Rahul Chelikani, Dong Shik Kim

4:06 PM S24.00007: Conformation Distributions in Adsorbed Proteins
Curtis W. Meuse, Joseph B. Hubbard, John S. Vrettos, Jackson R. Smith, Marcus T. Cicerone

4:18 PM S24.00008: Mesophase Separation and Probe Dynamics in Protein-Polyelectrolyte Coacervates
A. Basak Kayitmazer, H. B. Bohidar, K.W. Mattison, A. Bose, P.S. Russo, P.L. Dubin

4:30 PM S24.00009: Strain-stiffening response in organogels assembled using steroidal biomolecules
Shih-Huang Tung, Srinivasa R. Raghavan

4:42 PM S24.00010: Solvent Viscosity at the Protein Surface
Sheila Khodadadi, Marian Paluch, Sebastian Pawlus, Yoshihito Hayashi, Alexei Sokolov

4:54 PM S24.00011: Correlation of chitosan's rheological properties to its ability to electrospin
Wendy E. Krause, Hailey A. Queen, Rebecca R. Klossner, Andrew J. Coughlin

5:06 PM S24.00012: Diblock Copolymer as a Surface Delivery Vehicle for DNA Chip Construction
Lu Chen, Chris Grigoras, Jeffrey Koberstein, Mong Marma, Zengmin Li, Jingyue Ju

5:18 PM S24.00013: Effect of copolymer microstructure on single chain collapse
Ashok Dasmahapatra, Guruswamy Kumaraswamy, Hemant Nanavati

Session S25. Block Copolymer Thin Films (DPOLY)

Wednesday afternoon, 2:30 PM, Colorado Convention Center, 203

Chair: Thomas H. Epps, University of Delaware

2:30 PM S25.00001: Surfactant Assisted Orientation of PS-b-PMMA Block Copolymer Thin Films
Jeong Gon Son, Xavier Bulliard, Huiman Kang, Paul F. Nealey, Kookheon Char

2:42 PM S25.00002: Controlled Alignment of Lamellar Phase in Thin Films of a Block Copolymer and a Silica Precursor Mixture
H.-C. Kim, C. Rettner, J. Cheng, O.-H. Park, L. Sundstrom

2:54 PM S25.00003: Defect structures in block copolymer thin films epitaxially assembled on chemically nanopatterned surfaces
Sang Ouk Kim, Bong Hoon Kim, Kwanghyon Kim, Mark Stoykovich, Paul Nealey, Harun Solak

3:06 PM S25.00004: Graphoepitaxy of diblock-copolymers microdomains with chemical patterns
Antonio Checco, Benjamin M. Ocko, Matthew Misner, Ji Xu, Thomas P. Russell

3:18 PM S25.00005: The Alignment of Ion-Complexed Symmetric Diblock Copolymer Thin Films under an Electric Field
Jia-Yu Wang, Ting Xu, Julie Leiston-Belanger, Suresh Gupta, James Sievert, Thomas Russell

3:30 PM S25.00006: Shear-induced Long Range Order in Diblock Copolymer Thin Films
Xuan Ding, Thomas Russell

3:42 PM S25.00007: Control of Ordering Kinetics and Morphology using Zone Annealing of Thin Block Copolymer Films
Alamgir Karim, Brian Berry, Ronald Jones

3:54 PM S25.00008: Orientation of Microdomains of Block Copolymers by Zone casting
Chuanbing Tang, Krzysztof Matyjaszewski, Tomasz Kowalewski

4:06 PM S25.00009: The Effect of Humidity on the Ordering of Triblock Copolymer Thin Films
Joona Bang, Bumjoon J. Kim, Gila E. Stein, Edward J. Kramer, Craig J. Hawker, Thomas P. Russell

4:18 PM S25.00010: Directing the Assembly of Patterns with Complex Geometries using Block Copolymers and Chemically Nanopatterned Substrates
SangMin Park, Prabu Ravindran, Young-Hye La, Nicola Ferrier, Paul Nealey

4:30 PM S25.00011: Order and disorder in cylindrical block copolymers on a surface with positive and negative Gaussian curvature
A. Hexemer, E. J. Kramer, V. Vitelli, C. D. Santangelo, R. D. Kamien

4:42 PM S25.00012: Rod-Coil Block Copolymer Self-Assembly in Thin Films
B.D. Olsen, X. Li, J. Wang, R.A. Segalman

4:54 PM S25.00013: Self-consistent field theory simulations of block copolymer assembly on a sphere
T.L. Chantawansri, A.W. Bosse, A. Hexemer, H.D. Ceniceros, C.J. Garcia-Cervera, E.J. Kramer, G.H. Fredrickson

5:06 PM S25.00014: Freestanding nanowire arrays from soft-etch block copolymer templates
E. Crossland, S. Ludwigs, M. Hillmyer, U. Steiner

5:18 PM S25.00015: Investigation of polystyrene-b-polyferrocenyl silane diblock copolymer thin films via conducting probe atomic force microscopy
James Li, Shan Zou, David Rider, Ian Manners, Gilbert Walker

5:30 PM S25.00016: Directed Assembly of Block Copolymers to Pattern Isolated Features and Essential Integrated Circuit Geometries
M. P. Stoykovich, H. Kang, G. Liu, K. Ch. Daoulas, J. J. de Pablo, M. Mueller, P. F. Nealey

5:42 PM S25.00017: Reversible reordering of a sphere-forming diblock at the substrate interface: surface directed sphere to lamellar transition
Jessica L. Carvalho, Michael V. Massa, Kari Dalnoki-Veress

5:54 PM S25.00018: Lamellar nanostructures of diblock copolymers confined in submicro-patterns
Sehee Kim, Kookheon Char, Byeong-Hyeok Sohn

Session U4. Interfaces between Synthetic and Biological Polymers (DPOLY/DBP)

Thursday morning, 8:00 AM, Colorado Convention Center, Korbel 2B-3B

Chair: Christine Ortiz, Massachusetts Institute of Technology

8:00 AM U4.00001: Design Rules for Thermally Responsive Polymer Brushes
Invited Speaker: Deborah Leckband

8:36 AM U4.00002: Studying Polymer Transport on Soft and Hard Surfaces
Invited Speaker: Sanat Kumar

9:12 AM U4.00003: Design of dendrimer-based drug delivery nanodevices with enhanced therapeutic efficacies
Invited Speaker: Rangaramanujam Kannan

9:48 AM U4.00004: Ligand-receptor binding in the presence of polymeric spacers
Invited Speaker: Igal Szleifer

10:24 AM U4.00005: Using Liquid Crystallinity to Design Interfaces between Synthetic and Biological Materials
Invited Speaker: Nicholas Abbott

Session U17. Polymer Surfaces (DPOLY)

Thursday morning, 8:00 AM, Colorado Convention Center, 102

Chair: Vivek Prabhu, National Institute of Standards and Technology

8:00 AM U17.00001: Forces between polyelectrolyte brushes in various ionic environments
Matthew Tirrell

8:12 AM U17.00002: Evolution of Polymer Brush Dynamics by X-ray Photon Correlation Spectroscopy
Pinar Akcora, Suresh Narayanan, Pappannan Thiyagarajan, Linda Schadler, Sanat Kumar

8:24 AM U17.00003: Nanoparticle decoration overlayer for producing a surface enhanced Raman scattering spectrum of a pre-existing polymer surface
Bettina Roan, Thomas Furtak

8:36 AM U17.00004: Dewetting of a Polymer Melt on a Chemically Identical Brush
Ophelia Tsui, Xueyun Zhang

8:48 AM U17.00005: Probing Molecular Mobility at the PNIPAM Brush Surface
Jiang Zhao, Wei Wang, Shengqin Wang

9:00 AM U17.00006: Influence of entropic configurational effects on the surface tension of symmetric star polymers
Zhenyu Qian, Venkatachala Minnikanti, Lynden Archer, Bryan Sauer

9:12 AM U17.00007: Contact Properties of Surface Modified Elastomeric Membranes and the Recognition of Specific Interactions
David A. Brass, Kenneth R. Shull

9:24 AM U17.00008: Photoresponsive Polymer Surfaces
Spiros H. Anastasiadis, M.I. Lygeraki, K. Lakiotaki, M. Varda, A. Athanassiou, M. Farsari, C. Fotakis

9:36 AM U17.00009: Learning from the Venus Flytrap: A Biomimetic Responsive Interface
Douglas P. Holmes, Alfred J. Crosby

9:48 AM U17.00010: “Smart” Surfaces of Diblock Copolymer Brushes
Dong Meng, Qiang Wang

10:00 AM U17.00011: Polymers containing azobenzene as photo-mechanical materials
Christopher Barrett

10:12 AM U17.00012: Light-directed Control of Macromolecule Organization on a Surface
Gregory Carroll, Jeffrey Koberstein, Nicholas Turro

10:24 AM U17.00013: High-speed, sub-15 nm feature size thermochemical nanolithography
Elisa Riedo, Robert Szoszkiewicz, Takashi Okada, Simon Jones, Tai-De Li, William King, Seth Marder

10:36 AM U17.00014: In-Plane Ordering in Diblock Copolymer Brushes
Bulent Akgun, Gokce Ugur, William J. Brittain, Mark D. Foster, Xuefa Li, Jin Wang

10:48 AM U17.00015: Anomalous Surface Segregation in Polymer Blends
Shishir Prasad, Laurie Hanne, Ali Dhinojwala

Session U24. Phase Transitions in Polymeric Systems I (DPOLY)

Thursday morning, 8:00 AM, Colorado Convention Center, 201

Chair: Alamgir Karim, National Institute of Standards and Technology

8:00 AM U24.00001: Influence of Phase Separation and Shear on the Crystallization of Polyolefin Blends
Invited Speaker: Charles C. Han

8:36 AM U24.00002: Formation of micelles in homopolymer-copolymer mixtures
Marcus Müller, Anna Cavallo, Kurt Binder

8:48 AM U24.00003: Enhancing the segregation strength of amphiphilic block copolymer melts using selectively associating homopolymers: Well ordered systems from inexpensive components
James Watkins, Vijay Tirumala, Alvin Romang, Eric Lin

9:00 AM U24.00004: Hexagonal Phases in Rod Coil Block Copolymers
Rachel Segalman, Bradley Olsen

9:12 AM U24.00005: Morphological Characteristics and Phase Behavior of Nanoparticle-Modified Block Copolymers
Michelle Bowman, Michael Bockstaller, Kim Rasmussen, Jon Samseth, Steven Smith, Russell Thompson, Richard Spontak

9:24 AM U24.00006: Structure and Phase Transition in Sulfonated Block Copolymer
Moon Jeong Park, Nitash Balsara

9:36 AM U24.00007: Symmetry Breaking in Block Copolymer Thin Films
Eric Cochran, Gila Stein, Kirill Katsov, Ed Kramer, Glenn Fredrickson

9:48 AM U24.00008: Dewetting and Phase Separation in Thin Film Polymer Blends
Nigel Clarke

10:00 AM U24.00009: Shear-Induced Phase Transitions in Ternary Polymer Blends
Venkat Ganesan, Bharad Narayanan

10:12 AM U24.00010: Formation of a superlattice in mixtures of block copolymer micelles
Sayeed Abbas, Timothy P. Lodge

10:24 AM U24.00011: Phase transitions in block copolymers induced by external fields
Marco Pinna, Andrei Zvelindovsky

10:36 AM U24.00012: Phase behavior and morphology of high hard block content polyurethanes
Alberto Saiani, Julia S. Higgins

10:48 AM U24.00013: Monte Carlo simulation of self-assembled polymer chains with inter-chain attractions
Xinjiang Lü, James Kindt

Session U25. Organic Field-Effect Transistors (DPOLY/DMP)

Thursday morning, 8:00 AM, Colorado Convention Center, 203

Chair: Lynn Loo, University of Texas at Austin

8:00 AM U25.00001: Intrinsic transport anisotropy in single-crystal FETs on new rubrene derivatives
A.F. Stassen, W. Kalb, S. Haas, U. Berens, H.J. Kirner, B. Batlogg

8:12 AM U25.00002: RC Transmission Line Characterization of Organic Thin Film Transistors
Daniel Lenski, Adrian Southard, Michael S. Fuhrer

8:24 AM U25.00003: Eliminating gate bias stress effects in organic field-effect transistors
Wolfgang L. Kalb, Thomas Mathis, Simon Haas, Arno F. Stassen, Bertram Batlogg

8:36 AM U25.00004: Field dependent hole transport mobility studies on a select group of conjugated polymers
N. C. Heston, B. Wilson, E. M. Galand, D. B. Tanner, J. R. Reynolds

8:48 AM U25.00005: Electric Field Induced Conductivity of Disorder Driven Anderson Insulator
Vladimir Prigodin, Arthur Epstein

9:00 AM U25.00006: Device Model for Organic Semiconductor Light-Emitting Field-Effect Transistors
Darryl Smith, P. Paul Ruden

9:12 AM U25.00007: Electrostatic Injection of Very Large 2D Charge Carrier Densities to Obtain Metallic Conductivities in Organic Semiconductors
Matthew Panzer, C. Daniel Frisbie

9:24 AM U25.00008: Charge mobility of discotic mesophases of hexabenzocoronene derivatives: a multiscale quantum/classical study of the effects of side chain substitution
Denis Andrienko, Valentina Marcon, Kurt Kremer, James Kirkpatrick, Jenny Nelson

9:36 AM U25.00009: The electronic structure and charge carrier dynamics in organic molecular crystals
Na Sai, Zhiqiang Li, Vitaly Podzorov, Michael Martin, Michael Gershenson, Dimitri Basov, Massimiliano Di Ventra

9:48 AM U25.00010: Analysis of the Injection Efficiency Saturation in Polyfluorene Copolymers
David Dunlap, Tianjian Lu, Hon Hang Fong, George Malliaras

10:00 AM U25.00011: High-resolution electrical characterization of polyaniline/p-type organic semiconductor interfaces in thin-film transistors
Kwang Seok Lee, Timothy J. Smith, Chris Zangmeister, Joung Eun Yoo, Keith J. Stevenson, Yueh-Lin (Lynn) Loo

10:12 AM U25.00012: Polymer LED interfaces studied with resonant soft x-ray reflectivity
Cheng Wang, B. Watts, T. Araki, H. Ade, A. Hexemer, A. Garcia, T.-Q. Nguyen, G.C. Bazan, K.E. Sohn, E.J. Kramer

10:24 AM U25.00013: Enhanced transport in metallic particle modulated organic field-effect transistors
Yu Chen, Masaya Nishioka, Allen Goldman, Yu Xia, Daniel Frisbie

10:36 AM U25.00014: Viewing density of states of the contact in organic thin-film transistors
Takeo Minari, Kazuhito Tsukagoshi, Tetsuhiko Miyadera, Hiromi Ito, Yoshinobu Aoyagi

Session V4. Dynamics in Polymeric Systems (DPOLY)

Thursday mid-day, 11:15 AM, Colorado Convention Center, Korbel 2B-3B

Chair: Ophelia Tsui, Boston University

11:15 AM V4.00001: Dynamics of polymer glasses under active deformation
Invited Speaker: Mark Ediger

11:51 AM V4.00002: Dynamics of Polymer Blends: Beyond Self-Concentration
Invited Speaker: Tim Lodge

12:27 PM V4.00003: Looking inside the tube: what molecular dynamics simulations are revealing about polymer entanglements
Invited Speaker: Ron Larson

1:03 PM V4.00004: Glass Transition Temperature Reductions in Freely-Standing Films of Different Polymers
Invited Speaker: John Dutcher

1:39 PM V4.00005: Dynamics in Confined Systems: Polymer Thin Films and Surfaces
Invited Speaker: Gregory McKenna

Session V17. Hybrid Organic/Inorganic Nanomaterials: Synthesis, Assembly, and Applications II (DPOLY/FIAP)

Thursday mid-day, 11:15 AM, Colorado Convention Center, 102

Chair: Ryan Hayward, University of Massachusetts

11:15 AM V17.00001: Photoinduced Reduction of Noble Metal Ions to Metal Nanoparticles on Tubular J-Aggregates
D.M. Eisele, A. Burmistrova, H. v. Berlepsch, C. Boettcher, S. Kirstein

11:27 AM V17.00002: The chemical and structural properties of PECVD polymerized ferrocene deposited by the sublimation of the precursor material
Jesse Enlow, Hao Jiang, Someshwar Peri, Mark Foster, Timothy Bunning

11:39 AM V17.00003: Selective dispersion of nanofillers in PET/PC blends
E. Manias, M.J. Heidecker

11:51 AM V17.00004: The thermal properties and the microstructures of organic-inorganic nano-composite materials
KengChing Lin, Kuo-Hsin Chang, WeiFang Su

12:03 PM V17.00005: Enhanced Oxygen Barrier and Interfacial Adhesion of Polystyrene/Clay Nanocomposites via Plasma Surface Modification
Patchara Tasanatanachai, Rathanawan Magaraphan

12:15 PM V17.00006: Structure and Morphology of Polymer/Clay Nanocomposites formed by Chaotic Smart Blending
Dilru R. Ratnaweera, Dvora Perahia, Chaitra Mahesha, Dvid Zumbrunnen, Mark A. Kampf

12:27 PM V17.00007: A Nanoparticle Self-Assembled Tactile Sensor with Sensitivity & Resolution of Human Finger
Vivek Maheshwari, Chieu Nguyen, Ravi Saraf

12:39 PM V17.00008: Novel Route to Nanoparticle Dispersion Using Supercritical Carbon Dioxide
Rahmi Ozisik, Kumin Yang

12:51 PM V17.00009: Directing self-assembly of gold nanoparticles in diblock copolymer scaffold
Qifang Li, Jinbo He, Elizabeth Glogowski, Todd Emrick, Thomas Russell

1:03 PM V17.00010: Simple Fabrication of Mesoporous Silica with Remarkable High Temperature Stability at Neutral pH and Ambient Conditions from TEOS
David Hess, Radha Vippagunta, James Watkins

1:15 PM V17.00011: Hydrophilic Silica-Polypeptide Composite Particles
Erick Soto-Cantu, Paul Russo

1:27 PM V17.00012: Polymer-Graphite Nanocomposites: Comparison to Clay- and Carbon Nanotube-Based Hybrids
Katsuyuki Wakabayashi, Kosmas Kasimatis, John M. Torkelson

1:39 PM V17.00013: Organic-Inorganic Photovoltaic Composite Materials Based on Polymer-Functionalized Semiconductor Nanorods
Qingling Zhang, Suresh Gupta, Todd Emrick, Thomas Russell

1:51 PM V17.00014: Controlled Clustering of Oxide Nanoparticles using Block Copolymers for Coating and Biomedical Applications
Jean-Francois Berret

2:03 PM V17.00015: Novel Nanocomposite Materials Synthesis and Their Application
YuanQiao Rao

Session V24. Phase Transitions in Polymeric Systems II (DPOLY)

Thursday mid-day, 11:15 AM, Colorado Convention Center, 201

Chair: Kristopher Lavery, National Institute of Standards and Technology

11:15 AM V24.00001: Phase Transition of Long Chain Normal Alkanes in Confined Geometry
Invited Speaker: Dujin Wang

11:51 AM V24.00002: Supercritical Fluid-Assisted Electrospinning of Polymers
Mark McHugh, Manuel Marquez, Zhihao Shen, Jun Liu, Sanho Lee

12:03 PM V24.00003: Origin of the Difference in Order-Disorder Transition Temperature Between Polystyrene-block-Poly(2-vinylpyridine) and Polystyrene-block-Poly(4-vinylpyridine) Copolymers
Jin Kon Kim, Dong Hyun Lee, Sung Hyun Han, Weibin Zha, Chang Dae Han, JIn Ho Kang, Cheol Park

12:15 PM V24.00004: Stucture and dynamics of a microphase separating block copolymer melt
Amish Patel, Nitash Balsara, Suresh Narayanan, Alec Sandy, Simon Mochrie

12:27 PM V24.00005: Pressure Dependence of Block Copolymer Phase Transition in Selective Solvent
Yongsheng Liu, Rama Bansil, Milos Steinhart

12:39 PM V24.00006: Nanoporous Materials Formed in Condensed Carbon Dioxide
William Edmonds, Timothy Lodge, Marc Hillmyer

12:51 PM V24.00007: Morphological transformation and mesostructure formation in diblock copolymer blends
Kishore Tenneti, Xiaofang Chen, Christopher Li, Lixia Rong, Benjamin Hsiao

1:03 PM V24.00008: Salt Complexation in Cleavable Polystyrene-b-poly (ethylene oxide) Thin Films
Ling Yang, Mingfu Zhang, Serkan Yurt, Matthew Misner, E. Bryan Coughlin, D. Venkataraman, Thomas Russell, Benjamin Ocko, Xuefa Li

1:15 PM V24.00009: Modeling of self-assembly in diblock copolymer and particle mixtures using self-consistent field theory
Seung Ha Kim, Eric Cochran

1:27 PM V24.00010: Effect of solvent vapor type on evolution of thin film morphology of block copolymer-nanoparticle composites
Deepali Palta, David Bucknall

1:39 PM V24.00011: An SCFT Study of Nanostructuring in Epoxy Thermosets
Folusho Oyerokun, Glenn Fredrickson, Ludwik Leibler

1:51 PM V24.00012: Fluctuation effects and stability of the Fddd phase in diblock copolymer melts
Bing Miao, Robert Wickham

Session V25. Organic Based Magnetism and Organic Spintronics (DPOLY/DMP)

Thursday mid-day, 11:15 AM, Colorado Convention Center, 203

Chair: Bin Hu, University of Tennessee

11:15 AM V25.00001: Spin Response in Organic Spin-Valves based on LSMO Electrodes
Fujian Wang, Cungeng Yang, Z. Valy Vardeny, Xiaoguang Li

11:27 AM V25.00002: Spin Valve Effects in Hybrid Organic-Inorganic Devices
Yaohua Liu, Taegweon Lee, Howard E. Katz, Daniel H. Reich

11:39 AM V25.00003: Morphology Influenced Properties in Organic Semiconducting Thin Films for Spin-Valves
J. Sheung, M. Teague, C.R. Hughes, S. Mitrovic, N.-C. Yeh

11:51 AM V25.00004: Dipolar-Biased Tunneling of Magnetization in Crystals of Single Molecule Magnets
Invited Speaker: Kunio Awaga

12:27 PM V25.00005: Regioregular polythiophene based spintronic devices: effect of interface
Ronald Osterbacka, Sayani Majumdar, Himadri Majumdar, Reino Laiho, Pekka Laukkanen, Juhani Vayrynen

12:39 PM V25.00006: Ferrimagnetic resonance study on photo-induced magnetism in hybrid magnetic semiconductor $V(TCNE)_x$, $x \approx 2$ film
Jung-Woo Yoo, R. Shima Edelstein, D. M. Lincoln, A. J. Epstein

12:51 PM V25.00007: On the Mechanism Causing Large Room-Temperature Magnetoresistance in OLEDs
Y. Sheng, T. Nguyen, G. Veeraraghavan, J. Rybicki, O. Mermer, M. Wohlgenannt

1:03 PM V25.00008: Molecular Beam Epitaxy Growth of Organic Spin Valves
K. Pi, W. Wang, R. Thamankar, Y. Chye, Y. F. Chiang, Y. Li, R. K. Kawakami

1:15 PM V25.00009: Boosting quantum efficiency of single layer organic light emitting device by doping CoFe magnetic nanoparticles
Chengjun Sun, Yue Wu, Zhihua Xu, Bin Hu, Jian-Ping Wang, Jian Shen

1:27 PM V25.00010: Spin dynamics of photoexcited polarons in MEH-PPV: optically detected magnetic resonance studies
Cungeng Yang, Zeev Vardeny, Eitan Ehrenfreund

1:39 PM V25.00011: Role of triplet polaron pairs in conjugated polymer photophysics
Elizabeth Wesely, Lewis Rothberg, Alfred Marchetti, Shaw Chen, Yanhou Geng, *Sean Culligan*

1:51 PM V25.00012: Efficient plastic scintillators utilizing phosphorescent dopants
Ian Campbell, Brian Crone

Session W4. Computational Challenges in Simulations of Macromolecular Assemblies (DPOLY/DCOMP)

Thursday afternoon, 2:30 PM, Colorado Convention Center, Korbel 2B-3B

Chair: Grant Smith, University of Utah

2:30 PM W4.00001: Confined Self-Assembly of Block Copolymers
Invited Speaker: An-Chang Shi

3:06 PM W4.00002: Simulation of driven self assembly of complex polymeric systems across multiple length scales
Invited Speaker: Juan de Pablo

3:42 PM W4.00003: Chemistry Unified Language Interface: a Novel Toolkit for Hybrid Macromolecular Models
Invited Speaker: Hans Fraaije

4:18 PM W4.00004: Modeling Microcapsule-Substrate Interactions: Repairing Damages Surfaces and Separating Damaged Cells
Invited Speaker: Anna Balazs

4:54 PM W4.00005: Non-equilibrium dynamics at polymer surfaces and interfaces
Invited Speaker: Dilip Gersappe

Session W17. Dynamics and Glass Transition Phenomena in Thin Polymer Films (DPOLY)

Thursday afternoon, 2:30 PM, Colorado Convention Center, 102

Chair: Christopher Stafford, National Institute of Standards and Technology

2:30 PM W17.00001: Effect of Confinement on the Relaxation Dynamics in an Antiplasticized Polymer Melt
Robert Riggleman, Juan de Pablo

2:42 PM W17.00002: Kinetically Constrained Models of Thin Film Glassy Systems
Madhav Mannava, Sanat Kumar

2:54 PM W17.00003: A New Look at Polymer Films and the Glass Transition
Jane Lipson, Scott Milner

3:06 PM W17.00004: The Glass Transition of Miscible Binary Polymer-Polymer Thin Films
Peter Green, Brian Besancon, Christopher Soles

3:18 PM W17.00005: Molecular-dynamics simulations of thin films with a free surface
Simone Peter, Hendrik Meyer, Joerg Baschnagel

3:30 PM W17.00006: Dewetting of Thin Polymer Films
Elie Raphael, Thomas Vilmin

3:42 PM W17.00007: Hole growth in free-standing block copolymer films: does lamellar structure imitate a support?
Matthew J. Farrar, Andrew B. Croll, Kari Dalnoki-Veress

3:54 PM W17.00008: Confinement and interfacial effects on the alpha relaxation dynamics of thin polymer films
Rodney Priestley, Linda Broadbelt, Koji Fukao, John Torkelson

4:06 PM W17.00009: Free Volume behavior and Structure of Polymer Thin Film
Seisuke Ata, Toshiaki Ougizawa, Makoto Muramatsu, Toshiyuki Ohdaira, Ryoichi Suzuki, Toshitaka Oka, Kenji Ito, Yoshinori Kobayashi

4:18 PM W17.00010: Effect of Confinement in Ultrathin Films on Translational Diffusion in Polymers near the Glass Transition
Manish K. Mundra, John M. Torkelson

4:30 PM W17.00011: Hindering Cooperative Segmental Dynamics at the Free Surface of Polystyrene: The Impact of Narrow Immiscible Interfaces in Polymer Multilayer Films
Connie B. Roth, John M. Torkelson

4:42 PM W17.00012: Dynamics of Polymer Melts Confined by Smooth Walls: Crossover from Non-entangled to Entangled Regime
Qi Liao, Yijie Li, Dongshan Wei, Xigao Jin, Charles Han

4:54 PM W17.00013: Surface Dynamics of Polymer Brushes in the Melt State: An XPCS Study
Mark D. Foster, Bulent Akgun, Gokce Ugur, William J. Brittain, Suresh Narayanan, Heeju Lee, Sanghoon Song, Hyunjung Kim, Zhang Jiang, Sunil K. Sinha

5:06 PM W17.00014: Dynamics from Buried Polymer-Polymer Interfaces in Thin Films
Jyotsana Lal, Xuesong Hu, Zhang Jiang, Sunil K. Sinha, Suresh Narayanan, Alec R. Sandy, Xuesong Jiao, Laurence B. Lurio

5:18 PM W17.00015: Dynamics of complicated phase behavior in ultrathin film of polymer blend by in situ AFM
Tongfei Shi, Yonggui Liao, Lijia An

Session W24. Microphysical Properties of Block Copolymer Aggregates, Going Beyond Structure (DPOLY)

Thursday afternoon, 2:30 PM, Colorado Convention Center, 201

Chair: Steve Hudson, National Institute of Standards and Technology

2:30 PM W24.00001: Solvated Block Copolymers as a Novel Class of Electroactive Nanostructured Polymers
Invited Speaker: Richard Spontak

3:06 PM W24.00002: Self-Assembled Micro-Phase Separated Semi-Permeable Membranes
Dale Handlin, Scott Trenor, Carl Willis

3:18 PM W24.00003: Toward structure-property relationships in block copolymer electrolytes
Enrique Gomez, Mohit Singh, Vincent Chen, Nitash Balsara

3:30 PM W24.00004: Phase Behavior of Block Copolymers containing Poly(vinyl pyridine) by Coordination with Metal Chloride
Dong Hyun Lee, Hwang Yong Kim, Jin Kon Kim, Du Yeol Ryu, June Huh

3:42 PM W24.00005: Brownian Dynamics Simulation of ABA Block Copolymer in Selective Solvent: Kinetics of HEX Cylinders to BCC Spheres Transition
Minghai Li, Yongsheng Liu, Rama Bansil

3:54 PM W24.00006: Symmetric Diblock Copolymers in Nanopores: Monte Carlo Simulations and Strong-Stretching Theory
Qiang Wang

4:06 PM W24.00007: Self-assembly of a diblock a copolymer melt absorbed in porous materials
Panagiotis Maniadis, Ioannis Tsimpanogiannis, Edward Kober

4:18 PM W24.00008: Effective Control of Pore Size in the Block Copolymer by Matrix Crosslinking
E. Kim, C. Shin, D.Y. Ryu, J. Bang, C. Hawker, T. Russell

4:30 PM W24.00009: Superelastic materials based on multigraft copolymers
U. Staudinger, R. Weidisch, Y. Zhu, S. P. Gido, D. Uhrig, J. W. Mays, M. Klueppel, G. Heinrich

4:42 PM W24.00010: Mesoscopic Archimedian Tiling Patterns in ABC Star-Shaped Terpolymers
Atsushi Takano, Kenichi Hayashida, Tomonari Dotera, Yushu Matsushita

4:54 PM W24.00011: Hierarchical Structures of a Multiblock Copolymer Melt
Weihua Li, An-Chang Shi

5:06 PM W24.00012: Whispering Gallery Modes in Highly Hexagonal Symmetric Structures of Three Dimensional SBA-1 Mesoporous Silica
Chih-Wei Chen, Yang-Fang Chen

Session W25. Polymer Melts and Solutions (DPOLY)

Thursday afternoon, 2:30 PM, Colorado Convention Center, 203

Chair: Kyusoon Shin, Seoul National University

2:30 PM W25.00001: Dynamic Light Scattering Studies of Light Absorbing Solutions
Thomas Seery, Maria DeMesa

2:42 PM W25.00002: Small Angle Neutron Scattering Study of Oligo(ethylene glycol) Grafted Polystyrene in Aqueous Solutions
G. Cheng, Y.B. Melnichenko, G.D. Wignall, F. Hua, K. Hong, P.F. Britt, J.W. Mays

2:54 PM W25.00003: Steady state structure factor and stress in sheared semi-dilute polymer solutions
Prasanth Jose, Grzegorz Szamel

3:06 PM W25.00004: Structure of polydisperse star branched polymers grown by diffusion
Guillermo Ramirez-Santiago, Carlos I. Mendoza

3:18 PM W25.00005: Modeling the liquid-solid transition in saturated triglycerides
C.B. Hanna, D.A. Pink, A.J. MacDonald, K. Thillainadarajah, R. Corkery, D. Rousseau

3:30 PM W25.00006: Kinetics of Anionic Polymerization of Polybutadienyl Lithium in Benzene: An Osmotic Effect on Propagation Process
Hiroshi Watanabe

3:42 PM W25.00007: Conformational studies of conjugated polymers substituted with different side chains
Yunfei Jiang, Uwe H. F. Bunz, Dvora Perahia

3:54 PM W25.00008: High-Pressure Vibrational Spectroscopy of Polymers
E.D. Emmons, R.G. Kraus, J.S. Thompson, A.M. Covington

4:06 PM W25.00009: Conformational Heat Capacity of Liquid Biodegradable Polymers in the Absence and Presence Water
Marek Pyda, Elzbieta Nowak-Pyda

4:18 PM W25.00010: Diffusion in Polypropylene Melts: Role of Stereochemistry
Ernst von Meerwall, Numan Waheed, Wayne Mattice

4:30 PM W25.00011: An examination of the whipping instability of viscoelastic jets in electrospinning
Pradipto Bhattacharyya, Jian Yu, Gregory Rutledge, Gareth McKinley

4:42 PM W25.00012: The role of extensional stress in the formation of electrospun fibers
Jian Yu, Sergey Fridrikh, Gregory Rutledge

4:54 PM W25.00013: First observation of the first-order transition in ultra-filtration of flexible linear polymer chains
Chi Wu, Fan Jin

5:06 PM W25.00014: First-order Conformation Transition of Single Polyelectrolyte Molecules in Aqueous Solutions
Shengqin Wang, Jiang Zhao

5:18 PM W25.00015: Influence of the solvent size on the behavior in polymer solution
Lijia An, Yunqi Li, Tongfei Shi

Session X17. Structure and Dynamics of Polymer Films (DPOLY)

Friday morning, 8:00 AM, Colorado Convention Center, 102

Chair: Joona Bang, Korea University

8:00 AM X17.00001: In-situ Nanoparticles Direct Self-Assembly of Block Copolymer Thin Films
Ranjan Deshmukh, Gavin Buxton, Nigel Clarke, Russell Composto

8:12 AM X17.00002: Real-Time Guided Wave Depolarized Light Scattering of Block Copolymer Thin Films during in Situ Annealing
Jeffrey Wilbur, Nitash Balsara, Zhuangxi Fang, Maurice Newstein, Bruce Garetz

8:24 AM X17.00003: Structural Characterization of Asymmetric Block Copolymer Thin Films using Resonant Soft X-Ray Scattering
J. M. Virgili, J. B. Kortright, N. P. Balsara, R. A. Segalman

8:36 AM X17.00004: Decay length of phase coherent block copolymer films: neutron reflectivity, analytical theoretical and simulation studies
Junhan Cho, Kwanwoo Shin, Kwangsoo Cho, Wonyoung Jung, Sangbo Na

8:48 AM X17.00005: Silicon Wire Grid Polarizer for Deep UV Fabricated by Diblock Copolymer Lithography
Koji Asakawa, Young-Rae Hong, Vincent Pelletier, Douglas Adamson, Richard Register, Paul Chaikin

9:00 AM X17.00006: Why Does the Effect of the Free Surface on the T_g-Confinement Effect Depend So Strongly on Polymer Species?
John M. Torkelson, Manish K. Mundra

9:12 AM X17.00007: Dynamics of water on self-assembled monolayers
J. Matthew D. Lane, Michael Chandross, Mark J. Stevens, Gary S. Grest, Christian D. Lorenz

9:24 AM X17.00008: Phase Transitions of Hexadecanethiol Self-Assembled Monolayers on Polycrystalline Silver Studied by NanoDSC
Liang Hu, Leslie Allen

9:36 AM X17.00009: Kinetics of growth and assembly of ordered array of non-coalescing water droplets over evaporating polymer solutions
Vivek Sharma, Mohan Srinivasarao

9:48 AM X17.00010: Molecular Dynamics in Self-Assembled Monolayers
Jason Bochinski, Derrick Stevens, Mary Scott, Laura Guy, Casey deDeugd, Laura Clarke

10:00 AM X17.00011: Thickness study of Langmuir-Blodgett Films of Copolymers of Vinylidene Fluoride with Trifluoroethylene using X-ray Reflectivity
Jihee Kim, Stephen Ducharme, Shireen Adenwalla

10:12 AM X17.00012: Electro-Optic Polymer Films for Reconfigurable Photomask Applications
Adam Fontecchio, Anna Fox

10:24 AM X17.00013: Interfacial Characteristics of a Potentially Anti-befouling Highly Rigid Ionomer
Christopher J. Cornelius, Cy H. Fujimoto, Lilin He, Dvora Perahia

10:36 AM X17.00014: Interfacial Effects of Nanometer Fluorinated Segments on Energy Controlled Responsive Polymeric Films
Dvora Perahia, Alma Gonzales, Dennis W. Smith Jr.

Session X18. Biopolymers II: Simulations (DPOLY/DCOMP)

Friday morning, 8:00 AM, Colorado Convention Center, 103

Chair: Daniel Savin, University of Vermont

8:00 AM X18.00001: Effect of solvent on the conformation and dynamics of Aspartic Acid Protease by a coarse-grained bond-fluctuating Monte Carlo simulation
Ras Pandey, Barry Farmer

8:12 AM X18.00002: Statistical Mechanics of Membrane Proteins
Karim Wahba, Robijn Bruinsma

8:24 AM X18.00003: Mechanical unfolding of proteins: reduction to a single-reaction coordinate unfolding potential, and an application of the Jarzynski Relation
Peter Olmsted, Daniel West, Emanuele Paci

8:36 AM X18.00004: Boundary Element Microhydrodynamics: Stagnation of flow in protein cavities
Sergio Aragon, David Hahn

8:48 AM X18.00005: Electrostatic theory of viral self-assembly: Structure and Kinetics
Tao Hu, Boris Shklovskii

9:00 AM X18.00006: Electrophoresis of DNA on a disordered two-dimensional substrate
Cynthia J. Olson Reichhardt, Charles Reichhardt

9:12 AM X18.00007: Shape of DNA in a box
Ya Liu, Bulbul Chakraborty, Jane' Kondev

9:24 AM X18.00008: Polymer dynamics in a tight squeeze
Jeremy Schmit, Ercan Kamber, Joshua Kalb, Bulbul Chakraborty, Jane' Kondev

9:36 AM X18.00009: λ-DNA thermal migration in a microchannel
Jennifer Kreft, Yeng-Long Chen

9:48 AM X18.00010: Force-extension relation of DNA-histone complexes
A.J. Levine, Mark L. Henle, Tom Chou

10:00 AM X18.00011: Monitoring the Bending Stiffness of DNA
Chongli Yuan, Xiongwen Lou, Elizabeth Rhoades, Huimin Chen, Lynden Archer

10:12 AM X18.00012: Validity of the bead-spring model for describing the linear viscoelastic properties of single-strand DNA under strongly denaturing conditions
Semant Jain, Ronald Larson

10:24 AM X18.00013: Dynamics of particles with key-lock interactions
Nicholas Licata, Alexei Tkachenko

10:36 AM X18.00014: Molecular Dynamics Simulation of semi-flexible filament assembly
Lam T. Nguyen, Qi Wang, Ziyad Muslimani, Linda S. Hirst

10:48 AM X18.00015: Ion condensation near patterned surfaces
Yury Velichko, Francisco Solis, Sharon Loverde, Monica Olvera de la Cruz

Session X24. Conducting Polymers and Devices (DPOLY/DMP)

Friday morning, 8:00 AM, Colorado Convention Center, 201

Chair: Pawan Kahol, Missouri State University

8:00 AM X24.00001: Dissipative effects in the electron transport through conducting polymers
Natalya Zimbovskaya, Grigory Zimbovskiy

8:12 AM X24.00002: Tuning the Electrical Conductivity of Polyaniline by Controlling the Molecular Characteristics of the Polymer Acid Template
Joung Eun Yoo, Tracy Bucholz, Yueh-Lin Loo

8:24 AM X24.00003: Electrical Conductivity Measurements of Nanofibers Electrospun from Polyaniline/Polyethylene Oxide Blends
Saima Khan, Aurangzeb Khan, Martin Kordesch

8:36 AM X24.00004: Exciton localization and delocalization in phenyl-cored thiophene dendrimers
Muhammet Erkan Kose, Kwiseon Kim, Will J. Mitchell, Nikos Kopidakis, Garry Rumbles, Sean E. Shaheen

8:48 AM X24.00005: Semiconducting molecular crystals: Bulk in-gap states modified by structural and chemical defects
S. Haas, C. Krellner, C. Goldmann, K. P. Pernstich, D. J. Gundlach, B. Batlogg

9:00 AM X24.00006: Optical Characterization of a Single Cavity in Random Laser Polymer Film
Z.Valy Vardeny, Abdullah Tulek

9:12 AM X24.00007: Unidirectional Emission from Asymmetric Polymer Microcavities
Abdullah Tulek, Z.Valy Vardeny

9:24 AM X24.00008: Molecular Spectroscopy Using Slow Surface Plasmon Polaritons
Michael Preiner, Ken Shimizu, Nazanin Davani, Jason Fabbri, Nicholas Melosh

9:36 AM X24.00009: Mechanism for interaction between gases and Phthalocyanine films
Amos Sharoni, Corneliu Colesniuc, Jeongwon Park, Forest I. Bohrer, Andrew C. Kummel, William C. Trogler, Ivan K. Schuller

9:48 AM X24.00010: The Electronic structure at the copper phthalocyanine to P(VDF-TrFE) copolymer thin films interface
Jie Xiao, Carolina Ilie, Peter Dowben

10:00 AM X24.00011: Transport properties and non-volatile memory application of self assembled nanoparticle array by microtubules
Mei Xue, K.L. Wang, Jing Zhou, Bruce Dunn

10:12 AM X24.00012: pH Memory Effects of Tunable Block Copolymer Photonic Gels and Their Applications
Youngjong Kang, Edwin L. Thomas

10:24 AM X24.00013: Nondestructive Memory Elements Based on Polymeric Langmuir-Blodgett Thin Films
T.J. Reece, S. Ducharme

10:36 AM X24.00014: Salt-induced phase transitions in charged polymerized membranes
Angelo Cacciuto, Erik Luijten

Session X25. Liquid Crystalline And Amorphous Polymers (DPOLY)

Friday morning, 8:00 AM, Colorado Convention Center, 203

Chair: Andrey Dobrynin, University of Connecticut

8:00 AM X25.00001: Swelling and Shrinking Dynamics of Monodomain Nematic Elastomers
Kenji Urayama, Ryo Mashita, Yuko Arai, Toshikazu Takigawa

8:12 AM X25.00002: Effects of Long Wave-length Thermal Fluctuations on the Elasticity of Nematic Elastomers
Xiangjun Xing, Aparna Baskaran

8:24 AM X25.00003: Synthesis of Optimal and Imperfect Main Chain Smectic Elastomers
Harshad Patil, Ronald Hedden

8:36 AM X25.00004: Construction of Chiral Propeller Architectures from Achiral Molecules
Kwang-Un Jeong, Deng-Ke Yang, Matthew J. Graham, Brian S. Knapp, Frank W. Harris, Stephen Z.D. Cheng

8:48 AM X25.00005: Small angle X-ray scattering studies of side chain liquid crystalline block copolymers
Eric Verploegen, Lu Tian, Paula Hammond

9:00 AM X25.00006: Solvent induced shape changes in liquid crystal elastomers
Attilio Golemme, Tibor Toth-Katona, Jeremy Neal, Peter Palffy-Muhoray

9:12 AM X25.00007: Bloch wall defects in nematic thin films: experiments and simulations
Mohan Srinivasarao, Jian Zhou, Jung O. Park, Gino De Luca, Alejandro D. Rey

9:24 AM X25.00008: Abnormal Slowdown of Longitudinal Diffusion of F-actin across Isotropic to Nematic Phase Transition
Jun He, Jorge Viamontes, Jay Tang

9:36 AM X25.00009: Dynamic Fragility and the Glass Transition: Is there a relationship?
Gregory McKenna, Qian Qin

9:48 AM X25.00010: Prediction of Creep Behavior in PMMA
James Caruthers, Rebecca Martin, Grigori Medvedev

10:00 AM X25.00011: Strain Hardening and Plastic Deformation in Polymer Glasses
Robert S. Hoy, Mark O. Robbins

10:12 AM X25.00012: The influence of nonlinearity on the timescale of volume relaxation
Prashanth Badrinarayanan, Sindee Simon

10:24 AM X25.00013: Photothermal studies of polymers using polarized light
Marshall Thomsen, Daeha Joung, Don Snyder

10:36 AM X25.00014: Gradient Copolymers Yield Uniquely Broad Glass Transition Temperatures in Comparison with Block Copolymers and Polymer Blends
Jungki Kim, Michelle M. Mok, Christopher L.H. Wong, Robert W. Sandoval, John M. Torkelson

10:48 AM X25.00015: Utilizing Nanoparticle Surface Plasmons for Surface-Initiated Polymerization and Conformational Switching of Polymers
Nelson Nunalee, Jack Mock, Ashutosh Chilkoti, Stefan Zauscher

Session Y4. Assembly and Organization in Polymeric Systems (DPOLY)

Friday mid-day, 11:15 AM, Colorado Convention Center, Korbel 2B-3B

Chair: Jack Douglas, National Institute of Standards and Technology

11:15 AM Y4.00001: Self Organization via Frontal Polymerization
Invited Speaker: John Pojman

11:51 AM Y4.00002: Structural Analysis and Properties of Supramolecular Assemblies
Invited Speaker: Steven Hudson

12:27 PM Y4.00003: Controlling self-assembly in thin block copolymer films: From model systems to applications
Invited Speaker: Georg Krausch

1:03 PM Y4.00004: pH and Solubility Effects as Control Mechanisms for Vesicle Interfaces
Invited Speaker: Adi Eisenberg

1:39 PM Y4.00005: Nanomechanics of Bone: Nanogranular Friction and Heterogeneity
Invited Speaker: Christine Ortiz

Session Y17. Multiscale Modeling in Polymeric Materials (DPOLY/DCOMP)

Friday mid-day, 11:15 AM, Colorado Convention Center, 102

Chair: Michael Rubinstein, University of North Carolina at Chapel Hill

11:15 AM Y17.00001: Molecular Dynamics Simulations of Layer-by-Layer Assembly of Charged Macromolecules
Invited Speaker: Andrey Dobrynin

11:51 AM Y17.00002: Dynamics of melts consisting of circular and linear polymers
Michael Lang, Michael Rubinstein

12:03 PM Y17.00003: Numerical Advances in Field Theoretic Simulations of Polymers
Erin M. Lennon, Kirill Katsov, Hector D. Ceniceros, Carlos J. Garcia-Cervera, Glenn H. Fredrickson

12:15 PM Y17.00004: Analytical coarse-graining theories for multiscale modeling of macromolecular systems
Marina Guenza

12:27 PM Y17.00005: Multiscale modeling of self-assembling polymer solutions
Dmitry Bedrov, Grant Smith, Ben Hanson

12:39 PM Y17.00006: Coarse grained model of polymer dynamics
R.C. Picu, A. Rakshit

12:51 PM Y17.00007: Multiscale Simulation of polyethylene oxide: Combined United Atom and Coarse-Grained Modeling
Praveen Depa, Janna Maranas

1:03 PM Y17.00008: Structure and Evolution of Ordered Domains in Deeply Quenched Polyethylene Melt
Naida Lacevic, Laurence Fried, Richard Gee

1:15 PM Y17.00009: Simulating the Oxidation of Polypropylene Using a Reactive Forcefield
Joanne Budzien, Aidan Thompson

1:27 PM Y17.00010: Rheological properties of polymer melts in confined shear flow from dynamic Monte Carlo simulations
John Dorgan

1:39 PM Y17.00011: Flow-deformed conformations of entangled polymers as persistent random walks
Yitzhak Shnidman

1:51 PM Y17.00012: String-merging of meso- viscoelastic droplets
Yuanze Xu, Jianmao Xu

2:03 PM Y17.00013: DNA-Particle Hydrodynamic Interactions In Microchannels
Yeng-Long Chen

Session Y18. Polymer Blends (DPOLY)

Friday mid-day, 11:15 AM, Colorado Convention Center, 103

Chair: Valeriy Ginsburg, Dow Chemical

11:15 AM Y18.00001: Thermodynamic Properties of A/B/A-C Polymer Blends from SANS and USANS
Nisita Wanakule, Megan Robertson, David Lohse, Nitash Balsara

11:27 AM Y18.00002: Kinetic Studies of Pressure-Quenched A/B/A-C Polymer Blends
Alisyn Nedoma, Megan Robertson, David Lohse, Nitash Balsara

11:39 AM Y18.00003: Effects of deuterium labeling at PS/PMMA interfaces studied with resonant soft x-ray reflectivity
H. Ade, C. Wang, S. E. Harton, B. Watts, T. Araki

11:51 AM Y18.00004: Ion solvation and its effects on polymer blend miscibility
Zhen-Gang Wang

12:03 PM Y18.00005: Thermoreversible bond formation in multi-component polymer blends
Richard Elliott, Glenn Fredrickson

12:15 PM Y18.00006: Modeling of Crystallization and Phase Separation in Binary Blends Driven by Photopolymerization
Pankaj Rathi, Thein Kyu

12:27 PM Y18.00007: Shear-induced Crystallization of and Polypropylene/Poly(Ethylene-co-Octene) Blends
Xia Dong, Kun Meng, Chenggui Zhang, Tongchen Sun, Charles C. Han, Jianhua Dong

12:39 PM Y18.00008: Nanoparticles as Blend Compatibilizers: Layered Silicates and Fullerenes
Jitendra Sharma, Romesh Patel, Liang Xu, Ramanan Krishnamoorti

12:51 PM Y18.00009: Compatibilization of Polymer Blends via Reactive Processing with Telechelic Copolymers
Earl Ashcraft, Mark Dadmun

1:03 PM Y18.00010: The Effect of Copolymer Composition on the Dynamics of Random Copolymers of Styrene and Methylmethacrylate in a PMMA Matrix: A Neutron Reflectivity Study
Sudesh Kamath, Mark Dadmun, William Hamilton, Michael Arlen

1:15 PM Y18.00011: Nucleation in Polymer Blends
Edward Feng

1:27 PM Y18.00012: Poly(ethylene oxide) Dynamics in Blends with Poly(vinyl acetate)
Junshu Zhao, Mark Ediger

1:39 PM Y18.00013: Viscosity of “Nanoparticle”/Polymer Mixtures
John G. Curro, Amalie L. Frischknecht

1:51 PM Y18.00014: T_g in Polymer/Oligomer Athermal Blends
Wei Zheng, Sindee Simon

2:03 PM Y18.00015: Surface-induced structure formation of polymer dispersed liquid crystals on chemically gradient substrate
Jun Wang, Jianfeng Xia, Suck Won Hong, Feng Qiu, Zhiqun Lin

Special DPOLY Events

Sunday, March 4th 2007

DPOLY Reception, time and location TBD - check your email

This DPOLY reception recognizes Glenn Fredrickson (recipient of the 2007 Polymer Physics Prize) and Darrin Pochan (recipient of the 2007 Dillon Medal).

Tuesday, March 6th 2007

DPOLY Business Meeting
Room: 201, Colorado Convention Center, 5:45 – 6:45 PM

Tuesday, March 6th 2007

Discussion on Research Funding from the National Science Foundation
Room: 201, Colorado Convention Center, 6:45 – 7:45 PM

Award Lectures

Polymer Physics Prize:

Glenn Fredrickson
Challenges for Polymer Theory and Simulation
Tuesday, March 6th 2007, 8:00 AM
Four Seasons 4, Colorado Convention Center

Padden Prize Symposium:

Tuesday, March 6th 2007, 11:15 AM
Room 201, Colorado Convention Center

Dillon Medal:

Darrin Pochan
Gels to Dumbbell Micelles: Construction of Materials and Nanostructure with Self-assembly
Tuesday, March 6th 2007, 2:30 PM
Room 201, Colorado Convention Center

Disclaimer: The information contained within this booklet is unofficial and is accurate as of 1/13/2007. For all official information please refer to the APS March Meeting Proceedings (http://meetings.aps.org/Meeting/MAR07/)