

2011 APS MARCH MEETING DPOLY PROGRAM

DPOLY MARCH 2011 MEETING PROGRAM

APS physics

2011 APS March Meeting • March 21–25 • Dallas, Texas

DPOLY Short Course

Advances in Scattering Techniques: Theory and Applications in Polymer Physics

Saturday, March 19, 12:30 p.m. - 5:30 p.m.

Sunday, March 20, 8:30 a.m. - 5:30 p.m.

Dallas Convention Center

Course Description

The workshop will introduce basic concepts of elastic and inelastic X-ray and neutron techniques that provide understanding of the structure and dynamic processes in polymers. The physics that underlines the properties of polymers in their many applications from sustainable energy to single molecule sensors in biological complexes is determined by their structure and their dynamics. Neutron and X-ray scattering techniques are ideal for probing polymeric systems on broad length scales, from that of a single bond through the smallest rigid segments and the polymer dimensions to that of assemblies.

The workshop will introduce the basic principles of the major elastic and inelastic scattering techniques that are currently employed to study polymers together with examples. New developments to probe extended length and time scales will also be discussed.

Two series of lectures will be given. Both series will incorporate elastic and inelastic techniques. The two series will be on:

- Neutron based techniques
- X-ray based methods

Program Topics and Speakers

Boualem Hammouda, *NCNR, National Institute of Standard and Technology*

Small-Angle Neutron Scattering from Polymers

Dvora Perahia, *Clemson University*

Neutron Reflectometry: Applications to Polymers and Membranes

Kenneth W. Herwig, *SNS, Oak Ridge National Laboratory*

Quasielastic Scattering/Backscattering in Polymers

Bela Farago, *Institut Laue-Langevin (ILL), France*

Neutron Spin Echo in Soft Matter

Roger Pynn, *Indiana University*

New Techniques for the Study of Polymers

Tom Russell, *University of Massachusetts*

Small Angle X-ray Scattering and Grazing Angle Diffraction in Polymers

Wesley R. Burghardt, *Northwestern University*

Small Angle X-ray Scattering Under Shear

Simon Mochrie, *Yale University*

X-ray Photon Correlation Spectroscopy in Polymers

Course Organizer:

Dvora Perahia

Professor of Chemistry

Chemistry Department

Clemson University

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Front Cover taken from the DPOLY Image Gallery, submitted by Sungwon Ma, Jin Young Lim, and Yonathan Thio (Georgia Institute of Technology & Savannah College of Art and Design). This scanning electron micrograph shows a nano-sized rose generated by self assembly from microphase-separated polystyrene-polyisoprene diblock copolymers, preserved by selective crosslinking of the polyisoprene block.

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 DPOLY Business Meeting Sponsor: DPOLY Room: A302/303

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11:15

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Session A4: Nanostructures in Polymer-base Photovoltaics

Sponsoring Units: DPOLY

Chair: Michael Mackay, University of Delaware

Room: Ballroom A4

Monday, March 21, 2011 [A4.00001: Multiscale simulation of solar cell morphologies
guided by SANS and neutron reflectivity data](#)
8:00AM - 8:36AM
Invited Speaker: Phillip Duxbury

Monday, March 21, 2011 [A4.00002: Achievements, opportunities and challenges for
organic solar cells](#)
8:36AM - 9:12AM
Invited Speaker: Gilles Dennler

Monday, March 21, 2011 [A4.00003: Impact of the interfacial nanostructures on the
electronic processes in organic solar cells](#)
9:12AM - 9:48AM
Invited Speaker: Jean-Luc Bredas

Monday, March 21, 2011 [A4.00004: Interfacial Aspects of Polymer Based Photovoltaic
Structures](#)
9:48AM - 10:24AM
Invited Speaker: Thomas Russell

Monday, March 21, 2011 [A4.00005: Morphology control in printable solar cells](#)
10:24AM - 11:00AM
Invited Speaker: Joachim Loos

Session A13: Focus Session: Polymer Colloids: Structure, Function, and Dynamics I

Sponsoring Units: DFD DPOLY

Chair: Alberto Fernandez De Las Nieves, Georgia Institute of Technology

Room: D225/226

- Monday, March 21, 2011 8:00AM - 8:12AM [A13.00001: Osmotic pressure of microgel suspensions](#)
Juan Jose Lietor-Santos , Benjamin Sierra-Martín , Justin Frederick , Yesenia Laporte , George Markou , Alberto Fernandez-Nieves
- Monday, March 21, 2011 8:12AM - 8:24AM [A13.00002: Particle Charging and Interaction in Nonpolar Colloidal Dispersions Mediated by Nonionic Surfactants](#)
Sven Behrens
- Monday, March 21, 2011 8:24AM - 8:36AM [A13.00003: Experimental Studies of the Brownian Diffusion of Boomerang Colloidal Particle in a Confined Geometry](#)
Ayan Chakrabarty , Feng Wang , Bhuwan Joshi , Qi-Huo Wei
- Monday, March 21, 2011 8:36AM - 8:48AM [A13.00004: Effect of Boundary Mobility on the Dynamics of Confined Colloidal Suspensions](#)
Gary L. Hunter , Kazem V. Edmond , Eric R. Weeks
- Monday, March 21, 2011 8:48AM - 9:00AM [A13.00005: Observing liquid-gas nucleation in a colloid-polymer solution](#)
Ryan McGorty , Vinothan N. Manoharan
- Monday, March 21, 2011 9:00AM - 9:12AM [A13.00006: Measuring the translational and rotational diffusion of colloidal clusters with digital holographic microscopy](#)
Jerome Fung , Kristopher Eric Martin , Ryan McGorty , David M. Kaz , Rebecca W. Perry , John A. Keller , Guangnan Meng , Vinothan N. Manoharan
- Monday, March 21, 2011 9:12AM - 9:24AM [A13.00007: Density of States of a Two-Dimensional NIPA-Polystyrene Colloidal Crystal](#)
Matthew Gratale , Peter Yunker , Ke Chen , Arjun Yodh
- Monday, March 21, 2011 9:24AM - 9:36AM [A13.00008: Structure and dynamics of confined colloid-polymer mixtures](#)
Jacinta Conrad , Binh Trinh , Gildardo Ceballos
- Monday, March 21, 2011 9:36AM - 9:48AM [A13.00009: Controlling the size distribution of self-assembled colloidal clusters](#)
Nicholas Schade , Jesse Collins , Jonathan Fan , Miranda Holmes-Cerfon , Vinothan Manoharan
- Monday, March 21, 2011 9:48AM - 10:00AM [A13.00010: Dynamics of interfacial breach by colloidal spheres](#)
David M. Kaz , Ryan McGorty , Madhav Mani , Vinothan N. Manoharan
- Monday, March 21, 2011 10:00AM - 10:12AM [A13.00011: Sub-diffusion of DNA Coated Particles Near a Complementary DNA Covered Surface](#)
Lang Feng , Qin Xu , Ruojie Sha , Nadrian Seeman , Paul Chaikin

- Monday, March 21, 2011 10:12AM - 10:24AM [A13.00012: Multiple-Stage Melting and Freezing of Colloidal Crystallites with Short-range Attraction](#)
Liquan Pei , J.R. Savage , A.D. Dinsmore
- Monday, March 21, 2011 10:24AM - 10:36AM [A13.00013: Colloidal aggregation in microgravity by critical Casimir forces](#)
Sandra Veen , Peter Schall , Marco Potenza , Matteo Alaimo , Stefano Mazzoni , Gerard Wegdam
- Monday, March 21, 2011 10:36AM - 10:48AM [A13.00014: Particle interactions in colloids are revealed in a nonlinear effect in light transmission](#)
Jinsuk Song , Daniel Ou-yang
- Monday, March 21, 2011 10:48AM - 11:00AM [A13.00015: Nano-dumbbells pack densely to form birefringent photonic crystals](#)
Jason Forster , Jin-Gyu Park , Manish Mittal , Vinodkumar Saranathan , Heeso Noh , Carl Schreck , Richard Prum , Corey O'Hern , Hui Cao , Eric Furst , Eric Dufresne

Session A40: New Experimental, Theoretical, and Computational Methods in Polymer and Soft Matter Physics

Sponsoring Units: DPOLY

Chair: Amalie Frischknecht, Sandia National Laboratories

Room: A122/123

- Monday, March 21, 2011 8:00AM - 8:12AM [A40.00001: A First Principle Approach to Rescale the Dynamics of Simulated Coarse-Grained Macromolecular Liquids](#)
Ivan Lyubimov , Marina Guenza
- Monday, March 21, 2011 8:12AM - 8:24AM [A40.00002: Phase behavior of disk-coil molecules](#)
YongJoo Kim , Alfredo Alexander-Katz
- Monday, March 21, 2011 8:24AM - 8:36AM [A40.00003: A unified model Hamiltonian for polythiophene, polypyrrole, polyfuran, free base porphyrin, and polyaniline: Accuracy, transferability, and computational efficiency](#)
Andre Botelho , Xi Lin
- Monday, March 21, 2011 8:36AM - 8:48AM [A40.00004: Fluctuating lattice-Boltzmann model for complex fluids](#)
Santtu Ollila , Colin Denniston , Mikko Karttunen , Tapio Ala-Nissila
- Monday, March 21, 2011 8:48AM - 9:00AM [A40.00005: Polymer network stretching during electrospinning](#)
Israel Greenfeld , Arkadii Arinstein , Kamel Fezzaa , Miriam Rafailovich , Eyal Zussman
- Monday, March 21, 2011 9:00AM - 9:12AM [A40.00006: Microscopic theory of topological entanglement constraints in fluids of rigid macromolecules](#)
Daniel Sussman , Ken Schweizer
- Monday, March 21, 2011 9:12AM - 9:24AM [A40.00007: Tying Polymer Knots to Find the Entanglement Length](#)
Jian Qin , Scott Milner
- Monday, March 21, 2011 9:24AM - 9:36AM [A40.00008: Towards simulation of charges in the presence of varying dielectric response](#)
Vikram Jadhao , Francisco Solis , Guillermo Guerrero-Garcia , Monica Olvera de la Cruz
- Monday, March 21, 2011 9:36AM - 9:48AM [A40.00009: Colloidal Particle Vibration Spectroscopy](#)
Tim Still , George Fytas , Maurizio Mattarelli , Maurizio Montagna
- Monday, March 21, 2011 9:48AM - 10:00AM [A40.00010: Physical properties of two-dimensional directed polymer systems obtained via bosonization and related techniques](#)
David Zeb Rocklin , Paul M. Goldbart
- Monday, March 21, 2011 10:00AM - 10:12AM [A40.00011: Adapted Su-Schrieffer-Heeger Hamiltonian for PPV, PPP, and polyacenes](#)
Yongwoo Shin , Xi Lin

- Monday, March 21, 2011 10:12AM - 10:24AM [A40.00012: Rigid body constraints in HOOMD-Blue, a general purpose molecular dynamics code on graphics processing units](#)

Trung D. Nguyen , Carolyn L. Phillips , Joshua A. Anderson , Sharon C. Glotzer

Session A41: Focus Session: Active Biopolymers and Biomaterials

Sponsoring Units: DPOLY
Chair: Jennifer Ross, University of Massachusetts--Amherst
Room: A115/117

- Monday, March 21, 2011 8:00AM - 8:36AM [A41.00001: Connecting Atomic Structures with Continuum Mechanics in Cytoskeletal Polymers](#)
Invited Speaker: David Sept
- Monday, March 21, 2011 8:36AM - 8:48AM [A41.00002: The Interplay of Nonlinearity and Architecture and Nonequilibrium Dynamics in Cytoskeletal Mechanics](#)
Shenshen Wang , Tongye Shen , Peter Wolynes
- Monday, March 21, 2011 8:48AM - 9:00AM [A41.00003: Buckling of Branched Cytoskeletal Filaments](#)
D.A. Quint , J.M. Schwarz
- Monday, March 21, 2011 9:00AM - 9:12AM [A41.00004: "Twist-state" transitions in parallel actin bundles induced by crosslinking proteins](#)
Homin Shin , Gregory Grason
- Monday, March 21, 2011 9:12AM - 9:24AM [A41.00005: Elasticity of a cross-linked active bundle](#)
Silke Henkes , Tanniemola B. Liverpool , M. Cristina Marchetti , A. Alan Middleton , Jennifer M. Schwarz
- Monday, March 21, 2011 9:24AM - 9:36AM [A41.00006: Bursts of active transport in living cells](#)
Bo Wang , James Kuo , Sung Chul Bae , Steve Granick
- Monday, March 21, 2011 9:36AM - 9:48AM [A41.00007: Mechanically Activated Motion of a Single Self-Propelled Polymeric Microcapsule](#)
German Kolmakov , Alexander Schaefer , Igor Aranson , Anna Balazs
- Monday, March 21, 2011 9:48AM - 10:00AM [A41.00008: Coarse-grained models for biological simulations](#)
Zhe Wu , Qiang Cui , Arun Yethiraj
- Monday, March 21, 2011 10:00AM - 10:12AM [A41.00009: Guided Transport of a Transmembrane Nanochannel](#)
Meenakshi Dutt , Olga Kuksenok , Anna Balazs
- Monday, March 21, 2011 10:12AM - 10:48AM [A41.00010: Accidental Interactions and Purposeful Flaws in Polymer Brushes: Variations in Bioadhesive Mechanisms](#)
Invited Speaker: Maria Santore
- Monday, March 21, 2011 10:48AM - 11:00AM [A41.00011: Nanoparticle Self-Lighting Photodynamic Therapy For Cancer Treatment](#)
Wei Chen

Session A42: Focus Session: Directed Assembly of Hybrid Nanomaterials

Sponsoring Units: DPOLY
Chair: Sanat Kumar, Columbia University
Room: A302/303

- Monday, March 21, 2011 8:00AM - 8:12AM [A42.00001: Magnetically Actuated Artificial Cilia with Controlled Length and Areal Density](#)
Jason Benkoski , Jennifer Breidenich , Michael Wei , Guy Clatterbaugh , Pei-Yuin Keng , Jeffrey Pyun
- Monday, March 21, 2011 8:12AM - 8:24AM [A42.00002: Ordered ferrofluidic assemblies in polymer film formed by magnetically induced polymer-solvent phase separation](#)
Nataraj Sanna Kotrappanavar , Myunghwan Byun , Paul Zaval-Reviera , Kevin Chonnon , Shaheen S.A. Al-Muhtaseb , Easan Sivaniah
- Monday, March 21, 2011 8:24AM - 8:36AM [A42.00003: Manipulating nanoparticles via polymer crystallization](#)
Christopher Li , Bin Dong , Bing Li , Xi Chen , Wenda Wang
- Monday, March 21, 2011 8:36AM - 9:12AM [A42.00004: Directed Assembly of Nano-Colloids: Toward Discrete and Defined Polymer-Inorganic Architectures](#)
Invited Speaker: Richard Vaia
- Monday, March 21, 2011 9:12AM - 9:24AM [A42.00005: Designing Functionalized Nanoparticles for Controlled Assembly in Polymer Matrix: Self consistent PRISM Theory and Monte Carlo simulation Study](#)
Arthi Jayaraman , Nitish Nair
- Monday, March 21, 2011 9:24AM - 9:36AM [A42.00006: High Fidelity Detection of Defects in Polymer Films using Surface-Modified Nanoparticles](#)
Alamgir Karim , Matthew Becker , Chaitanya Pratiwada
- Monday, March 21, 2011 9:36AM - 9:48AM [A42.00007: Directed Hierarchical Assemblies of Nanoparticles in Thin Films](#)
Ting Xu
- Monday, March 21, 2011 9:48AM - 10:24AM [A42.00008: Adsorption of particles at fluid interfaces: Jamming, structure control, and rheology](#)
Invited Speaker: Sachin Velankar
- Monday, March 21, 2011 10:24AM - 10:36AM [A42.00009: Additive-driven assembly of block copolymers](#)
Ying Lin , Vikram Daga , Eric Anderson , James Watkins
- Monday, March 21, 2011 10:36AM - 10:48AM [A42.00010: Supramolecular Assembly of Gold Nanoparticles in PS-b-P2VP Diblock Copolymers via Hydrogen Bonding](#)
Se Gyu Jang , Craig J. Hawker , Edward J. Kramer
- Monday, March 21, 2011 10:48AM - 11:00AM [A42.00011: Role of defects on self-assembly of nanoparticles in block copolymer thin film](#)
Jenny Kim , Peter Green

Session A43: Focus Session: Thin Film Block Copolymers I

Sponsoring Units: DPOLY

Chair: Thomas Epps, University of Delaware

Room: A306/307

- Monday, March 21, 2011 8:00AM - 8:12AM [A43.00001: Study of Complex Morphology of ABC Triblock Copolymer with Resonant Soft X-ray Scattering](#)
Cheng Wang , Dong Hyun Lee , Wei Zhao , Thomas Russell , Myung Im Kim , Ting Xu , Hirokazu Hasegawa , Alexander Hexemer
- Monday, March 21, 2011 8:12AM - 8:24AM [A43.00002: STED Microscopy as a Characterization Tool for Three Dimensionally Nanostructured Block Copolymer Thin Films](#)
Chaitanya Ullal , Roman Schmidt , Ulrike Boehm , Sebastian Primpke , Philipp Vana , Stefan Hell
- Monday, March 21, 2011 8:24AM - 8:36AM [A43.00003: Interfaces between Block Copolymer Domains](#)
Jaep Kim , Seong-Jun Jeong , Sang Ouk Kim
- Monday, March 21, 2011 8:36AM - 8:48AM [A43.00004: Patterning of Multiple Block Copolymers per Layer with Orthogonal Processing](#)
Wei Min Chan , Evan L. Schwartz , Jin-Kyun Lee , Joan K. Bosworth , John DeFranco , Sandip Tiwari , Christopher K. Ober
- Monday, March 21, 2011 8:48AM - 9:00AM [A43.00005: Highly specific placement of Au Nanoparticles on chemical brush patterns prepared by combination of top-down and block copolymer lithography](#)
Serdar Onses , Chi-Chun Liu , Christopher Thode , Shengxiang Ji , Paul Nealey
- Monday, March 21, 2011 9:00AM - 9:12AM [A43.00006: Synthesis and graphoepitaxial placement control of block copolymer mediated silver nanoparticles](#)
Dong Wook Kim , Noel Arellano , Charles Rettner , Leslie Krupp , Teya Topuria , Philip Rice , Gabriele Raino , Thilo Stoferle , Rainer Mahrt , Ho-Cheol Kim
- Monday, March 21, 2011 9:12AM - 9:48AM [A43.00007: Functional Nanomaterials based on Nanoporous Block Copolymer Templates](#)
Invited Speaker: Jin Kon Kim
- Monday, March 21, 2011 9:48AM - 10:00AM [A43.00008: Effect of Boundary Conditions on the Directed Self-Assembly of Block Copolymer on Chemical Patterned Surfaces](#)
Guoliang Liu , Paul Nealey
- Monday, March 21, 2011 10:00AM - 10:12AM [A43.00009: Directed assembly of supramolecular copolymers in thin films](#)
Marcus Muller , Kostas Ch. Daoulas , Anna Cavallo , Roy Shenhar
- Monday, March 21, 2011 10:12AM - 10:24AM [A43.00010: Self-Assembly of Block Copolymers on Well-modulated Sawtoothed Surface](#)
Dong Hyun Lee , Ting Xu , Sung Woo Hong , Alexander Hexemer , Howard Padmore , Thomas Russell

- Monday, March 21, 2011 10:24AM - 10:36AM [A43.00011: Templating non-hexagonal monolayers of block copolymer spheres in confined geometries](#)
Adetunji Onikoyi , Edward Kramer , Glenn Fredrickson , Su-Mi Hur
- Monday, March 21, 2011 10:36AM - 10:48AM [A43.00012: The Spectrum of Interfacial Fluctuations in a Minimal Model of Lamellar Pattern-Forming Systems](#)
August Bosse
- Monday, March 21, 2011 10:48AM - 11:00AM [A43.00013: Dynamics of interacting edge defects in copolymer lamellae](#)
Kari Dalnoki-Veress , Joshua D. McGraw , Ian D.W. Rowe

Session A44: Friction, Adhesion, and Fracture of Polymers

Sponsoring Units: DPOLY

Chair: Al Crosby, University of Massachusetts--Amherst

Room: A309

- Monday, March 21, 2011
8:00AM - 8:12AM [A44.00001: Contact Adhesion of Wrinkled Surfaces](#)
Chelsea Davis , Alfred Crosby
- Monday, March 21, 2011
8:12AM - 8:24AM [A44.00002: Structural Effects on the Friction of Tethered PDMS Networks](#)
Claude Cohen , Lucas Landherr , Lynden Archer
- Monday, March 21, 2011
8:24AM - 8:36AM [A44.00003: Lithography-Free Microchannel Fabrication in PDMS](#)
Jeyantt S. Sankaran , Wintana T. Khsai , Uyen H.T. Pham , Samir M. Iqbal
- Monday, March 21, 2011
8:36AM - 8:48AM [A44.00004: Theory of Hydrostatic Lubrication for Like Charge Polymer Hydrogel Coated and Cartilage Coated Surfaces](#)
Jeffrey Sokoloff
- Monday, March 21, 2011
8:48AM - 9:00AM [A44.00005: Polymer Brushes that Mimic Repulsive Properties of the Boundary Lubricant Glycoprotein Lubricin](#)
Jahn Torres , Gregory Jay , Qian Ni , David Bello , Geoffrey Bothun , Kyung-Suk Kim
- Monday, March 21, 2011
9:00AM - 9:12AM [A44.00006: Activation-deactivation of self-healing in supramolecular rubbers](#)
Laurent Corte , Florine Maes , Damien Montarnal , Sabine Cantournet , Francois Tournilhac , Ludwik Leibler
- Monday, March 21, 2011
9:12AM - 9:24AM [A44.00007: Self-Healing of Polyethylene Oxide](#)
Dorina Magdalena Chipara , Maritza Flores , Nancy Puente , Karen Lozano
- Monday, March 21, 2011
9:24AM - 9:36AM [A44.00008: Modeling the Nano-indentation of Self-healing Materials](#)
Solomon F. Duki , German V. Kolmakov , Victor V. Yashin , Tomasz Kowalewski , Krzysztof Matyjaszewski , Anna C. Balazs
- Monday, March 21, 2011
9:36AM - 9:48AM [A44.00009: Viscoelastic solid glue produced by orb-weaving spiders](#)
Vasav Sahni , Todd Blackledge , Ali Dhinojwala
- Monday, March 21, 2011
9:48AM - 10:00AM [A44.00010: Hydrophobic Interactions on a Protein-Polymer Functionalized Surface of Varying Hydrophilicity](#)
Kristen Keller , Pinar Akcora
- Monday, March 21, 2011
10:00AM - 10:12AM [A44.00011: Dissipative mechanisms of the lateral friction in contact-mode atomic force microscopy of flexible alkane molecule films](#)
F.Y. Hansen , P. Soza , H. Taub , M. Kiwi , U. Volkmann

Monday, March 21, 2011
10:12AM - 10:24AM [A44.00012: Stress-Induced Slip at Polymer-Polymer Boundaries](#)
Andrew Gustafson

Monday, March 21, 2011
10:24AM - 10:36AM [A44.00013: Optical Properties of Isolated MEH-PPV polymers in Developing Crazes](#)
Meng-Kuan Wang , Chiau-Heng Tsau , Wei-Cheng Li , Arnold Chang-Mou Yang , Jui-Hung Hsu , Jonathon D. White

Monday, March 21, 2011
10:36AM - 10:48AM [A44.00014: Quantitative surface parameter maps using Intermodulation Atomic Force Microscopy](#)
Daniel Forchheimer , Daniel Platz , Erik Tholven , Carsten Hutter , David Haviland

Monday, March 21, 2011
10:48AM - 11:00AM [A44.00015: Direct Measurement of Acid-Base Interaction Energy at Polymer-Solid Interfaces](#)
Anish Kurian , Shishir Prasad , Ali Dhinojwala

Session B4: Hybrid Nanomaterials Assembly

Sponsoring Units: DPOLY

Chair: Richard Vaia, Air Force Research Laboratory

Room: *Ballroom A4*

- Monday, March 21, 2011 11:15AM - 11:51AM [B4.00001: "Hairy" Nanoparticles in Block Copolymers and Homopolymers: Modeling using Hybrid Self-Consistent Field Theory](#)
Invited Speaker: Valeriy Ginzburg
- Monday, March 21, 2011 11:51AM - 12:27PM [B4.00002: Direct hierarchical assemblies of nanoparticles in thin films](#)
Invited Speaker: Ting Xu
- Monday, March 21, 2011 12:27PM - 1:03PM [B4.00003: Aqueous foams stabilised solely by nanoparticles](#)
Invited Speaker: Dominique Langevin
- Monday, March 21, 2011 1:03PM - 1:39PM [B4.00004: Versatile Solid Phase Syntheses of Structured Nanoparticle Hybrids](#)
Invited Speaker: Jeffrey Koberstein
- Monday, March 21, 2011 1:39PM - 2:15PM [B4.00005: Nanoparticle Self-Assembly in a Polymer Matrix and Its Impact on Phase Separation](#)
Invited Speaker: Jack Douglas

Session B41: Focus Session: Supramolecular Self-Assembly--Controlling Network and Gel Formation I

Sponsoring Units: DPOLY DBP

Chair: Aline Miller, University of Manchester

Room: *A115/117*

- Monday, March 21, 2011 11:15AM - 11:27AM [B41.00001: Bio-mimetic metal-ligand crosslinks yield self-healing polymer networks with near-covalent elastic moduli](#)
Niels Holten-Andersen , Matthew Harrington , Henrik Birkedal , Bruce Lee , Phillip Messersmith , Herbert Waite , Ka Yee Lee
- Monday, March 21, 2011 11:27AM - 11:39AM [B41.00002: Controlling Mechanical Properties of Bis-leucine Oxalyl Amide Gels](#)
William Chang , Daniel Carvajal , Kenneth Shull
- Monday, March 21, 2011 11:39AM - 11:51AM [B41.00003: 4D Structural Dynamics of Sheared Collagen Networks](#)
Richard Arevalo , Daniel Blair , Jeffrey Urbach
- Monday, March 21, 2011 11:51AM - 12:03PM [B41.00004: Molecular Dynamics Modeling of Actin Network Formation](#)
Ronald Pandolfi , Peter Becich , Lam Nguyen , Linda Hirst
- Monday, March 21, 2011 12:03PM - 12:15PM [B41.00005: Polyelectrolyte-Surfactant Complexes: A New Class of Organogelators](#)
Kevin Cavicchi , Yuqing Liu , Gustavo Guzman
- Monday, March 21, 2011 12:15PM - 12:27PM [B41.00006: Self-Assembly of DNA--Block Copolymer Micelles](#)
Wei Qu , Xuan Jiang , Hai-Quan Mao , Erik Luijten
- Monday, March 21, 2011 12:27PM - 12:39PM [B41.00007: LL37-DNA complexes and auto-immune diseases](#)
Fan Jin , Lori K. Sanders , Wujing Xian , Michel Gilliet , Gerard C. L. Wong
- Monday, March 21, 2011 12:39PM - 12:51PM [B41.00008: Stiffness of DNA nanotubes: insights for the design of dsDNA materials](#)
Paul Weitekamp , Daniel Schiffels , Alex Iteen , Deborah Fyngenson
- Monday, March 21, 2011 12:51PM - 1:27PM [B41.00009: Peptide assemblies: from cell scaffolds to immune adjuvants](#)
Invited Speaker: Joel Collier
- Monday, March 21, 2011 1:27PM - 1:39PM [B41.00010: Multiscale peptide self-assembly](#)
Justin Barone , Devin Ridgley
- Monday, March 21, 2011 1:39PM - 1:51PM [B41.00011: Intermolecular Hydrogen Bonding in Peptide and Modified Jeffamine Organogels](#)
Daniel Savin , Adam Richardson
- Monday, March 21, 2011 1:51PM - 2:03PM [B41.00012: Designing responsive peptide hydrogels using peptide-responsive polymer conjugates](#)
Alberto Saiani , Anton Maslovskis , Aline Miller
- Monday, March 21, 2011 [B41.00013: Stimuli-Responsive Peptide-based Triblock and Star Copolymers](#)
Jacob Ray , Sandeep Naik , Ashley Johnson , Jack Ly , Daniel Savin

2:03PM - 2:15PM

Session B42: Polyelectrolytes, Conformations, Assembly, and Dynamics

Sponsoring Units: DPOLY
Chair: Venkat Ganesan, University of Texas at Austin
Room: A302/303

- Monday, March 21, 2011 11:15AM - 11:27AM [B42.00001: Scaling behavior of single chain dimension of polystyrene sulfonate](#)
Qingbo Yang , Jiang Zhao
- Monday, March 21, 2011 11:27AM - 11:39AM [B42.00002: Bridging induced by multivalent counterions in polyelectrolyte brush](#)
Nicolas Laugel , Robert Farina , Philip Pincus , Matthew Tirrell
- Monday, March 21, 2011 11:39AM - 11:51AM [B42.00003: Collapse of single polyelectrolytes in a.c.\electric fields](#)
Chunda Zhou , Robert Riehn
- Monday, March 21, 2011 11:51AM - 12:03PM [B42.00004: Conformation of Randomly Sulfonated Pentablock Ionomers in Dilute Solution: Molecular Dynamic Simulation Study](#)
Dipak Aryal , Dvora Perahia , Gary S. Grest
- Monday, March 21, 2011 12:03PM - 12:15PM [B42.00005: Polyelectrolyte Dendrimer Conformations from Mean Field Theory](#)
Thomas Lewis , Venkat Ganesan
- Monday, March 21, 2011 12:15PM - 12:27PM [B42.00006: Controlling the swelling and wettability of weak polyelectrolyte brushes](#)
Richard Gurtowski , Benxin Jing , Elaine Zhu
- Monday, March 21, 2011 12:27PM - 12:39PM [B42.00007: Light- and pH Switchable Supramolecular Nanoparticles through Electrostatic Self-Assembly](#)
Franziska Groehn , Immanuel Willerich
- Monday, March 21, 2011 12:39PM - 12:51PM [B42.00008: Surfactant mediated self-assembly of weakly charged polymer on hydrophobic polymeric substrate](#)
Monojoy Goswami , Bobby Sumpter
- Monday, March 21, 2011 12:51PM - 1:03PM [B42.00009: Finite size effects in polyelectrolyte adsorption: A simulation study](#)
Maria Sammalkorpi , Paul R. Van Tassel
- Monday, March 21, 2011 1:03PM - 1:15PM [B42.00010: Thermal Properties of Linearly and Exponentially Growing Layer-by-Layer Assemblies](#)
Ajay Vidyasagar , Jodie Lutkenhaus
- Monday, March 21, 2011 1:15PM - 1:27PM [B42.00011: Polyelectrolyte gel dynamics during volume phase transitions](#)
Mithun Mitra , Jing Hua , Murugappan Muthukumar
- Monday, March 21, 2011 1:27PM - 1:39PM [B42.00012: Field theoretic simulations of the interfacial properties of complex coacervates](#)
Robert Riggleman , Glenn Fredrickson

- Monday, March 21, 2011 1:39PM - 1:51PM [B42.00013: Electrohydrodynamics of polyelectrolytes using Lattice-Boltzmann simulations without electrostatics](#)
Owen A. Hickey , James L. Harden , Christian Holm , Gary W. Slater
- Monday, March 21, 2011 1:51PM - 2:03PM [B42.00014: Thermophoresis of a polyelectrolyte](#)
Jennifer Kreft Pearce , Audrey Hammack , Andrew Laster , James Lee , Seth Norman
- Monday, March 21, 2011 2:03PM - 2:15PM [B42.00015: Charge transport in confined ionic liquids](#)
Joshua Sangoro , Ciprian Iacob , Wycliffe Kipnusu , Friedrich Kremer

Session B43: Focus Session: Polymers for Energy Storage and Conversion – Nanoscale Structure in Polymer-based Photovoltaics

Sponsoring Units: DMP DPOLY GERA
Chair: Dean Delongchamp, National Institute of Standards and Technology
Room: A306/307

- Monday, March 21, 2011 11:15AM - 11:51AM [B43.00001: Association of P3HT and PCBM in solution](#)
Invited Speaker: Tomek Kowalewski
- Monday, March 21, 2011 11:51AM - 12:03PM [B43.00002: Organic solar cells: a theoretical study of the effects of polymer side-chains](#)
Nicolas Berube , Helene Antaya , Michel Cote
- Monday, March 21, 2011 12:03PM - 12:15PM [B43.00003: Perylene Diimide Based "Nanofabric" Thin Films for Organic Photovoltaic Cells](#)
Austin Carter , June Hyoung Park , Yong Min , Arthur Epstein
- Monday, March 21, 2011 12:15PM - 12:27PM [B43.00004: Influence of Annealing and Blending of Photoactive Polymers on Their Crystalline Structure](#)
Matthias A. Ruderer , Stefan M. Prams , Monika Rawolle , Qi Zhong , Peter Mueller-Buschbaum , Jan Perlich , Stephan V. Roth
- Monday, March 21, 2011 12:27PM - 12:39PM [B43.00005: Photoinduced degradation of polymer and polymer-fullerene active layers: Experiment and Theory](#)
Matt Reese , Alex Nardes , Ben Rupert , Ross Larsen , Dana Olson , Matt Lloyd , Dave Ginley , Sean Shaheen , Garry Rumbles , Nikos Kopidakis
- Monday, March 21, 2011 12:39PM - 1:15PM [B43.00006: Bio-Inspired electro-photonic structure for organic and dye sensitized solar cells](#)
Invited Speaker: Rene Lopez
- Monday, March 21, 2011 1:15PM - 1:27PM [B43.00007: The Poly\(3-hexylthiophene\) / ZnO \(10-10\) interface: structure and energetics](#)
Jie Jiang , Sohrab Ismail-Beigi
- Monday, March 21, 2011 1:27PM - 1:39PM [B43.00008: Photovoltaic Device Performance Enhancement by Interfacial Decoration of Bulk-Heterojunctions with Semiconducting Nanocrystals](#)
Theodore J. Kramer , Ioannis Kymissis , Irving P. Herman
- Monday, March 21, 2011 1:39PM - 1:51PM [B43.00009: Semiconducting Nanocomposites via Directly Grafting Conjugated Polymer onto Quantum Rods](#)
Lei Zhao , Xinchang Pang , Zhiqun Lin
- Monday, March 21, 2011 1:51PM - 2:03PM [B43.00010: Directed assembly of core-shell hybrid nanomaterials for polymer photovoltaics](#)
Shanju Zhang , Candice Pelligra , Lisa Pfefferle , Chinedum Osuji
- Monday, March 21, 2011 2:03PM - 2:15PM [B43.00011: Interconnected and nano-perforated lamellar sheets of metal oxides produced using novel block copolymer templates](#)
Paul Zavala-Rivera , Kevin Channon , Vincent Nyugen , Easan Sivaniah , Nataraj Sanna Kotrappanavar , S.A. Al-Muhtaseb

Session B44: Physics of Copolymers I

Sponsoring Units: DPOLY
Chair: Darrin Pochan, University of Delaware
Room: A309

- Monday, March 21, 2011
11:15AM - 11:51AM [B44.00001: Controlling Cellular Endocytosis at the Nanoscale](#)
Invited Speaker: Giuseppe Battaglia
- Monday, March 21, 2011
11:51AM - 12:03PM [B44.00002: Microphase Separation in Block-Random Copolymers of Styrene and Hydrogenated Isoprene](#)
Bryan S. Beckingham , Richard A. Register
- Monday, March 21, 2011
12:03PM - 12:15PM [B44.00003: Micellization kinetics of diblock copolymers in a homopolymer matrix: A self-consistent field study](#)
Raghuram Thiagarajan , David Morse
- Monday, March 21, 2011
12:15PM - 12:27PM [B44.00004: Manipulating the structural conformation of block copolymer micelles using co-solvent mixtures](#)
Elizabeth G. Kelley , Thomas P. Smart , Millicent O. Sullivan , Thomas H. Epps, III
- Monday, March 21, 2011
12:27PM - 12:39PM [B44.00005: Molecular Exchange in Ordered Diblock Copolymer Micelles](#)
Soo-Hyung Choi , Timothy Lodge , Frank Bates
- Monday, March 21, 2011
12:39PM - 12:51PM [B44.00006: Kinetics of Pressure Jump for Block Copolymer Phase Transition in Selective Solvent](#)
Yongsheng Liu , Rama Bansil , Milos Steinhart
- Monday, March 21, 2011
12:51PM - 1:03PM [B44.00007: Transition Behavior of Hydrogen Bonding mediated Block Copolymer complex](#)
Sudhakar Naidu , Hyungju Ahn , Hoyeon Lee , Du Yeol Ryu
- Monday, March 21, 2011
1:03PM - 1:15PM [B44.00008: Phase Behavior of Binary Mixtures of Block Copolymers having Hydrogen Bonding](#)
Sung Hyun Han , Jin Kon Kim
- Monday, March 21, 2011
1:15PM - 1:27PM [B44.00009: Highly Localized Optically Induced Melting Transitions in Block Copolymers](#)
Azar Alizadeh , Eugene Boden , Xialei Shi , Victor Ostroverkhov , Daniel Brunnelle , Vicki Watkins , Charles Kerbage , Matthew Misner , Brian Lawrence
- Monday, March 21, 2011
1:27PM - 1:39PM [B44.00010: Self-Assembly of Lamellar Microphases in Linear Gradient Copolymer Melts](#)
Nicholas B. Tito , Scott T. Milner , Jane E. G. Lipson
- Monday, March 21, 2011
1:39PM - 1:51PM [B44.00011: Kinetics and Dynamics of HEX to Gyroid Transition of a Diblock Copolymer in Selective Solvent](#)
Julian Spring , Yongsheng Liu , Rama Bansil
- Monday, March 21, 2011
1:51PM - 2:03PM [B44.00012: Dynamics of Cloud Point Transitions in Dilute Solutions of Gradient Copolymers with Prescribed Gradient Strengths](#)
Keith Gallow , Yueh-Lin Loo

- Monday, March 21, 2011
2:03PM - 2:15PM [B44.00013: Effect of Macromolecular Architecture on the Morphology of Polystyrene/Polyisoprene Block Copolymers](#)
Caleb Dyer , Paraskevi Driva , Scott Sides , Bobby Sumpter , Jimmy Mays , Mark Dadmun , Feng Zuo , Frank Bates

Session C1: Poster Session I (2:00pm - 5:00pm)

Sponsoring Units: APS
Room: Hall D

C1.00001: POLYMERS AND SOFT MATTER I

C1.00002: Helical Ordering in Chiral Diblock Copolymers -- the Effect of Chirality
Wei Zhao , Sung Woo Hong , Gregory Grason , Thomas Russell

C1.00003: Dilute Solution Coil Dimensions of Hyperbranched Polymers in Synthetic Oils

Thomas Sun , Michael Fryd , Johannes Soulages , Andy Tsou

C1.00004: Crystallization of a Cyanurate Trimer in Nanopores

Yung P. Koh , Sindee L. Simon

C1.00005: Chemical Composition Distribution of Partially Brominated Polystyrenes

Wayne Powers , Young Kuk Jhon , Jan Genzer , Chang Ryu

C1.00006: Controlled Orientation of Block Copolymer Microdomains on Modified Solid Surfaces

Wei Yin Gu , Sung Woo Hong , Thomas Russell

C1.00007: Studies on Morphology of PCPDTBT/Fullerene Bulk Heterojunction Organic Photovoltaics

Yu Gu , Thomas Russell

C1.00008: Morphology Evolution of Molecular Weight Dependent P3HT: PCBM Solar Cells

Feng Liu , Dian Chen , Alejandro Briseno , Thomas Russell

C1.00009: Elimination of branching in beta-hairpin self-assembling peptides

Sameer Sathaye , Darrin Pochan

C1.00010: Theory of Nanoparticle Interactions Mediated by Reversibly Binding Polymer Chains

Stephanie Trittschuh , Gregory Grason

C1.00011: Thio-amide functionalized polymers via polymerization or post-polymerization modification

Ali Ozcam , Adam Henke , Iva Stibingerova , Jiri Srogl , Jan Genzer

C1.00012: Charged triblock copolymer self-assembly into charged micelles

Yingchao Chen , Ke Zhang , Jiahua Zhu , Karen Wooley , Darrin Pochan

C1.00013: Examining the Role of Structure on Charge Transport of Polymer Semiconductors

Kiarash Vakhshouri , Enrique Gomez

C1.00014: Towards quantitative structure-function relationships for organic solar cells
Derek Kozub , Kiarash Vakhshouri , Enrique Gomez

C1.00015: Polarization Controlled Photomechanical Behaviors of Polydomain Azobenzene Liquid Crystalline Polymer Networks

Timothy White , Kyung Min Lee , Vincent Tondiglia , Hilmar Koerner , Richard Vaia , Timothy Bunning

C1.00016: Effects of Sequence Distribution, Concentration and pH on Gradient and Block Copolymer Micelle Formation in Solution

Stephen Marrou , Jungki Kim , Christopher Wong , John Torkelson

C1.00017: Temperature dependence of ionic association of lithium triflate in acetate solutions

Dharshani Bopege , Matt Petrowsky , Roger Frech , J.M. Fumeaux

C1.00018: Organic Molecules and Network Polymers of Intrinsic Microporosity: Structural Characterization via X-ray Scattering and Simulations

Amanda G. McDermott , Lauren J. Abbott , Annalaura Del Regno , Kadhum J. Msayib , Bader S. Ghanem , Rupert Taylor , Mariolino Carta , Neil B. McKeown , Peter M. Budd , Flor R. Siperstein , Coray M. Colina , James Runt

C1.00019: Methyl Methacrylate Polymerization in Nanoporous Matrix: Reactivity and Molecular Weight

Haoyu Zhao , Sindee Simon

C1.00020: The Dynamic Heat Capacity of the Potential Energy Landscape of a Simple Chain Model

Jonathan Brown , John McCoy

C1.00021: Characterization of the Morphology and Rapid Expansion of Swellable Organically Modified Silica

Lilianna E. Christman , Amanda Logue , Paul L. Edmiston , Susan Y. Lehman

C1.00022: Gamma Irradiation of Polyethyleneterephthalate

He Huang , Emilio Bucio , Dorina Magdalena Chipara , Karen Lozano , David Hui , Mircea Chipara

C1.00023: Self-assembly of PtBA-P3HT multi-arms star-like block copolymer at the air/water interface

Lei Zhao , Xinchang Pang , Chaowei Feng , zhiqun Lin

C1.00024: Glassy dynamics of polymers in thin films and monomolecular layers

Martin Tress , Emmanuel U. Mapesa , Anatoli Serghei , Friedrich Kremer

C1.00025: Confinement-Induced Ordering in Dewetting of Polymer Blend Film

Mu Wang , Xiao-Chun Chen , Ru-Wen Peng , Guo-Bin Ma , Dajun Shu

[C1.00026: Synthesis of polymer brushes by surface-initiated controlled radical polymerization in the presence of free initiators. A Monte Carlo investigation](#)

Salomon Turgman-Cohen , Jan Genzer

[C1.00027: Directed Dewetting of Thin Polymer Films](#)

Suchanun Mounghai , Trang Pham , Gus Rajaendran , Gila Stein

[C1.00028: Reaction-Diffusion Processes in Ultrathin Films of Photoresist](#)

Ginusha Perera , Gila Stein

[C1.00029: Mechanical properties determination of PDMS films on hard substrate using atomic force microscopy](#)

Wenwei Xu , Todd Sulchek

[C1.00030: Anisotropic Surface and Interfacial Instabilities in Nanoimprinted Polymer Bilayers](#)

Dae Up Ahn , Zheng Zhang , Yifu Ding

[C1.00031: Modification of Silicon Oxide Surfaces with Thermally Annealed Polystyrene Films](#)

Steven Kalan , Kevin Cavicchi , Alamgir Karim

[C1.00032: A closer look on the thermo-responsive behavior of ultrathin pNIPAM films - relating interfacial molecular transitions to macroscopic properties](#)

Patrick Koelsch , Volker Kurz , Stefan Zauscher

[C1.00033: Non-Contact Measurements of Stiffness in Confined PS Films by Fluorescence and XPCS](#)

Christopher Evans , Suresh Narayanan , Zhang Jiang , John Torkelson

[C1.00034: Interfacial Structure, Dynamics, and Transport of Polyelectrolyte Membrane Materials for Fuel Cells](#)

Christopher Soles , K. Page , S. Eastman , S. Kim , S. Kang , J. Dura

[C1.00035: Large and Reversible Plasmon Tuning using Ultrathin Responsive Polymer film](#)

Srikanth Singamaneni , Saide Nergiz

[C1.00036: Mechanical Properties of Nanofibers Revealed by Interaction with Streams of Air](#)

Yinan Lin , Daniel Clark , Darrell Reneker

[C1.00037: Structural Characterization of Nanopatterned Surface Gratings with Grazing Incidence X-Ray Scattering](#)

Elaine Chan , Dong Hyun Lee , Dmitry Voronov , Howard Padmore , Ting Xu , Thomas Russell , Alexander Hexemer

[C1.00038: Thermal Programmed Desorption of C₃₂SH₆₆](#)

M. Cisternas , V. del Campo , A.L. Cabrera , U.G. Volkmann , F.Y. Hansen , H. Taub

[C1.00039: Molecular dynamics simulations of dotriacontane films supported on a SiO₂ surface](#)

Sebastian Gutierrez , Raul Araya , Tomas Perez-Acle , Maria Jose Retamal , Ulrich G. Volkmann

[C1.00040: Fabricating Stable Superhydrophobic Hierarchical Polyelectrolyte Multilayer Films by Layer-by-Layer Assembly and Nanolithography](#)

Xiayun Huang , Nicole Zacharia

[C1.00041: Adhesion of Nanoparticles](#)

Jan-Michael Carrillo , Elie Raphael , Andrey Dobrynin

[C1.00042: Fluorescence imaging of polymeric mar damage](#)

Eleni Danika , Mourad Chennaoui , Janet S. Wong

[C1.00043: Pressure Mapping Within a Tribological Contact with Fluorescence Imaging](#)

Mourad Chennaoui , Janet Wong

[C1.00044: Thermal Properties of specific Nonconjugated Conductive Polymers studied using Differential Scanning Calorimetry](#)

Gurudutt Telang , Sapana Shrivastava , Mrinal Thakur

[C1.00045: Complex fluids with robustly tunable optical properties: experiments and theory](#)

T. Cong , S.N. Wani , A.S. Sangani , R. Sureshkumar

[C1.00046: Exploiting redox chemistries to manipulate structure and electrical conductivity in polymer acid-doped polyaniline](#)

Jacob Tarver , Joline Fan , Yueh-Lin Loo

[C1.00047: Electromagnetic transport in magnetorheological elastomer composites](#)

Darin Zimmerman , Kofi Adu , Richard Bell , Timothy Hooper , Gary Weisel

[C1.00048: Solution Structures of Poly\(3-alkylthiophene\)](#)

Kaikun Yang , Liwei Huang , Narayan Ch Das , Howard Wang

[C1.00049: Generation of conductivity through transfer charge properties, for polyesters and polyamides with characteristic functional groups](#)

Carmen Gonzalez , Luis Hernan Tagle , Claudio A. Terraza , Andres Barriga , A.L. Cabrera , Ulrich G. Volkmann

[C1.00050: Structural symmetry breaking of silicon containing polymers and their relation with electrical conductivity and Raman active vibrations](#)

Alejandro Cabrera , Carmen Gonzalez , Luis Tagle , Claudio Terraza , Ulrich Volkmann , Andres Barriga , Esteban Ramos , Maximiliano Pavez

[C1.00051: Structural Disorder and Thermal Properties of the Alpha' Phase of Poly\(L-Lactic Acid\)](#)

Jeffrey Kalish , Shaw Ling Hsu

[C1.00052: Influence of graphene on the crystallization behavior of polyethylene](#)

Shan Cheng , Christopher Li

[C1.00053: Crystallization effects of carbon nanotubes on semicrystalline isotactic polypropylene](#)

Georgi Georgiev , Scott Schoen , Devin Ivy , Peggy Cebe

[C1.00054: Structure and dynamics of solvent-free polymer grafted nanoparticles: A computational study](#)

Alexandros Chremos , Athanassios Panagiotopoulos

[C1.00055: A new method to measure the optical trapping energy of nanoparticles](#)

Joseph Junio , Jack Ng , Joel Cohen , Zhifang Lin , H. Daniel Ou-Yang

[C1.00056: Spontaneous asymmetry in coated spherical nanoparticles in solution and at liquid-vapor interfaces](#)

J. Matthew D. Lane , Gary S. Grest

[C1.00057: Manipulation of nearly isotropic superparamagnetic colloids](#)

Damien Demoulin , Mike Cates , Jerome Bibette , Jean Baudry

[C1.00058: Controlled Evaporative Self-Assembly of Hierarchical Polymer Stripes with Ordered Nanochannels](#)

Wei Han , Myunghwan Byun , Lei Zhao , Javid Rzayev , Zhiqun Lin

[C1.00059: Supercritical carbon dioxide induced surface melting/recrystallization process in ultrathin PEO films](#)

Naisheng Jiang , Mitsunori Asada , Peter Gin , So King Lam , Maya Endoh , Sushil Satija , Tad Koga

[C1.00060: Ionic clusters in polyelectrolyte multilayers assembled with self-healing ionomers](#)

Hsiu-Chin Huang , Nicole Zacharia

[C1.00061: Highly Swollen Porous Microstructures in Polyelectrolyte Multilayers](#)

Chunyeon Cho , Jeremy Kaiser , Nicole Zacharia

[C1.00062: Morphological Change of Poly\(4-*tert*-butylstyrene-*tert*-butylstyrene\) in a Wide Range of Segregation Strength Through Hydrolysis Reaction](#)

Siti Sarah Abdul Rahman , Daisuke Kawaguchi , Yushu Matsushita

[C1.00063: Frustrated ABC Linear Block-Random Copolymer with a Semicrystalline End Block](#)

Bryan S. Beckingham , Richard A. Register

[C1.00064: Self-Consistent Field Modeling of Diblock Copolymers in Selective Solvents](#)

Raghuram Thiagarajan , David Morse

[C1.00065: Synthesis and Characterization of Tapered Block Copolymers](#)

Wei-Fan Kuan , Raghunath Roy , JongKeun Park , Thomas Epps

[C1.00066: Gelation of Copolymers Photo-crosslinked by Pendant Benzophenones](#)

Scott Christensen , Ryan C. Hayward

[C1.00067: Understanding the phase behavior and equilibration kinetics of PDMS-containing block copolymers](#)

Charlotte Stewart-Sloan , Edwin Thomas

[C1.00068: Cloud Point Depression in Dilute Solutions of HEMA/DMAEMA Copolymers with Prescribed Composition Profiles and Gradient Strengths](#)

Keith Gallow , Young Jhon , Jan Genzer , Yueh-Lin Loo

[C1.00069: High area density etching mask for data storage industry based on the block copolymer self-assembly](#)

Xiaodan Gu , Thomas Russell , Bin Zhang , Dorsey Paul

[C1.00070: Orientation Control of Block Copolymer Films on Rough Substrates Prepared by E-beam Lithography](#)

Youngwoo Choo , Hyo Seon Suh , Hyun-Mi Kim , Myung Rae Cho , Yun Daniel Park , Ki-Bum Kim , Kookheon Char

[C1.00071: Architectural Effects in Thin Films of Poly\(styrene-*b*-methyl methacrylate\) Copolymers](#)

Nikhila Mahadevaparam , Thai Vu , Gila Stein

[C1.00072: From blood dialysis to desalination: A one-size fits all block copolymer based membrane system](#)

Nataraj Sanna Kotrappanavar , Paul Zavala-Rivera , Kevin Chonnon , Shaheen S.A. AIMuhtaseb , Easan Sivaniah

[C1.00073: Circular Patterns over Large Areas from The Self-Assembly of Block Copolymers Guided by Shallow Trenches](#)

Sung Woo Hong , Xiaodan Gu , June Huh , Shuaigang Xiao , Thomas Russell

[C1.00074: Poly\(2-vinyl naphthalene-*b*-acrylic acid\) \(P2VN-*b*-PAA\) block copolymer pattern formation, alignment and pattern transfer by reactive ion etching \(RIE\)](#)

Xin Zhang , Christopher Metting , R.M. Briber , Sang Hak Shin , Ben Jones

[C1.00075: Methods for Self-Assembly of Rod-Coil Diblock Copolymer Thin Films](#)

Samantha Collins , Amanda Kamps , Michael Fryd , Russell Composto , So-Jung Park

[C1.00076: Nanopatterns in a confined triblock copolymer](#)

Jumi Lee , Yeongmin Jeon , Jaep Kim , Junhan Cho

[C1.00077: Hierarchical assembly of coil-rod-coil peptide-based copolymers](#)

Nandula Wanasekara , Casey Johnson , LaShanda Korley

[C1.00078: Enhanced stability of self-assembled polymer nanostructures by molecular crosslinking](#)

Mark Stoykovich , Ian Campbell , Brian Perea

[C1.00079: Local segmental dynamics of cis-1,4-polybutadiene, polypropylene, and polyethylene terephthalate via molecular dynamics simulations](#)

David Whitley , David Adolf

[C1.00080: Coarse-grained modeling of polystyrene at different concentrations using the Iterative Boltzmann Inversion technique](#)

Beste Bayramoglu , Roland Faller

[C1.00081: Identifying Entanglement States of Ring Polymers Using Knot Polynomials](#)

Jian Qin , Scott Milner

[C1.00082: Conformation of a Lennard-Jones Chain in Explicit Solvent: A Solvation Potential Approach](#)

Shishir Adhikari , Mark Taylor

[C1.00083: Differential AC/scanning chip nanocalorimeter for in-situ measurements of vapor deposited glasses](#)

Mathias Ahrenberg , Katie Whitaker , Heiko Huth , Mark D. Ediger , Christoph Schick

[C1.00084: An apparatus for in situ x-ray scattering studies of polymer melts during homogenous uniaxial extensional flow](#)

Wesley Burghardt , Ruinan Mao

[C1.00085: Differential dynamic optical microscopy for the characterization of soft matter: liquid crystal dynamics, volume phase transition of hydrogels, and phase transition of binary mixtures](#)

Beom-Jin Yoon , Jung Ok Park , Mohan Srinivasarao , Michael H. Smith , L. Andrew Lyon

[C1.00086: Fast Off-Lattice Monte Carlo Simulations with Soft Potentials](#)

Jing Zong , Delian Yang , Yuhua Yin , Xinghua Zhang , Qiang (David) Wang

[C1.00087: Kinetic Control for the Morphological Transition of Block Copolymer Micelle Complexes](#)

Misook Lee , Jinkee Hong , Kookheon Char

[C1.00088: Multigeometry micelles made from self-assembly of block copolymer mixtures via kinetic control](#)

Jiahua Zhu , Shiyi Zhang , Yun Lin , Ke Zhang , Caroline Miesch , Todd Emrick , Karen Wooley , Darrin Pochan

[C1.00089: Nanocomposites Consisting of Nanoparticles with Multidentate PS Brushes Mixed with PS Matrices](#)

Hyemin Lee , Sanghyuk Woo , Jaehoon Lim , Matthias Zorn , Rudolf Zentel , Kookheon Char

[C1.00090: Controlling the Self-Assembly of Inorganic Nanoparticles within Conjugated Rod-Coil Block Copolymers](#)

Bryan McCulloch , Rachel Segalman

[C1.00091: Experimental and computational studies of finite-size effects in nanocomposites](#)

M.P. Roman , E.W. Skau , D.R. Stevens , L.N. Downen , T.J. Hoffman , L.I. Clarke

[C1.00092: Nanoparticle Surface Functionalization for Improved Dispersion in Network Composites](#)

Adam Richardson , Olivia McNair , Gregory Strange , Mark Early , Daniel Savin

[C1.00093: Effect of Metal-Dielectric Interface on Capacitor Functions of Ag-Polymer Nanocomposites at Low Frequency \(\$\leq 1\$ MHz\)](#)

Ataur Chowdhury , Abhijit Biswas , Ilker Bayer

[C1.00094: A Robust Model for Predicting Charge Mobility in a Random CNT Composite Sample](#)

Joshua Brown , Pedro Derosa

[C1.00095: Effect of Single-Walled Carbon Nanotubes on Glass Transition Behavior in Polystyrene](#)

Brian Grady , Warren Ford , Abhijit Paul

Session H4: Polymer Physics Prize

Sponsoring Units: DPOLY

Chair: Philip Pincus, University of California, Santa Barbara

Room: *Ballroom A4*

Tuesday, March 22, 2011 8:00AM - 8:36AM [H4.00001: Polymer Physics Prize Talk: Polymer Brushes: Why do we still care?](#)

Invited Speaker: Gary S. Grest

Tuesday, March 22, 2011 8:36AM - 9:12AM [H4.00002: Polymer Physics Prize Talk: Topological Constraints Matter -- or Back to the Origin](#)

Invited Speaker: Kurt Kremer

Tuesday, March 22, 2011 9:12AM - 9:48AM [H4.00003: TBD](#)

Invited Speaker: Kurt Binder

Tuesday, March 22, 2011 9:48AM - 10:24AM [H4.00004: Entanglements and the Mechanical Properties of Glassy Polymers](#)

Invited Speaker: Mark Robbins

Tuesday, March 22, 2011 10:24AM - 11:00AM [H4.00005: Conjugated Polymer Nanoparticle Hybrids: Structure, Dynamics and Forces](#)

Invited Speaker: Dvora Perahia

Session H42: Focus Session: Polymers for Energy Storage and Conversion -- Physics of Ion Conductivity in Polymers

Sponsoring Units: DMP DPOLY GERA

Chair: Jodie Lutkenhaus, Texas A&M University

Room: *A302/303*

Tuesday, March 22, 2011 8:00AM - 8:36AM [H42.00001: Polymer Physics Prize Break](#)

Invited Speaker:

Tuesday, March 22, 2011 8:36AM - 8:48AM [H42.00002: Broadband Dielectric Spectroscopy and Quasi-Elastic Neutron Scattering on Single-Ion Polymer Conductors](#)
Christopher Soles , Hua-Gen Peng , Kirt Page , Chad Snyder , Ashoutosh Pandey , Youmi Jeong , James Runt

Tuesday, March 22, 2011 8:48AM - 9:00AM [H42.00003: A Quasi Elastic Neutron Scattering study of polymer dynamics in PEO based sulfonate ionomers: Effect of ion content and ion identity](#)
Kokonad Sinha , Janna Maranas

Tuesday, March 22, 2011 9:00AM - 9:12AM [H42.00004: Structure and Dynamics of Proton-Conducting Azoles Confined within Metal-Organic Frameworks](#)
Jamie Ford , Jason Simmons , Taner Yildirim

Tuesday, March 22, 2011 9:12AM - 9:48AM [H42.00005: Ion solvation thermodynamics in polymer blends and block copolymers](#)
Invited Speaker: Zhen-Gang Wang

Tuesday, March 22, 2011 9:48AM - 10:00AM [H42.00006: Understanding Ion Transport in Plasticized Polymer Electrolytes using Dielectric Spectroscopy](#)
U. Hyeok Choi , Siwei Liang , James Runt , Ralph Colby

Tuesday, March 22, 2011 10:00AM - 10:12AM [H42.00007: Ionic conductivity of mesoporous block copolymer membranes in liquid electrolyte as a function of copolymer and homopolymer molecular weight](#)
David Wong , Scott Mullin , Greg Stone , Vincent Battaglia , Nitash Balsara

Tuesday, March 22, 2011 10:12AM - 10:24AM [H42.00008: Cation/Anion Associations and Transport in Ionic Polymer Membranes](#)
Louis Madsen , Jianbo Hou , Zhiyang Zhang , Jing Li

Tuesday, March 22, 2011 10:24AM - 10:36AM [H42.00009: Correlation between cation conduction and ionic morphology in a PEO-based single ion conductor](#)
Kan-Ju Lin , Janna Maranas

Tuesday, March 22, 2011 10:36AM - 10:48AM [H42.00010: Decoupling Between Ionic Conductivity and Segmental Dynamics in Polymers](#)
Alexander Agapov , Alexei Sokolov

Tuesday, March 22, 2011 10:48AM - 11:00AM [H42.00011: Molecular dynamics simulations of ionic aggregates in a coarse-grained ionomer melt](#)
Lisa Hall , Mark Stevens , Amalie Frischknecht

Session H43: Focus Session: Thin Film Block Copolymers II

Sponsoring Units: DPOLY

Chair: Ting Xu, University of California, Berkeley

Room: A306/307

- Tuesday, March 22, 2011
8:00AM - 8:36AM [H43.00001: Polymer Physics Prize Break](#)
Invited Speaker:
- Tuesday, March 22, 2011
8:36AM - 9:12AM [H43.00002: Directed self-assembly of Si-containing block copolymer thin films in topographical templates](#)
Invited Speaker: Caroline Ross
- Tuesday, March 22, 2011
9:12AM - 9:24AM [H43.00003: Thermal Manipulation of Block Copolymer Morphology by Focused Laser Spike \(FLaSk\) Annealing](#)
Jonathan Singer , Kevin Gotrik , Steven Kooi , Caroline Ross , Edwin Thomas
- Tuesday, March 22, 2011
9:24AM - 9:36AM [H43.00004: Tunable Cosolvent Annealing Affects on Block Copolymer Morphology](#)
Kevin Gotrik , Jeong Gon Son , Adam Hannon , Alfredo Alexander-Katz , Caroline Ross
- Tuesday, March 22, 2011
9:36AM - 9:48AM [H43.00005: Annealing Techniques for Obtaining Ordered Morphologies in Poly\(methacrylic acid\)-Poly\(methyl methacrylate\) Diblock Copolymer Thin Films](#)
Yan Sun , Kevin Henderson , Zhang Jiang , Joseph Strzalka , Jin Wang , Kenneth Shull
- Tuesday, March 22, 2011
9:48AM - 10:00AM [H43.00006: High-Speed Block Copolymer Self-Assembly under Ambient Conditions](#)
Dae Up Ahn , Yifu Ding
- Tuesday, March 22, 2011
10:00AM - 10:12AM [H43.00007: Directed self-assembly with density multiplication of block copolymer via controlled solvent annealing](#)
Mikihito Takenaka , Hiroshi Yoshida , Yasuhiko Tada , Teruaki Hayakawa , Yoshihito Ishida , Hirokazu Hasegawa , Go Sakaguchi , Kinichiro Yamaguchi
- Tuesday, March 22, 2011
10:12AM - 10:24AM [H43.00008: Temperature Gradient effects in Directed Assembly of Block Copolymer Films via Cold Zone Annealing](#)
Gurpreet Singh , Manish Kulkarni , Kevin Yager , Brian Berry , Alamgir Karim
- Tuesday, March 22, 2011
10:24AM - 10:36AM [H43.00009: The dynamics of lamellar re-orientation in free-standing diblock copolymer films: flipping the morphology from edge-on to flat-on](#)
Robert D. Peters , Kari Dalnoki-Veress
- Tuesday, March 22, 2011
10:36AM - 10:48AM [H43.00010: New approaches to directing self-assembly and alignment of block copolymer](#)
Hanqiong Hu , Pawel Majewski , Chinedum Osuji

- Tuesday, March 22, 2011
10:48AM - 11:00AM [H43.00011: A novel approach to achieve perpendicular long range order alignment in lamella PS-b-PEO system](#)
Parvaneh Mokarian-Tabari , Timothy W. Collins , Justin D. Holmes , Michael A. Morris

Session H44: Surfaces, Interfaces, and Polymer Thin Films I

Sponsoring Units: DPOLY

Chair: S. Michael Kilbey II, Oak Ridge National Laboratory/University of Tennessee

Room: A309

- Tuesday, March 22, 2011
8:00AM - 8:36AM [H44.00001: Polymer Physics Prize Break](#)
Invited Speaker:
- Tuesday, March 22, 2011
8:36AM - 8:48AM [H44.00002: Diffusion and Filtration Properties of Self-assembled Close-packed Nanocrystal Membranes](#)
Jinbo He , Xiao-Min Lin , Lela Vukovic , Henry Chan , Petr Kral , Heinrich Jaeger
- Tuesday, March 22, 2011
8:48AM - 9:00AM [H44.00003: Diffusion of Small Penetrants in Polybutadienes](#)
Ahmed E. Ismail , Flint Pierce , Gary S. Grest
- Tuesday, March 22, 2011
9:00AM - 9:12AM [H44.00004: Control dispersion of water in thin films of semi-fluorinated polymer/POSS nanocomposites](#)
Dilru Ratnaweera , Dvora Perahia , Manish Dubey , Jaroslaw Majewski
- Tuesday, March 22, 2011
9:12AM - 9:24AM [H44.00005: Water Desorption from Ferroelectric and Dipole-Oriented Polymers](#)
Carolina Ilie , Lillie Ghobrial , Gregory Maslak , Mark Stewart , Michael Evans , Luis G. Rosa , Peter A. Dowben
- Tuesday, March 22, 2011
9:24AM - 9:36AM [H44.00006: Role of Diffusion in Scaling of Polymer Chain Aggregates Found in Vapor Deposition Polymerization](#)
Sairam Tangirala , David Landau
- Tuesday, March 22, 2011
9:36AM - 9:48AM [H44.00007: Impact of solid surfaces on structure and dynamics of polymer melts](#)
Sulivan Vianna , Werner Steffen , Karen Johnston , Vagelis Harmandaris , Hans-Juergen Butt , Hatice Duran
- Tuesday, March 22, 2011
9:48AM - 10:00AM [H44.00008: Structure and dynamics of dense polymer chains in 2D](#)
Hendrik Meyer , Joachim P Wittmer , Albert Johnner , Jorg Baschnagel
- Tuesday, March 22, 2011
10:00AM - 10:12AM [H44.00009: Dynamic surface tension effects from molecular dynamics simulations](#)
Alex Lukyanov
- Tuesday, March 22, 2011
10:12AM - 10:24AM [H44.00010: Hierarchical roughness of sticky and non-sticky superhydrophobic surfaces](#)
Muhammad Akram Raza , Stefan Kooij , Arend van Silfhout , Harold Zandvliet , Bene Poelsema
- Tuesday, March 22, 2011
10:24AM - 10:36AM [H44.00011: Alkane Self Assembling](#)
Tomas Corrales , Pia Homm , Piero Ferrari , Maria Jose Retamal , Valeria del Campo , Ulrich G. Volkmann
- Tuesday, March 22, 2011
10:36AM - 10:48AM [H44.00012: A Thermodynamic Treatment of Polymer Thin Film Glasses](#)
Ronald White , Jane Lipson

Tuesday, March 22, 2011 [H44.00013: Non-equilibrium behavior of spin-cast films](#)
10:48AM - 11:00AM Katherine Thomas

Session J4: Interactions between Pore Forming Peptides and Membranes

Sponsoring Units: DPOLY DBP
Chair: Gerard Wong, University of California, Los Angeles
Room: Ballroom A4

- Tuesday, March 22, 2011 11:15AM - 11:51AM [J4.00001: Membrane Disruption Mechanism by Antimicrobial Peptides](#)
Invited Speaker: Ka Yee C. Lee
- Tuesday, March 22, 2011 11:51AM - 12:27PM [J4.00002: Deconstruction of biophysical function in the HIV fusion peptide](#)
Invited Speaker: Dennis Bong
- Tuesday, March 22, 2011 12:27PM - 1:03PM [J4.00003: Relation between amino acid sequence and peptide-induced membrane curvature](#)
Invited Speaker: Gerard Wong
- Tuesday, March 22, 2011 1:03PM - 1:39PM [J4.00004: Structural Studies of Biological Solids Using NMR](#)
Invited Speaker: Ayyalusamy Ramamoorthy
- Tuesday, March 22, 2011 1:39PM - 2:15PM [J4.00005: How antimicrobial peptides disrupt lipid bilayers?](#)
Invited Speaker: Durba Sengupta

Session J41: Focus Session: Polymers for Energy Storage and Conversion – Structure in Organic Semiconductor Blends

Sponsoring Units: DMP DPOLY GERA
Chair: Enrique Gomez, Pennsylvania State University
Room: A115/117

- Tuesday, March 22, 2011 11:15AM - 11:51AM [J41.00001: Organic devices. New perspectives provided from soft x-ray characterization](#)
Invited Speaker: Chris McNeill
- Tuesday, March 22, 2011 11:51AM - 12:03PM [J41.00002: Systematic Multiscale Modeling of Polymers](#)
Roland Faller , David Huang , Beste Bayramoglu , Adam Moule
- Tuesday, March 22, 2011 12:03PM - 12:15PM [J41.00003: Exploiting solvent additives to introduce processability to organic solar cells](#)
James Rogers , Kristin Schmidt , Michael Toney , Guillermo Bazan , Edward Kramer
- Tuesday, March 22, 2011 12:15PM - 12:27PM [J41.00004: Kinetics of Structure Formation in Polymer-Fullerene Solutions for Organic Photovoltaics](#)
Margaret Sobkowicz , Ronald Jones , R. Joseph Kline , Dean DeLongchamp
- Tuesday, March 22, 2011 12:27PM - 12:39PM [J41.00005: Molecular-Scale and Nanoscale Morphology of P3HT:PCBM Bulk Heterojunctions: Energy-Filtered TEM and Low-Dose HREM](#)
Lawrence Drummy , Robert Davis , Diana Moore , Michael Durstock , Richard Vaia , Julia Hsu
- Tuesday, March 22, 2011 12:39PM - 12:51PM [J41.00006: Neutron Scattering Provides a New Model for Optimal Morphologies in Organic Photovoltaics: Rivers and Streams](#)
Mark Dadmun , Nathan Henry , Wen Yin , Kai Xiao , John Ankner
- Tuesday, March 22, 2011 12:51PM - 1:03PM [J41.00007: Organic Photovoltaic Interfaces: Back Contact Study](#)
Brett Guralnick , Michael Mackay , Raul Lobo
- Tuesday, March 22, 2011 1:03PM - 1:15PM [J41.00008: Long-range Order in Self-assembled Poly\(3-alkylthiophene\)-Diblock Copolymers](#)
Victor Ho , Bryan Boudouris , Rachel Segalman
- Tuesday, March 22, 2011 1:15PM - 1:27PM [J41.00009: P3HT-based copolymers as interfacial compatibilizers in P3HT/PCBM system](#)
S. Michael Kilbey II , Jihua Chen , Xiang Yu , Kai Xiao , Mark Dadmun , Deanna Pickel , Bobby Sumpter
- Tuesday, March 22, 2011 1:27PM - 1:39PM [J41.00010: Cooperative Assembly of Hydrogen-bonded Block Copolythiophenes/Fullerene Blends for Photovoltaic Devices](#)
James J. Watkins , Ying Lin , Jung Ah Lim , Qingshuo Wei , Alejandro L. Briseno

- Tuesday, March 22, 2011 1:39PM - 1:51PM [J41.00011: Enhanced Photovoltaic Performance of All-Conjugated Poly\(3-alkylthiophene\) Diblock Copolymers](#)
Ming He , Wei Han , Jing Ge , Yuliang Yang , Feng Qiu , Zhiqun Lin
- Tuesday, March 22, 2011 1:51PM - 2:03PM [J41.00012: Morphological Characterization of Low-Bandgap Crystalline Polymer:PCBM Bulk Heterojunction Solar Cells](#)
Haiyun Lu , Thomas Russell
- Tuesday, March 22, 2011 2:03PM - 2:15PM [J41.00013: Donor-acceptor conjugated polymers used as electron acceptors in bulk heterojunction photovoltaics](#)
Christopher Bailey , Barney Taylor , Jianguo Mei , John Reynolds , John Henderson , Benjamin Leever , Michael Durstock

Session J42: Padden Award Symposium

Sponsoring Units: DPOLY
Chair: John Torkelson, Northwestern University
Room: A302/303

- Tuesday, March 22, 2011 11:15AM - 11:27AM [J42.00001: Directing crystallization of organic semiconductors around corners in solution-processed thin films](#)
Stephanie S. Lee , Samuel Tang , Marsha Loth , John E. Anthony , Detlef M. Smilgies , Arthur Woll , Yueh-Lin Loo
- Tuesday, March 22, 2011 11:27AM - 11:39AM [J42.00002: Solid-State Structure and Crystallization in Double-Crystalline Diblock Copolymers](#)
Sheng Li , Sasha Myers , Richard Register
- Tuesday, March 22, 2011 11:39AM - 11:51AM [J42.00003: Electric Field Induced Ordering of a Battery Electrolyte](#)
Scott Mullin , Nitash Balsara
- Tuesday, March 22, 2011 11:51AM - 12:03PM [J42.00004: Gradient Solvent Vapor Annealing of Thin Films](#)
Julie Albert , Timothy Bogart , Ronald Lewis , Thomas Epps
- Tuesday, March 22, 2011 12:03PM - 12:15PM [J42.00005: Injectable solid peptide hydrogel: shear-thinning and instant recovery](#)
Congqi Yan , Joel Schneider , Darrin Pochan
- Tuesday, March 22, 2011 12:15PM - 12:27PM [J42.00006: Transport properties of mechanically deformed polymer networks](#)
Hassan Masoud , Alexander Alexeev
- Tuesday, March 22, 2011 12:27PM - 12:39PM [J42.00007: Numerical coarse-graining of polymer field theories](#)
Michael Villet , Glenn Fredrickson
- Tuesday, March 22, 2011 12:39PM - 12:51PM [J42.00008: Molecular mobility and cation conduction in sulfonated polyester copolymer ionomers](#)
Gregory Tudryn , Daniel King , Michael O'Reilly , Karen Winey , Ralph Colby
- Tuesday, March 22, 2011 12:51PM - 1:03PM [J42.00009: Strain Localization and Sliding Friction in Physically Associating Networks](#)
Kendra A. Erk , Kenneth R. Shull

Session J43: Physics of Copolymers II

Sponsoring Units: DPOLY

Chair: Bradley Olsen, Massachusetts Institute of Technology

Room: A306/307

- Tuesday, March 22, 2011 11:15AM - 11:27AM [J43.00001: Coil-globule Transitions in Model Bioinspired Polymers](#)
Hannah Murnen , Adrienne Rosales , Ronald Zuckermann , Rachel Segalman
- Tuesday, March 22, 2011 11:27AM - 11:39AM [J43.00002: Modeling the Heat Capacity of Spider Silk Inspired Di-block Copolymers](#)
W. Huang , S. Krishnaji , D. Kaplan , P. Cebe
- Tuesday, March 22, 2011 11:39AM - 11:51AM [J43.00003: Effect of chain shape and monomer sequence on self-assembly of polypeptoid-polystyrene block copolymers](#)
Adrienne Rosales , Hannah Murnen , Ronald Zuckermann , Rachel Segalman
- Tuesday, March 22, 2011 11:51AM - 12:03PM [J43.00004: Self-Assembly of Globular Protein-Polymer Diblock Copolymers](#)
C.S. Thomas , B.D. Olsen
- Tuesday, March 22, 2011 12:03PM - 12:15PM [J43.00005: Phase Behavior and Significantly Enhanced Toughness in Polylactide Graft Copolymers](#)
Megan Robertson , Grayce Theyo , Feng Jing , Marc Hillmyer
- Tuesday, March 22, 2011 12:15PM - 12:27PM [J43.00006: Thermoresponsive Polymers and Block Copolymers in Ionic Liquids](#)
Hau-Nan Lee , Zhifeng Bai , Nakisha Newell , Timothy Lodge
- Tuesday, March 22, 2011 12:27PM - 12:39PM [J43.00007: Effect of homopolymer additives on texture evolution in block copolymer composites](#)
Hyung Ju Ryu , Jane Sun , Michael Bockstaller
- Tuesday, March 22, 2011 12:39PM - 12:51PM [J43.00008: Influence of Chemical Heterogeneity on the Viscoelastic Properties of Polystyrene-b-Poly\(alkyl methacrylate\) Baroplastics](#)
Asem Abdulahad , Chang Y. Ryu
- Tuesday, March 22, 2011 12:51PM - 1:03PM [J43.00009: Effects of B Segment Polydispersity on ABA Triblock Copolymer Phase Behavior](#)
Mahesh Mahanthappa , Joan Schroeder , Andrew Schmitt , Adam Schmitt , Kyuhyun Im
- Tuesday, March 22, 2011 1:03PM - 1:15PM [J43.00010: Elucidation of an Unusual Pull Out Mechanism for the Additive-Driven Assembly of Poly\(ethylene oxide\)-Poly\(propylene oxide\)-Poly\(ethylene oxide\)Tri-block Copolymers](#)
Vikram Daga , Hua-Gen Peng , Ying Lin , Wen-Li Wu , Christopher Soles , James Watkins
- Tuesday, March 22, 2011 1:15PM - 1:27PM [J43.00011: Influence of thermal fluctuations on nucleation in a diblock copolymer melt](#)
Russell Spencer , Robert Wickham

- Tuesday, March 22, 2011 1:27PM - 1:39PM [J43.00012: Disorder-to-Order Transition Induced by Alkyne/Azide Click Chemistry in Diblock Copolymer Thin Films](#)
Xinyu Wei , Wei Chen , Joseph Strzalka , Thomas Russell
- Tuesday, March 22, 2011 1:39PM - 1:51PM [J43.00013: Correlation in SANS \$\chi\$ upon heating and pressurization for a diblock copolymer](#)
Junhan Cho , Jumi Lee , Du Yeol Ryu
- Tuesday, March 22, 2011 1:51PM - 2:03PM [J43.00014: Rouse and Entangled Dynamics in Coarse Grain Polymeric Systems](#)
Abelardo Ramirez-Hernandez , Darin Pike , Francois Detcheverry , Juan de Pablo
- Tuesday, March 22, 2011 2:03PM - 2:15PM [J43.00015: Facile Synthesis and Characterization of Well-Defined Rod-Coil Block Copolymers Composed of Regioregular Poly\(3-hexyl thiophene\)](#)
Hong Chul Moon , Jin Kon Kim

Session J44: Focus Session: Kinetic Control of Solution Assemblies

Sponsoring Units: DPOLY DFD
Chair: Margarita Herrera-Alonso, Johns Hopkins University
Room: A309

Tuesday, March 22, 2011 11:15AM - 11:27AM	J44.00001: Helical Assembly of Janus Particles Jonathan Whitmer , Qian Chen , Shan Jiang , Sung Chul Bae , Steve Granick , Erik Luijten
Tuesday, March 22, 2011 11:27AM - 11:39AM	J44.00002: Nucleation of Nanoparticle Superclusters from Solution Siddique J. Khan , C.M. Sorensen , A. Chakrabarti
Tuesday, March 22, 2011 11:39AM - 11:51AM	J44.00003: Directing the self-assembly of polyhedral silver nanocrystals Michael Gruenwald , Joel Henzie , Asaph Widmer-Cooper , Phillip Geissler , Peidong Yang
Tuesday, March 22, 2011 11:51AM - 12:27PM	J44.00004: Nanoscale systems assembled with DNA: from principles to rational design Invited Speaker: Oleg Gang
Tuesday, March 22, 2011 12:27PM - 12:39PM	J44.00005: A direct comparison of crystallization transitions and glassy dynamics in polymers and colloids Robert S. Hoy , Corey S. O'Hern
Tuesday, March 22, 2011 12:39PM - 12:51PM	J44.00006: Dynamics of Fatty Acid Single Molecule Islands on Metal-exchanged Mica Mourad Chennaoui , Aleks Ponjavic , Janet Wong
Tuesday, March 22, 2011 12:51PM - 1:27PM	J44.00007: Multicompartment and multigeometry nanostructures with block copolymers and kinetic control Invited Speaker: Darrin Pochan
Tuesday, March 22, 2011 1:27PM - 1:39PM	J44.00008: Determination of critical micelle concentrations in ionic liquid/block copolymer systems Michelle Mok , Timothy Lodge
Tuesday, March 22, 2011 1:39PM - 1:51PM	J44.00009: Hierarchical Helical-Assembly of Conjugated Poly(3-hexylthiophene)-<i>b</i>S-poly(3-triethylene glycol-thiophene) Diblock Copolymers Eunji Lee , Brenton Hammer , Todd Emrick , Ryan C. Hayward
Tuesday, March 22, 2011 1:51PM - 2:03PM	J44.00010: Molecular simulation study of random block copolymer films prepared through solvent evaporation Dmitry Bedrov , Keith Hambrecht , Grant Smith
Tuesday, March 22, 2011 2:03PM - 2:15PM	J44.00011: Blood Clotting-Inspired Control of Single-Chain Molecules in Flows Charles Sing , Alfredo Alexander-Katz

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Session L42: Dillon Medal Symposium

Sponsoring Units: DPOLY
Chair: Spiros Anastasiadis, IESL- FORTH
Room: A302/303

Tuesday, March 22, 2011 2:30PM - 3:06PM	L42.00001: John H. Dillon Medal Talk: Protein Fibrils, Polymer Physics: Encounter at the Nanoscale Invited Speaker: Raffaele Mezzenga
Tuesday, March 22, 2011 3:06PM - 3:18PM	L42.00002: Interdiffusion in bilayers of PCBM fullerene and poly(3-hexyl thiophene) P3HT Edward J. Kramer , Neal D. Treat , Michael A. Brady , Michael F. Toney , Michael L. Chabinyc , Craig J. Hawker
Tuesday, March 22, 2011 3:18PM - 3:30PM	L42.00003: Geroges Hadziioannou
Tuesday, March 22, 2011 3:30PM - 3:42PM	L42.00004: Coarse grained polystyrene simulations: Static and dynamic properties Kurt Kremer
Tuesday, March 22, 2011 3:42PM - 3:54PM	L42.00005: Effects of Side Chains on the Self-Assembly and Photovoltaic Properties of Conjugated Polymer Semiconductors Samson Jenekhe
Tuesday, March 22, 2011 3:54PM - 4:06PM	L42.00006: Nacre-Mimetic Composites via Single-Step Self-Assemblies of Polymer-Coated Colloids Olli Ikkala
Tuesday, March 22, 2011 4:06PM - 4:18PM	L42.00007: On the Crystallinity and Chain Conformation in PEO / Layered Silicate Nanocomposites Spiros H. Anastasiadis , K. Chrissopoulou , S. Bollas , K. Andrikopoulos , S. Fotiadou , D. Christofilos , G.A. Voyiatzis
Tuesday, March 22, 2011 4:18PM - 4:30PM	L42.00008: Formation and application of functional coatings on synthetic fibers Kiran Goli , Ali Ozcam , Kristen Roskov , Richard Spontak , Orlando Rojas , Jan Genzer
Tuesday, March 22, 2011 4:30PM - 4:42PM	L42.00009: Peptide assembly for nanoscale control of materials Darrin Pochan
Tuesday, March 22, 2011 4:42PM - 4:54PM	L42.00010: Food Materials - a natural playground for soft matter physics Adam Burbidge
Tuesday, March 22, 2011 4:54PM - 5:06PM	L42.00011: Assembly of conjugated-polymer-based nanostructures driven by solution-state crystallization Ryan Hayward , Felicia Bokel , Eunji Lee , Brent Hammer , P.K. Sudeep , Emily Pentzer , Todd Emrick
Tuesday, March 22, 2011 5:06PM - 5:18PM	L42.00012: Temperature responsive hydrogel nanofibers and nanoparticles Janne Ruokolainen

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Tuesday, March 22, 2011 [L42.00013: Orientation and Order in High-Efficiency Polymer Solar Cell Active Layers](#)
5:18PM - 5:30PM
M.R. Hammond , R.J. Kline , L.J. Richter , C.L. Soles , D.M. DeLongchamp , T. Xu , L. Yu , M.F. Toney

Session L43: Focus Session: Polymers for Energy Storage and Conversion – Emerging Applications

Sponsoring Units: DMP DPOLY GERA
Chair: Lou Madsen, Virginia Polytechnic Institute and State University
Room: A306/307

- Tuesday, March 22, 2011 [L43.00001: Dillon Medal Break](#)
2:30PM - 3:06PM
Invited Speaker:
- Tuesday, March 22, 2011 [L43.00002: Block copolymers exhibiting simultaneous electronic and ionic conduction for use in lithium battery electrodes](#)
3:06PM - 3:18PM
Anna Javier , Shrayesh Patel , Daniel Hallinan , Nitash Balsara
- Tuesday, March 22, 2011 [L43.00003: All Solid State Rechargeable Lithium Batteries using Block Copolymers](#)
3:18PM - 3:30PM
Daniel Hallinan , Nitash Balsara
- Tuesday, March 22, 2011 [L43.00004: Solubility of Lithium Polysulfides in a Block Copolymer Electrolyte for Lithium/Sulfur Batteries](#)
3:30PM - 3:42PM
Alexander Teran , Nitash Balsara
- Tuesday, March 22, 2011 [L43.00005: Solution Processable Hybrid Polymer-Inorganic Thermoelectric Materials](#)
3:42PM - 3:54PM
Shannon Yee , Nelson Coates , Kevin See , Jeffrey Urban , Rachel Segalman
- Tuesday, March 22, 2011 [L43.00006: Microscopic mechanism of energy storage in PVDF-CTFE from ab-initio calculations](#)
3:54PM - 4:06PM
V. Ranjan , Marco Buongiorno Nardelli , J. Bernholc
- Tuesday, March 22, 2011 [L43.00007: Nanotube Forests for Electrochemical Energy Storage from Electrostatic Assembly](#)
4:06PM - 4:18PM
Lin Shao , Woo-Sik Jang , Jodie Lutkenhaus
- Tuesday, March 22, 2011 [L43.00008: Block-Copolymer Lithium Battery Electrolytes](#)
4:18PM - 4:54PM
Invited Speaker: Hany Eitouni
- Tuesday, March 22, 2011 [L43.00009: Effect of Nanoscale Morphology on Selective Ethanol Transport through Block Copolymer Membranes](#)
4:54PM - 5:06PM
Ashish Jha , Nitash Balsara

Session L44: Surfaces, Interfaces, and Polymer Thin Films II

Sponsoring Units: DPOLY

Chair: Russell Thompson, University of Waterloo

Room: A309

- Tuesday, March 22, 2011
2:30PM - 3:06PM [L44.00001: Dillon Medal Break](#)
Invited Speaker:
- Tuesday, March 22, 2011
3:06PM - 3:18PM [L44.00002: Confinement and elastic modulus in polymer nanofibers](#)
Eyal Zussman , Michael Burman , Arkadii Arinstein
- Tuesday, March 22, 2011
3:18PM - 3:30PM [L44.00003: Size-dependent behavior of electrospun polymer nanofibers under small deformation](#)
Arkadii Arinstein , Eyal Zussman
- Tuesday, March 22, 2011
3:30PM - 3:42PM [L44.00004: Near Edge X-ray Absorption Fine Structure Studies of Cu Ion-Containing PAMAMOS Dendrimer Networks](#)
Robert Bubeck , Petar Dvornic , Daniel Fischer
- Tuesday, March 22, 2011
3:42PM - 3:54PM [L44.00005: Ionic conduction at liquid-liquid interfaces](#)
Francisco Solis , Monica Olvera de la Cruz
- Tuesday, March 22, 2011
3:54PM - 4:06PM [L44.00006: Vapor-Phase Free Radical Polymerization in the Presence of Ionic Liquids](#)
Malancha Gupta
- Tuesday, March 22, 2011
4:06PM - 4:18PM [L44.00007: Molecular orientation and photo-degradation of PTCDA films on TiO₂\(110\)](#)
Orhan Kizilkaya , Eizi Morikawa , Phillip Sprunger
- Tuesday, March 22, 2011
4:18PM - 4:30PM [L44.00008: Functionalization dependence of the electron beam sensitivity of bridged calix\[6\]arenes](#)
Gregory Spencer , Daniel Ralls , Anup Bandyopadhyay , Michael Blanda
- Tuesday, March 22, 2011
4:30PM - 4:42PM [L44.00009: Surface Segregation of Small Macrocyclic](#)
Shih-Fan Wang , Xiaopeng Li , Renfeng Hu , Bulent Akgun , Rebecca Agapov , Chrys Wesdemiotis , David T. Wu , Mark D. Foster
- Tuesday, March 22, 2011
4:42PM - 4:54PM [L44.00010: Structure Formation and Transition Mechanism in Two-Dimensional Molecular Chiral Phases](#)
Ye-liang Wang , Bing Yang , Nan Jiang , Huan-yao Cun , Shi-xuan Du , Yue Wang , Karl-Heinz Ernst , Hong-jun Gao
- Tuesday, March 22, 2011
4:54PM - 5:06PM [L44.00011: Formation and Collapse of Biodegradable Polymer Monolayers at the Air-Water Interface](#)
Hae-Woong Park , Kimberly Ohn , You-Yeon Won
- Tuesday, March 22, 2011
5:06PM - 5:18PM [L44.00012: 8CB-Langmuir Layer at air/water interface: Line Tension vs. Dipolar Repulsion](#)
Pritam Mandal , Andrew Bernoff , Adin Mann , James Alexander , Elizabeth Mann

Tuesday, March 22, 2011 [L44.00013: Origins of the Failure of Classical Nucleation Theory for Nanocellular Polymer Foams](#)
5:18PM - 5:30PM
Russell Thompson , Yeongyoon Kim

Mar 22 2011 5:45PM, Tuesday

DPOLY Business Meeting Sponsor: DPOLY Room: A302/303

Session P4: Kinetic Pathways to Assembly of Polymers, Particles and Biomolecules

Sponsoring Units: DPOLY
Chair: Ryan Hayward, University of Massachusetts
Room: *Ballroom A4*

Wednesday, March 23, 2011 8:00AM - 8:36AM	P4.00001: Equilibration and metastability in block copolymer micelles Invited Speaker: Timothy Lodge
Wednesday, March 23, 2011 8:36AM - 9:12AM	P4.00002: Uncovering the Biological Identity at the NanoScale: Fundamental principles governing interactions between nanoparticles and living organisms Invited Speaker: Kenneth Dawson
Wednesday, March 23, 2011 9:12AM - 9:48AM	P4.00003: Nanoparticle formation by block copolymer directed rapid precipitations---Flash NanoPrecipitation Invited Speaker: Robert Prud'homme
Wednesday, March 23, 2011 9:48AM - 10:24AM	P4.00004: Dynamic and Kinetic Assembly Studies of an Icosahedral Virus Capsid Invited Speaker: Kelly Lee
Wednesday, March 23, 2011 10:24AM - 11:00AM	P4.00005: Soft matter self-assembly driven by specific and nonspecific attractions: dynamic pathways and the Ostwald rule of stages Invited Speaker: Stephen Whitlam

Session P40: Polymer Melts & Solutions

Sponsoring Units: DPOLY
Chair: Costantino Creton, ESPCI, France
Room: *A122/123*

Wednesday, March 23, 2011 8:00AM - 8:12AM	P40.00001: Radical-cured block copolymer modified thermosets Erica Redline , Lorraine Francis , Frank Bates
Wednesday, March 23, 2011 8:12AM - 8:24AM	P40.00002: Cavitation in Filled Styrene-butadiene Rubber: A Real Time SAXS Observation Huan Zhang , Arthur K. Scholz , Fabien Vion-Loisel , Edward J. Kramer , Costantino Creton
Wednesday, March 23, 2011 8:24AM - 8:36AM	P40.00003: Why is the tube model inapplicable for entangled polymer dynamics at large deformation Shi-Qing Wang , Yangyang Wang
Wednesday, March 23, 2011 8:36AM - 8:48AM	P40.00004: Non-Gaussian Stretching Behavior of Entangled Polymers Yangyang Wang , Shi-Qing Wang
Wednesday, March 23, 2011 8:48AM - 9:00AM	P40.00005: Parameters of slip-springs model of polymer entanglement from the maximum likelihood principle Timothy Palmer , Alexei Likhtman , Jorge Ramirez , Mark Matsen
Wednesday, March 23, 2011 9:00AM - 9:12AM	P40.00006: Segmental orientation dynamics in bidisperse entangled linear polymer melts Zuowei Wang , Jing Cao , Alexei Likhtman , Ronald Larson
Wednesday, March 23, 2011 9:12AM - 9:24AM	P40.00007: Simulations of polymer melts modeled as chains of interacting soft-colloids Anthony Clark , Marina Guenza
Wednesday, March 23, 2011 9:24AM - 9:36AM	P40.00008: Renormalized dynamics of overdamped driven elastic media Jonathan Landy , Alex J. Levine
Wednesday, March 23, 2011 9:36AM - 9:48AM	P40.00009: Thermodynamic Scaling of Polymer Dynamics versus Shifting by T-Tg Jiaxi Guo , Sindee Simon

- Wednesday, March 23, 2011 9:48AM - 10:00AM [P40.00010: The linear rheological responses of dense branched brush polymers with different side chain lengths and structures](#)
Miao Hu , Gregory McKenna , Yan Xia , Chris Daeffler , Andrew Boydston , Robert Grubbs , Julia Kornfield
- Wednesday, March 23, 2011 10:00AM - 10:12AM [P40.00011: Analytical rheology of metallocene-catalyzed polyethylenes](#)
Sachin Shanbhag , Arsia Takeh
- Wednesday, March 23, 2011 10:12AM - 10:24AM [P40.00012: Pressure-Volume-Temperature Behavior of Hyperbranched Polyols: Experiment and Modelling](#)
Mukul Kaushik , Sergei Nazarenko , Brian Olson
- Wednesday, March 23, 2011 10:24AM - 10:36AM [P40.00013: Influence of the Hofmeister Series on Lower Critical Solution Temperature \(LCST\) Polymers](#)
Ryan Toomey , Leena Patra
- Wednesday, March 23, 2011 10:36AM - 10:48AM [P40.00014: Ionic Liquids for the Imaging of Wet Polymer Morphology](#)
David Hoagland , John Harner , Malvika Bihari
- Wednesday, March 23, 2011 10:48AM - 11:00AM [P40.00015: Biaxial Strain Testing of Extremely Soft Gels](#)
Kenji Urayama , Yohsuke Bitoh , Toshikazu Takigawa

Session P42: Focus Session: Organic Electronics and Photonics -- Organic Photovoltaic Devices

Sponsoring Units: DMP DPOLY
Chair: Russell Holmes, University of Minnesota
Room: A302/303

- Wednesday, March 23, 2011 8:00AM - 8:12AM [P42.00001: Increasing Transport Efficiencies of Polymer Based Solar Cells by Electrophoresis](#)
Terrence Wong
- Wednesday, March 23, 2011 8:12AM - 8:24AM [P42.00002: Transparent Carbon Nanotube layers as cathodes in OLEDs](#)
Alexios Papadimitratos , Albert Nasibulin , Esko Kauppinen , Anvar Zakhidov
- Wednesday, March 23, 2011 8:24AM - 8:36AM [P42.00003: Nanoscale electro-optical measurements of photovoltaic materials using scanning probe microscopy](#)
Nikolai Zhitenev , Behrang Hamadani , Paul Haney , Suyong Jung , Hua Xu
- Wednesday, March 23, 2011 8:36AM - 9:12AM [P42.00004: Organic and hybrid organic-inorganic photovoltaic cells](#)
Invited Speaker: Michael McGehee
- Wednesday, March 23, 2011 9:12AM - 9:24AM [P42.00005: Studying recombination in the bulk heterojunction solar cells using lateral solar cell geometries](#)
Christopher Lombardo , Eric Danielson , Ananth Dodabalapur
- Wednesday, March 23, 2011 9:24AM - 9:36AM [P42.00006: Scaling behavior and transport in bulk heterojunction materials](#)
Eric Danielson , Christopher Lombardo , Ananth Dodabalapur
- Wednesday, March 23, 2011 9:36AM - 9:48AM [P42.00007: Charge Carrier Lifetime in Poly\(3-hexylthiophene\)/ZnO Nanowire Array Based Photovoltaic Devices](#)
Lee Butler , William Baughman , Shawn David Wilbert , Nick Harris , Gang Shen , Nabil Dawahre , Joseph Brewer , Patrick Kung , Seongsin Margaret Kim
- Wednesday, March 23, 2011 9:48AM - 10:00AM [P42.00008: Effect of C_S on the ZnO-nanorod surface in organic-inorganic hybrid photovoltaics](#)
Fang-Chi Hsu , Chiang-Ting Chen , Shang-Wei Kuan , Yang-Fang Chen
- Wednesday, March 23, 2011 10:00AM - 10:12AM [P42.00009: Spectral aspects of cavity tuned absorption in organic photovoltaics](#)
Brent Valle , Stephen Loser , Jonathan Hennek , Kenneth D. Singer , James Andrews , Tobin Marks

- Wednesday, March 23, 2011 10:12AM - 10:24AM [P42.00010: Probing the Thickness Limits of Organic Solar Cells using Monte Carlo Simulation](#)
Mike Heiber , Ali Dhinojwala
- Wednesday, March 23, 2011 10:24AM - 10:36AM [P42.00011: Dehydration assisted nanoimprint of PEDOT:PSS nanogratings to improve organic photovoltaics](#)
Yi Yang , Koyau Lee , Kamil Mielczarek , Walter Hu , Anvar Zakhidov
- Wednesday, March 23, 2011 10:36AM - 10:48AM [P42.00012: High-performance inverted polymer solar cells with ITO coated with a thin layer of oxide for electron collection](#)
Jianyong Ouyang , Hongmei Zhang

Session P43: Focus Session: Thin Film Block Copolymers III

Sponsoring Units: DPOLY
Chair: Mark Stoykovich, University of Colorado at Boulder
Room: A306/307

- Wednesday, March 23, 2011 8:00AM - 8:12AM [P43.00001: Effect of Well-defined Roughness on the Microdomain Orientation of Block Copolymer Thin Films](#)
Kookheon Char , Youngwoo Choo , Hyo Seon Suh , Taehee Kim
- Wednesday, March 23, 2011 8:12AM - 8:24AM [P43.00002: Multiple Replicas of Block Copolymer Thin Films from a Brushless Organosilicate Substrate](#)
Hyo Seon Suh , Hyunsik Yoon , Kookheon Char
- Wednesday, March 23, 2011 8:24AM - 8:36AM [P43.00003: Rational design of block copolymer morphologies via control of the film thickness and substrate patterning: A self consistent field study](#)
Xiangui Ye , Brian J. Edwards , Bamin Khomami
- Wednesday, March 23, 2011 8:36AM - 8:48AM [P43.00004: Utilizing low surface energy moieties to control surface composition of a polystyrene-b-poly\(2-vinylpyridine\) block copolymer](#)
Michael Dimitriou , Daniel Fischer , Craig Hawker , Edward Kramer
- Wednesday, March 23, 2011 8:48AM - 9:00AM [P43.00005: Flexible Confinement of Block Copolymer Films Between Tunable Surface Energy Elastomeric Films and Xerogel Substrates](#)
Manish Kulkarni , Gurpreet Singh , Sushil Satija , Alamgir Karim
- Wednesday, March 23, 2011 9:00AM - 9:12AM [P43.00006: Directed Assembly of Block Copolymer on Tunable Surface Energy Flexible Substrate](#)
Arzu Hayirlioglu , Alamgir Karim
- Wednesday, March 23, 2011 9:12AM - 9:24AM [P43.00007: The effect of Surface Neutrality on ODT of PS-b-PMMA films](#)
Eunhye Kim , Seunghoon Choi , Rui Guo , Du Yeol Ryu , Craig J. Hawker , Thomas P. Russell
- Wednesday, March 23, 2011 9:24AM - 9:36AM [P43.00008: Surface Affinity Effects On Confined Thin Film Block Copolymers Using Self Consistent Field Theory Modeling](#)
Adam Hannon , Alfredo Alexander-Katz , Caroline Ross
- Wednesday, March 23, 2011 9:36AM - 9:48AM [P43.00009: Stress induced topographic patterning in thin diblock copolymer films](#)
Andrew Croll , Alfred Crosby

- Wednesday, March 23, 2011 9:48AM - 10:00AM [P43.00010: Shear-induced sphere-to-cylinder transition in thin films of diblock copolymers and the role of wetting layers](#)
Alexandros Chremos , Richard Register , Paul Chaikin , Athanassios Panagiotopoulos
- Wednesday, March 23, 2011 10:00AM - 10:12AM [P43.00011: Shear alignment of standing block copolymer lamellae in thin films](#)
Saswati Pujari , Michael Keaton , Paul Chaikin , Richard Register
- Wednesday, March 23, 2011 10:12AM - 10:24AM [P43.00012: Defect generation in thin films of block copolymer cylinders: the effect of cylinder spacing and film thickness](#)
Vindhya Mishra , Edward Kramer
- Wednesday, March 23, 2011 10:24AM - 10:36AM [P43.00013: Micelle Formation of Diblock Copolymer in a Thin Film Homopolymer: a Comparison with Polymer Brush-Coated Nanoparticles](#)
Hengxi Yang , Chelsea Chen , Peter Green
- Wednesday, March 23, 2011 10:36AM - 10:48AM [P43.00014: Bicontinuous nanoporous block copolymer films prepared from a spherical-phase architecture](#)
Easan Sivaniah , Paul Zavala , Kevin Channon , Sanna Nataraj , Shaheen Al-Muhtaseb
- Wednesday, March 23, 2011 10:48AM - 11:00AM [P43.00015: Arrangement of the Microdomains of Block Copolymers Confined at Hemi-sphere Walls](#)
Du Sik Bae , Jin Kon Kim

Session P44: Focus Session: Assembly, Structure, & Instabilities in Polymer Films, Network Films, & Interfaces I

Sponsoring Units: DPOLY
Chair: Zhiqun Lin, Iowa State University
Room: A309

- Wednesday, March 23, 2011 8:00AM - 8:36AM [P44.00001: An interplay between self-organization and interfacial modification of diblock copolymers in bi-layered thin film laminates](#)
Invited Speaker: Jan Genzer
- Wednesday, March 23, 2011 8:36AM - 8:48AM [P44.00002: Formation of Nanoparticle Stripe Patterns via Flexible-Blade Flow Coating](#)
Dong Yun Lee , Hyun Suk Kim , Cassandra Parkos , Cheol Hee Lee , Todd Emrick , Alfred Crosby
- Wednesday, March 23, 2011 8:48AM - 9:00AM [P44.00003: Hierarchically Organized Structures Engineered from Controlled Evaporative Self-Assembly](#)
Zhiqun Lin , Myunghwan Byun , Wei Han , Ned Bowden
- Wednesday, March 23, 2011 9:00AM - 9:12AM [P44.00004: Wrinkling instabilities in compressed networks of polymer supported single-wall carbon nanotubes](#)
John Harris , Swathi Iyer , Ji Yeon Huh , Jeffrey A. Fagan , Jun Young Chun , Steven D. Hudson , Jan Obrzut , Christopher M. Stafford , Erik K. Hobbie
- Wednesday, March 23, 2011 9:12AM - 9:24AM [P44.00005: Confinement-Induced Molecular Stresses and Wetting Instability in Ultrathin Polymer Films](#)
Y. Chein , P.W. Lee , A.C.-M. Yang
- Wednesday, March 23, 2011 9:24AM - 9:36AM [P44.00006: Nucleation and growth of creases on swelled polymer gel surfaces](#)
Jinhwan Yoon , Jungwook Kim , Ryan Hayward
- Wednesday, March 23, 2011 9:36AM - 9:48AM [P44.00007: Effect of polymer architecture on the interfacial properties of thin films](#)
Emmanouil Glynos , Bradley Frieberg , Peter Green
- Wednesday, March 23, 2011 9:48AM - 10:00AM [P44.00008: Interfacial Effects on Pentablock Ionomer Thin Films](#)
Thusitha Etampawala , Dilru Ratnaweera , Naresh Osti , Umesh Shrestha , Dvora Perahia , Jaroslaw Majewski
- Wednesday, March 23, 2011 10:00AM - 10:12AM [P44.00009: Directed Morphology of Nanofilled Polymer Films on Flexible Substrates](#)
Diya Bandyopadhyay , Arzu Hayirlioglu , Manish Kulkarni , Alamgir Karim

Wednesday, March 23, 2011
10:12AM - 10:24AM

[P44.00010: Fiber Formation From the Melting of Free-standing Polystyrene, Ultra-thin Films: A Technique for the Investigation of Thin Film Dynamics, Rheological Properties and Confinement Effects](#)

Jeremy M. Rathfon , Robert W. Cohn , Alfred J. Crosby , Jonathan P. Rothstein , Gregory N. Tew

Wednesday, March 23, 2011
10:24AM - 10:36AM

[P44.00011: Self-Repair of Polymer Films Through Monomer Filled Ni-Zn Microcapsules](#)

Marcia Patchan , Lance Baird , Yo-Rhin Rhim , Erin LaBarre , Adam Maisano , Ryan Deacon , Jason Benkoski

Wednesday, March 23, 2011
10:36AM - 10:48AM

[P44.00012: Structural Rearrangement of Semifluorinated Diblock copolymer Thin Films Exposed to Selective Solvents](#)

Umesh Shrestha , Dvora Perahia , Stephen Clarson

Wednesday, March 23, 2011
10:48AM - 11:00AM

[P44.00013: Wetting induced instabilities in miscible polymer blends](#)

Nigel Clarke , Katherine Thomas , Ullrich Steiner , Rosa Poetes , Mihai Morariu

Monday, March 21th 2011

Session	A4.	A13.	A40.	A41.	A42.	A43.	A44.
Room	Ballroom A4	D225/226	A122/123	A115/117	A302/303	A306/307	A309
Chair	Mackay	Fernandez-Nieves	Frischknecht	Ross	Kumar	Epps	Crosby
8:00 AM	Duxbury	Lietor-Santos	Lyubimov	Sept	Benkoski	Wang	Davis
8:12 AM		Behrens	Kim		Kotrappanavar	Ullal	Cohen
8:24 AM		Chakrabarty	Botelho		Li	Kim	Sankaran
8:36 AM	Dennler	Hunter	Ollila	Wang	Vaia	Chan	Sokoloff
8:48 AM		McGorty	Greenfeld	Quint		Onses	Torres
9:00 AM		Fung	Sussman	Shin		Kim	Corte
9:12 AM	Bredas	Gratale	Qin	Henkes	Jayaraman	Kim	Chipara
9:24 AM		Conrad	Jadhao	Wang	Karim		Duki
9:36 AM		Schade	Still	Kolmakov	Xu		Sahni
9:48 AM	Russell	Kaz	Rocklin	Wu	Velankar	Liu	Keller
10:00 AM		Feng	Shin	Dutt		Muller	Hansen
10:12 AM		Pei	Nguyen	Santore		Lee	Gustafson
10:24 AM	Loos	Veen			Lin	Onikoy	Wang
10:36 AM		Song			Jang	Bosse	Forchheimer
10:48 AM		Forster		Chen	Kim	Dalnoki-Veress	Kurian

Session	B4.	B41.	B42.	B43.	B44.
Room	Ballroom A4	A115/117	A302/303	A306/307	A309
Chair	Vaia	Miller	Ganesan	Delongchamp	Pochan
11:15 AM	Ginzburg	Holten-Andersen	Yang	Kowalewski	Battaglia
11:27 AM		Chang	Laugel		
11:39 AM		Arevalo	Zhou		
11:51 AM	Xu	Pandolfi	Aryal	Berube	Beckingham
12:03 PM		Cavicchi	Lewis	Carter	Thiagarajan
12:15 PM		Qu	Gurtowski	Ruderer	Kelley
12:27 PM	Langevin	Jin	Groehn	Reese	Choi
12:39 PM		Weitekamp	Goswami	Lopez	Liu
12:51 PM		Collier	Sammalkorpi		Naidu
1:03 PM	Koberstein		Vidysagar		Han
1:15 PM			Mitra	Jiang	Alizadeh
1:27 PM		Barone	Rigglieman	Kramer	Tito
1:39 PM	Douglas	Savin	Hickey	Zhao	Spring
1:51 PM		Saijani	Pearce	Zhang	Gallow
2:03 PM		Ray	Sangoro	Zavala-Rivera	Dyer

C1.	Poster Session I	2:00pm -	5:00pm	Hall D
Zhao	Christman	Huang	Jiang	Stoykovich
Sun	Huang	Garrillo	Huang	Whitney
Koh	Zhao	Danko	Cho	Bayramoglu
Powers	Tress	Chennaoui	Rahman	Qin
Gu	Wang	Telang	Beckingham	Adhikari
Gu	Turgman-Cohen	Cong	Thiagarajan	Ahrenberg
Liu	Mounthai	Farver	Kuan	Sunghard
Sathava	Perera	Zimmerman	Christensen	Yoon
Trittschuh	Xu	Yang	Stewart-Sloan	Zong
Ozcam	Ahn	Gonzalez	Gallow	Lee
Chen	Kalan	Cabrera	Gu	Zhu
Vakhshouri	Koelsch	Kalish	Choo	Lee
Kozub	Evans	Cheng	Mahadevapuram	McCulloch
White	Soles	Georgiev	Kotrappanavar	Roman
Marrou	Singamaneni	Hong	Hong	Richardson
Boppre	Lin	Junio	Zhao	Chowdhury
McDermott	Chan	Lane	Collins	Brown
Zhao	Cisternas	Demoulin	Lee	Grady
Brown	Gutierrez	Han	Wanasekara	

Tuesday, March 22th 2011

Session	H4.	H42.	H43.	H44.
Room	Ballroom A4	A302/303	A306/307	A309
Chair	Pincus	Lutkenhaus	Xu	Kilbey
8:00 AM	Grest			
8:12 AM				
8:24 AM				
8:36 AM	Kremer	Soles	Ross	He
8:48 AM		Sinha		Ismail
9:00 AM		Ford		Ratnaweera
9:12 AM	Binder	Wang	Singer	Ilie
9:24 AM			Gotik	Tangirala
9:36 AM			Sun	Vianna
9:48 AM	Robbins	Choi	Ahn	Meyer
10:00 AM		Wong	Takenaka	Lukyanov
10:12 AM		Madsen	Singh	Raza
10:24 AM	Perahia	Lin	Peters	Corrales
10:36 AM		Agapov	Hu	White
10:48 AM		Hall	Mokarian	Thomas

Session	J4.	J41.	J42.	J43.	J44.
Room	Ballroom A4	A115/117	A302/303	A306/307	A309
Chair	Wong	Gomez	Torkelson	Olsen	Herrera-Alonso
11:15 AM	Lee	McNeill	Lee	Muiren	Whitmer
11:27 AM			Li	Huang	Khan
11:39 AM			Mullin	Rosales	Gruenwald
11:51 AM	Bong	Faller	Albert	Thomas	Gang
12:03 PM		Rogers	Yan	Robertson	
12:15 PM		Sobkowitz	Masoud	Lee	
12:27 PM	Wong	Drumny	Villet	Ryu	Hoy
12:39 PM		Dadmun	Tudryn	Abdulahad	Chennaoui
12:51 PM		Guralnick	Erk	Mahanthappa	Pochan
1:03 PM	Ramamoorthy	Ho	Daga		
1:15 PM		Kilbey	Spencer		
1:27 PM		Watkins	Wei		Mok
1:39 PM	Sengupta	He	Cho		Lee
1:51 PM		Lu	Ramirez-		Bedrov
2:03 PM		Bailey	Hernandez	Moore	Sing

Session	L42.	L43.	L44.
Room	A302/303	A306/307	A309
Chair	Anastasiadis	Madsen	Thompson
2:30 PM	Mezzenga		
2:42 PM			
2:54 PM			
3:06 PM	Kramer	Javier	Zussman
3:18 PM	Hadziioannou	Hallinan	Aristein
3:30 PM	Kremer	Teran	Bubeck
3:42 PM	Jenekhe	Yee	Solis
3:54 PM	Ikkala	Ranjana	Gupta
4:06 PM	Anastasiadis	Shao	Kizilkaya
4:18 PM	Goli	Eitouni	Spencer
4:30 PM	Pochan		Wang
4:42 PM	Burbridge		Wang
4:54 PM	Hayward	Jha	Park
5:06 PM	Ruckolainen		Mandal
5:18 PM	Hammond		Thomson
5:30 PM			
5:42 PM			

APS Division of Polymer Physics Annual Business Meeting: 5:45 p.m. Room A302/303

Wednesday, March 22th 2011

Session	P4.	P40.	P42.	P43.	P44.
Room	Ballroom A4	A122/123	A302/303	A306/307	A309
Chair	Hayward	Creton	Holmes	Stoykovich	Lin
8:00 AM	Lodge	Redline	Wong	Char	Genzer
8:12 AM		Zhang	Papadimitratos	Suh	
8:24 AM		Wang	Zhitenev	Ye	
8:36 AM	Dawson	Wang	McGehee	Dimitriou	Lee
8:48 AM		Plamer		Kulkarni	Lin
9:00 AM		Wang		Hayirloglu	Harris
9:12 AM	Prud'homme	Clark	Lombardo	Kim	Chein
9:24 AM		Landy	Danielson	Hannon	Yoon
9:36 AM		Gue	Butler	Croll	Glynos
9:48 AM	Lee	Hu	Hsu	Chremos	Etampawalla
10:00 AM		Shanbhag	Valle	Pujari	Bandyopadhyay
10:12 AM		Kaushik	Halber	Mishra	Rathfon
10:24 AM		Toomey	Yang	Yan	Patchan
10:36 AM	Whitelam	Hosland	Ouyang	Sivaniash	Shrestha
10:48 AM		Urayama		Bae	Clarke

Session	Q4.	Q38.	Q42.	Q43.	Q44.
Room	Ballroom A4	A130/131	A302/303	A306/307	A309
Chair	Yethiraj	McGehee	Chatterjee	Bhattacharya	Riggelman
11:15 AM	Schreiber	DeLongchamp	Das	Ikonen	Keams
11:27 AM			Dong	Dubbeddam	McGraw
11:39 AM			Modestino	Ho	Koga
11:51 AM	Yethiraj	Boudouris	Castello	Ala-Nissila	Dai
12:03 PM		Kim	Mutiso		Wang
12:15 PM		Pavlopoulou	Ortiz		Song
12:27 PM	Cheung	Collins	Pryamitsyn	Merchant	Bloom
12:39 PM		Guignard	Moll	Liu	Priezjev
12:51 PM		Gomez	Wei	Hayashi	Yang
1:03 PM	Ebbinghaus	Yin	Goren	Li	Raphael
1:15 PM		Shen	Jiao	de Haan	
1:27 PM		Zhang	Chantawansri	Krems	
1:39 PM	Skolnick	Kirschner	Ma	Mahalik	Peng
1:51 PM		Loo	Wang	Eliseev	Yeh
2:03 PM			Chipara	Bhattacharya	Xu

S1.	Poster Session III		1:00pm - 4:00pm		Hall D
Pandey	Deodhar	Halbert	Mastrolanni	Heermann	
Clarke	Russano	Pang	Ferez	Schlichting	
Barone	Lee	Tawalbeh	Huq	Alnemrat	
Wang	Bunning	Abdallah	Brady	Fan	
Rollins	Kim	Grabowski	Palos-Chavez	Neogy	
Hyun	Georgiev	Lee	Lee	Wang	
Zhang	Majewski	Runt	Hsu	Chen	
Chapman	Kim	Fei	Snyder	Kim	
Lee	Castagna	Choi	Toglia	Kao	
Bose	Young	Liarte	Ormos	Hsieh	
Mapesa	Choi	Salib	Swensen	Mohagheghi	
Hoshino	O'Reilly	Kim	Wang	Kuo	
Ren	Choi	Lewis	Parkes		
Garcia	Johnson	Scholz	Retamal		
Vaddey	Lai	Lee	Krishnaji		
Russano	Brovelli	Sirivat	van Zoelen		
Mitamura	Abdi	He	Freeman		
Venev	Chang	Echeverri	Chang		
Wang	Lovato	Jung	Farmer		

Thursday, March 24th 2011

Session	V4.	V42.	V43.	V44.
Room	Ballroom A4	A302/303	A306/307	A309
Chair	Fakhraai	Clarke	Dubbeldam	Jones
8:00 AM	Ediger	MacKintosh	Mihovilovic	Zhang
8:12 AM			Luan	McNeil
8:24 AM			Balagurusamy	Shah
8:36 AM	Kremer	Mester	Wilson	He
8:48 AM		Shen	Xie	
9:00 AM		Mirigian	He	
9:12 AM	Paul	Swaminathan	Sung	Coropceanu
9:24 AM		Salib		Sharifzadeh
9:36 AM		Audus		Gao
9:48 AM	Forrest	Spencer	Novak	Rojas
10:00 AM		Koh	Billio	Daughton
10:12 AM		Lliao	Jiang	Wislawsky
10:24 AM	Lyulin	Choi	Gierak	Slinker
10:36 AM		Li	Slater	Richter
10:48 AM		Lu	He	Marginean

Session	W38.	W40.	W42.	W43.	W44.
Room	A130/131	A122/123	A302/303	A306/307	A309
Chair	Pivrikas	Tsige	Won	Korley	Jacobs
11:15 AM	Jurchescu	Watanabe	Szleifer	Beers	Yu
11:27 AM	Wang	Runt	Choi	Zheng	
11:39 AM	Tsumuraya	Clark	Stone	Deng	
11:51 AM	Atalla	Fourman	Farina	Kumar	Kumar
12:03 PM	McLellan	Balik	Buie	Majewski	Katzenstein
12:15 PM	Xie	Chu	Park	Nakamura	Gin
12:27 PM	Wang	Schoch	Ober	Ganesan	Ozisk
12:39 PM	Ha	Ha		Osti	Guo
12:51 PM	Sarker	Kriisa		Beyer	Maskay
1:03 PM	Yan	Chen	Alonzo	Seitz	Zhang
1:15 PM	Han	Zhou	Wang	Buitrago	Klotz
1:27 PM	Kang	Beaulieu	Yang	Castagna	Begum
1:39 PM	Colesniuc	Tsige	Luettmmer	Hoarfrost	Lin
1:51 PM	Yimer	Halverson	Xu	Patel	Suo
2:03 PM	Faramarzi		Trombly	Park	

Session	X4.	X42.	X43.	X44.	X45.
Room	Ballroom A4	A302/303	A306/307	A309	A310
Chair	Szleifer	Ediger	Toomey	Fernandez-Nieves	Beyer
2:30 PM	Marko	Fakhraai	Burdick	Srivastava	Kwon
2:42 PM		Ekenseair		Rogers	Moussa
2:54 PM		Cicerone		Meng	Mally
3:06 PM	Pablo	Xu	Zacharia	Islam	Winey
3:18 PM		McKenna	DuPont		Meth
3:30 PM		Golick	Akgun		Hore
3:42 PM	Bansil	Chen	Kim	Di	Shofner
3:54 PM		Ge	Jones	Ziherl	Fernandes
4:06 PM		Karim	McEnnis	Yang	Hood
4:18 PM	de la Cruz	Daley	Han	Yu	Guo
4:30 PM		Nazarenko	Wang	Petekidis	Hagita
4:42 PM		Medvedev	Yuan		Ye
4:54 PM	Aizenberg	Priestley	Frieberg		Dorgan
5:06 PM		Toepperwein	Torkelson	Guo	
5:18 PM		McDermott	Gholamrezaie	Chen	
5:30 PM				Lane	

Friday, March 25th 2011

Session	Y4.	Y40.	Y41.	Y42.	Y43.	Y44.
Room	Ballroom A4	A122/123	A115/117	A302/303	A306/307	A309
Chair	Furst	Watkins	Cavicchi	Roth	Savin	Rumbles
8:00 AM	Clays	Bockstaller	Wahmund	Wool	Aguilera-Mercado	Pivrikas
8:12 AM			Hu	Long	Reyes	
8:24 AM			Cui	Lipson	Ye	
8:36 AM	Lang	Composto	Singh	Stafford	McNair	Guan
8:48 AM		Gam	Kalfus		Slozberg	Jiang
9:00 AM		Capuano	Budzien		Hua	Podzorov
9:12 AM	Watson	Boucher	Zhang	Schick	Sotta	Maillard
9:24 AM		Park	Henderson	Cangialosi	Devant	Irfan
9:36 AM			Deplace	Pye	Ward	Jones
9:48 AM	Manoharan		Smith	Eremov	Sharma	
10:00 AM		Grady	Chan	Xue	Lee	
10:12 AM		Lorenzo	Jha	Gu	Cheng	Lefalce
10:24 AM	Gilchrist	Knorowski		Clarke	Heermann	Zang
10:36 AM		Zhang		Xu	Chandran	Lee
10:48 AM				Napolitano	Banks	Chen

Session	Z40.	Z42.	Z43.	Z44.
Room	A122/123	A302/303	A306/307	A309
Chair	Hoy	Carrillo	Osuji	He
11:15 AM	Mao	Lyu	Buchanan	Takenobu
11:27 AM	Li		Cladis	Dubey
11:39 AM	Hu		Gopinadhan	Sheng
11:51 AM	Ceccia	Benetatos	Pirogovskiy	Ryan
12:03 PM	Ruiz-Orta	Dobrynin	Dey	Kuehne
12:15 PM	Carvalho	Liu	Park	Duarte
12:27 PM	Yi	Guan	Behabtu	Cobb
12:39 PM	Cheng	Shin	McConney	Willard
12:51 PM	Zhu	Mirjanian	Bowick	Kim
1:03 PM	Tarver	Cai	Mbanga	Tinh
1:15 PM	Walker	Rein	Khanal	Sarswat
1:27 PM	Maniadis	Chatterjee	Dunning	Shrivastava
1:39 PM	Samiullah	Olsen	Nouri	LeFevre
1:51 PM	Tang	Carrillo	Zong	
2:03 PM	Morvan	Mao	Park	

Session Q4: Macromolecular Crowding Effects in the Cytoplasm

Sponsoring Units: DPOLY DBP
Chair: Arun Yetheraj, University of Wisconsin
Room: Ballroom A4

- Wednesday, March 23, 2011 11:15AM - 11:51AM [Q4.00001: Formation of protein-complexes in crowded environments: from in vitro to in vivo](#)
Invited Speaker: Gideon Schreiber
- Wednesday, March 23, 2011 11:51AM - 12:27PM [Q4.00002: TBD](#)
Invited Speaker: Arun Yetheraj
- Wednesday, March 23, 2011 12:27PM - 1:03PM [Q4.00003: Protein structure, stability and folding in the cell -- \textit{in silico} biophysical approaches](#)
Invited Speaker: Margaret Cheung
- Wednesday, March 23, 2011 1:03PM - 1:39PM [Q4.00004: Phosphoglycerate kinase in crowded and cellular environments](#)
Invited Speaker: Simon Ebbinghaus
- Wednesday, March 23, 2011 1:39PM - 2:15PM [Q4.00005: Crowding and hydrodynamic interactions likely dominate in vivo macromolecular motion](#)
Invited Speaker: Jeffrey Skolnick

Session Q38: Focus Session: Organic Electronics and Photonics -- Morphology in polymer-based solar cells

Sponsoring Units: DMP DPOLY GERA
Chair: Michael McGehee, Stanford University
Room: A130/131

- Wednesday, March 23, 2011 11:15AM - 11:51AM [Q38.00001: Structural measurements of polymer-fullerene blend films for organic photovoltaics](#)
Invited Speaker: Dean DeLongchamp
- Wednesday, March 23, 2011 11:51AM - 12:03PM [Q38.00002: Tuning Rod-Rod Interactions in Poly\(3-alkylthiophene\) Derivatives](#)
Bryan Boudouris , Victor Ho , Rachel Segalman
- Wednesday, March 23, 2011 12:03PM - 12:15PM [Q38.00003: Polymer/Polymer Heterojunctions for Ambipolar Charge Transport in Organic Electronics](#)
Felix Kim , Selvam Subramanian , Samson Jenekhe
- Wednesday, March 23, 2011 12:15PM - 12:27PM [Q38.00004: The role of donor-acceptor intermixing in the performance of polymer-polymer OPVs](#)
Eleni Pavlopoulou , Stephanie Lee , Chang Su Kim , Yueh-Lin Loo , Zhihua Chen , Antonio Facchetti , Michael F. Toney
- Wednesday, March 23, 2011 12:27PM - 12:39PM [Q38.00005: Phase purity in organic solar cells](#)
Brian Collins , Eliot Gann , Lewis Guignard , Xiaoxi He , Christopher McNeill , Harald Ade
- Wednesday, March 23, 2011 12:39PM - 12:51PM [Q38.00006: Diffusion rates and crystallization of phenyl-C61-butyric acid methyl ester in poly\(3-hexylthiophene\)](#)
L. Guignard , B. Collins , J. Seok , H. Ade
- Wednesday, March 23, 2011 12:51PM - 1:03PM [Q38.00007: Structural evolution in polythiophene-fullerene mixtures](#)
Enrique Gomez , Derek Kozub , Kiarash Vakhshouri
- Wednesday, March 23, 2011 1:03PM - 1:15PM [Q38.00008: Miscibility Study of PCBM/P3EHT Organic Photovoltaics via Small Angle Neutron Scattering](#)
Wen Yin , Bryan McCulloch , Rachel Segalman , Mark Dadmun
- Wednesday, March 23, 2011 1:15PM - 1:27PM [Q38.00009: Characterization and Improvement on the Morphology in Polymer-Based Solar Cells](#)
Hao Shen , Wenluan Zhang , Brett Guralnick , Michael Mackay , Brain Kirby , Charles Majkrzak

Wednesday, March 23, 2011 1:27PM - 1:39PM

[Q38.00010: Investigation of fullerene concentration profile in polymer based solar cell by using magnetic contrast neutron reflectivity](#)

Wenluan Zhang , Brian Kirby , Michael Mackay

Wednesday, March 23, 2011 1:39PM - 1:51PM

[Q38.00011: Correlation of Structure and Roughness with Fabrication Conditions of P3HT-PCBM Bilayer Interfaces with X-Ray Reflectometry](#)

Stuart Kirschner , Ming-Ling Yeh , Nathaniel Smith , Howard Katz , Daniel Reich

Wednesday, March 23, 2011 1:51PM - 2:03PM

[Q38.00012: Polymer Solar Cells, Deconstructed](#)

Yueh-Lin Loo , Jongbok Kim , He Wang , Stephanie Lee , Zelei Guan , Antoine Kahn

Session Q42: Polymer Composites

Sponsoring Units: DPOLY

Chair: Tirtha Chatterjee, The Dow Chemical Company

Room: A302/303

Wednesday, March 23, 2011 11:15AM - 11:27AM

[Q42.00001: Dispersion and composite processing of polymer coated graphene](#)

Sriya Das , Ahmed Wajid , John Shelburne , Abel Cortinas , Micah Green

Wednesday, March 23, 2011 11:27AM - 11:39AM

[Q42.00002: Fabrication of Graphene Oxide/Polypropylene Nanocomposites and Their Electrical Conductivity Study](#)

Jinyong Dong

Wednesday, March 23, 2011 11:39AM - 11:51AM

[Q42.00003: Controlling nanorod self-assembly in polymer thin film composites](#)

Miguel Modestino , Jeffrey Urban , Rachel Segalman

Wednesday, March 23, 2011 11:51AM - 12:03PM

[Q42.00004: Multi-Walled Carbon Nanotube Network Formation in Extruded High Density Polyethylene/MWNT Composites](#)

Frank Yezpez Castillo , Brian P. Grady , Daniel E. Resasco

Wednesday, March 23, 2011 12:03PM - 12:15PM

[Q42.00005: Effect of Nanowire Size Dispersity on the Electrical Conductivity in Polymer Nanocomposites](#)

Rose Mutiso , Michelle Sherrott , Ju Li , Karen Winey

Wednesday, March 23, 2011 12:15PM - 12:27PM

[Q42.00006: Simulating the Effect of Flame Retardant Materials on Heat Diffusion in Polymers](#)

Joseph Ortiz , Arpon Raksit , Dilip Gersappe

Wednesday, March 23, 2011 12:27PM - 12:39PM

[Q42.00007: Diffusion of small molecules in polymer nanocomposites: relationship between local free volume dynamics and penetrant diffusivity](#)

Victor Pryamitsyn , Venkat Ganesan

Wednesday, March 23, 2011 12:39PM - 12:51PM

[Q42.00008: Nanoparticle Size Dependence of a Polymer's Mechanical Properties](#)

Joseph Moll , Shushan Gong , Sanat Kumar , Ralph Colby

Wednesday, March 23, 2011 12:51PM - 1:03PM

[Q42.00009: Preparation and Characterization of Electrospun Poly\(Methyl Methacrylate\)-ODS NanoComposite Fibers](#)

Suying Wei , Jayanthi Sampathi , Dan Rutman , Ashwini Kucknoor , Zhanhu Guo

Wednesday, March 23, 2011 1:03PM - 1:15PM

[Q42.00010: Improvement of the dispersion of silica nanoparticles in PMMA](#)

Kerem Goren , Osman B. Okan , Limeng Chen , Linda S. Schadler , Rahmi Ozisik

Wednesday, March 23, 2011 1:15PM - 1:27PM	Q42.00011: Dispersion of Magnetic Brushes in Polymer Melts Yang Jiao , Pinar Akcora
Wednesday, March 23, 2011 1:27PM - 1:39PM	Q42.00012: Modeling nanoparticle aggregation in nanocomposites Tanya Chantawansri , Lee Trask , Eric Cochran , Jan Andzelm
Wednesday, March 23, 2011 1:39PM - 1:51PM	Q42.00013: Effect of Silicon Dioxide Nanoparticles on the Morphology and Interphase Structure of Electrospun PET Nanofibers Qian Ma , Bin Mao , Peggy Cebe
Wednesday, March 23, 2011 1:51PM - 2:03PM	Q42.00014: Flexible Polymer Nanocomposite Hydrogen Sensors by Solution Processes Howard Wang , Yayong Liu , Liwei Huang , Kaikun Yang , Lianfeng Zou , Cheol Park
Wednesday, March 23, 2011 2:03PM - 2:15PM	Q42.00015: Thermal Properties of PEO-anatase nanocomposites Mircea Chipara , He Huang , Karen Lozano , David Hui , Xu Hailan , Rafael Villegas , Thomas Mion

Session Q43: Focus Session: Translocation through Nanopores I

Sponsoring Units: DPOLY DBP
Chair: Aniket Bhattacharya, University of Central Florida
Room: A306/307

Wednesday, March 23, 2011 11:15AM - 11:27AM	Q43.00001: A Coupled-Dynamics Model for Polymer Translocation Timo Ikonen , Tapio Ala-Nissila , Aniket Bhattacharya , Wokyung Sung
Wednesday, March 23, 2011 11:27AM - 11:39AM	Q43.00002: A new approach to polymer translocation Johan Dubbeldam , Vakhtang Rostiashvili , Andrey Milchev , Thomas Vilgis
Wednesday, March 23, 2011 11:39AM - 11:51AM	Q43.00003: Stepping dsDNA through a solid-state nanopore one basepair at a time Anthony Ho , Jeffrey Comer , Aleksei Aksimentiev
Wednesday, March 23, 2011 11:51AM - 12:27PM	Q43.00004: Universal and Non-Universal Translocation Dynamics of Coarse-Grained Biopolymers Invited Speaker: Tapio Ala-Nissila
Wednesday, March 23, 2011 12:27PM - 12:39PM	Q43.00005: DNA translocation through grapheme nanopores Christopher A. Merchant , Ken Healy , Meni Wanunu , Vishva Ray , Neil Peterman , John Bartel , Michael D. Fischbein , Kim Venta , Zhengtang Luo , A.T. Charlie Johnson , Marija Drndic
Wednesday, March 23, 2011 12:39PM - 12:51PM	Q43.00006: Characterization of DNA Translocation and Detection in Functionalized Nanopores Yaling Liu , Abhijit Ramachandran , Qingjiang Guo
Wednesday, March 23, 2011 12:51PM - 1:03PM	Q43.00007: Direct observation of DNA motions into solid state nanopore under applied electrical potentials on conductive surface Yoshitaka Hayashi , Genki Ando , Ichiro Idutsu , Toshiyuki Mitsui
Wednesday, March 23, 2011 1:03PM - 1:15PM	Q43.00008: Fluid-driven polymer translocation through a microchannel: A dissipative particle dynamics simulation study Xuejin Li , Jiayi Guo , Haojun Liang
Wednesday, March 23, 2011 1:15PM - 1:27PM	Q43.00009: Polymer Translocation through a Nanopore in the Presence of a Viscosity Gradient Hendrick W. de Haan , Gary W. Slater

- Wednesday, March 23, 2011
1:27PM - 1:39PM [Q43.00010: Ionic Coulomb Blockade in Nanopores](#)
Matt Krems , Massimiliano Di Ventra
- Wednesday, March 23, 2011
1:39PM - 1:51PM [Q43.00011: Modeling polyelectrolyte translocation through protein channels](#)
Jyoti Mahalik , Jing Hua , Yanbo Wang , Murugappan Muthukumar
- Wednesday, March 23, 2011
1:51PM - 2:03PM [Q43.00012: Polyelectrolyte translocation through a spherical cavity with tunable charge](#)
Alexander Eliseev , Murugappan Muthukumar
- Wednesday, March 23, 2011
2:03PM - 2:15PM [Q43.00013: Polymer translocation facilitated by Chaperones](#)
Aniket Bhattacharya , Tapio Ala-Nissila , Wokyung Sung

Session Q44: Focus Session: Dynamics of Polymers- Phenomena due to Confinement

Sponsoring Units: DPOLY
Chair: Rob Riggleman, University of California, Santa Barbara
Room: A309

- Wednesday, March 23, 2011
11:15AM - 11:27AM [Q44.00001: The effect of pattern dimensions on the thermal decay of polymer patterns created by nanoimprint lithography](#)
Kenneth Kearns , H.W. Ro , Heather J. Patrick , Thomas A. Germer , Christopher Soles
- Wednesday, March 23, 2011
11:27AM - 11:39AM [Q44.00002: Capillary levelling as a probe of rheology in polymer thin films](#)
Joshua D. McGraw , Nick M. Jago , Kari Dalnoki-Veress
- Wednesday, March 23, 2011
11:39AM - 11:51AM [Q44.00003: Direct evidence of heterogeneous dynamics within ultrathin polystyrene melt films](#)
Tad Koga , Naisheng Jiang , Peter Gin , Maya Endoh , Suresh Narayanan , Larry Lurio , Sunil Sinha
- Wednesday, March 23, 2011
11:51AM - 12:03PM [Q44.00004: Anisotropic Dependence of Capillary Dynamics of Confined Polymer Liquid Films](#)
Yeling Dai , Oleg Shpyrko , Kyle Alvine , Suresh Narayanan , Alec Sandy
- Wednesday, March 23, 2011
12:03PM - 12:15PM [Q44.00005: Surface Dynamics of Macrocylic Polystyrene Films](#)
Shih-fan Wang , Mark D. Foster , Zhang Jiang , Suresh Narayanan
- Wednesday, March 23, 2011
12:15PM - 12:27PM [Q44.00006: Surface dynamics of micellar diblock copolymer films](#)
Sanghoon Song , Wonsuk Cha , Hyunjung Kim , Zhang Jiang , Suresh Narayanan
- Wednesday, March 23, 2011
12:27PM - 12:39PM [Q44.00007: Polymer Transport Near Rough Surfaces](#)
Moses Bloom , Jonathan Whitmer , Erik Luijten
- Wednesday, March 23, 2011
12:39PM - 12:51PM [Q44.00008: Molecular dynamics simulation study of slip flows over surfaces with periodic and random anisotropic textures](#)
Nikolai Priezjev
- Wednesday, March 23, 2011
12:51PM - 1:03PM [Q44.00009: Glass Transition Dynamics and Surface Layer Mobility in Unentangled Polystyrene Films](#)
Zhaohui Yang , Yoshihisa Fujii , F.K. Lee , C.H. Lam , Dongdong Peng , Ophelia Tsui

- Wednesday, March 23, 2011 1:03PM - 1:39PM [Q44.00010: Fingering Instability of Debonding Soft Elastic Adhesives](#)
Invited Speaker: Elie Raphael
- Wednesday, March 23, 2011 1:39PM - 1:51PM [Q44.00011: Effect of molecular weight on surface mobility of polystyrene films](#)
Dongdong Peng , Zhaohui Yang , Ophelia Tsui
- Wednesday, March 23, 2011 1:51PM - 2:03PM [Q44.00012: Scaling of confined and interacting comb polymers](#)
Catherine Yeh , Philip Pincus
- Wednesday, March 23, 2011 2:03PM - 2:15PM [Q44.00013: Geometry and molecular architecture effects in nanobubble inflation measurements](#)
Shanhong Xu , Sylvie Castagnet , Gregory McKenna

Session S1: Poster Session III (1:00pm - 4:00pm)

Sponsoring Units: APS
Room: Hall D

[S1.00001: POLYMERS AND SOFT MATTER II](#)

[S1.00002: Scaffolding of peptides using a coarse-grained representation of residues with side chain and backbone nodes](#)

Ras Pandey , Barry Farmer

[S1.00003: Ion tunable of rheology of supramolecular metallogels](#)

Nigel Clarke , Jonathan Steed , Marc-Oliver Piepenbrock

[S1.00004: Amine-sulfonyl hydrogen bonding forms \$\beta\$ -strand mimics](#)

Justin Barone , Katherine Harvey

[S1.00005: Relationship between Hydrophilicity of PEO-PPO-PEO Copolymers and Their Ability to Protect Liposomes from Peroxidation](#)

Jia-Yu Wang , Chi-Yuan Cheng , Song-I Han , Ka Yee Lee

[S1.00006: The effect of ion beam sculpted nanopore size and shape on DNA translocation](#)

Ryan Rollings , Edward Graef , Denis Tita , Santoshi Nandivada , Mourad Benemara , Jiali Li

[S1.00007: Detection of SPM tip-attached DNA molecules with solid state nanopores](#)

Changbae Hyun , Zhexue Lu , Bradley Ledden , Jiali Li

[S1.00008: Micro-phase assembly of active sites in a coarse-grained model of chromatin by Monte Carlo simulation](#)

Yang Zhang , Dieter Heermann , Barry Farmer , Ras Pandey

[S1.00009: Single-molecule studies of DNA self-diffusion in entangled linear and circular DNA blends](#)

Cole D. Chapman , Michael Harlander-Locke , Douglas E. Smith , Rae M. Robertson-Anderson

[S1.00010: Dual-Function Epi-fluorescence Optical Tweezers to Characterize Single Polymer Interactions in Complex Polymeric Fluids](#)

Kent Lee , Cole D. Chapman , Rae M. Robertson-Anderson

[S1.00011: Dynamics of a linear polymer in a microchannel creeping flow](#)

Prasenjit Bose , Miron Kaufman , Petru Fodor

[S1.00012: Glassy dynamics in thin layers of polystyrene and polyisoprene](#)

Emmanuel Urandu Mapesa , Martin Tress , Friedrich Kremer

[S1.00013: Dynamics of Silica Particles Grafted with Polymer Brush in Polystyrene Matrix](#)

Taiki Hoshino , Moriya Kikuchi , Daiki Murakami , Koji Mitamura , Yoshiko Harada , Kiminori Ito , Yoshihito Tanaka , Sono Sasaki , Masaki Takata , Atsushi Takahara

[S1.00014: New methods to characterize the confinement effects in epoxy nanocomposites](#)

Liyun Ren , Michael Goodman , Rahmi Ozisik

[S1.00015: Defect structures and coarsening in spherical shells of asymmetric block copolymer systems](#)

Nicol'as Garc'ia , Leopoldo R. Gomez , Aldo D. Pezzutti , Daniel A. Vega , Marcelo A. Villar

[S1.00016: Nanoconfinement Effect on Polymerization](#)

Maitri Vaddey , Sindee Simon

[S1.00017: Molecular Dynamics Simulations of Grafted Layers of Bottle-Brush Polyelectrolytes](#)

Daniel Russano , Jan-Michael Carrillo , Andrey Dobrynin

[S1.00018: Influence of Ionic Strength on Chain Dimension in Polyelectrolyte Brushes at Aqueous Solution Interface](#)

Koji Mitamura , Motoyasu Kobayashi , Mayumi Terada , Norifumi L. Yamada , Atsushi Takahara

[S1.00019: Densely grafted brushes of gradient copolymers: an effective Flory-Huggins parameter approach](#)

Sergey Venev , Igor Potemkin

[S1.00020: Fast Lattice Monte Carlo Simulations of Inhomogeneous Polymers](#)

Qiang Wang , Pengfei Zhang , Xinghua Zhang , Delian Yang , Baohui Li

[S1.00021: Structure and Swelling Behavior of Weak Polyelectrolyte Brushes](#)

Chaitra Deodhar , Erick Soto-Cantu , David Uhrig , John Ankner , S. Michael Kilbey II

[S1.00022: Molecular dynamics simulations of interactions and friction between bottle-brush layers](#)

Daniel Russano , Jan-Michael Carrillo , Andrey Dobrynin

[S1.00023: Surface Dynamics of Partially Tethered Polymer Films](#)

Jin Kuk Lee , Bulent Akgun , Zhang Jiang , Suresh Narayanan , Sushil Satija , Mark D. Foster

[S1.00024: A mechanistic study of a thermo-responsive polymer in a liquid crystal solvent](#)

Timothy Bunning , Michael Mcconney , Jennifer Hurtubise , Vincent Tondiglia , Timothy White

[S1.00025: Formation of Liquid Crystal Elastomer Microparticles](#)

Chanjoong Kim , Huan Yan , Souptik Mukherjee , Paul Luchette , Peter Palfy-Muhoray

[S1.00026: Coupling of Smectic Liquid Crystalline Order of iPP to Carbon Nanotube Alignment under Melt-Shear](#)

Georgi Georgiev , Robert Judith , Erin Gombos , Michael McIntyre , Peggy Cebe

[S1.00027: Magnetic fields for the long-range ordering of amphiphilic block copolymers and surfactant mesophases](#)

Pawel Majewski , Manesh Gopinadhan , Chinedum Osuji

[S1.00028: Morphology and Proton Conductivity of Ionic Liquid Containing Sulfonated Block Copolymers](#)

Sung Yeon Kim , Moon Jeong Park

[S1.00029: The Role of Neutralizing Ion Type on the Dynamics of Sulfonated Polystyrene Ionomers](#)

Alicia Castagna , Wenqin Wang , Karen I. Winey , James Runt

[S1.00030: Mixed-salts effect on the ionic conductivity of PEO-containing block copolymers](#)

Wen-Shiue Young , Allen Schantz , Thomas Epps

[S1.00031: Time Scales of Ion Transport in Imidazolium-based Polymers](#)

U. Hyeok Choi , Yuesheng Ye , Minjae Lee , Harry Gibson , Yossef Elabd , James Runt , Ralph Colby

[S1.00032: Ionic Aggregation and Microphase Separation in Sulfonated Polyester Multiblock Copolymers and Ionomers](#)

Michael O'Reilly , Gregory Tudryn , Ralph Colby , Karen Winey

[S1.00033: Ion Conduction in Perfectly Aligned Block Copolymer-Ionic Liquid Mixtures](#)

Jae-Hong Choi , Yossef A. Elabd , Karen I. Winey

[S1.00034: Modification of Aqueous Peptide-based Block Copolymer Morphologies through Addition of Ionic Liquid](#)

Ashley Johnson , Jacob Ray , Sandeep Naik , Laura Bullock , Daniel Savin

[S1.00035: Phase behavior of the blend of rod-coil block copolymer with the corresponding coil homopolymer](#)

Chia-Sheng Lai , Chun-Chih Ho , Wei-Fang su , Hsin-Lung Chen

[S1.00036: Threaded molecular wires as building blocks for advanced polymer blends: WPLEDs, ultra-broadband optical amplifiers, multi color lasers](#)

Sergio Brovelli , Marta Mroz , Giuseppe Sforazzini , Tersilla Virgili , Franco Meinardi , Alberto Paleari , Harry L. Anderson , Guglielmo Lanzani , Franco Cacialli

[S1.00037: Measurements of Thermally Stimulated Luminescence in Gamma-Irradiated Ultra-High Molecular Weight Polyethylene in the Presence of Vitamin E](#)

Dereje Abdi , Muhammed Jahan , Benjamin Walters

[S1.00038: Confocal Raman Microscopy on in-situ Structural Evolution of Polyolefin Blends](#)

Wansoo Chang , Byungho Jeon , Jong-Won Lee , Chang Y. Ryu

[S1.00039: Polymer Blends for Proton Exchange Membranes](#)

Tina Lovato , Kelly McNabb , Jason Meyers , Gaber Rupnik , Qian Ma , Meng Zhao , Jingjing Pan , Joel Walker , Thomas Smith , Peggy Cebe

[S1.00040: Diffusion Studies of Compatibilizers in Immiscible Polymer Blends](#)

Candice Halbert , John Ankner , James Browning , Haskell Beckham , David Bucknall

[S1.00041: Synthesis of Functional Nanoparticles by Amphiphilic Star-like Block Copolymer as Template](#)

Xinchang Pang , Zhiqun Lin

[S1.00042: Low temperature electrical conductivity of low-density polyethylene/carbon black composites](#)

Tarek Tawalbeh , Subhi Saq'an , Shadi Yasin , Awwad Zihlif , Giuseppe Ragosta

[S1.00043: Effect of Grain Size on the AC Electrical Properties of Kaolinite/Polystyrene Composites](#)

Lina Abdallah , Awwad Zihlif

[S1.00044: Domain Structure Formation in Swollen Side-Chain Liquid Crystal Elastomers](#)

Christopher Grabowshi , Paul Luchette , Peter Palfy-Muhoray

[S1.00045: Molecular Alignment and Temperature Effects on Photodriven, Multidimensional Oscillation of Azobenzene Liquid Crystalline Polymer Networks](#)

Kyung Min Lee , Matthew Smith , Hilmar Koerner , Richard Vaia , Timothy Bunning , Timothy White

[S1.00046: The role of uniaxial deformation on microstructure and dynamics of a bulk-polymerized polyurea](#)

James Runt , Taeyi Choi , Daniel Fragiadakis , C. Michael Roland

[S1.00047: Characterization of a Poly\(styrene-block-methylacrylate-random-octadecylacrylate-block-styrene\) Shape Memory ABA Triblock Copolymer](#)

Pengzhan Fei , Kevin Cavicchi

[S1.00048: Structure and dynamics of of solution polymerized polyureas](#)

Taeyi Choi , Youmi Jeong , James Runt

[S1.00049: The elastic Maier-Saupe-Zwanzig model and some properties of nematic elastomers](#)

Danilo Liarte , Silvio Salinas , Carlos Yokoi

[S1.00050: The Effect of Multiple Parallel Bonds on the Self-healing of Labile Crosslinked Nanogel Networks](#)

Isaac G. Salib , German V. Kolmakov , Chet N. Gnegy , Krzysztof Matyjaszewski , Anna C. Balazs

[S1.00051: Characterization of hybrid hydrogel with different shape of particles after gamma-ray radiation](#)

Donghyun Kim , Hoik Lee , Hyemi Park , Daewon Sohn

[S1.00052: A State-of-Ease Analysis of Shape Memory Elastomers](#)

Christopher Lewis , Jiahui Li , Mitchell Anthamatten

[S1.00053: Real time small angle X-ray scattering from cyclically stretched nanoparticle-filled siloxane elastomers](#)

Arthur K. Scholz , Huan Zhang , Elaine R. Chan , Alexander Hexemer , Edward J. Kramer

[S1.00054: Investigating Heterogeneous Microenvironments in Hydrogels by Single Quantum Dot Tracking](#)

Cheol Hee Lee , Todd Emrick , Alfred Crosby , Ryan Hayward

[S1.00055: Effects of AC Electrical Field on the Dielectrophoresis Force of Dielectric Elastomers and Blends](#)

Anuvat Sirivat , Ruksapong Kunanurksapong

[S1.00056: Effects of Annealing on the Photovoltaic Performance of All-Conjugated Poly\(3-alkylthiophene\) Diblock Copolymer](#)

Ming He , Wei Han , Yuliang Yang , Feng Qiu , Zhiqun Lin

[S1.00057: Role of Succinonitrile in a Poly\(ethylene oxide\)/LiTFSI membrane for lithium batteries](#)

Mauricio Echeverri , Thein Kyu

[S1.00058: Synthesis and Photovoltaic Properties of a New Class of Donor-Acceptor Alternating Copolymers Containing Pechmann-Dye Derivatives](#)

Jae Woong Jung , Won Ho Jo

[S1.00059: Nanostructured photovoltaic materials using conjugated block copolymer assemblies](#)

Sarah E. Mastroianni , Thomas H. Epps, III

[S1.00060: Structure-performance analysis of donor/acceptor low band gap polymers: Effect of different acceptors](#)

Louis Perez , James Rogers , Kristin Schmidt , Guillermo Bazan , Edward Kramer

[S1.00061: PCBM Functionalized Block Copolymer films for Photovoltaic Applications](#)

Abul M.A. Huq , Manish M. Kulkarni , Alamgir Karim

[S1.00062: Mixing Behavior of a Molecular Acceptor and Polymeric Donors in Organic Solar Cell Blends](#)

M.A. Brady , N.D. Treat , L.A. Perez , J.E. Cochran , M.F. Toney , C.J. Hawker , M.L. Chabinyc , E.J. Kramer

[S1.00063: Photophysical Study of Novel Perylene Analogues for Biophysical Applications](#)

Jorge Palos-Chavez, Mark Penick, George Negrete, Lorenzo Brancaloni

[S1.00064: Synthesis and Characterization of Quinoxaline-Based Low-Bandgap Copolymers for Bulk Heterojunction Solar Cells](#)

Yoonkyoo Lee, Won Ho Jo

[S1.00065: PL enhancement in MEH-PPV stretched films by suppression non-radiative relaxations](#)

Jui-Hung Hsu, Jonathon David White, Arnold C.-M. Yang

[S1.00066: Classification of Semiconducting Polymeric Mesophases to Optimize Device Post-Processing](#)

Chad Snyder, Ryan Nieuwendaal, Lee Richter, R. Joseph Kline, Dean DeLongchamp, Martin Heeney, Iain McCulloch

[S1.00067: Solution processed organic microarray with inverted structure](#)

Patrick Toglia, Jason Lewis, Evan Lafalce, Xiaomei Jiang

[S1.00068: Subpicosecond photonic switching based on bacteriorhodopsin](#)

Pal Ormos, Laszlo Fabian, Zsuzsanna Heiner, Mark Mero, Miklos Kiss, Elmar Wolff, Karoly Osvay, Andras Der

[S1.00069: Efficient blue PhOLEDs using host materials of lower triplet energy than the emitter](#)

James Swensen, Evgueni Polikarpov, Amber VonRuden, Liang Wang, Asanga Padmaperuma

[S1.00070: Simulation of DNA Electrophoresis by Coarse-Grained Hybrid Molecular Dynamics Approach](#)

Rong Wang

[S1.00071: Examining Adsorbed Polymer Conformations with Fluorescence Imaging](#)

Maria Parkes, Mourad Chennaoui, Janet Wong

[S1.00072: Study of pluronic F68 molecules on silicon with Atomic Force Microscopy \(AFM\)](#)

M.J. Retamal, U.G. Volkmann, V.D. Samith

[S1.00073: Hierarchical self-assembly of spider silk-like block copolymers](#)

Sreevidhya Krishnaji, Wenwen Huang, Peggy Cebe, David Kaplan

[S1.00074: Tunable surface properties from bioinspired polymers](#)

Wendy van Zoelen, Adrienne Rosales, Hannah Murnen, Ronald Zuckermann, Rachel Segalman

[S1.00075: Synthesis and Characterization of Thermally Responsive Polysaccharide Nanoparticles](#)

Krista Freeman, Sean Sheridan, Imaan Benmerzouga, John McKenna, Kiril Stretletzky

[S1.00076: Uniform Yeast Cell Assembly Based on Microfluidic Microgels](#)

Ya-Wen Chang, Peng He, Manuel Marquez, Zhengdong Cheng, Samantha M. Marquez

[S1.00077: Clay platelets in a matrix of amino acids \(of a clay binding peptide M1\) homopolymer: binding, unbinding, dispersion, and self-assembly by a coarse-grained Monte Carlo simulation](#)

Barry Farmer, Lawrence Drummy, Sharon Jones, Richard Vaia, Rajesh Naik, Hendrik Heinz, Ras Pandey

[S1.00078: Diffusion-driven looping provides a consistent framework for chromatin organization](#)

Dieter Heermann, Manfred Bohn

[S1.00079: Synthesis of a novel photopolymerized nanocomposite hydrogel for the treatment of acute mechanical damage to cartilage](#)

Kathryn Schlichting, Trishelle Copeland-Johnson, Matthew Goodman, Robert Lipert, Todd McKinley, James Martin, Surya Mallapragada, Zhiqun Lin

[S1.00080: Car--Parrinello Molecular Dynamics Study of Base-Catalyzed Hydrolysis Reactions](#)

Sufian Alnemrat, Igor Vasiliev, Haobin Wang

[S1.00081: Silica-Based Janus Nanoparticles at the Water-Decane Interface](#)

Heng Fan, Alberto Striolo

[S1.00082: Synthesis of stable Au-PEG nanocomposite chains in a single step precursor free method and its formation mechanism and Di-electric behavior](#)

Rajesh Kumar Neogy, Rajib Nath, Gautam Basu, Arup Kumar Raychaudhuri

[S1.00083: Assembly of carbon nanotube/polymer hybrids at liquid/liquid interface](#)

Wenda Wang, Eric Laird, Christopher Li

[S1.00084: Nucleation and Growth of Hydroxapatite on Hierarchically Ordered Polymer Nanofibers](#)

Xi Chen, Bin Dong, Bingbing Wang, Christopher Li

[S1.00085: Direct nanoparticle assembly in block copolymer based supramolecules containing liquid crystal](#)

Myung Im Kim, Clayton E. Mauldin, Jean M.J. Frechet, Ting Xu

[S1.00086: Assemble Nanoparticles in Diblock Copolymer-Based Supramolecular Thin Films in Fifteen Minutes](#)

Joseph Kao, Vivian Chuang, Seong-Jun Jeong, Ting Xu

[S1.00087: PS- \$\text{PDMS}\$ Block Copolymer Thin Film: Pattern Formation and Phase Behavior](#)

I-Fan Hsieh, Stephen Z.D. Cheng

[S1.00088: Directing morphology development in Triblock copolymers: A Self-Consistent Field Theory Study](#)

Mougeh Mohagheghi , Bamin Khomami

[S1.00089: How Fast Liposomes Diffuse in the Extracellular Matrix](#)

James Kuo , Bo Wang , Sung Chul Bae , Steve Granick

Session V4: Dynamics of Polymers: Phenomena Due to Confinement

Sponsoring Units: DPOLY

Chair: Zahra Fakhraei, University of Wisconsin

Room: *Ballroom A4*

Thursday, March 24, 2011
8:00AM - 8:36AM

[V4.00001: Direct measurement of molecular motion in freestanding polystyrene thin films](#)

Invited Speaker: Mark Ediger

Thursday, March 24, 2011
8:36AM - 9:12AM

[V4.00002: Molecular dynamics at nanometric length-scales](#)

Invited Speaker: Friedrich Kremer

Thursday, March 24, 2011
9:12AM - 9:48AM

[V4.00003: Gas Permeation in Thin Glassy Polymer Films](#)

Invited Speaker: Donald Paul

Thursday, March 24, 2011
9:48AM - 10:24AM

[V4.00004: Surface Dynamics in Glass forming Materials](#)

Invited Speaker: James Forrest

Thursday, March 24, 2011
10:24AM - 11:00AM

[V4.00005: Confinement effects on polymer structure and glassy dynamics](#)

Invited Speaker: Alexey Lyulin

**Session V42: Focus Session: Supramolecular Self-Assembly--
Controlling Network and Gel Formation II**

Sponsoring Units: DPOLY DBP
Chair: Nigel Clarke, University of Durham
Room: A302/303

Thursday, March 24, 2011 8:00AM - 8:36AM	V42.00001: Control of semi-flexible polymer networks by architecture and dynamic cross-linking Invited Speaker: Fred MacKintosh
Thursday, March 24, 2011 8:36AM - 8:48AM	V42.00002: Macro- and microphase separation in multifunctional supramolecular polymer networks Zoltan Mester , Aruna Mohan , Glenn Fredrickson
Thursday, March 24, 2011 8:48AM - 9:00AM	V42.00003: Equilibrium and nonequilibrium gelation in TPR protein/linker mixtures Tianqi Shen , Robert S. Hoy , Corey S. O'Hern
Thursday, March 24, 2011 9:00AM - 9:12AM	V42.00004: Effects of inclusions on the dynamics of viscoelastic media Stephen Mirigian , Murugappan Muthukumar
Thursday, March 24, 2011 9:12AM - 9:24AM	V42.00005: Conformation and mechanical properties of diblock fibers Sumanth Swaminathan , Francisco Solis , Monica Olvera de la Cruz
Thursday, March 24, 2011 9:24AM - 9:36AM	V42.00006: The Role of Multiple, Reformable Parallel Bonds on the Self-healing Behavior of Dual Crosslinked Nanogel Materials Isaac G. Salib , German V. Kolmakov , Chet N. Gnegy , Krzysztof Matyjaszewski , Anna C. Balazs
Thursday, March 24, 2011 9:36AM - 9:48AM	V42.00007: Forming Reversible Gels with Triblock Polyelectrolytes: a Field-theoretic Study Debra Audus , Glenn Fredrickson
Thursday, March 24, 2011 9:48AM - 10:00AM	V42.00008: Supramolecular Arrest and Activation for the Network Formation of Acid Catalyzed Epoxy Polymerization Matthew Spencer , James Crivello , Chang Y. Ryu
Thursday, March 24, 2011 10:00AM - 10:12AM	V42.00009: Polymer Phononic Meta-material Networks Cheongyang Koh , Edwin Thomas
Thursday, March 24, 2011 10:12AM - 10:24AM	V42.00010: Formation of Anisotropic Block Copolymer Gels Chya Yan Liaw , Kenneth Shull , Kevin Henderson , Derk Joester
Thursday, March 24, 2011 10:24AM - 10:36AM	V42.00011: Microstructural Organization of Elastomeric Polyurethanes with Siloxane-Containing Soft Segments Taeyi Choi , Jadwiga Weklsler , Ajay Padsalgikar , James Runt
Thursday, March 24,	V42.00012: Viscoelastic Properties of Photo-crosslinked Shape Memory Elastomers

201110:36AM - 10:48AM

Thursday, March 24, 2011
10:48AM - 11:00AM

Jiahui Li , Christopher Lewis , Darcy Chen , Mitchell Anthamatten

[V42.00013: Origins and stability of the polydomain regime in isotropic-genesis nematic elastomers](#)
Bing Lu , Fangfu Ye , Xiangjun Xing , Paul Goldbart

Session V43: Focus Session: Translocation Through Nanopores II

Sponsoring Units: DPOLY DBP

Chair: Johan Dubbeldam, Delft University of Technology, Netherlands

Room: A306/307

Thursday, March 24, 2011 8:00AM - 8:12AM	V43.00001: The Statistics of DNA Capture and Re-Capture by Solid-State Nanopores Mirna Mihovilovic , Erin Teich, Nick Hagerty, Jason Chan , Derek Stein
Thursday, March 24, 2011 8:12AM - 8:24AM	V43.00002: DNA translocation through a solid-state nanopore coated with a self-assembled monolayer Binqun Luan , Gustavo Stolovitzky , Glenn Martyna
Thursday, March 24, 2011 8:24AM - 8:36AM	V43.00003: Nanopore DNA translocation studies of tri-oligomer DNA with two hybridization segments Venkat Balagurusamy , Paul Weinger , Xinsheng Ling
Thursday, March 24, 2011 8:36AM - 8:48AM	V43.00004: Dehydration and Ionic Conductance Quantization in Synthetic Nanopores James Wilson , Michael Zwolak , Massimiliano Di Ventra
Thursday, March 24, 2011 8:48AM - 9:00AM	V43.00005: Nanowire-nanopore transistor sensor for DNA detection during translocation Ping Xie , Qihua Xiong , Ying Fang , Quan Qing , Charles Lieber
Thursday, March 24, 2011 9:00AM - 9:12AM	V43.00006: How to improve the sensitivity in transverse electronic measurements of DNA for nucleobase distinction? Yuhui He , Ming Liu , Anton Grigoriev , Ralph H. Scheicher , Rajeev Ahuja
Thursday, March 24, 2011 9:12AM - 9:48AM	V43.00007: Novel effects of chain flexibility, external force, and background stochasticity on polymer translocation Invited Speaker: Wokyung Sung
Thursday, March 24, 2011 9:48AM - 10:00AM	V43.00008: Simulations of Single DNA Nucleotide Transport Through Nanoslits Brian Novak , Kai Xia , Dorel Moldovan , Dimitris Nikitopoulos , Steven Soper
Thursday, March 24, 2011 10:00AM - 10:12AM	V43.00009: Heat Treatment to Shrink Solid-State Nanopores Joseph Billo , Waseem Asghar , Samir M. Iqbal
Thursday, March 24, 2011 10:12AM - 10:24AM	V43.00010: The Nanofluidic Field-Effect in Electrically Actuated Nanopores Zhijun Jiang , Derek Stein
Thursday, March 24, 2011 10:24AM - 10:36AM	V43.00011: FIB direct fabrication of sub-10 nm synthetic nanopores Jacques Gierak , Ali Madouri , Eric Bourhis , Jean-Yves Marzin , Ghani Oukhaled , Laurent Bacri , Benjamin Cressiot , Juan Pelta , Ralf Jede , Lars Bruchhaus , Loïc Auvray

Thursday, March 24, 2011 10:36AM - 10:48AM [V43.00012: Incremental Mean First Passage Analysis of Unbiased Polymer Translocation](#)

Gary W. Slater , Hendrick W. de Haan

Thursday, March 24, 2011 10:48AM - 11:00AM [V43.00013: Nanoscale fluid transportation through individual carbon nanotubes](#)

Jun He , Di Cao , Pei Pang , Tao Luo , Stuart Lindsay , Predrag Krstic , Colin Nuckolls

Session V44: Focus Session: Organic Electronics and Photonics -- Small molecule semiconductors and molecular electronics

Sponsoring Units: DMP DPOLY
Chair: Tim Jones, University of Warwick
Room: A309

- Thursday, March 24, 2011 8:00AM - 8:12AM [V44.00001: The Electronic Structure of a Local Charge-Transfer-Induced Spin Transition Molecular Adsorbate](#)
Xin Zhang , Ning Wu , ZhengZheng Zhang , Jean-François L'etard , Franois Guillaume , Bernard Doudin , Peter Dowben
- Thursday, March 24, 2011 8:12AM - 8:24AM [V44.00002: Raman scattering studies of organic semiconducting charge-transfer compounds](#)
Laurie McNeil , Christian Kloc
- Thursday, March 24, 2011 8:24AM - 8:36AM [V44.00003: Observation of optically forbidden states in PC₆₁BM due to interfacial distortion](#)
Hemant Shah , Bruce Alphenaar
- Thursday, March 24, 2011 8:36AM - 9:12AM [V44.00004: Free exciton emission and vibrations in pentacene monolayers](#)
Invited Speaker: Rui He
- Thursday, March 24, 2011 9:12AM - 9:24AM [V44.00005: The interaction of charge carriers with lattice phonons in oligoacene crystals](#)
Veaceslav Coropceanu , Yuan Li , Yuanping Yi , Robert Brown , Jean-Luc Bredas
- Thursday, March 24, 2011 9:24AM - 9:36AM [V44.00006: Spectroscopy of organic semiconductors from first principles](#)
Sahar Sharifzadeh , Ariel Biller , Leeor Kronik , Jeffery Neaton
- Thursday, March 24, 2011 9:36AM - 9:48AM [V44.00007: Angle resolved photoemission study of rubrene single crystal](#)
Yongli Gao , Huanjun Ding , Irfan Irfan , Colin Reese Reese , Antti Makinen , Zhenan Bao
- Thursday, March 24, 2011 9:48AM - 10:00AM [V44.00008: Charge localization and inhibition of self-assembly in tetraphenyl porphyrin on Cu\(111\)](#)
Geoffrey Rojas , Xumin Chen , Donna Kunkel , Jie Xiao , Peter A. Dowben , Axel Enders
- Thursday, March 24, 2011 10:00AM - 10:12AM [V44.00009: Scanning Tunneling Spectroscopy measurements of the Electronic Structure of C60 films on the Cu\(100\) surface](#)
D.R. Daughton , J.A. Gupta
- Thursday, March 24, 2011 10:12AM - 10:24AM [V44.00010: Highly Conducting Contacts for Single Molecule Transport Measured by STM-Break Junction](#)
Jonathan R. Widawsky , Zhan-Ling Cheng , Rachid Skouta , Severin T. Schneebeli , Hector Vazquez , Mark S. Hybertsen , Ronald Breslow , Latha Venkataraman

- Thursday, March 24, 2011 10:24AM - 10:36AM [V44.00011: 34 nm Charge Transport through DNA](#)
Jason Stinker , Natalie Muren , Sara Renfrew , Jacqueline Barton
- Thursday, March 24, 2011 10:36AM - 10:48AM [V44.00012: Electrical properties of metal-molecule-silicon structures with varying molecular backbones, dipoles, and atomic tethers](#)
Curt A Richter , Nadine Gergel-Hackett , Mariona Coll , Christina A Hacker
- Thursday, March 24, 2011 10:48AM - 11:00AM [V44.00013: Engineering controlled Au/GaAs junctions with partial molecular monolayers](#)
C. Marginean , J.P. Pelz , H. Haick , D. Cahen

Session W38: Focus Session: Organic Electronics and Photonics -- Charge transport

Sponsoring Units: DMP DPOLY

Chair: Almantas Pivrikas, Johannes Kepler University Linz

Room: A130/131

- Thursday, March 24, 2011 11:15AM - 11:27AM [W38.00001: Charge Transport in Functionalized Fluorinated Pentacenes](#)
Oana Jurchescu , Daniel David , Claire McLellan , Balaji Purushothaman , Shubin Liu , Veaceslav Coropceanu , John Anthony , Laurie McNeil
- Thursday, March 24, 2011 11:27AM - 11:39AM [W38.00002: Semicrystalline high performance poly \(thienothiophene\) thin films: crystallites and defects](#)
Chenchen Wang , Javier Dacu\~na , Bj\"orn Br\"auer , Dan Daranciang , Alberto Salles
- Thursday, March 24, 2011 11:39AM - 11:51AM [W38.00003: First-principles study of polythiophene and polyselenophene crystals for organic electronics](#)
Takao Tsumuraya , Jung-Hwan Song , A.J. Freeman
- Thursday, March 24, 2011 11:51AM - 12:03PM [W38.00004: Analysis of Metallic Conduction at the Interface of TTF and TCNQ Crystals](#)
Viktor Atalla , Mina Yoon , Matthias Scheffler
- Thursday, March 24, 2011 12:03PM - 12:15PM [W38.00005: Charge Trapping in Organic Thin-Film Transistors](#)
Claire McLellan , Jack Owen , Marsha Griminger , John Anthony , Oana Jurchescu
- Thursday, March 24, 2011 12:15PM - 12:27PM [W38.00006: Organic electrical double layer transistors gated with ionic liquids](#)
Wei Xie , C. Daniel Frisbie
- Thursday, March 24, 2011 12:27PM - 12:39PM [W38.00007: Hopping transport in electrolyte-gated P3HT organic field effect transistors](#)
Shun Wang , Mingjing Ha , Michael Manno , C. Daniel Frisbie , C. Leighton
- Thursday, March 24, 2011 12:39PM - 12:51PM [W38.00008: Charge transport and velocity distribution in ambipolar organic thin film Transistors based on a diketopyrrolopyrrole-benzothiadiazole copolymer](#)
Tae-jun Ha , Prashant Sonar , Samarendra Pratap Singh , Ananth Dodabalapur
- Thursday, March 24, 2011 12:51PM - 1:03PM [W38.00009: Organic field effect transistor fabricated by directly grown poly \(3 hexylthiophene\) crystalline nanowires on solution processed carbon nanotube aligned array electrodes](#)
Biddut Sarker , Jianhua Liu , Lei Zhai , Saiful Khondaker
- Thursday, March 24, 2011 1:03PM - 1:15PM [W38.00010: Interfacial Width Measurements of Dielectric/P\(NDI2OD-T2\) Using Resonant Soft X-ray Reflectivity](#)
Hongping Yan , Ziran Gu , Eliot Gann , Brian Collins , Sufal Swaraj , Cheng Wang , Torben Schuettfort , Chris McNeill , Harald Ade

- Thursday, March 24, 2011 1:15PM - 1:27PM [W38.00011: Temperature Induced Structure Evolution of Regioregular Poly \(3-hexylthiophene\) in Dilute Solution and its Influence on Thin Film Morphology](#)
Charles Han , Ye Huang , He Cheng
- Thursday, March 24, 2011 1:27PM - 1:39PM [W38.00012: Effect of Cooling Rate on Microstructure and Charge Transport in Semiconducting Polymer Thin Films](#)
Evan Kang , Eunseong Kim
- Thursday, March 24, 2011 1:39PM - 1:51PM [W38.00013: Exponential behavior of the Ohmic transport in organic films](#)
Corneliu Colesniuc , Rudro Biswas , Samuel Hevia , Alexander Balatsky , Ivan Schuller
- Thursday, March 24, 2011 1:51PM - 2:03PM [W38.00014: Atomistic Molecular Dynamics Simulation of the Surface Properties of P3HT Films](#)
Yeneneh Yimer , Sima Mofakham , Ali Dhinojwala , Mesfin Tsige
- Thursday, March 24, 2011 2:03PM - 2:15PM [W38.00015: Switching or triggering by light organic materials in the 100 nm size range](#)
Vina Faramarzi , Jean Francois Dayen , Bernard Doudin

Session W40: Polymer Blends

Sponsoring Units: DPOLY

Chair: Mesfin Tsige, University of Akron

Room: A122/123

- Thursday, March 24, 2011 11:15AM - 11:27AM [W40.00001: Entanglement Dynamics in Miscible Polyisoprene / Poly\(p-*tert*-butyl styrene\) Blends](#)
Hiroshi Watanabe
- Thursday, March 24, 2011 11:27AM - 11:39AM [W40.00002: Local Relaxation Behavior and Dynamic Fragility in Hydrogen Bonded Polymer Blends](#)
James Runt , Kevin Masser , Hanqing Zhao , Paul Painter
- Thursday, March 24, 2011 11:39AM - 11:51AM [W40.00003: Partial Miscibility in Copolymer Blends](#)
Elizabeth Clark , Jane Lipson
- Thursday, March 24, 2011 11:51AM - 12:03PM [W40.00004: Improving the Compatibility and Mechanical Properties of Recycled Polymer Blends using Supercritical Carbon Dioxide](#)
Mitchell Fourman , Miriam Rafailovich , John Michael Iraci
- Thursday, March 24, 2011 12:03PM - 12:15PM [W40.00005: Properties of polystyrene/poly\(dimethyl siloxane\) blends partially compatibilized with star polymers containing a gamma-cyclodextrin core and polystyrene arms](#)
C. Maurice Balik , Brad J. Busche , Alan E. Tonelli
- Thursday, March 24, 2011 12:15PM - 12:27PM [W40.00006: Crystallization in the Binary Blends of Crystalline-Amorphous Diblock Copolymers Bearing Chemically Different Crystalline Block](#)
Che-Yi Chu , Hsin-Lung Chen , Bhanu Nandan , Ming-Siao Hsiao
- Thursday, March 24, 2011 12:27PM - 12:39PM [W40.00007: Particles Directed into Phases of Bicontinuous Polymer Blends and Their Mechanical Properties](#)
Andrew B. Schoch , Andrew J. Duncan , Frederick L. Beyer , Joseph L. Lenhart
- Thursday, March 24, 2011 12:39PM - 12:51PM [W40.00008: Effect of Organoclays on Immiscible Polymer Blends](#)
Mai Ha , Ramanan Krishnamoorti
- Thursday, March 24, 2011 12:51PM - 1:03PM [W40.00009: Characterization of the Early Stages of Phase Separation in PS/PVME Blends Using Fluorescence](#)
Annika Kriisa , Sung Park , Connie Roth
- Thursday, March 24, 2011 1:03PM - 1:15PM [W40.00010: Non-Isothermal Crystallization of PET/PLA Blends](#)
Huipeng Chen , Marek Pyda , Peggy Cebe
- Thursday, March 24, 2011 1:15PM - 1:27PM [W40.00011: Critical Micelle Concentrations for Different Micelle Shape in Diblock Copolymer/Homopolymer Blends](#)
Jiajia Zhou , An-Chang Shi
- Thursday, March 24, 2011 1:27PM - 1:39PM [W40.00012: Ordered Materials via Additive Driven Assembly and Reaction using Surfactant-Based Templates](#)
Michael R. Beaulieu, Vikram K. Daga, Alan J. Lesser , James J. Watkins

Thursday, March 24, 2011 1:39PM - 1:51PM [W40.00013: Interfacial Structure and Dynamics of the liquid/liquid interface between Polydimethylsiloxane and Polystyrene](#)
Mesfin Tsige

Thursday, March 24, 2011 1:51PM - 2:03PM [W40.00014: Effect of linear contaminants on the dynamics and rheology of ring polymer melts](#)
Jonathan Halverson , Gary Grest , Kurt Kremer

Session W42: Focus Session: Polymer Brushes

Sponsoring Units: DPOLY

Chair: You Yeon Won, Purdue University

Room: A302/303

Thursday, March 24, 2011 11:15AM - 11:51AM	W42.00001: Responsive Grafted Polymer Layers: the role of pH, temperature and surface geometry Invited Speaker: Igal Szleifer
Thursday, March 24, 2011 11:51AM - 12:03PM	W42.00002: Polyelectrolyte brushes in mixed ionic medium studied via intermolecular forces Robert Farina , Nicolas Laugel , Philip Pincus , Matthew Tirrell
Thursday, March 24, 2011 12:03PM - 12:15PM	W42.00003: Microsecond MD Simulations of Nano-patterned Polymer Brushes on Self-Assembled Monolayers Creighton Buie , Liming Qiu , Soyeun Park , Mark Vaughn , Kwan Cheng
Thursday, March 24, 2011 12:15PM - 12:27PM	W42.00004: Nano-pillars created from the surface-grafted crosslinked polymer chains Soyeun Park , Dipika Patel , Fernando Monjaraz , Wolfgang Frey
Thursday, March 24, 2011 12:27PM - 1:03PM	W42.00005: Polymer brushes: Tools for surface design Invited Speaker: Christopher Ober
Thursday, March 24, 2011 1:03PM - 1:15PM	W42.00006: Preparation, Patterning, and Electrical Characterization of Conjugated Polymer Brushes Jose Alonzo , Jihua Chen , Onome Swader , Nikolay Lavrik , Mark Dadmun , S. Michael Kilbey II
Thursday, March 24, 2011 1:15PM - 1:27PM	W42.00007: Quantifying Fluctuations/Correlations in Polymer Brushes Qiang Wang , Xinghua Zhang , Pengfei Zhang , Baohui Li
Thursday, March 24, 2011 1:27PM - 1:39PM	W42.00008: Structures of One and Two Polymer Mushrooms Delian Yang , Qiang Wang
Thursday, March 24, 2011 1:39PM - 1:51PM	W42.00009: Tethered chains in good and poor solvent - effects of lateral confinement on adsorption and chain collapse Jutta Luettmmer-Strathmann , Ryan M. Van Horn
Thursday, March 24, 2011 1:51PM - 2:03PM	W42.00010: Semiflexible Polymer Brushes Shiliyang Xu , J.M. Schwarz
Thursday, March 24, 2011 2:03PM - 2:15PM	W42.00011: Interfacial properties of statistical copolymer brushes David Trombly , Victor Pryamitsyn , Venkat Ganesan

Session W43: Morphology and Transport in Charged Polymers, Block Copolymers, Membranes, and Films

Sponsoring Units: DPOLY

Chair: LaShanda Korley, Case Western Reserve University

Room: A306/307

Thursday, March 24, 2011 11:15AM - 11:27AM	W43.00001: Characterization of a Model Polyelectrolyte Membrane Using a Semi-crystalline Block Copolymer Keith Beers , Xin Wang , Nitash Balsara
Thursday, March 24, 2011 11:27AM - 11:39AM	W43.00002: Structure-Property Relationships in Sulfonated Pentablock Copolymers Jae-Hong Choi , Carl Willis , Karen I. Winey
Thursday, March 24, 2011 11:39AM - 11:51AM	W43.00003: Interfacial Stability of Solid Block Copolymer Electrolytes for Rechargeable Lithium Metal Batteries Greg Stone , Scott Mullin , Nitash Balsara
Thursday, March 24, 2011 11:51AM - 12:03PM	W43.00004: Local dielectric constant and its effects on the microphase separation in charged-neutral diblock copolymer melts Rajeev Kumar , Scott Sides , Bobby Sumpter
Thursday, March 24, 2011 12:03PM - 12:15PM	W43.00005: Magnetically aligned ion-transport polymer membranes Pawel Majewski , Manesh Gopinadhan , Chinedum Osuji
Thursday, March 24, 2011 12:15PM - 12:27PM	W43.00006: The effect of salt-doping on the lamellar phase of AB diblock copolymers Issei Nakamura , Zhen-Gang Wang
Thursday, March 24, 2011 12:27PM - 12:39PM	W43.00007: Impact of morphology on conductivity of lamellar block copolymer electrolytes for battery applications Venkat Ganesan , Victor Pryamitsyn
Thursday, March 24, 2011 12:39PM - 12:51PM	W43.00008: Dynamics of water in sulfonated poly(phenylene) membranes Naresh Osti , Thusitha Etampawala , Umesh Shrestha , Dvora Perahia , Christopher Cornelius
Thursday, March 24, 2011 12:51PM - 1:03PM	W43.00009: Morphology and Transport Properties of Phosphonium-containing Styrenic Ionomers with Random Charge Placement Rick Beyer , Kristoffer Stokes , Joshua Orlicki , Yuesheng Ye , Yossef Elabd
Thursday, March 24, 2011 1:03PM - 1:15PM	W43.00010: Morphology of precise acid copolymers neutralized with monovalent cations Michelle Seitz , Kathleen Opper , Kenneth Wagener , Karen Winey
Thursday, March 24, 2011 1:15PM - 1:27PM	W43.00011: Cubic Ordering of Aggregates in Precise Phosphonic Acid Copolymers Francisco Buitrago , Kathleen Opper , Kenneth Wagener , Karen Winey

- Thursday, March 24, 2011 1:27PM - 1:39PM [W43.00012: The Effect of Sulfonation and Neutralization on the Dynamics of Zn Neutralized Sulfonated Polystyrene Ionomers](#)
Alicia Castagna , Wenqin Wang , Karen I. Winey , James Runt
- Thursday, March 24, 2011 1:39PM - 1:51PM [W43.00013: Proton Transport in Nanostructured Block Copolymer/Ionic Liquid Membranes](#)
Megan Hoarfrost , Madhu Tyagi , Jeffrey Reimer , Rachel Segalman
- Thursday, March 24, 2011 1:51PM - 2:03PM [W43.00014: Simultaneous Electronic and Ionic Charge Transport in Poly\(3-hexylthiophene\)-b-Poly\(ethylene oxide\)](#)
Shrayesh Patel , Anna Javier , Nitash Balsara
- Thursday, March 24, 2011 2:03PM - 2:15PM [W43.00015: Confinement Effects on Watery Domains in Hydrated Block Copolymer Electrolyte Membranes](#)
Moon Jeong Park , Sung Yeon Kim , Joomi Yeo

Session W44: Focus Session: Dynamics of Polymers- Phenomena due to Confinement - Diffusion, Particles, & Pores

Sponsoring Units: DPOLY
Chair: Karin Jacobs, Saarland University, Germany
Room: A309

- Thursday, March 24, 2011 11:15AM - 11:27AM [W44.00001: Single-molecule measurements of adsorbed polymer](#)
Changqian Yu , Juan Guan , Sung Chul Bae , Steve Granick
- Thursday, March 24, 2011 11:27AM - 11:39AM [W44.00002: Segmental motion in polystyrene thin film: a single molecule fluorescence study](#)
Zhongli Zheng , Jiang Zhao
- Thursday, March 24, 2011 11:39AM - 11:51AM [W44.00003: Order of Magnitude Decrease in Dye Diffusion in Nanoconfined Polymer Films: Fluorescence Nonradiative Energy Transfer Technique](#)
Hui Deng , Manish Mundra , John Torkelson
- Thursday, March 24, 2011 11:51AM - 12:03PM [W44.00004: Non-classical diffusion of PDMS confined in a surface forces apparatus](#)
Subhalakshmi Kumar , Changqian Yu , Sung Chul Bae , Steve Granick
- Thursday, March 24, 2011 12:03PM - 12:15PM [W44.00005: Probing In-Plane Diffusion of Nano-Confined Polymers in Ultrathin Films](#)
Joshua Katzenstein , Justin Chandler , Haley Hocker , Christopher Ellison
- Thursday, March 24, 2011 12:15PM - 12:27PM [W44.00006: Screening Effect of Supercritical Carbon Dioxide on Polymer/Substrate Interactions](#)
Peter Gin , Naisheng Jiang , Maya Endoh , Bulent Akgun , Sushil Satija , Tad Koga
- Thursday, March 24, 2011 12:27PM - 12:39PM [W44.00007: The Glass Transition at Silica/PMMA Nanocomposite Interfaces](#)
Rahmi Ozisik , Katelyn Parker , Ryan T. Schneider , Richard W. Siegel , Juan Carlos Cabanelas , Berna Serrano , Claire Antonelli , Juan Baselga
- Thursday, March 24, 2011 12:39PM - 12:51PM [W44.00008: Structural Relaxation of 3-Dimensionally Confined Polymer Glasses: Isobaric versus Isochoric Glass Formation](#)
Yunlong Guo , Chuan Zhang , Rodney Priestley
- Thursday, March 24, 2011 12:51PM - 1:03PM [W44.00009: Molecular Dynamics Study of Single Conjugated Polymers Confined to Nanoparticles](#)
Sabina Maskey , Flint Pierce , Dvora Perahia , Gary Grest
- Thursday, March 24, 2011 1:03PM - 1:15PM [W44.00010: The Glass Transition Temperature of Polymer Nanoparticles under Soft and Hard Confinement](#)
Chuan Zhang , Yunlong Guo , Rodney Priestley
- Thursday, March 24, 2011 1:15PM - 1:27PM [W44.00011: Statics and dynamics of confined DNA in a nanopit array](#)
Alexander Klotz , Walter Reisner

Thursday, March 24, 2011 [W44.00012: Modeling of Free Radical Polymerization of Methyl Methacrylate \(MMA\) in Nanoporous Confinement](#)
1:27PM - 1:39PM

Fatema Begum , Sindee Simon

Thursday, March 24, 2011 [W44.00013: Effect of Nanopore Confinement on the Polymerization Rate of Linear Polymers](#)
1:39PM - 1:51PM

Po-Han Lin , Rajesh Khare

Thursday, March 24, 2011 [W44.00014: Theoretical Study of Tethered Polymers inside a Cylindrical Tube](#)
1:51PM - 2:03PM

Tongchuan Suo , Mark Whitmore

Session X4: Functional Gels

Sponsoring Units: DPOLY

Chair: Igal Szleifer, Northwestern University

Room: *Ballroom A4*

Thursday, March 24, 2011 [X4.00001: Micromechanical study of mitotic chromosome structure](#)
2:30PM - 3:06PM

Invited Speaker: John Marko

Thursday, March 24, 2011 [X4.00002: A Molecular View of Liquid Crystalline Elastomers and Gels](#)
3:06PM - 3:42PM

Invited Speaker: Juan de Pablo

Thursday, March 24, 2011 [X4.00003: Gelation of mucin: Protecting the stomach from autodigestion](#)
3:42PM - 4:18PM

Invited Speaker: Rama Bansil

Thursday, March 24, 2011 [X4.00004: Responsive gels and membranes](#)
4:18PM - 4:54PM

Invited Speaker: Monica Olvera de la Cruz

Thursday, March 24, 2011 [X4.00005: HAIRS: Hydrogel-Actuated Integrated Responsive Systems](#)
4:54PM - 5:30PM

Invited Speaker: Joanna Aizenberg

Session X42: Polymeric Glasses

Sponsoring Units: DPOLY

Chair: Mark Ediger, University of Wisconsin--Madison

Room: A302/303

- Thursday, March 24, 2011 2:30PM - 2:42PM [X42.00001: Molecular Mobility on the Surface of Glassy Tris-naphthylbenzene \(TNB\)](#)
Zahra Fakhraai , Chad Daley , Stephen F. Swallen , Daniel Scifo , James A. Forrest , Mark D. Ediger
- Thursday, March 24, 2011 2:42PM - 2:54PM [X42.00002: Tuning the Dynamics of Penetrant Transport in Glassy Polymers through Network Structure Modification](#)
Adam Ekenseair , Nicholas Peppas
- Thursday, March 24, 2011 2:54PM - 3:06PM [X42.00003: A Surrogate for Debye-Waller Factors from Stokes Shifts](#)
Marcus Cicerone , Qin Zhong , Madhusudan Tyagi
- Thursday, March 24, 2011 3:06PM - 3:18PM [X42.00004: Comparison of the KWW and BSW Model Descriptions of the Dynamic Responses of Polymeric and Colloidal Glass Formers](#)
Ben Xu , Gregory B. McKenna
- Thursday, March 24, 2011 3:18PM - 3:30PM [X42.00005: Aging and structural recovery behaviors in epoxy films subjected to carbon dioxide plasticization jumps: Evidence for a new glassy state](#)
Gregory McKenna , Shankar Subramanian , Jing Zhao , Mataz Alcoutlabi , Lameck Banda
- Thursday, March 24, 2011 3:30PM - 3:42PM [X42.00006: Effect of Quench Conditions on the Subsequent Physical Aging Rate of Polymer Glasses](#)
Laura Golick , Paul Yoon , Andy Pahner , Connie Roth
- Thursday, March 24, 2011 3:42PM - 3:54PM [X42.00007: Low Temperature Flow of PVC Chains](#)
Wei Chen , Gi Xue
- Thursday, March 24, 2011 3:54PM - 4:06PM [X42.00008: Evolution of Entanglements During Crazing of Glassy Polymers](#)
Ting Ge , Mark O. Robbins , Robert Hoy , Stefanos Anogiannakis , Christos Tzoumanekas , Doros Theodorou
- Thursday, March 24, 2011 4:06PM - 4:18PM [X42.00009: Surface Softening in Polymers and Their Nanocomposites Determined by Surface Mechanical Properties through Spontaneous Particle Embedment](#)
Taskin Karim , Gregory McKenna
- Thursday, March 24, 2011 4:18PM - 4:30PM [X42.00010: Effect of molecular weight on gold nanoparticle embedding into polystyrene films near and below the bulk glass transition temperature](#)
Chad Daley , Dongping Qi , James Forrest
- Thursday, March 24, 2011 4:30PM - 4:42PM [X42.00011: Glass Transition and Free Volume Behavior in Epoxy-amine Network Glasses: Effect of Diamine Isomers](#)
Sergei Nazarenko , Mukul Kaushik , Matthew Jackson , Jeffrey Wiggins

- Thursday, March 24, 2011 4:42PM - 4:54PM [X42.00012: Difference in the heat capacity and the coefficient of thermal expansion responses during thermal cycling](#)
Grigori Medvedev , Eun-Woong Lee , James Caruthers
- Thursday, March 24, 2011 4:54PM - 5:06PM [X42.00013: Formation of Glassy Polymer Films by Matrix Assisted Pulsed Laser Evaporation](#)
Rodney Priestley , Yunlong Guo , Craig Arnold
- Thursday, March 24, 2011 5:06PM - 5:18PM [X42.00014: Characterization of pre-mature nanocomposite crazes](#)
Gregory N. Toepperwein , Juan J. de Pablo
- Thursday, March 24, 2011 5:18PM - 5:30PM [X42.00015: Structural Characterization of a Polymer of Intrinsic Microporosity: X-ray Scattering With Insight From Molecular Dynamics Simulations](#)
Amanda G. McDermott , Gregory S. Larsen , Peter M. Budd , Coray M. Colina , James Runt

Session X43: Focus Session: Assembly, Structure, & Instabilities in Polymer Films, Network Films, & Interfaces II

Sponsoring Units: DPOLY
Chair: Ryan Toomey, University of Southern Florida
Room: A306/307

- Thursday, March 24, 2011 2:30PM - 3:06PM [X43.00001: Hydrogels with Spatially and Temporally Controlled Properties to Control Cellular Interactions](#)
Invited Speaker: Jason Burdick
- Thursday, March 24, 2011 3:06PM - 3:18PM [X43.00002: Hydrogel Stamping of Polyelectrolyte Multilayers for Directed Cell Growth](#)
Nicole Zacharia , Chungyeon Cho
- Thursday, March 24, 2011 3:18PM - 3:30PM [X43.00003: Patterned Poly-N-isopropylacrylamide Surfaces for Culture and Harvest of Muscle Fibers](#)
Samuel DuPont ,Kranthi Kumar Elineni ,Nathan Gallant ,Ryan Toomey
- Thursday, March 24, 2011 3:30PM - 3:42PM [X43.00004: Controlled Release from Model Blended Polyelectrolyte Multilayer Films](#)
Bulent Akgun , Yeongseon Jang , Sushil Satija , Kookheon Char
- Thursday, March 24, 2011 3:42PM - 3:54PM [X43.00005: Surface wrinkling driven by swelling and its applications](#)
Hyun Suk Kim , Alfred Crosby
- Thursday, March 24, 2011 3:54PM - 4:06PM [X43.00006: Nanoporous Conductive Films Derived from Polymeric Bicontinuous Microemulsions](#)
Brad Jones , Kai-Yuan Cheng , Russell Holmes , Timothy Lodge
- Thursday, March 24, 2011 4:06PM - 4:18PM [X43.00007: Particle Behavior at Anisotropically Curved Liquid Interfaces](#)
Kathleen McEnnis , Chuan Zeng , Benny Davidovitch , Anthony Dinsmore , Thomas Russell
- Thursday, March 24, 2011 4:18PM - 4:30PM [X43.00008: Hierarchically Ordered Block Copolymer Micelles Formed by Controlled Evaporative Self-Assembly](#)
Wei Han , Myunghwan Byun , Zhiqun Lin
- Thursday, March 24, 2011 4:30PM - 4:42PM [X43.00009: Viscoelastic properties of ultrathin polymer films using the liquid dewetting technique](#)
Jinhua Wang , Gregory McKenna
- Thursday, March 24, 2011 4:42PM - 4:54PM [X43.00010: Elastic Moduli of Nanoparticle-Polymer Composite Thin Films via Buckling on Elastomeric Substrates](#)
Hongyi Yuan , Alamgir Karim
- Thursday, March 24, 2011 4:54PM - 5:06PM [X43.00011: Effect of Chain Architecture on the Physical Aging of Thin Polymer Films](#)
Bradley Frieberg , Emmanouil Glynos , Peter Green
- Thursday, March 24, 2011 [X43.00012: Perturbing the Tg of Polymers by 50-100 K in Nanoconfined Freely Standing Films and by the Presence of Neighboring Layers of Other Polymers](#)

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5:06PM - 5:18PM

John Torkelson , Soyoung Kim

Thursday, March 24, 2011 5:18PM - 5:30PM [X43.00013: Ordered semiconducting self-assembled monolayers on polymeric surfaces applied in organic integrated circuits](#)

Fatemeh Gholamrezaie , Simon Mathijssen , Edsger Smits , Eugenio Cantatore , Paul van Hal , Sergei Ponomarenko , Heinz-Georg Flesch , Roland Resel , Paul Blom , Dago de Leeuw

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Session X44: Focus Session: Polymer Colloids-Structure, Function, and Dynamics II

Sponsoring Units: DPOLY DFD

Chair: Alberto Fernandez De Las Nieves, Georgia Institute of Technology

Room: A309

Thursday, March 24, 2011 2:30PM - 2:42PM	X44.00001: Nanoparticle Organic Hybrid Suspensions: Structure and Rheology Samanvaya Srivastava , Lynden Archer
Thursday, March 24, 2011 2:42PM - 2:54PM	X44.00002: Measuring and Modeling the Interactions Between DNA-Functionalized Colloids William Rogers , John Crocker
Thursday, March 24, 2011 2:54PM - 3:06PM	X44.00003: Rheological and scattering properties of cross-linker-free microgels Zhiyong Meng , Chinedum Osuji
Thursday, March 24, 2011 3:06PM - 3:42PM	X44.00004: Normal Modes and Density of States of Disordered Colloidal Solids Invited Speaker: Mohammad Islam
Thursday, March 24, 2011 3:42PM - 3:54PM	X44.00005: Signatures of Aging: Comparison between Colloidal and Molecular Glasses Xiaojun Di , K.Z. Win , Gregory McKenna , T. Narita , F. Lequeux , S. Pullela , Z. Cheng
Thursday, March 24, 2011 3:54PM - 4:06PM	X44.00006: Packings of soft disks Primoz Zihelr , Marija Vidmar
Thursday, March 24, 2011 4:06PM - 4:18PM	X44.00007: Theory of effective interactions and dispersion of soft nanoparticles in polymer melts Jian Yang , Kenneth Schweizer
Thursday, March 24, 2011 4:18PM - 4:30PM	X44.00008: Density functional theory for the structure and dynamics of solvent-free nanoparticle--organic hybrid materials Hsiu-Yu Yu , Donald Koch
Thursday, March 24, 2011 4:30PM - 5:06PM	X44.00009: Yielding mechanisms and particle rearrangements in colloidal glasses and gels under shear Invited Speaker: George Petekidis
Thursday, March 24, 2011 5:06PM - 5:18PM	X44.00010: Ridge formation of charged end group ligands grafted on faceted nanoparticle Peijun Guo , Rastko Sknepnek , Monica Olvera de la Cruz
Thursday, March 24, 2011 5:18PM - 5:30PM	X44.00011: Dynamics of Polymers in Colloidal Flows Hsieh Chen , Alfredo Alexander-Katz
Thursday, March 24, 2011 5:30PM - 5:42PM	X44.00012: Spontaneous asymmetry in coated spherical nanoparticles in solution and at liquid-vapor interfaces J. Matthew D. Lane , Gary S. Grest

Session X45: Focus Session: Nanocomposite Physics I- Dispersions and Physical Properties

Sponsoring Units: DPOLY

Chair: Frederick Beyer, Army Research Laboratory

Room: A310

Thursday, March 24, 2011 2:30PM - 2:42PM	X45.00001: Dynamical Aspects of Percolation Networks of Carbon Nanotubes in Polymer Composites Gyemin Kwon , Bong June Sung
Thursday, March 24, 2011 2:42PM - 2:54PM	X45.00002: Langevin Approach to Optimizing Thermal Conductivity in Composite Materials Abdellah Ait Moussa , K.G.S.H. Gunawardana , Kieran Mullen
Thursday, March 24, 2011 2:54PM - 3:06PM	X45.00003: Use of embedded metal nanoparticles as photothermal heaters in polymer nanocomposites Somsubhra Maity , Jason Bochinski , Laura Clarke
Thursday, March 24, 2011 3:06PM - 3:18PM	X45.00004: Resistive switching in bulk polymer nanocomposites containing silver nanowires Karen Winey , Sadie White , Patrick Vora , Jay Kikkawa , Rose Mutiso
Thursday, March 24, 2011 3:18PM - 3:30PM	X45.00005: The Development of Structure in Nanoscale Colloidal Silica -- Polymer Nanocomposites Jeff Meth , J. David Londono , Changzai Chi , Barbara Wood , Patricia Cotts , Sangah Gam , Karen Winey , Russell Composto
Thursday, March 24, 2011 3:30PM - 3:42PM	X45.00006: Dispersion Behavior of Au Nanorods in Polymer Thin Films Mediated by Brush-Matrix Interactions Michael J.A. Hore , Russell J. Composto
Thursday, March 24, 2011 3:42PM - 3:54PM	X45.00007: Particle networks through aggregation in polymer nanocomposites Meisha Shofner , Jasmeet Kaur , Ji Hoon Lee
Thursday, March 24, 2011 3:54PM - 4:06PM	X45.00008: A silica nanoparticle based ionic material Nikhil Fernandes , Zubair Azad , Emmanuel Giannelis
Thursday, March 24, 2011 4:06PM - 4:18PM	X45.00009: Structure-Properties Relationship in Segmented Polyurethane/Silica Nanoparticle Composites Matthew Hood , James Sands , John La Scala , Frederick Beyer , Christopher Li
Thursday, March 24, 2011 4:18PM - 4:30PM	X45.00010: Polyurethane Nanocomposites Reinforced with Core-shell Magnetic Particles for Microwave Absorption Applications Zhanhu Guo , Jiahua Zhu , Rahul Patil , Neel Haldolaarachchige , David Young , Suying Wei
Thursday, March 24, 2011 4:30PM - 4:42PM	X45.00011: Deformation and fracture of Coarse-grained Model of Filled Rubber Composites Katsumi Hagita , Hiroshi Morita , Masao Doi , Hiroshi Takano

Thursday, March 24, 2011 [X45.00012: Studies of Microwave Absorption Properties of Carbon Nanotubes-Epoxy Composites](#)
4:42PM - 4:54PM

Z. Ye , Z. Li , J.A. Roberts , G.L. Zhao

Thursday, March 24, 2011 [X45.00013: Ecobionanocomposites: a new class of green materials](#)
4:54PM - 5:30PM

Invited Speaker: John Dorgan

Session Y4: Polymer Colloids: Structure, Function and Dynamics

Sponsoring Units: DPOLY

Chair: Eric Furst, University of Delaware

Room: Ballroom A4

Friday, March 25, 2011 [Y4.00001: Colloidal photonic crystals: Beyond optics, beyond spheres](#)
8:00AM - 8:36AM

Invited Speaker: Koen Clays

Friday, March 25, 2011 [Y4.00002: Near Wall Dynamics in Colloidal Suspensions Studied by Evanescent Wave Dynamic Light Scattering](#)
8:36AM - 9:12AM

Invited Speaker: Peter R. Lang

Friday, March 25, 2011 [Y4.00003: Assembly of Dimer-Based Photonic Crystals](#)
9:12AM - 9:48AM

Invited Speaker: Chekesh M. Liddell Watson

Friday, March 25, 2011 [Y4.00004: Directed self-assembly of small colloidal clusters](#)
9:48AM - 10:24AM

Invited Speaker: Vinothan Manoharan

Friday, March 25, 2011 [Y4.00005: Convective microsphere monolayer deposition](#)
10:24AM - 11:00AM

Invited Speaker: James Gilchrist

Session Y40: Focus Session: Nanocomposite Physics II- Polymer Dynamics

Sponsoring Units: DPOLY

Chair: Jim Watkins, University of Massachusetts--Amherst

Room: A122/123

- Friday, March 25, 2011 8:00AM - 8:36AM [Y40.00001: Particles Bridge the Gap -- Relevance of Polymer Graft Architecture on the Properties of Particle Brush Assemblies](#)
Invited Speaker: Michael Bockstaller
- Friday, March 25, 2011 8:36AM - 8:48AM [Y40.00002: How do Macromolecules Diffuse Through Pathways imposed by Nanoparticles?](#)
Russell Composto , Karen Winey , Nigel Clarke , Sangah Gam , Jeff Meth
- Friday, March 25, 2011 8:48AM - 9:00AM [Y40.00003: Macromolecular Diffusion in Polymer Nanocomposites](#)
Sangah Gam , Jeff Meth , Steve Zane , Karen Winey , Nigel Clarke , Russell Composto
- Friday, March 25, 2011 9:00AM - 9:12AM [Y40.00004: Role of Particle -- Polymer Interactions on the Dynamics of Polymer Nanocomposites](#)
Guglielmo Capuano , Ramakrishna Ponnampati , Domenico Acerno , Ramanan Krishnamoorti
- Friday, March 25, 2011 9:12AM - 9:24AM [Y40.00005: The relationship between the \$T_g\$ depression and the speeding up of physical aging in polystyrene/gold nanocomposites](#)
Virginie M. Boucher , Daniele Cangialosi , Angel Alegria , Juan Colmenero
- Friday, March 25, 2011 9:24AM - 10:00AM [Y40.00006: Nanoparticle-directed self-assembly of amphiphilic block-copolymers](#)
Invited Speaker: So-Jung Park
- Friday, March 25, 2011 10:00AM - 10:12AM [Y40.00007: Effect of Single-Walled Carbon Nanotubes on Glass Transition Behavior in Polystyrene](#)
Brian Grady , Warren Ford , Abhijit Paul
- Friday, March 25, 2011 10:12AM - 10:24AM [Y40.00008: Isothermal Crystallization of Poly\(ethylene oxide\) / Single Walled Carbon Nanotube Nanocomposites](#)
Arnaldo Lorenzo , Tirtha Chatterjee , Ramanan Krishnamoorti
- Friday, March 25, 2011 10:24AM - 10:36AM [Y40.00009: MD Simulations of DNA-Programmable Nanoparticle Self-Assembly](#)
Christopher Knorowski , Alex Travasset
- Friday, March 25, 2011 10:36AM - 10:48AM [Y40.00010: Hierarchical Superstructures from the Self-assembly of Giant Surfactants in Condensed State](#)
Wen-Bin Zhang , Xinfei Yu , Xuehui Dong , Yiwen Li , Kan Yue , Jinlin He , Stephen Cheng

Session Y41: Elastomers and Gels

Sponsoring Units: DPOLY

Chair: Kevin Cavicchi, University of Akron

Room: A115/117

- Friday, March 25, 2011 8:00AM - 8:12AM [Y41.00001: Swelling Kinetics of a Microgel Shell](#)
Joshua Wahrmond , Jin-Woong Kim , Liang-Yin Chu , Chanjie Wang , Yong Li , Alberto Fernandez-Nieves , David A. Weitz , Arkadii Krokhin , Zhibing Hu
- Friday, March 25, 2011 8:12AM - 8:24AM [Y41.00002: Indentation of polydimethylsiloxane submerged in organic solvents](#)
Yuhang Hu , Xin Chen , George Whitesides , Joost Vlassak , Zhigang Suo
- Friday, March 25, 2011 8:24AM - 8:36AM [Y41.00003: Synthesis and mechanical properties of resilin-like hydrogels](#)
Jun Cui , Melissa Lackey , Gregory Tew , Alfred Crosby
- Friday, March 25, 2011 8:36AM - 8:48AM [Y41.00004: Pre-Stressed Double Network Elastomers And Hydrogels](#)
Naveen Singh , Alan Lesser
- Friday, March 25, 2011 8:48AM - 9:00AM [Y41.00005: Topological effects on viscoelasticity of polyacrylamide hydrogels](#)
Jan Kalfus , Alan Lesser
- Friday, March 25, 2011 9:00AM - 9:12AM [Y41.00006: Memory Effects in Strained Polymer Networks Caused By Multiple Stages of Crosslinking](#)
Joanne Budzien
- Friday, March 25, 2011 9:12AM - 9:24AM [Y41.00007: Viscoelastic Properties and Ionic Conductivity of Block Copolymer-Based Ion Gel Electrolytes](#)
Sipei Zhang , Keun Hyung Lee , C. Daniel Frisbie , Timothy P. Lodge
- Friday, March 25, 2011 9:24AM - 9:36AM [Y41.00008: Fracture Behavior of High-Toughness, Ionically Cross-linked Triblock Copolymer Hydrogels](#)
Kevin Henderson , Kathryn Otim , Kenneth Shull
- Friday, March 25, 2011 9:36AM - 9:48AM [Y41.00009: Origin of the Toughness and the Elastomeric Properties of Gels from Block Copolymers with Semicrystalline Syndiotactic Polypropylene Blocks](#)
Fanny Deplace , Zhigang Wang , Glenn H. Fredrickson , Edward J. Kramer , Jeffrey M. Rose , Geoffrey W. Coates , Fumihiko Shimizu , Lixia Rong , Benjamin S. Hsiao
- Friday, March 25, 2011 9:48AM - 10:00AM [Y41.00010: Chemomechanical Characterization of Autonomic Polyacrylamide Gels](#)
Matthew Smith , Kevin Heitfeld , Ryan Kramb , Maxim Tchoul , Daniel Gallagher , Richard Vaia
- Friday, March 25, 2011 10:00AM - 10:12AM [Y41.00011: Block copolymer photonic crystal gels for mechanochromic sensing](#)
Edwin Chan , Joseph Walsh , Edwin Thomas , Christopher Stafford

Friday, March 25, 2011
10:12AM - 10:24AM

[Y41.00012: Theoretically Informed Coarse-Grained Simulations of Polymer Nanogels](#)

Prateek Jha , Jos Zwanikken , Francois Detcheverry , Juan de Pablo,
Monica Olvera de la Cruz

Session Y42: Focus Session: Dynamics of Polymers-- Phenomena due to Confinement--Theory, Wrinkling, and Glass Transitions

Sponsoring Units: DPOLY
Chair: Connie Roth, Emory University
Room: A302/303

- Friday, March 25, 2011
8:00AM - 8:12AM [Y42.00001: Twinkling Fractal Analysis of Confinement Effects on the Glass Transition of Thin Films](#)
Richard Wool , Joseph Stanzione III
- Friday, March 25, 2011
8:12AM - 8:24AM [Y42.00002: Mechanical properties of thin polymer films close to the glass transition: a mesoscale model](#)
Didier R. Long , Alain Dequidt , Paul Sotta
- Friday, March 25, 2011
8:24AM - 8:36AM [Y42.00003: A Simple Approach to Free Volume Transport in Molten/Glassy Material](#)
Jane Lipson , Scott Milner , Nicholas Tito
- Friday, March 25, 2011
8:36AM - 9:12AM [Y42.00004: Deviations in mechanical properties of ultrathin polymer films via surface wrinkling](#)
Invited Speaker: Christopher M. Stafford
- Friday, March 25, 2011
9:12AM - 9:24AM [Y42.00005: Calorimetry of Thin Films -- From Single Layer Glass Transitions to Inter-layer Diffusion in Double Layers](#)
Christoph Schick , Dongshan Zhou , Heiko Huth , Mathias Ahrenberg
- Friday, March 25, 2011
9:24AM - 9:36AM [Y42.00006: \$T_g\$ depression and segmental dynamics of polystyrene thin films](#)
Daniele Cangialosi , Virginie M. Boucher , Angel Alegria , Juan Colmenero
- Friday, March 25, 2011
9:36AM - 9:48AM [Y42.00007: Evidence for Two Simultaneous Mechanisms Causing \$T_g\$ Reductions in High Molecular-Weight Free-Standing Films Observed as Dual Glass Transitions More Than 30 K Apart in a Single Film](#)
Justin Pye , Connie Roth
- Friday, March 25, 2011
9:48AM - 10:00AM [Y42.00008: Demonstration of Glass Transition Temperature Depression in Thin Supported Polystyrene Films Using Internal Standard](#)
Mikhail Efremov , Paul Nealey
- Friday, March 25, 2011
10:00AM - 10:12AM [Y42.00009: Effect of Packing Density on the Measurement of Glass Transition Temperatures in Thin Film](#)
Gi Xue
- Friday, March 25, 2011
10:12AM - 10:24AM [Y42.00010: The Effect of Molecular Weight on the Glass Transition Temperature of Polymer Thin Films](#)
Qiang Gu , Dongshan Zhou , Gi Xue
- Friday, March 25, 2011
10:24AM - 10:36AM [Y42.00011: Glassy dynamics within surface-bound molecular monolayers](#)
L.I. Clarke , M.P. Roman , D.R. Stevens , M.C. Scott , J.R. Bochinski

Friday, March 25, 2011 10:36AM - 10:48AM [Y42.00012: Interchain Coupling in Thin Polymer Film Studied by Fluorescence Nonradiative Energy Transfer](#)

Jie Xu , Gi Xue

Friday, March 25, 2011 10:48AM - 11:00AM [Y42.00013: Impact of annealing and adsorption on the distribution of segmental mobility and tracer diffusivity of ultrathin films of polystyrene](#)

Simone Napolitano , Cinzia Rotella , Michael Wubbenhorst

Session Y43: Molecules, Solutions, Networks, & Gels

Sponsoring Units: DPOLY

Chair: Daniel Savin, University of Southern Mississippi

Room: A306/307

Friday, March 25, 2011 8:00AM - 8:12AM [Y43.00001: Distinct Tensile Response of Model Semi-flexible Elastomer Networks](#)

Bernardo M. Aguilera-Mercado , Claude Cohen , Fernando A. Escobedo

Friday, March 25, 2011 8:12AM - 8:24AM [Y43.00002: Elastically tuned defect mode in cholesteric elastomers](#)

Juan Adrian Reyes , Laura Olivia Palomares

Friday, March 25, 2011 8:24AM - 8:36AM [Y43.00003: Glassy structure and thermal fluctuations of amorphous nematogenic solids](#)

Fangfu Ye , Bing Lu , Xiangjun Xing , Paul Goldbart

Friday, March 25, 2011 8:36AM - 8:48AM [Y43.00004: Thermal and Mechanical Properties of Sequential and Simultaneous Thiol-Ene-Isocyanate Networks](#)

Olivia McNair , Davis Brent , Daniel Savin

Friday, March 25, 2011 8:48AM - 9:00AM [Y43.00005: Computational and Experimental Investigation of Morphology of Polymer Gels](#)

Yelena Sliozberg , Kenneth Strawhecker , Jan Andzelm , Joseph Lenhart

Friday, March 25, 2011 9:00AM - 9:12AM [Y43.00006: Theory of volume phase transitions of polyelectrolyte gels](#)

Jing Hua , Mithun Mitra , Murugappan Muthukumar

Friday, March 25, 2011 9:12AM - 9:24AM [Y43.00007: Plasticity and slow relaxation phenomena in reinforced rubbers](#)

Paul Sotta , Stephane Dupres , Didier Long

Friday, March 25, 2011 9:24AM - 9:36AM [Y43.00008: Migration of chemical additives in a rubber under UV irradiation](#)

Ludovic Devant , Roland Benoit , Marie-Louise Saboungi , Emmanuel Gomez , Benoit Le Rossignol

Friday, March 25, 2011 9:36AM - 9:48AM [Y43.00009: Probing the sliding interactions between bundled actin filaments](#)

Andy Ward , Zvonimir Dogic

Friday, March 25, 2011 9:48AM - 10:00AM [Y43.00010: Apparent Yield Stress and Interfacial Viscoelasticity of Globular Protein Solutions](#)

Vivek Sharma , Aditya Jaishankar , Ying-Chih Wang , Gareth H. McKinley

Friday, March 25, 2011 10:00AM - 10:12AM [Y43.00011: The enhanced bubble formation in short dsDNA loops](#)

O-chul Lee , Wokyung Sung

Friday, March 25, 2011 10:12AM - 10:24AM [Y43.00012: Universality in the timescales of internal loop formation in unfolded proteins and single-stranded oligonucleotides](#)

Ryan Cheng , Takanori Uzawa , Kevin Plaxco , Dmitrii Makarov

Friday, March 25, 2011
10:24AM - 10:36AM [Y43.00013: Topological interactions between ring polymers](#)
Dieter Heermann

Friday, March 25, 2011
10:36AM - 10:48AM [Y43.00014: Imaging and Osmotic Characterization of Aggregan Assemblies on Mica Surface, comparison against DNA](#)
Preethi Chandran , Emiliós Dimitriadis , Candida Silva , Peter Basser , Ferenc Horkay

Friday, March 25, 2011
10:48AM - 11:00AM [Y43.00015: Combining DNA Nanotechnology and Fluorescence Polarization Microscopy to Determine the Orientation of DNA-bound Fluorophores](#)
Hunter Banks , Christoph Schneider , Deborah Fygenon

Session Y44: Focus Session: Organic Electronics and Photonics – Exciton and charge separation physics

Sponsoring Units: DMP DPOLY
Chair: Garry Rumbles, National Renewable Energy Laboratory
Room: A309

Friday, March 25, 2011
8:00AM - 8:36AM [Y44.00001: Charge transport studies in organic semiconductors using carrier extraction by linearly increasing voltage \(CELIV\) technique](#)
Invited Speaker: Almantas Pivrikas

Friday, March 25, 2011
8:36AM - 8:48AM [Y44.00002: Direct determination of energy level alignment of organic-organic bulk heterojunction: cases of the P3HT:PCBM and P3HT:FLN-i blend](#)
Zelei Guan , Antoine Kahn , Jong Bok Kim , He Wang , Yueh-Lin Loo

Friday, March 25, 2011
8:48AM - 9:00AM [Y44.00003: Direct Determination of Energy Level Alignment and Charge Transport at Metal/Alq₃ Interfaces via Ballistic-Electron-Emission Spectroscopy \(BEES\)](#)
J.S. Jiang , J.E. Pearson , S.D. Bader

Friday, March 25, 2011
9:00AM - 9:12AM [Y44.00004: Observation of long-range exciton diffusion in highly ordered organic semiconductors](#)
Vitaly Podzorov

Friday, March 25, 2011
9:12AM - 9:24AM [Y44.00005: Band alignment optimization of bulk rrP3HT/CS heterojunction](#)
Arnaud Maillard , Alain Rochefort

Friday, March 25, 2011
9:24AM - 9:36AM [Y44.00006: Strong interface p-doping and band bending in CS](#)
Irfan Irfan , Huanjun Ding , Yongli Gao , Minlu Zhang , Ching Tang

Friday, March 25, 2011
9:36AM - 10:12AM [Y44.00007: Understanding the role of interfaces in small molecule organic photovoltaics](#)
Invited Speaker: Tim Jones

Friday, March 25, 2011
10:12AM - 10:24AM [Y44.00008: Photophysics of Poly\(3-dodecylthiylenevinylene\) with Controlled Regioregularity](#)
Evan Lafalce , Xiaomei Jiang

Friday, March 25, 2011
10:24AM - 10:36AM [Y44.00009: Magneto-Optical Studies of Internal Photovoltaic Processes in Organic Solar Cells](#)
Huidong Zang , Zhihua Xu , Bin Hu

Friday, March 25, 2011
10:36AM - 10:48AM [Y44.00010: Photoluminescence Influenced by Chain Conformation in Thin Conjugated Polymer Films by Spin Coating and Dewetting](#)
P.W. Lee , W.C. Li , Y. Chien , G. Reiter , A.C.-M. Yang

Friday, March 25, 2011
10:48AM - 11:00AM [Y44.00011: Contribution of Increased Extraction Efficiency to Increased Photo-Luminescence in Strained Polymer Films](#)
Po-Jui Chen , Arnold Chang-Mou Yang , Jui-Hung Hsu , Jonathon D. White

Session Z40: Semi Crystalline Polymers: Morphology and

Electronics

Sponsoring Units: DPOLY
Chair: Robert Hoy, Yale University
Room: A122/123

- Friday, March 25, 2011 11:15AM - 11:27AM [Z40.00001: Structure Evolution of Propylene-1-Butylene Random Copolymer under Uniaxial Stretching: from Unit Cells to Lamellae](#)
Yimin Mao , Christian Burger , Xiaowei Li , Benjamin Hsiao
- Friday, March 25, 2011 11:27AM - 11:39AM [Z40.00002: An In-Situ X-ray Scattering Study during Uniaxial Stretching of Ionic liquid/Ultra-High Molecular Weight Polyethylene Blend](#)
Xiaowei Li , Yimin Mao , Hongyang Ma , Benjamin S. Hsiao
- Friday, March 25, 2011 11:39AM - 11:51AM [Z40.00003: Microscopic kinetic model for polymer crystal growth](#)
Wenbing Hu
- Friday, March 25, 2011 11:51AM - 12:03PM [Z40.00004: Polyethylene crystallization in compatibilized polyethylene/polyamide 6 blends](#)
Simona Ceccia , Katerina Hynstova , Alexandra Fabre , Lise Trouillet-Fonti , Didier Long , Paul Sotta
- Friday, March 25, 2011 12:03PM - 12:15PM [Z40.00005: Kinetic Partitioning of 1-Butene Defect in Random Propylene 1-Butene Copolymers by Time-Resolved FTIR](#)
Carolina Ruiz-Orta , Rufina G. Alamo
- Friday, March 25, 2011 12:15PM - 12:27PM [Z40.00006: Homogeneous bulk, surface, and edge nucleation in crystalline nanodroplets](#)
Jessica L. Carvalho , Kari Dalnoki-Veress
- Friday, March 25, 2011 12:27PM - 12:39PM [Z40.00007: Molecular simulation of homogeneous crystal nucleation of n-alkane melts](#)
Peng Yi , Gregory Rutledge
- Friday, March 25, 2011 12:39PM - 12:51PM [Z40.00008: Hierarchical Ordered Structures in Hybrid Functional Supramolecules and Macromolecules](#)
Stephen Cheng , Wen-Bin Zhang , Chien-Lung Wang , Xinfei Yu , Yiwen Li , Xuehui Dong , Ryan Van Horn
- Friday, March 25, 2011 12:51PM - 1:03PM [Z40.00009: Nanoconfined Ferroelectricity in Polymers](#)
Lei Zhu , Fangxiao Guan , Jing Wang , Qing Wang
- Friday, March 25, 2011 1:03PM - 1:15PM [Z40.00010: Quantifying the rapid dynamics of polyelectrochromic switching in polymer acid-doped polyaniline](#)
Jacob Tarver , Yueh-Lin Loo

- Friday, March 25, 2011 1:15PM - 1:27PM [Z40.00011: Enhanced RF Heating of Poly\(N-Isopropylacrylamide\) Gels by Utilization of Multiferroic Nanoparticles](#)
Ezekiel Walker , Yukikuni Akishige , James Roberst , Tong Cai , Zhibing Hu , Arup Neogi
- Friday, March 25, 2011 1:27PM - 1:39PM [Z40.00012: Manipulating functional properties at the interface of composite organic semiconductors](#)
Panagiotis Maniadis , Turab Lookman , Avadh Saxena , Daryl Smith
- Friday, March 25, 2011 1:39PM - 1:51PM [Z40.00013: The Role of Exciton Dynamics in Photorefractivity in Organic Semiconductors](#)
Mohammad Samiullah
- Friday, March 25, 2011 1:51PM - 2:03PM [Z40.00014: Smart lens made of dielectric elastomer: simulation study](#)
Hong Tang
- Friday, March 25, 2011 2:03PM - 2:15PM [Z40.00015: Electro-mechanical Responses of Electrospun Ferroelectric Fibers](#)
Jason Morvan , Ebru Buyuktanir , John West , Antal J'akli

Session Z42: Biopolymers: Molecules, Solutions, Networks, and Gels

Sponsoring Units: DPOLY
Chair: Jan-Michael Carrillo, University of Connecticut
Room: A302/303

Friday, March 25, 2011 11:15AM - 11:51AM	Z42.00001: How do polymers degrade? Invited Speaker: SuPing Lyu
Friday, March 25, 2011 11:51AM - 12:03PM	Z42.00002: Stretching semiflexible filaments with quenched disorder Panayotis Benetatos , Eugene M. Terentjev
Friday, March 25, 2011 12:03PM - 12:15PM	Z42.00003: Chains Are More Flexible Under Tension Andrey Dobrynin , Jan-Michael Carrillo , Michael Rubinstein
Friday, March 25, 2011 12:15PM - 12:27PM	Z42.00004: Statistical Mechanics of Helical Wormlike Model Ya Liu , Toni Perez , Wei Li , James Gunton , Amanda Green
Friday, March 25, 2011 12:27PM - 12:39PM	Z42.00005: DNA walks one step at a time in electrophoresis Juan Guan , Bo Wang , Steve Granick
Friday, March 25, 2011 12:39PM - 12:51PM	Z42.00006: The effects of end-interactions on semiflexible polymers looping Jaeh Shin , Wokyung Sung
Friday, March 25, 2011 12:51PM - 1:03PM	Z42.00007: Modeling of biomimetic peptoid polymers Dina Mirijanian , Steve Whitelam
Friday, March 25, 2011 1:03PM - 1:15PM	Z42.00008: Periciliary Layer as a Protective Barrier of Human Airways Liheng Cai , Brian Button , Richard Boucher , Michael Rubinstein
Friday, March 25, 2011 1:15PM - 1:27PM	Z42.00009: Cellulose aerogel from ionic liquid solution dried by silylation Dmitry Rein , Yachin Cohen
Friday, March 25, 2011 1:27PM - 1:39PM	Z42.00010: Macroscopic structure and properties of aqueous methylcellulose gels Tirtha Chatterjee , Roland Adden , Meinolf Brackhagen , Alan I. Nakatani , David Redwine , Robert L. Sammler
Friday, March 25, 2011 1:39PM - 1:51PM	Z42.00011: Responsive Gelation in Physical Double Network Hydrogels from Artificial Protein Polymers B.D. Olsen , M.J. Glassman
Friday, March 25, 2011 1:51PM - 2:03PM	Z42.00012: Universality in Nonlinear Elasticity of Biological and Polymeric Networks and Gels Jan-Michael Carrillo , Andrey Dobrynin

Friday, March 25, 2011 2:03PM - 2:15PM	Z42.00013: Criticality and isostaticity in fiber networks Xiaoming Mao , Olaf Stenull , Tom C. Lubensky , Chase P. Broedersz , Fred C. Mackintosh
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Session Z43: Liquid Crystalline Order in Polymer and Complex Fluids

Sponsoring Units: DPOLY
Chair: Chinedum Osuji, Yale University
Room: A306/307

Friday, March 25, 2011 11:15AM - 11:27AM	Z43.00001: Nonlinear Dielectric Response of the Liquid Crystal 8CB near the phase transitions Hannah Buchanan
Friday, March 25, 2011 11:27AM - 11:39AM	Z43.00002: A Novel Liquid Crystal Elastomer with Large Spontaneous Length Changes Patricia Cladis , Simon Krause , Yusril Yusuf , Shohei Hashimoto , Leonid Fel , Shoichi Kai , Heino Finkelmann
Friday, March 25, 2011 11:39AM - 11:51AM	Z43.00003: Magnetic field directed self-assembly of liquid crystalline block copolymers for membrane applications Manesh Gopinadhan , Pawel W. Majewski , Chinedum O. Osuji
Friday, March 25, 2011 11:51AM - 12:03PM	Z43.00004: Temperature Dependent Self-Assembly of Side-Group Liquid Crystalline Block Copolymers in LC Solvent Paul Pirogovsky , Zuleikha Kurji , Rohan Hule , Julia Kornfield
Friday, March 25, 2011 12:03PM - 12:15PM	Z43.00005: In-Situ X-Ray Diffraction Study of the Elongation Behavior of a Main Chain Liquid Crystal Elastomer Sonal Dey , D.M. Agra-Kooijman , Leela Joshi , Satyendra Kumar , Wanting Ren , Whitney M. Kline , Anselm C. Griffin
Friday, March 25, 2011 12:15PM - 12:27PM	Z43.00006: Evaporative Self-Assembly and Formation of the Lyotropic Liquid Crystalline Phase of Poly(3-hexyl thiophene) Min Sang Park , Avishek Aiyar , Jung Ok Park , Elsa Reichmanis , Mohan Srinivasarao
Friday, March 25, 2011 12:27PM - 12:39PM	Z43.00007: Lyotropic nematic droplets of single-walled carbon nanotubes in super acids: equilibrium shape and dynamics Natnael Behabtu , Budhadipta Dan , Lee Taewoo , Ivan Smalyukh , Matteo Pasquali
Friday, March 25, 2011 12:39PM - 12:51PM	Z43.00008: The unique behavior of chiral templated polymers swollen with liquid crystals Michael McConney , Jennifer Hurtubise , Vincent Tondiglia , Timothy White , Timothy Bunning
Friday, March 25, 2011 12:51PM - 1:03PM	Z43.00009: The Shape of Structured Polymer Vesicles Mark Bowick , Min-Hui Li , Homin Shin , Xiangjun Xing , Zhenwei Yao
Friday, March 25, 2011 1:03PM - 1:15PM	Z43.00010: Curvature-induced transitions in two-dimensional nematics Badel L. Mbang , C.D. Santangelo , G.M. Grason
Friday, March 25, 2011 1:15PM - 1:27PM	Z43.00011: Effect of chain stiffness on structural and thermodynamic properties of polymers Kiran Khanal , Jutta Luettmmer-Strathmann

Friday, March 25, 2011 1:27PM - 1:39PM	Z43.00012: Symmetric reflection band broadening of weakly polymer stabilized cholesteric thin films using low DC electric fields Madeline Dunning , Christopher Bailey , Anastasia Voevodin , Vincent Tondiglia , Lalgudi Natarajan , Timothy White , Timothy Bunning
Friday, March 25, 2011 1:39PM - 1:51PM	Z43.00013: Structure of Rigid Hard-Ring Fluids Mariam Nouri , Marc Robert
Friday, March 25, 2011 1:51PM - 2:03PM	Z43.00014: Fast Off-Lattice Monte Carlo Simulations with a Novel Soft-Core Spherocylinder Model Jing Zong , Xinghua Zhang , Qiang (David) Wang
Friday, March 25, 2011 2:03PM - 2:15PM	Z43.00015: Solvent involved self-crystallization of CS₂ molecules into high definition cube microstructure Chibeom Park , Hee Cheul Choi

Session Z44: Focus Session: Organic Electronics and Photonics -- New Materials and Applications

Sponsoring Units: DMP DPOLY
Chair: Rui He, Columbia University
Room: A309

- Friday, March 25, 2011
11:15AM - 11:27AM [Z44.00001: Ambipolar Electric Double Layer Transistors Using Organic Single Crystals](#)
Taishi Takenobu , Di Wen , Hidekazu Shimotani , Shimpei Ono , Yoshihiro Iwasa
- Friday, March 25, 2011
11:27AM - 11:39AM [Z44.00002: Refractive Indices of Specific Nonconjugated Conductive Polymers: Organic Nanometallic Systems](#)
Prashant Dubey , Sapana Shrivastava , Mrinal Thakur
- Friday, March 25, 2011
11:39AM - 11:51AM [Z44.00003: Below Gap Excitation of Poly\(phenylene-vinylene\) films at High Hydrostatic Pressure](#)
Chuanxiang Sheng , Ella Olejnik , Bill Pandit , Zeev Valy Vardeny
- Friday, March 25, 2011
11:51AM - 12:03PM [Z44.00004: Sub-diffraction limited features in three-dimensional photopatterned, two-photon excimer-forming fluorescent dye-doped films](#)
Christopher Ryan , Brent Valle , Joseph Lott , Jack R. Johnson , Jie Shan , Kenneth D. Singer , Christoph Weder , David A. Schiraldi
- Friday, March 25, 2011
12:03PM - 12:15PM [Z44.00005: Low threshold conjugated polymer lasers by intrinsically directed resonator design](#)
Alexander Kuehne , David Weitz
- Friday, March 25, 2011
12:15PM - 12:27PM [Z44.00006: Effects of polar analytes on the transport properties of organic semiconductor field-effect chemical sensors](#)
Davianne Duarte , Brian Cobb , Ananth Dodabalapur
- Friday, March 25, 2011
12:27PM - 12:39PM [Z44.00007: Chemical vapor sensors using a poly\(triarylamine\) semiconductor modified through incorporation of organic receptors](#)
Brian Cobb , Davianne Duarte , Ananth Dodabalapur
- Friday, March 25, 2011
12:39PM - 12:51PM [Z44.00008: Nonadiabatic exciton dynamics in conjugated polymers](#)
Adam Willard , Peter Rossky
- Friday, March 25, 2011
12:51PM - 1:03PM [Z44.00009: Energy Level Alignment at the Interface of P3HT and PCBM Bilayer Films Deposited in UHV by Electrospray Deposition](#)
Ji-Hoon Kim , Jong-Am Hong , Jaewon Seo , Jeong Won Kim , Yongsup Park
- Friday, March 25, 2011
1:03PM - 1:15PM [Z44.00010: Solution Processable Organic Solar Cell Microarrays for Use in MEMS](#)
Jennifer Trinh , Jason Lewis , Patrick Toglia , Xiaomei Jiang

- Friday, March 25, 2011
1:15PM - 1:27PM [Z44.00011: Synthesis and characterization of a new TPA-Thiophene based molecule for potential Organic PV applications](#)
Prashant Sarswat , Amarchand Sathyapalan , Michael Free
- Friday, March 25, 2011
1:27PM - 1:39PM [Z44.00012: Quadratic Electro-optic Effect in the Nonconjugated Conductive Polymer Trans-1,4-polyisoprene Measured at 1.55 \$\mu\text{m}\$](#)
Sapana Shrivastava , Mrinal Thakur
- Friday, March 25, 2011
1:39PM - 1:51PM [Z44.00013: Photo-active Silicon Containing Polymer Films: An Approach Towards All-Solution Processable Devices](#)
Scott LeFevre , Xinxing Liu , Leonard Interrante , Chang Ryu

Special DPOLY Events

DPOLY Reception

5:30 – 9:00 PM, Sunday, March 20, 2011
YO Ranch Steakhouse, 702 Ross Ave. at Market St., Dallas, TX 75202
phone: 214-744-3287

This DPOLY reception recognizes **Gary Grest** and **Kurt Kremer** (recipients of the 2011 Polymer Physics Prize) and **Raffaele Mezzenga** (recipient of the 2011 Dillon Medal).

DPOLY Business Meeting

5:45 PM, Tuesday, March 22, 2011
Dallas Convention Center
Room A302/303

DPOLY Award Lectures

Polymer Physics Prize:

8:00 AM, Tuesday, March 22, 2011
Dallas Convention Center
Ballroom A4

Gary S. Grest

Polymer Physics Prize Talk: *Polymer Brushes: Why do we still care?*

Kurt Kremer

Polymer Physics Prize Talk: *Topological Constraints Matter -- or Back to the Origin*

Padden Prize Symposium:

11:15 AM, Tuesday, March 22, 2011
Dallas Convention Center
Room A302/303

Dillon Medal:

2:30PM, Tuesday, March 22, 2011
Dallas Convention Center
Room A302/303

Raffaele Mezzenga

Dillon Medal Talk: *Protein Fibrils, Polymer Physics: Encounter at the Nanoscale*

Acknowledgement

The DPOLY Program Committee is grateful to Prof. Robin Hissam and Ms. Bonnie Helmick of West Virginia University for their help in assembly of the DPOLY booklet.

Disclaimer: The information contained within this booklet is unofficial and is accurate as of 1/21/2011. For all official information please refer to the APS March Meeting Proceedings (<http://meetings.aps.org/Meeting/MAR11/>)