2006

DPOLY
Meeting Program

APS March Meeting
Baltimore, MD
March 13-17, 2006

APS Division of Polymer Physics

DPOLY Short Course: Polymers in Existing and Emerging Patterning Technologies
Saturday March 11 8:30 am – 5:00 pm
Sunday March 12 8:30 am – 3:00 pm
Registration fees: $400 ($200 for students); pre-registration required, no on-site registration.

Course description
The ability to create high-resolution, periodic patterns within a polymer thin-film forms the basis of photolithography in current-day microelectronics processing. Increasingly, polymers are also being considered attractive candidates for next-generation lithography as well as disruptive patterning technologies. This 1.5 day course will provide attendees with a general overview of these patterning technologies, as well as an in-depth look at the role(s) polymers play in these processes. The materials requirements of these polymers – physical properties, chemical compatibility and reactivity – will be emphasized.

Who should attend
The course will be useful to scientists from academia or industry with broad interests in patterning of soft materials. The instructors will assume a background of B.S. level training in physical science or engineering.

Topics to be covered
The course will begin with basic concepts of photolithography – a patterning technology that is used in current-day microelectronics processing. Emphasis will be placed on the materials aspects of this processing technology. The course then continues with the materials requirements for next-generation lithography technologies, such as electron-beam, extreme-UV, and two-photon lithography, as well as emerging imprint technologies. Non-conventional patterning techniques, such as soft lithography, contact printing, screen and inkjet printing will also be highlighted in this course. The course focus will then shift to using phase-separated block copolymers and chemical and density gradients of polymers to pattern surfaces. The course will end with polyelectrolyte and colloidal assembly by a layer-by-layer technique.

Planned Speakers
Chris Ober (Cornell), Grant Willson (University of Texas, Austin), Michael Chabinyc (Palo Alto Research Center), Rick Register (Princeton University), Jan Genzer (North Carolina State University), Paula Hammond (MIT)

Course Organizer
Yueh-Lin (Lynn) Loo
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Special DPOLY events are listed on the inside back cover of this pamphlet.

Disclaimer: The information contained within this booklet is unofficial and is accurate as of 1/27/06. For all official information please refer to the APS March Meeting Proceedings (http://meetings.aps.org/Meeting/MAR06/APS_epitome)

Session A4. DPOLY: Particle Self Assembly

Monday morning, 8:00 am, Baltimore Convention Center 308

Chair: Maria Santore, University of Massachusetts

Invited Speakers: Crocker, Starr, Hammond, Douglas, Walker

8:00AM A4.00001: DNA-Mediated Colloidal Crystallization, Interactions and Dynamics
Invited Speaker: John Crocker

8:36AM A4.00002: Assembly and Gelation of Four-Armed DNA Dendrimers
Invited Speaker: Francis Starr

9:12AM A4.00003: Directing Colloidal Particle Organization Using Soft Lithography and Polyelectrolyte Assembly
Invited Speaker: Paula Hammond

9:48AM A4.00004: Symmetry, Equivalence and Self-Assembly
Invited Speaker: Jack Douglas

10:24AM A4.00005: Structured Nanocomposites: Organization of Particles Templated in Self-Assembled PEO-PPO-PEO Mesophases
Invited Speaker: Lynn Walker

Session A24. DPOLY: Semi-Crystalline and Structured Polymers

Monday morning, 8:00 am, Baltimore Convention Center 321

Chair: N. Sanjeeva Murthy, University of Vermont

8:00AM A24.00001: Crystalline Structure, Morphology and Gas Transport in Semicrystalline Syndiotactic Polystyrene
Brian Olson, Justin Brandt, Sergei Nazarenko

8:12AM A24.00002: Large Strain Requirements for Shear Induced Crystallization of Isotactic Polypropylene
H. Henning Winter, Aadil Elmoumni, Deepak Arora

8:24AM A24.00003: Real-time, Depth-Resolved Structure Development of Flow-Induced ``Skin-Core'' Morphologies in Polypropylene.
Lucia Fernandez-Ballester, Derek Thurman, Igors Sics, Lixia Rong, Julie Kornfield

8:36AM A24.00004: Crystallization in Precision Polyolefins
Rufina Alamo, Anindya Ghosal, Emine Boz, Kenneth Wagener, Riqiang Fu

8:48AM A24.00005: Transitions of Polymers with Precise Oligomethylene Sequences.
Bernhard Wunderlich, Wulin Qiu

9:00AM A24.00006: Molecular Dynamics Simulations of Spinodal-Assisted Crystallization of Polymers Melts
Naida Lacevic, Richard Gee, Laurence Fried

9:12AM A24.00007: Ellipsometry as a Probe of Crystallisation Kinetics in Thin Diblock Copolymer Films
Jessica L. Carvalho, Michael V. Massa, Kari Dalnoki-Veress

9:24AM A24.00008: Growth mechanism changes in pseudo-dewetted monolayer poly(ethylene oxide) crystallization
Dun-Shen Zhu, Er-Qiang Chen, An-Chang Shi, Stephen Cheng

9:36AM A24.00009: Guiding the orientation of polymer crystals by nano-imprint lithography
Zhijun Hu, Jean-François Gohy, Vincent Bayot, Alain Jonas

9:48AM A24.00010: An Atomic Force Microscopy study of the thin film crystallization behavior of blends of poly-(L-lactide) and poly-(D-lactide).
Yury Yuryev, Paula Wood-Adams, Josee Brisson, Marie-Claude Heuzey, Charles Dubois

10:00AM A24.00011: Spectroscopic Analysis of Unusual Poly (lactic acid) Structures.
Kaoru Aou, Guolin Wu, Shuhui Kang, Shaw Ling Hsu

10:12AM A24.00012: Poly(L-lactic acid) Crystals: From 2D to 3D
Suolong Ni, Robert E. Major, Alan R. Esker

10:24AM A24.00013: Amylose Crystallization From Concentrated Aqueous Solution: Role of Degree of Polymerization
John Creek, James Runt, Gregory Ziegler

10:36AM A24.00014: Diffusion-limited growth of poly (caprolactone) in poly (tert-butyl acrylate) matrices at the air/water interface
Bingbing Li, Alan R. Esker

10:48AM A24.00015: Crystallization and orientation studies in SWNTs based nanocomposites
Tirtha Chatterjee, Ramanan Krishnamoorti, Viktor Hadjiev

Session A25. DPOLY DMP: Focus Session: Organic Field Effect Transistors

Monday morning, 8:00 am, Baltimore Convention Center 322

Chair: David Martin, University of Michigan

Invited Speakers: Marks

8:00AM A25.00001: Organic Semiconductors and Nanodielectrics for Flexible, Low Voltage Thin-Film Transistors
Invited Speaker: Tobin Marks

8:36AM A25.00002: Complex Organic Semiconductor Devices Utilizing Threshold Voltage Shifting and Carrier Sign Reversal
Howard Katz, Cheng Huang, James West

8:48AM A25.00003: Improving the electrical characteristics of a solution-processable, anthradithiophene organic semiconductor by solvent vapor annealing
Kimberly Dickey, John Anthony, Yueh Lin Loo

9:00AM A25.00004: Dielectric relaxation in semiconducting regioregular poly(3-hexylthiophene)
Tatiana Psurek, Jan Obrzut

9:12AM A25.00005: All Electronic Time of Flight Mobility Measurements in Pentacene Organic Field Effect Transistors
Lawrence Dunn, Debarshi Basu, Liang Wang, Ananth Dodabalapur

9:24AM A25.00006: Infrared Imaging of Charge Injection Landscape in Organic Field-Effect Transistors
Zhiqiang Li, Guangming Wang, Na Sai, Daniel Moses, Michael Martin, Massimiliano Di Ventra, Alan Heeger, Dimitri Basov

9:36AM A25.00007: Oligothiphene nanostructure evolution in transition from monolayer to multilayers.
Geetha Dholakia, M. Meyyappan, Antonio Facchetti, Tobin Marks

9:48AM A25.00008: Charge injection and band alignment in organic field effect transistors.
Behrang Hamadani, Huanjun Ding, Jacob Ciszek, Yongli Gao, James Tour, Douglas Natelson

10:00AM A25.00009: Structural Determination of Interfaces in Organic Semiconductors using Coherent Bragg Rod Analysis
Brandon Chapman, Ronald Pindak, Yizhak Yacoby, Julie Cross, Edward Stern, Christian Kloc

10:12AM A25.00010: Transfer Printing of Pentacene Thin-Film Transistors onto Flexible Substrates
Daniel Hines, Vince Ballarotto, Ellen Williams

10:24AM A25.00011: Optical Probe of the Density of Defect States in Organic Thin-Film Transistors
Mihaela Breban, Danilo Romero, Vincent Ballarotto, Ellen Williams

10:36AM A25.00012: Architecture Effects for Transfer-Printed Carbon Nanotube Mat Transistors
Vinod Sangwan, Dan Hines, Vincent Ballarotto, Gokhan Esen, Michael Fuhrer, Ellen Williams

10:48AM A25.00013: ESR Study of Electric-Field Controlled Conductance of Fully-doped Polymers in a Transistor Structure
Fang-Chi Hsu, Arthur J. Epstein

Session A28. DPOLY: Polymer Blends

Monday morning, 8:00 am, Baltimore Convention Center 325

Chair: Kalman Migler, National Institute of Standards and Technology

8:00AM A28.00001: Component Terminal Dynamics in PEO / PMMA Blends
Timothy Lodge, Ilan Zeroni, Sahban Ozair

8:12AM A28.00002: A molecular dynamics simulation study of the segmental relaxations in model polymer blends
Dmitry Bedrov

8:24AM A28.00003: Dielectric Spectroscopy of Miscible Polymer Blends
Wenjuan Liu, Ralph H. Colby, Jane E. G. Lipson

8:36AM A28.00004: Assessment of the Flory diluent theory to evaluate its applicability in the determination of the amorphous-amorphous interaction energy
Rushikesh Matkar, Thein Kyu

8:48AM A28.00005: Designing Balanced Surfactants for Organizing Immiscible Polymers
Megan Ruegg, Benedict Reynolds, Nitash Balsara, Min Lin, David Lohse

9:00AM A28.00006: The Effect of Copolymer Composition on the Dynamics of Random Copolymers in a Homopolymer Matrix.
Sudesh Kamath, Mark Dadmun

9:12AM A28.00007: Dynamics of Ternary Mixtures with Photosensitive Chemical Reactions: Designing Three Dimensional Hierarchically Ordered Composites
Olga Kuksenok, Rui D.M. Travasso, Anna C. Balazs

9:24AM A28.00008: Shear-Induced Crystallization and Rheology Behavior of Isotactic Polypropylene and Poly (ethylene-co-octene) Blend
Xia Dong, Kun Meng, Charles C. Han, Yongyan Pang, Dujin Wang

9:36AM A28.00009: Eutectic Modeling of Blend Crystallization from the Homogeneous Melt
Sudhakar Balijepalli, Jerold Schultz

9:48AM A28.00010: Interplay Between Two Phase Transitions: Crystallization and Liquid-Liquid Phase Separation in a Polyolefin Blend
Charles C. Han, Xiaohua Zhang

10:00AM A28.00011: Rheological modeling relating mesoscopic morphology for polymer blends
Yuanze Xu, Wei Yu, Charles C. Han

10:12AM A28.00012: Design of Co-Continuous Nanostructured Polymer Blends by Solid-State Shear Pulverization.
Ying Tao, Jungki Kim, John M. Torkelson

10:24AM A28.00013: Polymer blends containing Linear Telechelic Supramolecular Polymers
Mitchell Anthamatten, Michelle Wrue

10:36AM A28.00014: Rheology of blends of dense star-like polystyrene soft nanospheres
Ajay Kulkarni, R. M. Kannan

10:48AM A28.00015: Reactive extrusion: A computational approach.
Manoranjan Prusty, Patrick Anderson, Han Goossens, Han Meijer

Session A30. DPOLY: Focus Session: Block Copolymer Dynamics

Monday morning, 8:00 am, Baltimore Convention Center 327

Chair: Nitash Balsara, University of California, Berkeley

Invited Speakers: Morse

8:00AM A30.00001: A Renormalized Theory of Composition Fluctuations in Polymer Mixtures
Invited Speaker: David Morse

8:36AM A30.00002: An efficient pseudo-spectral algorithm for the RPA response of ordered phases of block copolymer melts
Amit Ranjan, David Morse

8:48AM A30.00003: Random isotropic structures and possible glass transitions in diblock copolymer melts
Chengzhong Zhang, Zhen-Gang Wang

9:00AM A30.00004: Dynamics of PEO-PMMA diblock copolymers.
Javier Sacristan, Chunxia Chen, Janna Maranas

9:12AM A30.00005: Kinetics of Transition between HEX and Lamellar Phases in a triblock copolymer solution in a selective solvent.
Yongsheng Liu, Rama Bansil, Milos Steinhart

9:24AM A30.00006: Kinetics of HEX-BCC Transition of Cylinders to Spheres: Comparison of Time-resolved SAXS data with a Model of Coupled Anisotropic Fluctuations
Rama Bansil, Minghai Li, Milos Steinhart

9:36AM A30.00007: Modeling of twist grain boundaries in block copolymers: structure, stability, and motion
Xusheng Zhang, Zhi-Feng Huang, Jorge Vinals

9:48AM A30.00008: Manipulating block-copolymer films using electric fields
Mark Matsen

10:00AM A30.00009: Removal of non-equilibrium microdomain defects in block copolymer thin film simulations
August Bosse, Scott Sides, Kirill Katsov, Carlos Garcia-Cervera, Glenn Fredrickson

10:12AM A30.00010: Mixed Lamellae in Symmetric Diblock Copolymer Thin Films
Dong Meng, Qiang Wang

10:24AM A30.00011: Correlated defect dynamics in block copolymer melts
Robert Magerle, Larisa Tsarkova, Armin Knoll

10:36AM A30.00012: Dislocation Density and Orientational Order of Spherical Microdomains in Shear-Aligned Block Copolymer Thin Films
Andrew Marencic, Mingshaw Wu, Richard Register, Paul Chaikin

Session B26. DBP DPOLY: Focus Session: Single Molecule Biophysics: DNA & RNA

Monday midday, 11:15 am, Baltimore Convention Center 323

Chair: Meridith Betterton, University of Colorado

Invited Speakers: Nelson

11:15AM B26.00001: Dynamics of molecular motors with finite processivity on heterogeneous tracks
Invited Speaker: David Nelson

11:51AM B26.00002: DNA electrophoresis in Pluronic F127
Seungyong You, David Van Winkle

12:03PM B26.00003: Model for passage time of polymer trough a pore (weak external forces limit)
Stanislav Kotsev, Anatoly Kolomeisky

12:15PM B26.00004: Driven DNA translocation through thin and long nanopores
Aniket Bhattacharya, William H. Morrison

12:27PM B26.00005: Conformational Analysis of Single DNA Molecules Undergoing Entropically Induced Motion in Nanochannels.
John Mannion, Christian Reccius, Joshua Cross, Harold Craighead

12:39PM B26.00006: The Physics of Nanoconfined DNA
Walter Reisner, Keith Morton, Robert Riehn, Yang Mei Wang, Stephen Chou, Jonas Tegenfeldt, Robert Austin

12:51PM B26.00007: DNA entropic elasticity for short molecules
Jinyu Li, Philip C. Nelson, M. D. Betterton

1:03PM B26.00008: Single Molecule Visualization of DNA in Wicking Flows
Chad DeLong, David Hoagland

1:15PM B26.00009: Abundance of pseudoknots in the RNA world
Daniel Aalberts, Evan Miller

1:27PM B26.00010: DNA sequencing via transverse electronic transport
Johan Lagerqvist, Michael Zwolak, Massimiliano Di Ventra

1:39PM B26.00011: Polymer effects in forced passage of DNA and macromolecules through nanopores
Francisco Solis

1:51PM B26.00012: Mapping the phase diagram of DNA force-induced melting in the presence of DNA intercalators
Ioana Vladescu, Micah McCauley, Megan Nunez, Ioulia Rouzina, Mark Williams

2:03PM B26.00013: DNA and RNA unzipping using nanopore force spectroscopy
Amit Meller, Jerome Mathe, Meni Wanunu, Barak Akabayov, Irit Sagi

Session C1. DPOLY Poster Session I

Monday midday, 11:15 am - 2:15 pm, Baltimore Convention Center Exhibit Hall

C1.00001: DPOLY POSTER SESSION I

C1.00002: A Multi-Sample Melt Micro-Rheometer
Kalman Migler, Anthony Bur
C1.00003: Collection of an electrospinning jet
Tao Han, Darrell Reneker
C1.00004: Electrospun Nanofiber Yarn
Sphurti Doiphode, Darrell Reneker
C1.00005: Branching in electrospinning of nanofibers
A. L. Yarin, W. Kataphinan, D. H. Reneker, Z. Zhong
C1.00006: Developments of Novel Polymer Electrolyte Fuel Cell Membranes
Tomomi Irita, Masahiro Kondo, Hirokazu Aoyama, Thomas Russell
C1.00007: Molecular Dynamics Simulations of Ordering of Poly(dimethylsiloxane) Under Uniaxial Stress
Naida Lacevic, Robert Maxwell, Andrew Saab, Richard Gee
C1.00008: Non-halogen Flame retardant High Impact Polystyrene Composites
Miriam Rafailovich, Mayu Si, Jonathan Sokolov, Joshia Otaigbe, Vladimir E. Yudin
C1.00009: An ``Alternating-Curvature" Model for the Nanometer-scale Structure of the Nafion Ionomer, Based on Backbone Properties Detected by NMR
Klaus Schmidt-Rohr, Q. Chen
C1.00010: Dynamics of Sulfonated Polystyrene Copolymers and Ionomers using Broadband Dielectric Spectroscopy
Pornpen Atorngitjawat, James Runt
C1.00011: Molecular Dynamics Simulations of Polyelectrolyte Adsorption at Oppositely Charged Surfaces
Jan-Michael Carrillo, Andrey Dobrynin
C1.00012: Molecular Dynamics Simulations of Polyelectrolyte-Polyampholyte Complexes. Effect of Solvent Quality and Salt Concentration.
Junhwan Jeon, Andrey Dobrynin
C1.00013: Surface Treatment for Improved Mobility in Poly(3-hexylthiophene) Thin-Film Transistors
Adrian Southard, Michael Fuhrer
C1.00014: Age old antipodes united: stable and low-work-function surfaces are generic
M.A. Uijttewaal, G.A. de Wijs, R.A. de Groot
C1.00015: Effects of Local Dielectric Property on the Chain Conformation Distribution of Poly (vinylidene fluoride-hexafluoropropylene) Copolymers.
Guolin Wu, Suriyakala Ramalingam, Shaw Ling Hsu
C1.00016: The Effects of Surface Interactions and Confinement on the Melting Point of Semi-crystalline Polymer Thin Films
Yantian Wang, Miriam Rafailovich, Jonathan Sokolov, Dilip Gersappe, Ashish Bakshi, Rajesh Atluri, Tohru Araki, Ying Zou, Harald Ade, David Lewis Kilcoyne, Gad Marom, Arnold Lustiger
C1.00017: Oriented Lamellar Structure and Pore Formation Mechanism in CSX-Processed Porous High-Density Polyethylene
Shujun Chen, Samuel P. Gido, Souvik Nandi, H. Henning Winter

C1.00018: Melting Point Measurement of Polycaprolactone Thin Films
Clive Li, Victor Wang, Jonathan Sokolov, Miriam Rafailovich
C1.00019: Effects of Residual Crystallinity on the Crystallization Behavior of Random Polypropylene-Polyethylene Copolymer
Samuel Amanuel, Xiaofeng Chen, Rahmi Ozisik, Sanford S. Sternstein
C1.00020: Disk, Cylinders, Stack-of-Disks, and Vesicles Morphologies from Amphiphilic Block Copolymer Solution-State Assemblies
Zhibin Li, Zhiyun Chen, Honggang Cui, Kelly Hales, Kai Qi, Karen Wooley, Darrin Pochan
C1.00021: Nanoporous Membrane with Ultrahigh Selectivity and Flux Suitable for Filtration of Viruses
Jin Kon Kim, Seung Yun Yang, In Cheol Ryu, Sung Key Jang, Thomas P. Russell
C1.00022: Effect of Selective Solvent on the Morphological Phase Behavior of PS-b-PEO
Prachur Bhargava, Xiaoliang Zheng, Yingfeng Tu, Stephen Z.D. Cheng
C1.00023: Effect of Annealing Temperature on the Surface Composition of Block Copolymers with Semifluorinated Side Chains
K.E. Sohn, A. Hexemer, S. Krishnan, M. Paik, C.K. Ober, E.J. Kramer, D. Fischer
C1.00024: Polystyrene Freeze Dried from Dilute Solution: Tg Depression and Residual Solvent
Wei Zheng, Sindee Simon
C1.00025: Enthalpy Recovery of Polymeric Glasses: Is the Theoretical Limiting Liquid Line Reached?
Qingxiu Li, Sindee Simon
C1.00026: Universal Aspects of Macromolecules in Polymer Blends, Solutions, and Supercritical Mixtures
Yuri Melnichenko, George Wignall, Dietmar Schwahn
C1.00027: Associative polymers bridging between layers of multilamellar vesicles.
Seo Choi, Surita Bhatia
C1.00028: Synthesis and characterization of thermoreversible hydrogels from associating polymers
Jun Jiang, Chunhua Li, Michael Rubinstein, Ralph Colby, Daniel Cohn, Miriam Rafailovich, Jonathan Sokolov
C1.00029: Design, Synthesis, and Evaluation of Non-Porous, Hydrophilic Membranes
Sadie White, Michael Fryd, Bradford Wayland, Russell Composto, Karen Winey
C1.00030: Small angle neutron scattering study to determine the structure of high strength hydrogels.
Taiki Tominaga, Vijay R. Tirumala, Eric K. Lin, Wen-li Wu, Jian Ping Gong, Hidemitsu Furukawa, Yoshihito Osada
C1.00031: Quantitative analysis of interfacial reaction and interfacial thickness by FTIR and Ellipsometry.
Manoranjan Prusty, Han Goossens, Gert de Wit, Piet Lemstra, Matrin Van Duin
C1.00032: Confinement Effects on the Phase Separation of Polymer Dispersed Liquid Crystals
Jianfeng Xia, Jun Wang, Zhiqun Lin, Feng Qiu, Yuliang Yang
C1.00033: Crystallization of Ethylene Vinyl Acetate (EVA) and Polyethylene (PE) /deuterated Polystyrene (dPS) Blends in Supercritical Carbon Dioxide (scCO2)
Christopher Pynn, Payvand Ahdout, John Jerome, Yantian Wang, Vladimir Zaitsev, Johnathan Soklov, Miriam Rafailovich, Steven Schwarz
C1.00034: Phase structures of block copolymers blended with small molecules
Kishore Tenneti, Xiaofang Chen, Christopher Li, Xinhua Wan, Qi-Feng Zhou, Igors Sics, Benjamin Hsiao

C1.00035: Structure and Nanomechanical Properties of Well-aligned Electrospun PS/MWCNT Composite Nanofibers
Yuan Ji, Shouren Ge, Jaseung Koo, Bingquan Li, Batya Herzberg, Toby Klein, Jonathan Sokolov, Miriam Rafailovich
C1.00036: Spherical nanoparticle ordering in block copolymer systems
John Papalia, Mary Galvin
C1.00037: Dependence of Tg Upon Fiber Orientation in Epoxy-Matrix Composites
Kristy Visconti, Patrick Burton, John D. McCoy
C1.00038: One Dimensional Nanocomposites
Nikhil Sharma, Darrin Pochan
C1.00039: Structure, Morphology and Properties of Carbon Nanotube Containing Polymeric Materials
Lingyu Li, Steve Kodjie, Christopher Li
C1.00040: Organic Photonic Crystal Lasers from Holographic Polymer Dispersed liquid Crystals (H-PDLCs)
Timothy Bunning, Rachel Jakubiak, Dean Brown, Richard Vaia, Pamela Lloyd, Vincent Tondiglia, Lalgudi Natarajan, Richard Sutherland
C1.00041: Single-layer white-light polymeric luminescent film by plasma polymerization for light emitting diodes
Chun-Chih Chang, Yi-Hsing Chang, Ying-Chu Chen, Arnold Chang-Mou Yang, Kuo-Chu Hwang
C1.00042: Evaporation induced hierarchical structure formation using diblock copolymers
Suck Won Hong, Jun Xu, Zhiqun Lin
C1.00043: A Unique Two-Stage Dewetting of Ultrathin Films of Entangled Chains Solution-Cast on a Deformable Surface
Tony Ming-Hsun Yang, S.Y. Hou, Arnold Chang-Mou Yang, F.C. Chang, C.F. Wang
C1.00044: Investigation of atomic force microscopic image resolution of organic molecules
Masanori Harada, Masaru Tsukada, Naruo Sasaki
C1.00045: Surface Plasmon Resonance Studies of Hydroxypropyl Xylan Self-Assembly on Cellulose
Daniel A. Drazenovich, Abdulaziz Kaya, Alan R. Esker, Wolfgang G. Glasser
C1.00046: Microfluidic interfacial tensiometry
Jai Pathak, Steven Hudson, Joao Cabral
C1.00047: The Effect of Humidity on the Ordering of Block Copolymer Thin Films
Joona Bang, Bumjoon J. Kim, Thomas P. Russell, Edward J. Kramer, Craig J. Hawker
C1.00048: Surface Modification Using Photo-Crosslinkable Random Copolymers
Joonwon Bae, Joona Bang, Peter Lowenhielm, Christian Spiessberger, Thomas P. Russell, Craig J. Hawker
C1.00049: Mean-field Description of Spinodal Growth of Surface Waves on Rupturing Films
Yong Jian Wang, Ophelia K. C. Tsui
C1.00050: The Interface between Two Incompatible Polymers in Density Fluctuating Supercritical Carbon Dioxide
J.S. Koo, T. Koga, M. Rafailovich, J. Sokolov
C1.00051: Trisilanolphenyl-POSS as an Adhesion Promoter
Sarah Huffer, Ufuk Karabiyik, Alan Esker
C1.00052: Interface Behavior in Diblock Copolymer Brushes
Gokce Ugur, Bulent Akgun, William J. Brittain, Mark D. Foster, Xuefa Li, Dong Ryeol Lee, Jin Wang

C1.00053: Exciton Emission in PTCDA Thin Films under Uniaxial Pressure
A. DeSilva, V.R. Gangilenka, H.P. Wagner, R.E. Tallman, B.A. Weinstein, R. Scholz
C1.00054: Evidence for Capillary Contributions to Gecko Adhesion from Single Spatula Nanomechanical Measurements
Gerrit Huber, Stanislav Gorb, Eduard Arzt, Ralph Spolenak, Klaus Mecke, Hubert Mantz, Karin Jacobs
C1.00055: The Influence of Stereoerrors on the Crystallization of Isotactic Polypropylene
Xiaofeng Chen, Sanat K. Kumar, Rahmi Ozisik
C1.00056: Investigation of the Structure and Dynamics of Polyethylene Nanocomposites
Peter J. Dionne, Rahmi Ozisik, Catalin R. Picu
C1.00057: Extensions of an analytical coarse-grained description for polymer liquids: thermodynamic determinations and an intermediate length-scale description
Edward Sambriski, Marina Guenza
C1.00058: A Novel Approach for Understanding the Effect of Nano-Fillers on the Conformational Properties of a Polymer Matrix: Dimensions go up or down?
Fatih M. Erguney, Wayne L. Mattice
C1.00059: Density functional and molecular dynamics study of conducting polymers
Y. Dai, E. Blaisten-Barojas
C1.00060: Structure and Spectra in Mutated Green Fluorescent Protein: A Combined Molecular Dynamics and QM/MM Study
Soumya Patnaik, Steven Trohalaki, Ruth Pachter
C1.00061: Biodegradable Epoxy Networks Cured with Polypeptides
Shigeo Nakamura, Edward J. Kramer
C1.00062: A novel Generalized Langevin approach to bridge different timescales of relaxation in Protein Dynamics
Esther Caballero Manrique, Jenelle Bray, Marina Guenza
C1.00063: Quantitative prediction for two-dimensional bacterial genomic displays
Jean-Francois Mercier, Christine Kingsburry, Bénédicte Lafay, Gary W. Slater
C1.00064: Osmotic Pressure induced by Poly(ethylene glycol) at High Salt Concentrations
Sungkyun Sohn, Helmut Strey, Sam Gido
C1.00065: The Effect of Polymer-Clay Nano-Composites on Human Dermal Fibroblasts
Lourdes Collazo, Hilana Lewkowitz-Shpuntoff, Mary Catherine Wen, Miriam Rafailovich
C1.00066: Receptor/Ligand Interactions at an Oil/Water Interface
Daniel Carvajal, Chi-Yang Chao, Kenneth Shull
C1.00067: Theoretical Comparative Study of the Structure, Dynamics and Electronic Properties of Five Ally Molecules: Allicin, Methyl Propyl Disulfide (MPD), Allyl Methyl Sulfide (AMS), S-allyl cysteine (SAC) and S-allyl mercaptocysteine (SAMC)
Emine Deniz Calisir, Sakir Erkoc, Handan Yildirim, Abdelkader Kara, Talat S. Rahman, Mahmut Selvi, Figen Erkoc
C1.00068: Spheres-to-vesicles morphological transition in polymer micelles
Zhijun Hu, Alain Jonas, Jean-François Gohy
C1.00069: Osmotic Pressure Measurements of the Order Disorder Transition in Acrylic Triblock Copolymer Gels
Rafael E. Bras, Kenneth R. Shull
C1.00070: Scaling of Avrami Kinetics of Growing Anisotropic Grains
Samuel Gido, Ashoutosh Panday
C1.00071: Block Copolymer Nanotemplates for Biomolecular Arrays
Jung Hyun Park, Yale E. Goldman, Russell J. Composto

C1.00072: X-ray Photon Correlation Spectroscopy Studies of Dynamics in a Polymer Bicontinuous Microemulsion
Kristin Brinker, Wesley Burghardt, Simon Mochrie
C1.00073: Morphology of Fluorinated and Sulfonated diblock Copolymers
Tomonori Hosoda, Sam Gido, Tianzi Huang, Jimmy Mays
C1.00074: Stereocomplex Formation in Incompatible Racemic Chiral Polylactide Block Copolymers
Lu Sun, Lei Zhu
C1.00075: Effect of local point group symmetry on self-assembly in thin films of block copolymers on topographically patterned substrates.
Ion Bita, Joel Kang, Karl Berggren, Edwin Thomas
C1.00076: Spectroscopy of the Primary Photoexcitation and the Origin of the Photocurrent in Rubrene Single Crystals
Hikmat Najafov, Ivan Biaggio, Vitaly Podzorov, Matt Calhoun, Michael Gershenson
C1.00077: Exciton Dissociation by a Static Electric Field Followed by Nano-scale Charge Transport in PPV Polymer
HIkmat Najafov, Ivan Biaggio, Ta-Ko Chuang, Miltiadis K. Hatalis
C1.00078: Temperature Dependent Electroluminescence of Alq3 Based OLEDs
Ajith DeSilva, H. P. Wagner, R. A. Jones, W. Li, A. Stekl
C1.00079: Multiplicative luminescence enhancement induced by chain relaxation in ultrathin films of a conjugated polymer (MEH-PPV)
Chih-Wei Yang, Juo-Huei Jou, Arnold Chang-Mou Yang
C1.00080: How Fast Should Polymer/Drug Nanocrystal Dispersions Be Frozen?
Jonghwi Lee, Chul Ho Park
C1.00081: Equilibrium interactions and phase behavior of nanoparticles in solutions of adsorbing polymers
Megha Surve, Victor Pryamitsyn, Venkat Ganesan
C1.00082: How do colloidal particles rotate? New Materials and New Physics
Liang Hong, Stephen Anthony, Huilin Tu, Steve Granick
C1.00083: The Prospects of Nanorods as Blending Agents in Immiscible Binary Polymer Blends
Michael J. A. Hore, Mohamed Laradji
C1.00084: Adhesion and Release Mechanisms for Nanoimprint Lithography
Douglas Holmes, John Whang, Edwin Chan, Alfred Crosby
C1.00085: Nanotransfer printing for patterning conductive copper features
Kimberly Dickey, Yangming Sun, Yueh Lin Loo
C1.00086: Surface grafting of carbon nanotubes with conjugated polybenzoxazole polymer
Chih-Wei Lin, Jen-You Lin, Arnold Chang-Mou Yang, Chen-Chi M. Ma
C1.00087: Modification of Nanocomposite POSS-PMMA Surfaces by Exposure to Reactive Oxygen.
Rebekah Esmaili, Jacob Forstater, Brian H. Augustine, Wm. Christopher Hughes
C1.00088: Polypeptide-Based Silicate Layered Nanocomposite: Effect of Poly(L-lysine) Secondary Conformation on Physical Properties of the Hybrid
Rohan Hule, Jeffrey Thompson, Timothy Deming, Darrin Pochan
C1.00089: Oriented Mesoporous Inorganic Thin Films Using Laterally Confined Swellable Block Copolymer Templates.
Se Gyu Jang, Edward J. Kramer, Seung-Man Yang

C1.00090: Chemical composition effects on the crazing of PS-PMMA block copolymers
Won Kim, Junwon Han, Hoichang Yang, Chang Ryu
C1.00091: Impact of Nanotube Addition on Stress Recovery of Thermoplastic Elastomer Nanocomposites.
Daniel Powers, Max Alexander, Richard Vaia, Michael Arlen, Hilmar Koerner
C1.00092: Long DNA Molecules at Liquid-Solid Interfaces
Vladimir Samuilov, B. Li, J. Sokolov, M. Rafailovich, B. Chu
C1.00093: Closed-Loop Phase Behavior: Is it Universal Phenomenon for Block Copolymers with Lower Critical Transition Temperature?
Jin Kon Kim, Chaoxu Li, Dong Hyun Lee
C1.00094: Acoustic modes and elastic properties of polymeric nanostructures
Ryan D. Hartschuh, A. Kisliuk, A.P. Sokolov, V. Novikov, P.R. Heyliger, C.M. Flannery, W.L. Johnson, C.L. Soles, W.-l. Wu
C1.00095: Polymeric Micro/Nanostructures Fabricated through a Novel Method with Optical Microscopy
Chao-Min Cheng, Bin Li, Philip LeDuc
C1.00096: Nanoparticle arrays controlled by polymeric ligands
Chun-Kwei Wu, Jeffrey T. Koberstein
C1.00097: Crosslinked nanoparticle assemblies at liquid-liquid interfaces
Ravisubhash Tangirala, Habib Skaff, Yao Lin, Thomas Russell, Todd Emrick
C1.00098: Gold nanoparticle self-assembly and gold patterning using thin film polymer blend templates.
Ranjan D. Deshmukh, Russell J. Composto
C1.00099: Organometallic Polymer-Derived Catalyst Dispersion Effects on SWNT Growth
Sarah Lastella, Pulickel M. Ajayan, Chang Y. Ryu, David Rider, Ian Manners

Session D4. DPOLY DMP: Organic Electronics

Monday afternoon, 2:30 pm, Baltimore Convention Center 308

Chair: Chang Yeol Ryu, Rensselaer Polytechnic Institute

Invited Speakers: Friend, Martin, Loo, Chabinyc, Lin

2:30PM D4.00001: Excited states at polymer semiconductor heterojunctions.
Invited Speaker: Richard Friend

3:06PM D4.00002: Defects and Deformation in Organic Molecular Semiconductors
Invited Speaker: David Martin

3:42PM D4.00003: Solution-Processable Organic Semiconductors and Conductors: Viable Materials for Functional Thin-Film Transistors
Invited Speaker: Yueh-Lin Loo

4:18PM D4.00004: Structural Effects on the Performance of Polymeric Thin Film Transistors
Invited Speaker: Michael Chabinyc

4:54PM D4.00005: NEXAFS measurements of the development of interfacial order in organic semiconductor thin films.
Invited Speaker: Eric K. Lin

Session D25. DPOLY: Focus Session: Particle Dynamics and Organization; Polymer Tethers and Interfacial Segregation

Monday afternoon, 2:30 pm, Baltimore Convention Center 322

Chair: Francis Starr; Wesleyan University

Invited Speakers: Smith

2:30PM D25.00001: Multiscale Simulation Studies of the Self-Association of Poly(ethylene oxide)-Tethered Fullerenes
Invited Speaker: Grant Smith

3:06PM D25.00002: Polymer Models of Interphase Chromosomes
Joshua Martin, Jané Kondev, Debra Bressen, James Haber

3:18PM D25.00003: Dynamics of Adsorption-Desorption of Linear Polymer Chains to Spherical Nanoparticles: A Monte Carlo Investigation
Peter J. Dionne, Catalin R. Picu, Rahmi Ozisik

3:30PM D25.00004: Manipulating assembly of nanoparticles by polymer tethers
Zhenli Zhang, Mark Horsch, Christopher Iacovella, Sharon Glotzer

3:42PM D25.00005: Phase behavior and clustering of nanoparticles with approximate polymer interactions
Andrew Rahedi, Francis Starr

3:54PM D25.00006: Stable Bicontinuous Polymer Blend Films by Jamming Nanoparticles at the Interface
Russell J. Composto, Hyun-joong Chung, Kohji Ohno, Takeshi Fukuda

4:06PM D25.00007: Directed self-assembly of nanoscale building blocks through coded bonding potentials
Jason J. Benkoski, Ronald L. Jones, Jack F. Douglas, Alamgir Karim

4:18PM D25.00008: Selective trapping nanoparticles on an adaptive, topographic surface
Shu Yang, Ying Zhang, Shuhui Qin, John A. Taylor, Joanna Aizenberg

4:30PM D25.00009: Wetting of polymer thin films with nanoparticles
Igal Szleifer

4:42PM D25.00010: The Effects of Supercritical CO2 and Nanoparticles on Metallization of Polymer Thin Films
B. Kugler, F. Shaikh, J. Rosengard, R. Holzer, J. Jerome, T. Koga, M. Rafailovich, J. Sokolov

4:54PM D25.00011: Optimal Confinement for Internal Polymer Binding
Nam-Kyung Lee, Cameron Abrams, Albert Johner

Session D26.DBP DPOLY: Focus Session: Dynamics of Nuclei Acid-Protein Interaction: Single Molecule

Monday afternoon, 2:30 pm, Baltimore Convention Center 323

Chair: Mark W. Williams, Northeastern University

Invited Speakers: Wang, Wuite

2:30PM D26.00001: Probing Nucleosome Remodeling by Unzipping Single DNA Molecules
Invited Speaker: Michelle Wang

3:06PM D26.00002: Binding Study of T7 Gene 2.5 Protein to Single- and Double--Stranded DNA from Single Molecule Stretching
Leila Shokri, Boriana Marintcheva, Charles C. Richardson, Mark C. Williams

3:18PM D26.00003: Dynamics of Protein-DNA Interactions probed with Laser Temperature-Jump and Time-Resolved FRET Measurements.
Serguei Kuznetsov, Paula Vivas, Sawako Sugimura, Donald Crothers, Anjum Ansari

3:30PM D26.00004: Inferring the in vivo looping properties of DNA.
Jose Vilar, Leonor Saiz, Miguel Rubi

3:42PM D26.00005: DNA kept under tension reveals mechanochemical properties of protein reaction pathways
Invited Speaker: Gijs Wuite

4:18PM D26.00006: A Model for Folding and Aggregation in RNA Secondary Structures
Vishwesha Guttal, Ralf Bundschuh

4:30PM D26.00007: Mechanism of gene-regulating protein's diffusion along DNA: hopping vs. sliding
Yan Mei Wang, Edward Cox, Robert Austin

4:42PM D26.00008: Protein jamming on DNA
Zeba Wunderlich, Michael Slutsky, Mehran Kardar, Leonid Mirny

4:54PM D26.00009: Single-molecule Study of Nucleocapsid Protein Chaperoned DNA Hairpin Structural Dynamics
Yining Zeng, Gonzalo Cosa, Hsiao-Wei Liu, Christy Landes, Dmitrii Makarov, Paul Barbara, Karin Musier-Forsyth

5:06PM D26.00010: Mechanism of Nucleic Acid Chaperone Function of Retroviral Nuceleocapsid (NC) Proteins
Ioulia Rouzina, My-Nuong Vo, Kristen Stewart, Karin Musier-Forsyth, Margareta Cruceanu, Mark Williams

5:18PM D26.00011: Fis protein induced l-DNA bending observed by single-pair fluorescence resonance energy transfer
Fu Chi-Cheng, Fann Wunshain, Yuan Hanna S.

Session D28. DPOLY: Block Copolymer Thin Films

Monday afternoon, 2:30 pm, Baltimore Convention Center 325

Chair: Travis Bailey, Colorado State University

2:30PM D28.00001: Tuning Surface Interactions to Control Thin Film Block Copolymer Orientation
Alamgir Karim, Ronald Jones, Duangrut Julthongpiput, Michael Fasolka, Eric Amis, Sushil Satija

2:42PM D28.00002: Internal and Interface Structure in Diblock Copolymer Brushes
Mark D. Foster, Bulent Akgun, Gokce Ugur, William J. Brittain, Xuefa Li, Dong Ryeol Lee, Jin Wang

2:54PM D28.00003: Internal Morphology of Diblock Copolymer Brushes Determined by Neutron Reflectivity.
Bulent Akgun, William J. Brittain, Mark D. Foster, Charles F. Majkrzak

3:06PM D28.00004: Resonant X-Ray Scattering in Block Copolymer Thin Films
Justin Virgili, Jeffrey Kortright, Nitash Balsara, Rachel Segalman

3:18PM D28.00005: The development of order in ultra-thin PS-PMMA diblock copolymer films.
Ward Lopes, Hai Qian, Gene Mazenko, Heinrich Jaeger

3:30PM D28.00006: Thickness Dependent Packing Symmetries of Spherical-Domain Block Copolymer Multilayers
G.E. Stein, E. Cochran, G.H. Fredrickson, E.J. Kramer, X. Li, J. Wang

3:42PM D28.00007: Effect of chain architecture and surface energies on the microdomain orientation in block copolymer films
V. Khanna, E. J. Kramer, E. W. Cochran, G. H. Fredrickson, X. Li, J. Wang, S. F. Hahn

3:54PM D28.00008: Symmetry Breaking In Block Copolymer Thin Films
Eric Cochran, Kirill Katsov, Gila Stein, Ed Kramer, Glenn Fredrickson

4:06PM D28.00009: Ion Complexation in Salt Containing Block Copolymer Thin Films
Matthew Misner, Seung Hyun Kim, Ling Yang, Thomas Russell

4:18PM D28.00010: Homopolymer Penetration on Crosslinked Copolymer Mat
Du Yeol Ryu, Jia-Yu Wang, Eric Drockenmuller, Kristopher Lavery, Craig Hawker, Thomas Russell

4:30PM D28.00011: Enhanced order in thinfilms of Pluronic (A-B-A) and Brij (A-B) block copolymers blended with poly(acrylic acid)
Vijay R. Tirumala, Bryan D. Vogt, Hae-jeong Lee, Eric K. Lin, James J. Watkins

4:42PM D28.00012: Ordering transition of block copolymer films under compressed CO2
Abraham Arceo, Peter F. Green

4:54PM D28.00013: Self-Organization of PS-b-PFOMA Block Copolymer Aggregates in Thin Films
Yuan Li, Luciana Meli, Keith Johnston, Kwon Lim, Peter Green

5:06PM D28.00014: Scaling of Domain Spacing of Block Copolymers Dilated by High-Pressure Carbon Dioxide
Timothy Francis, Bryan Vogt, Xiaohui Wang, James Watkins

5:18PM D28.00015: Amphiphilic Block Copolymers in Condensed Carbon Dioxide
William Edmonds, Timothy Lodge, Marc Hillmyer

Session D30. DPOLY: Multiphase Polymer Materials

Monday afternoon, 2:30 pm, Baltimore Convention Center 327

Chair: Ali Dhinojwala, University of Akron

2:30PM D30.00001: Phonon Propagation in Dry and Wet Polystyrene Opals
George Fytas, Wei Cheng, Jian Jun Wang, Ulrich Jonas

2:42PM D30.00002: Kinetics of phase separation in a dilute short-ranged square-well system: a molecular dynamics study.
Hongjun Liu, Shekhar Garde, Sanat Kumar

2:54PM D30.00003: Styrene-Hydroxystyrene Gradient and Block Copolymers: Comparisions of Behavior as Compatibilizers of Immiscible, Crystallizable Polymer Blends and in the Neat and Solution States.
Jungki Kim, John M. Torkelson

3:06PM D30.00004: An off-lattice Wang-Landau simulation of the coil-globule and solid-liquid transitions of flexible homopolymers.
Drew Parsons, David Williams

3:18PM D30.00005: Exploring the Effects of Deuteration on Polymer Blends
Michael Tambasco, Jane Lipson, Julia Higgins

3:30PM D30.00006: Coarse-Grained Simulations of PEO/PMMA Blends
Praveen Depa, Chunxia Chen, Janna Maranas

3:42PM D30.00007: Relationship between Fluctuation and Stress Relaxation in a Block Copolymer Melt
Amish Patel, Nitash Balsara, Suresh Narayanan, Alec Sandy, Simon Mochrie, Bruce Garetz, Hiroshi Watanabe

3:54PM D30.00008: Self-consistent field theoretic calculations of stress in diblock
Panagiotis Maniadis, Kim O. Rasmussen, Turab Lookman, Edward M. Kober

4:06PM D30.00009: Coarse-Grained Modeling of the Mechanical Properties of Entangled Polymer Systems
Brian Pasquini, Fernando Escobedo, Yong L. Joo

4:18PM D30.00010: Flame Retardant Homopolymer and Polymer Blend Composites
Miriam Rafailovich, Mayu Si, Jonathan Sokolov, Tohru Araki, Harald Ade, Daniel Hefter, Aryeh Sokolov

4:30PM D30.00011: Ellipsometry studies of nanofilled polymer thin films.
Ufuk Karabiyik, Alan Esker

4:42PM D30.00012: Charge dissipation measurement on the surface of polymeric materials using modified surface potential electric force microscopy
Michael Reagan, Sergei Lyuksyutov, Ivan Dolog, Robert Mallik, Shane Juhl, Richard Vaia, Michael Durstock, John Ferguson

4:54PM D30.00013: Preparation and Characterization of a Superparamagnetic Polymer Nanocomposite
N. Brenner, R. Isseroff, M. Rafailovich, G. Rudomen, R. Gambino, S.S. Liang, D. Sunil, M. Si, L. Collazo, N. Pernodet, X. Fang

5:06PM D30.00014: Molecular Simulation of the intercrystalline region in isotactic polypropylene
Vikram Kuppa, Gregory C. Rutledge

5:18PM D30.00015: Phase Transition Behavior of Isotactic Polypropylene Crystallized from a Homogeneous Melt
Xiaofeng Chen, Sanat K. Kumar, Rahmi Ozisik

Session G4. DPOLY: Polymer Physics Prize

Tuesday morning, 8:00 am, Baltimore Convention Center 308

Chair: Murugappan Muthukumar, University of Massachusetts

Invited Speakers: Leibler, Möller, Fredrickson, Candau, Colby

8:00AM G4.00001: On nanostructured dispersions and toughness of semi-crystalline polymers.
Invited Speaker: Ludwik Leibler

8:36AM G4.00002: Function in block copolymer assembly
Invited Speaker: Martin Möller

9:12AM G4.00003: Field-Theoretic Polymer Simulations: At the Frontier
Invited Speaker: Glenn Fredrickson

9:48AM G4.00004: Structural an Dynamical Properties of Some Equilibrium Polymers.
Invited Speaker: Jean Sauveur Candau

10:24AM G4.00005: A Lattice Model for Segmental Dynamics of Miscible Polymer Blends
Invited Speaker: Ralph H. Colby

Session G24. DPOLY: Polymer Nanomaterials I

Tuesday morning, 8:00 am, Baltimore Convention Center 321

Chair: Kookheon Char, Seoul National University

8:00AM G24.00001: BREAK

8:36AM G24.00002: Marker Motion Measurements of Nanoparticles in Polymer Matrices
Aleta Hagman, Kenneth R. Shull, Jin Wang, Xuefa Li, Dong Ryeol Lee, Suresh Narayanan

8:48AM G24.00003: Effect of Areal Density of Polymer Chains on Gold Nanoparticles on Nanoparticle Location in a Block Copolymer Template
B.J. Kim, J. Bang, C.J. Hawker, E.J. Kramer

9:00AM G24.00004: Nanocomposite Microdomain Inversion in Au Nanoparticle/ PS-b-PFOMA Block Copolymer Films
Luciana Meli, Yuan Li, Keith P Johnston, Peter F Green

9:12AM G24.00005: Dielectrophoretic alignment of montmorillonite nanoplatelet suspensions in an organic matrix
Evangelos Manias, Georgios Polizos, Hilmar Koerner, Richard Vaia

9:24AM G24.00006: Surface morphology in dewetting polystyrene/polyhedral oligomeric silsesquioxane (POSS) thin-film bilayers
Rituparna Paul, Michael C. Swift, John R. Hottle, Alan R. Esker

9:36AM G24.00007: Block Copolymer Nanocomposites for RF Magneto-dielectric Applications
Ta-i Yang, Peter Kofinas

9:48AM G24.00008: Effect of confinement on the polymer segmental motion and on ion mobility in PEO/layered-silicate nanocomposites
Spiros H. Anastasiadis, Kiriaki Chrissopoulou, Athanasios Afratis, M.M. Elmahdy, George Floudas, Bernhard Frick

10:00AM G24.00009: Photovoltaic Responses of Solar Cells Based on Lead Selenide Quantum Dots and Conducting Polymers
Xiaomei Jiang, Sergey Lee, Anvar Zakhidov, Richard D. Schaller, J.M. Pietryga, Victor Klimov

10:12AM G24.00010: Electric Field Effect on Wannier- Frenkel Hybrid Exciton in a Quantum Dot Coated by an Organic Shell
Que Huong Nguyen, Joseph L. Birman

10:24AM G24.00011: Transport measurements in semiconductor nanocrystals capped with electroactive ligands
Claudia Querner, Peter Reiss, Michael D. Fischbein, Patrice Rannou, Joel Bleuse, Adam Pron, Marija Drndic

10:36AM G24.00012: Photooxidation of sugar and alcohol on TiO2 surfaces: A first-principles study
Mao-Hua Du, Jun Feng, Shengbai Zhang

10:48AM G24.00013: Directly Patterned Mesoporous Carbon and Metal-Doped Carbon Films Prepared using Block Copolymer Templates in Supercritical CO2
Gaurav Bhatnagar, James Watkins

Session G25. DPOLY: Structure and Dynamics of Functional Macromolecules

Tuesday morning, 8:00 am, Baltimore Convention Center 322

Chair: Xinyan Cui, University of Pittsburgh

8:00AM G25.00001: BREAK

8:36AM G25.00002: Structural Transitions of F-Actin:Espin Bundles
Kirstin Purdy, James Bartles, Gerard Wong

8:48AM G25.00003: Nonequilibrium Self-Assembly of Linear Fibers
Chenghang Zong, Ting Lu, Tongye Shen, Peter Wolynes

9:00AM G25.00004: Energetics and Dynamics of Constrained Actin Filament Bundling
Le Yang, David Sept, Anders Carlsson

9:12AM G25.00005: Evolution of growth modes for polyelectrolyte bundles
G. H. Lai, Olena V. Zribi, Golestanian Ramin, Gerard C. L. Wong

9:24AM G25.00006: Nanoscopic tubulin rings
Hacene Boukari, Dan Sackett, Peter Schuck, Susan Krueger, Ralph Nossal

9:36AM G25.00007: Deformation of DNA and Polymer Labels during End-Labelled Free-Solution Electrophoresis.
Gary W. Slater, Laurette C. McCormick

9:48AM G25.00008: Dynamics of Tethered, Lightly Crosslinked pH- Responsive Networks
Joshua Thomas, Nicholas Peppas

10:00AM G25.00009: Ferroelectric-specific peptides as building blocks for bio-inorganic devices
Brian Reiss, Guo-Ren Bai, Orlando Auciello, Lenidas Ocola, Millicent Firestone

10:12AM G25.00010: Bio-based Polymer Foam from Soyoil
Laetitia M. Bonnaillie, Richard P. Wool

10:24AM G25.00011: Calculation of the Vibrational Continuum in Helical Polymers from First Principles: Application to Single-walled Carbon Nanotubes
Hadley Lawler, Carter White, John Mintmire

10:36AM G25.00012: Optimizing the Geometry of Patterned Polymer Separation Media
David Hoagland, Helmut Strey

Session G28. DPOLY: Focus Session: Microphysical Properties of Block Copolymer Aggregates I

Tuesday morning, 8:00 am, Baltimore Convention Center 325

Chair: Erik Hobbie, National Institute of Standards and Technology

Invited Speakers: Discher

8:00AM G28.00001: BREAK

8:36AM G28.00002: Electric Field Manipulation of Charged Copolymer Worm Micelles
Invited Speaker: Dennis Discher

9:12AM G28.00003: Rheo-NMR measurements of shear alignment and banding in non-ionic wormlike micelles
Louis A. Madsen, Edward T. Samulski, Ralph H. Colby, Bradley S. Douglass, Paul T. Callaghan

9:24AM G28.00004: Reversible morphological transitions of polystyrene-b-polyisoprene micelles
Isaac Larue, Sergei Sheiko, Mireille Adam, Michael Rubinstein, Marinos Pitsikalis, Nikos Hadjichristidis

9:36AM G28.00005: Growth of Nanostructured Bilayers and Vesicles by Self-assembly of ABC Mikto-arm Star Terpolymers
Zhibo Li, Marc Hillmyer, Timothy Lodge

9:48AM G28.00006: Self-Assembly of Block Copolymers in an Ionic Liquid
Yiyong He, Zhibo Li, Timothy P. Lodge

10:00AM G28.00007: Controlling PS-b-PEO Morphologies by Solution Conditions
Prachur Bhargava, Xiaoliang Zheng, Yingfeng Tu, Stephen Z.D. Cheng

10:12AM G28.00008: Formation of Toroid Micelles: Mechanism and Size Control
Honggang Cui, Kelly Hales, Zhibin Li, Darrin Pochan, Zhiyun Chen, Kai Qi, Karen Wooley

10:24AM G28.00009: Kinetics of chain exchange in diblock copolymer micelles
Chun-Chung Chen, Elena E. Dormidontova

10:36AM G28.00010: Chain Exchange Kinetics in Diblock Copolymer Micelles: Comparison of Experimental and Simulation Results
Elena Dormidontova, Chun-Chung Chen, Reidar Lund, Lutz Willner, Dieter Richter

10:48AM G28.00011: Dynamics of Polystyrene-Polyisoprene (PS-PI) Micelles in Selective Solvents.
Dvora Perahia, Gang Cheng

Session G30. DPOLY DMP: Focus Session: Electronic Transport in Organic Films

Tuesday morning, 8:00 am, Baltimore Convention Center 327

Chair: Denis Fuchou, CNRS CEA-Saclay

Invited Speakers: De Feyter, Charra

8:00AM G30.00001: BREAK

8:36AM G30.00002: Scanning Tunneling Microscopy and Spectroscopy of Conjugated Oligomers at the Liquid-Solid Interface
Invited Speaker: Steven De Feyter

9:12AM G30.00003: Directing molecular traffic by means of a nano-engineered surface
Invited Speaker: Fabrice Charra

9:48AM G30.00004: Determining the conductance of single molecular wire
Alexandre Ndobe, Vladimir Burtman, Valy Vardeny

10:00AM G30.00005: Atomic-Scale Spectroscopy of Polydiacetylene Nanowires
Rajiv Giridharagopal, K. F. Kelly

10:12AM G30.00006: Self-Organized Single-Crystal Polythiophene Microwires
Kilwon Cho, Do Hwan Kim

10:24AM G30.00007: Bond resistances in molecular junctions
Anna Painelli

10:36AM G30.00008: Transport Properties of SAM Molecular Diodes with Structural Tunability
Vladimir Burtman, Valy Z. Vardeny, Alex Ndobe

10:48AM G30.00009: Electron Hopping in Conducting Polymers in the Presence Of Mobile Ions
Vladimir Prigodin, Fang Hsu, Jane Park, Arthur Epstein

Session H24. DPOLY: Polymers at Interfaces

Tuesday midday, 11:15 am, Baltimore Convention Center 321

Chair: Chris Soles, National Institute of Standards and Technology

11:15AM H24.00001: Adsorption-induced fracture of branched macromolecules.
Sergei Sheiko, Frank Sun, David Shirvanyants, Michael Rubinstein, Hyung-il Lee, Krzysztof Matyjaszewski

11:27AM H24.00002: The swelling and dissolution kinetics of polymer thin films
Arindam Kundagrami, M. Muthukumar

11:39AM H24.00003: Sum-Frequency Vibrational Spectroscopy on Rubbed Poly(vinyl cinnamate) films for Liquid Crystal Alignment..
Pasquale Pagliusi, Eric C.Y. Chen, Y. R. Shen

11:51AM H24.00004: Structure of Confined Fluid between an Elastomer and a Flat Surface
Kumar Nanjundiah, Ali Dhinojwala

12:03PM H24.00005: Resonant Soft X-ray Reflectivity of Polymer Thin Films
Cheng Wang, Tohru Araki, Harald Ade

12:15PM H24.00006: Possible explanation of polymer surface diffusion anomaly
Debashish Mukherji, Martin H. Muser

12:27PM H24.00007: Unconventional Spinodal Surface Fluctuations on Polymer Films
Yong Jian Wang, Ophelia K. C. Tsui

12:39PM H24.00008: Interfacial Characterization of Contact in Aqueous Environments with a Quartz Crystal Microbalance
David A. Brass, Kenneth R. Shull

12:51PM H24.00009: Humidity influence on atomic force microscopy electrostatic nanolithography
Sergei Lyuksyutov, Shane Juhl, Richard Vaia

1:03PM H24.00010: Comparison of thermal and chemical treatments of ultrathin chitosan films
Chris Murray, John Dutcher

1:15PM H24.00011: Glucose/galactose binding protein changes its mechanical properties: Novel AFM method of detection in-situ.
Venkatesh Subba Rao, Linda Luck, Igor Sokolov

1:27PM H24.00012: Modifying Surfaces with Light.
Jeff Koberstein, Greg Carrol, Feng Pan, Peng Wang, Nicholas Turro

1:39PM H24.00013: Dynamical simulations of rheology and phase behavior of ternary polymer blend systems.
Bharadwaj Narayanan, Venkat Ganesan, Victor Pryamitsyn

1:51PM H24.00014: Orientation competition of lamellar phases in sheared block copolymers via hydrodynamic instability
Zhi-Feng Huang, Jorge Vinals

2:03PM H24.00015: Defects in a Noncentrosymmetric Lamellar Block Copolymer Blend
Shujun Chen, Samuel P. Gido, Thodoris Tsoukatos, Apostolos Avgeropoulos, Nikos Hadjichristidis, Kunlun Hong, Jimmy W. Mays

Session H25. DPOLY: Focus Session: Particle Dynamics and Organization

Tuesday midday, 11:15 am, Baltimore Convention Center 322

Chair: Lynn Walker, Carnegie Mellon University

11:15AM H25.00001: Noncontinuum Effects in Dynamics of Nanoparticles in Polymer Matrices
Ganesan Venkatraghavan, Victor Pryamitsyn

11:27AM H25.00002: Mechanisms of Steady State Rheological Behavior of Polymer Nanoparticle Composites
Victor Pryamitsyn, Venkat Ganesan

11:39AM H25.00003: Surface Modification of Plate-Like Nanoparticles and Their Assembly into Nematic Organogels
Bani Cipriano, Srinivasa Raghavan

11:51AM H25.00004: Gelation and structural characteristics of nanoparticles in solutions of adsorbing polymers
Megha Surve, Victor Pryamitsyn, Venkat Ganesan

12:03PM H25.00005: Shear induced alignment in thin bilayer films: a simulation study
Joerg Rottler, David J. Srolovitz, Paul Chaikin

12:15PM H25.00006: Field-theoretic nanocomposite simulations: preliminary results of hybrid particle/SCFT simulations
Scott Sides, Glenn Fredrickson

12:27PM H25.00007: Distributed Polymeric Stickers and their Role in Colloidal Interactions and Selective Adhesion Dynamics.
Maria Santore, Natalia Kozlova, Bing Mei

12:39PM H25.00008: Thermally-responsive Interpenetrating Polymer Network Nanoparticles
Donald Owens, Nicholas Peppas

12:51PM H25.00009: Barrier Hopping, Viscous Flow and Kinetic Gelation in Nanoparticle-Polymer Suspensions
Kenneth Schweizer, Yeng-Long Chen, Vladimir Kobelev

1:03PM H25.00010: Soft X-ray Resonant Scattering of Structured Polymer Nanoparticles
Harald Ade, T. Araki, G. Mitchell, J. Stubbs, D. Sundberg, J. Kortright, A.L.D. Kilcoyne

1:15PM H25.00011: Studies of the formation of microporous polymer films in `breath figure' condensation processes
Mohan Srinivasarao, Jung Park, Matthew Barrow, Richard Jones, Chris Wright, P. Rhodri Williams

1:27PM H25.00012: Filling Small Pores With Polymer Melts
Priyanka Dobriyal, Mingfu Zhang, Jiun Tai Chen, Thomas Russell

1:39PM H25.00013: Shear Rate Dependent Structure of Polymer Stabilized TiO2 Dispersions
Alan Nakatani, Antony VanDyk, Lionel Porcar, John Barker

Session H28. DPOLY DMP: Focus Session: Energetics and Transport in Conjugated Organics

Tuesday midday, 11:15 am, Baltimore Convention Center 325

Chair: David Gundlach, National Institute of Standards and Technology

Invited Speakers: Silva

11:15AM H28.00001: Exciton Trapping at Heterojunctions in Polymer Blends
Invited Speaker: Carlos Silva

11:51AM H28.00002: Narrow Band Tails in Organic Semiconductor Crystals
C. Krellner, S. Haas, D. J. Gundlach, B. Batlogg

12:03PM H28.00003: Triplet Exciton Photogeneration in p-Conjugated Polymers
C. Yang, C.X. Sheng, M.H. Tong, Z.V. Vardeny

12:15PM H28.00004: Observation of a metastable electronic phase in films of long MEH-PPV chains
Tomer Drori, Z.V. Vardeny, Eitan Ehrenfreund, Yoav Eichen

12:27PM H28.00005: The role of upper excited states in generation of free charges in pi-conjugated polymers
A. Gambetta, C.X. Sheng, G. Lanzani, Z.V. Vardeny

12:39PM H28.00006: Hückle p-electron theory of self-assembled metalloporphyrin films
W. Schwalm, J. Moreno, A. Brandt

12:51PM H28.00007: Triplet exciton formation and decay in polyfluorene light emitting diode
H.H. Liao, H.F. Meng, S.F. Horng, J.T. Shy, K Chen, C.S. Hsu

1:03PM H28.00008: Estimating the electronic conductivity of size-expanded DNA: a complex bandstructure study
Miguel Fuentes-Cabrera, Jack C. Wells, Oscar Huertas, F. Javier Luque, Hao Wang, James P. Lewis, Modesto Orozco, Otto F. Sankey

1:15PM H28.00009: Excitonic effects in molecular crystals built up by small organic molecules
Peter Puschnig, Claudia Ambrosch-Draxl, Kerstin Hummer, Stephan Sagmeister

1:27PM H28.00010: Doping Induced Energy Level Shift in Organic Semiconductors
Huanjun Ding, Kate Green, Yongli Gao

1:39PM H28.00011: Optical Studies of Excited States in Polyfluorene
Minghong Tong, Chuanxiang Sheng, Z.Valy Vardeny

1:51PM H28.00012: On the Charge transport regime of crystalline organic semiconductors: diffusion limited by thermal off-diagonal electronic disorder
Alessandro Troisi

2:03PM H28.00013: Charge Transport Simulations for Amorphous Organic Thin Film Devices
Conor Madigan, Vladimir Bulovic

Session H30. DPOLY: Padden Award Symposium

Tuesday midday, 11:15 am, Baltimore Convention Center 327

Chair: Anne Mayes, Massachusetts Institute of Technology

11:15AM H30.00001: Electrochemically Controlled Self-Assembly of an Organometallic Block Copolymer
Hany Eitouni, Nitash Balsara

11:27AM H30.00002: Depth Profiling of 13C Labeled Polymers using Secondary Ion Mass Spectrometry
Shane Harton, Fred Stevie, Harald Ade

11:39AM H30.00003: Toward Single-Chain Crystallisation Kinetics
Michael V. Massa, Kari Dalnoki-Veress

11:51AM H30.00004: Fabrication of Three-Dimensional Nanostructures from Self-Assembling Block Copolymers on Two-Dimensional Chemically Patterned Templates with Mismatched Symmetry
Mark Stoykovich, Kostas Daoulas, Harun Solak, Sang-Min Park, Yioryos Papakonstantopoulos, Juan de Pablo, Marcus Mueller, Paul Nealey

12:03PM H30.00005: Slaved Diffusion in Phospholipid Bilayers
Liangfang Zhang, Steve Granick

Session K18. DPOLY: Focus Session: Dillon Medal Symposium

Tuesday afternoon, 2:30 pm, Baltimore Convention Center 315

Chair: Hiroshi Watanabe, Kyoto University

Invited Speakers: Urayama

2:30PM K18.00001: Stimuli Responses of Topology-Controlled Polymer Networks and Liquid Crystalline Gels
Invited Speaker: Kenji Urayama

3:06PM K18.00002: Self-Assembly of Magnetic Particles into Polymer Chains and Networks
Jack Douglas, Wolfgang Losert, Justin Stambaugh, Kevin Van Workum

3:18PM K18.00003: Electrical Properties of Poly(ethylene oxide)-based Ionomers as Single Ion Conductors
Ralph H. Colby, Shichen Dou, Shihai Zhang, Robert J. Klein, James P. Runt, Karl T. Mueller

3:30PM K18.00004: Rheological Properties of Nanotube -- Polymer Nanocomposites
Ramanan Krishnamoorti, Tirtha Chatterjee

3:42PM K18.00005: Non-Newtonian Behavior of Diblock and Triblock Copolymer Solutions
Hiroshi Watanabe

3:54PM K18.00006: Arm Retraction of Star and Dangling Polymers in the Absence of Dynamic Dilution
Daniel A. Vega

4:06PM K18.00007: Consequences of Switchable Solvent Quality on the Self-Assembly of Block Copolymers in a Nematic Liquid Crystal Solvent
Julia Kornfield

4:18PM K18.00008: Swelling and Elasticity of Entangled Polymer Networks
Michael Rubinstein, Jonathan Campbell, Sergey Panyukov

4:30PM K18.00009: Electric Field Response of Electroclinic Liquid Crystal Elastomers
Banahalli Ratna, Christopher Spillmann, Jawad Naciri

4:42PM K18.00010: Brownian dynamic simulations of electrophoresis and electro-stretching of DNA molecules in polymer gels.
Ronald Larson, Richard Graham

4:54PM K18.00011: Diffusion and Equilibration in Surfactant-Bearing Interfaces
Nitash Balsara, Benedict Reynolds, Megan Ruegg, Clayton Radke

5:06PM K18.00012: Thermodynamically Self-Consistent Theory of Crystalline Polymer Blends
Thein Kyu

5:18PM K18.00013: Polymer nano-adhesion promoted by surface mobility
Keiji Tanaka, Toshihiko Nagamura

Session K24. DPOLY: Polymer Nanomaterials II

Tuesday afternoon, 2:30 pm, Baltimore Convention Center 321

Chair: Azar Alizadeh, General Electric

2:30PM K24.00001: BREAK

3:06PM K24.00002: Cracks and Topological Defects in Nematic Nanotube Gels
A.G. Yodh, M.F. Islam, A.M. Alsayed, Z. Dogic, M. Nobili, J. Zhang, Fangfu Ye, T.C. Lubensky

3:18PM K24.00003: Composite Polymer Nanofibers with Carbon Nanotubes and Titanium Dioxide Particles with Photocatalytic Activity
Shahar Kedem, Yaron Paz, Yachin Cohen

3:30PM K24.00004: The Impact of Sample Preparation on Polymer Carbon Nanotube Nanocomposites.
Chang-Uk Lee, Mark Dadmun

3:42PM K24.00005: NMR Characterization of the Interface in Polyurethane/Carbon Nanotube Composites
Peter Mirau, Daniel Powers, Jennifer Garber, Hilmar Koerner, Richard Vaia

3:54PM K24.00006: Single-wall carbon nanotube aerogels
M. B. Bryning, M. F. Islam, L. A. Hough, A. G. Yodh

4:06PM K24.00007: Polymer crystallization-driven, periodical patterning on carbon nanotubes
Lingyu Li, Christopher Li

4:18PM K24.00008: Alignment and Alignment Modulation of Single Wall Carbon Nanotubes Using Lyotropic Chromonic Liquid Crystals
M. F. Islam, I. I. Smalyukh, O. D. Lavrentovich, A. G. Yodh

4:30PM K24.00009: Theoretical investigation of the atomic and electronic structure of amino acids on Si(100) surfaces
Xuan Luo, Gefei Qian, Celeste Sagui, Christopher Roland

4:42PM K24.00010: Dynamics of poly(ethylene oxide)/Li+ complexes confined in 1nm slits
Georgios Polizos, Vikram Kuppa, Andreas Schönhals, Evangelos Manias

4:54PM K24.00011: Development of New Elastomers and Elastic Nanocomposites from Plant Oils
Lin Zhu, Richard Wool

5:06PM K24.00012: Simulations of Polymer Nanocomposites
Thomas Clancy

5:18PM K24.00013: Characterizing the structural properties of organic-inorganic hybrid semiconductors by first-principles calculations
Chang-Youn Moon, Gustavo Dalpian, Yong Zhang, Su-Huai Wei, Xiaoying Huang, Jing Li

Session K25. DPOLY: Polymer Electrolytes and Conduction

Tuesday afternoon, 2:30 pm, Baltimore Convention Center 322

Chair: Bulent Ozbas; Princeton University

2:30PM K25.00001: BREAK

3:06PM K25.00002: Conformational transition of polybenzimidazole in N,N-Dimethylacetamide/lithium chloride.
Christopher Shogbon, Haifeng Zhang, Brian Benicewicz, Yvonne Akpalu, Jean-Luc Brousseau

3:18PM K25.00003: Nanostructured Polymer Electrolytes
Omolola Odusanya, Mohit Singh, Nitash Balsara

3:30PM K25.00004: Proton Conducting Membranes from Fluorinated Poly(Isoprene)-b-Sulphonated Poly(Styrene): A Structure vs. Property Study
Akinbode Isaacs-Sodeye, Samuel Gido, Tianzi Huang, Jimmy Mays

3:42PM K25.00005: Proton transport through polymeric membranes
Xinyu Wang, Rich Woudenberg, Ozgur Yavuzcetin, Sergio Granados, Bryan Coughlin, Mark Tuominen

3:54PM K25.00006: Performance of Nanostructured Polymer Electrolytes in Li Batteries
Mohit Singh, Lola Odusanya, Nitash Balsara

4:06PM K25.00007: PEO mobility in nanoparticle-filled polymer electrolytes as measured by neutron scattering
Susan Fullerton, Janna Maranas, Victoria Garcia Sakai

4:18PM K25.00008: Effects of Temperature and Dissolved LiClO4 on the Viscoelastic and Dynamic Properties of Poly(ethylene oxide), (PEO) Melts
R.B. Bogoslovov, J.C. Selser, S. Peng

4:30PM K25.00009: Local Ion Motion and Interactions in Single-Ion Polymer Electrolytes via Dielectric Spectroscopy
Robert Klein, Shihai Zhang, Shichen Dou, Ralph Colby, James Runt

4:42PM K25.00010: Confined Water in Ionic Membranes: Studied by NMR
Lilin He, Cy Fujimoto, Christopher Cornelius, Dvora Perahia

4:54PM K25.00011: E-Field Dependent Conduction Mechanisms in Low Density Polyethylene
Jerilyn Brunson, J.R. Dennison

5:06PM K25.00012: Ab initio study of a class of metalorganic systems
Harald O. Jeschke, L. Andrea Salguero, Roser Valenti, Badiur Rahaman, Tanusri Saha-Dasgupta, Christian Buchsbaum, Martin U. Schmidt, Matthias Wagner

5:18PM K25.00013: Computer simulation of supramolecular assembly by metal-ligand complexation
Shihu Wang, Chun-Chung Chen, Elena E. Dormidontova

Session K28. DPOLY: Focus Session: Microphysical Properties of Block Copolymer Aggregates II

Tuesday afternoon, 2:30 pm, Baltimore Convention Center 325

Chair: Dennis Discher, University of Pennsylvania

Invited Speakers: Santore

2:30PM K28.00001: BREAK

3:06PM K28.00002: Polymer Vesicles in Biomimetic Applications
Invited Speaker: Maria Santore

3:42PM K28.00003: Transition from Unilamellar to Bilamellar Vesicles Induced by an Amphiphilic Biopolymer
Srinivasa Raghavan, Jae-Ho Lee, Gregory Payne, Vivek Agarwal, Arijit Bose

3:54PM K28.00004: Temperature and pH Response of PB-P(Lys) Block Copolymer Assemblies
Daniel A. Savin, Kay E. Gebhardt, Gopal R. Venkatachalam

4:06PM K28.00005: Understanding the Self-Assembly of Amphiphilic Diblock Copolypeptides for Controlled Biomaterial Design
Lisa Pakstis, Andrew Nowak, Eric Holowka, Timothy Deming, Darrin Pochan

4:18PM K28.00006: Laminated, Nontwisting Beta-Sheet Fibrils Constructed via Peptide Self-Assembly
Matthew S. Lamm, Karthikan Rajagopal, Joel P. Schneider, Darrin J. Pochan

4:30PM K28.00007: Physical Properties of Anionic Peptide Amphiphile Fibers Grown in the Presence of Cationic Proteins
Megan Greenfield, Monica Olvera de la Cruz, Samuel Stupp

4:42PM K28.00008: Dewetting instability during formation of polymerosomes from block-copolymer-stabilized double emulsions
Ryan Hayward, Andrew Utada, David Weitz

4:54PM K28.00009: Condensed States of a Semiflexible Copolymer in a Poor Solvent: Figures of Eight and Discrete Toroids
David Williams, Ernesto Hernandez-Zapata, Ira Cooke

Session L18 DPOLY Business Meeting Sponsor: DPOLY
Tuesday afternoon, 5:30 pm, Baltimore Convention Center 315

Session N4. DPOLY DMP: Polymer Crystallization

Wednesday morning, 8:00 am, Baltimore Convention Center 308

Chair: Freddy Khoury, National Institute of Standards and Technology

Invited Speakers: Cheng, Hsiao, Ungar, Muthukumar, Granasy

8:00AM N4.00001: A new approach to study of the onsets of tethered chain overcrowding and highly stretched brush regime utilizing crystalline-amorphous diblock copolymers
Invited Speaker: Stephen Cheng

8:36AM N4.00002: Flow-Induced Crystallization Precursor Structure in Entangled Polymer Melt.
Invited Speaker: Benjamin Hsiao

9:12AM N4.00003: Curved faces in polymer crystals with asymmetrically spreading growth patches
Invited Speaker: Goran Ungar

9:48AM N4.00004: New Paradigms for Polymer Crystallization
Invited Speaker: Murugappan Muthukumar

10:24AM N4.00005: Growth and form of spherulites: A phase field study.
Invited Speaker: Laszlo Granasy

Session N24. DPOLY: Structure and Dynamics in Polymer Thin Films

Wednesday morning, 8:00 am, Baltimore Convention Center 321

Chair: Steve Granick, University of Illinois at Urbana Champaign

8:00AM N24.00001: Unique refractive index and thickness values for polymer films via ellipsometry
Alan R. Esker, Ufuk Karabiyik, Min Mao, Sushil K. Satija

8:12AM N24.00002: Watching How Molecules Orient in a Surface Forces Apparatus, Using Confocal Raman Spectroscopy
Shan Jiang, Minsu Kim, Sung Chul Bae, Steve Granick

8:24AM N24.00003: Polymer dynamics at local scales: origin of ripples formation
Robert Szoszkiewicz, Takashi Okada, Enrico Gnecco, William King, Seth Marder, Elisa Riedo

8:36AM N24.00004: Probing surface relaxation of polystyrene films using gold nano-particles
Zahra Fakhraai, James A Forrest

8:48AM N24.00005: Grazing-incidence x-ray scattering studies on surface melting in ultrathin polymer films
Tadanori Koga, Y. Wang, M. Rafailovich, J. Sokolov, A. Tikhonov, D. Schultz, M. Lee, M. Tolan

9:00AM N24.00006: The Tg-Nanoconfinement Effect and the Relaxation of Residual Stresses in Spin-Coated Films of Polystyrene and Styrene-Containing Copolymers: Characterization by Intrinsic Fluorescence.
Manish K. Mundra, Christopher J. Ellison, Ross Behling, John M. Torkelson

9:12AM N24.00007: Dynamics of very thin polymer films on supported surface
Chunhua Li, Hyunjung Kim, Jun Jiang, Clive Li, Tadanori Koga, LaurenceLurio Lurio, Sunil Sinha, Jonathan Sokolov, Miriam Rafailovich

9:24AM N24.00008: The Distribution of Tgs in Thin and Ultrathin Methacrylate-Based Polymer Films: Percolation of Free Surface and Interface Effects over Tens and Hundreds of Nanometers.
Rodney D. Priestley, Manish K. Mundra, Perla Rittigstein, Linda J. Broadbelt, John M. Torkelson

9:36AM N24.00009: Dynamics of Polymer Thin Film Mixtures
Brian M. Besancon, Peter F. Green, Christopher L. Soles

9:48AM N24.00010: Dynamics of Block copolymer films
Hyunjung Kim, Heeju Lee, Young Joo Lee, Zhang Jiang, Sunil Sinha, Xuesong Jiao, Adrian Ruehm, S. G. J. Mochrie

10:00AM N24.00011: Conformational Anisotropy and the Glass Transition in Polymer Thin Films
Folusho Oyerokun, Anna Cavallo, Marcus Mueller, Kenneth Schweizer

10:12AM N24.00012: Radial Thickness Profiles of Spincoated Thickness Gradient Films
Monika Michalek, Bernie Nickel, John Dutcher

10:24AM N24.00013: Internal Phase Separation Induces Dewetting in Multicomponent Polymer Films
Hyun-joong Chung, Russell J. Composto, Kohji Ohno, Takeshi Fukuda

10:36AM N24.00014: Dewetting Morphology and Dynamics of Ordered Symmetric Block Copolymer Films: Stability of Nanoscopic Liquid Bilayers
Matthew J. Farrar, Andrew B. Croll, Kari Dalnoki-Veress

10:48AM N24.00015: Interfacial segregation and micellization of hydrogen bonding copolymers
Michelle Lefebvre, Murat Guvendiren, Monica Olvera de la Cruz, Kenneth Shull

Session N25. DPOLY DMP: Focus Session: Organic Photovoltaics

Wednesday morning, 8:00 am, Baltimore Convention Center 322

Chair: Max Shtein, University of Michigan

Invited Speakers: Inganas

8:00AM N25.00001: Organic photovoltaics
Invited Speaker: Olle Inganäs

8:36AM N25.00002: High Performance Organic Light-Emitting Diodes Based on Intramolecular Charge Transfer Emission from Donor-Acceptor Molecules
Abhishek Kulkarni, Xiangxing Kong, Samson Jenekhe

8:48AM N25.00003: Reversible Persistence and Effects of Oxygen on the Photoconductivity of Porphyrin Nanorods
E. A. Muller, V. H. Joines, W. F. Smith, A. D. Schwab, J. C. de Paula, D. E. Johnston, A. T. Johnson

9:00AM N25.00004: Photoinduced Charge Transport Spectra for Porphyrin and Naphthalene Derivative-based Dendrimers
J.H. Park, Y. Wu, J.R. Parquette, A.J. Epstein

9:12AM N25.00005: Carbon nanotube sheets as transparent charge injectors in organic light-emitting diodes
Christopher Williams, Mei Zhang, Raquel Ovalle, Krutarth Trivedi, Alexander Kuznetsov, Sergey Lee, Ray Baughman, Anvar Zakhidov

9:24AM N25.00006: Dissociation Processes of Singlet and Triplet Excitons in Organic Photovoltaic Cells
Zhihua Xu, Yue Wu, Bin Hu

9:36AM N25.00007: Multilayer polymer devices: light emitting diode and vertical hot carrier transistor
Hsin-Fei Meng, Sheng-Fu Horng, Chain-Shu Hsu, Shin-Ron Tzeng, Yu-Chiang Chao, Syuan-Lin Yang

9:48AM N25.00008: Single-crystal films of a combination of materials (co-crystal) involving DAST and IR-125 for electro-optic applications
A. Narayanan, J. Titus, H. Rajagopalan, P. Vippa, M. Thakur

10:00AM N25.00009: Highly efficient third-order optical nonlinearities and their frequency dependence in donor-substituted cyanoethynylethene molecules.
Joshua C. May, Ivan Biaggio, Tsuyoshi Michinobu, François Diederich

10:12AM N25.00010: A Time-Dependent Density Functional Theory Study of One-and Two-Photon Absorption: Donor-Acceptor Chromophores.
Ruth Pachter, Paul N. Day, Kiet A. Nguyen

10:24AM N25.00011: Two Photon Absorption in a Novel Nano-optical Material Based on the Nonconjugated Conductive Polymer, Poly(beta-pinene)
Jitto Titus, Mrinal Thakur

10:36AM N25.00012: Temperature dependent electrical and optical characterization of polyfluorene based organic light-emitting-diodes
Mohammad Arif, S. Guha, M.S. Yun, S. Gangopadhyay

10:48AM N25.00013: Pi-Conjugated Dendrimers for Organic Photovoltaics
Sean Shaheen, William Mitchell, Nikos Kopidakis, Joseph Bozell, Garry Rumbles

Session N28. DPOLY: Polymer Adsorption and Surface Modification

Wednesday morning, 8:00 am, Baltimore Convention Center 325

Chair: Eric Lin, National Institute of Standards and Technology

8:00AM N28.00001: PEG Surface Modification by Thermoreversible Ligand Cleavage in Nanoparticle Composites.
Rick Beyer, Philip Costanzo

8:12AM N28.00002: Smart Polymeric Surfaces: Responsiveness and Reconstruction
Julie Crowe, Jan Genzer

8:24AM N28.00003: Conformations of Amphiphilic Comb Copolymer Chains Confined to Two Dimensions Through Self-Organization at the Polymer/Water Interface
William Kuhlman, Elsa A. Olivetti, Linda G. Griffith, Anne M. Mayes

8:36AM N28.00004: Temperature-responsive polymers and brushes with tunable onset of response
Theresa Foley, Kiril Efimenko, Jan Genzer, Evangelos Manias

8:48AM N28.00005: Single Molecule Experiments with Adsorbed Polyelectrolytes
Sergiy Minko, Yuri Roiter

9:00AM N28.00006: Quantifying How Polymer Interfacial Diffusion Differs from Bulk
Liang Hong, Steve Granick

9:12AM N28.00007: Balancing size exclusion and adsorption of polymers in nanopores
Won Kim, Chang Y. Ryu

9:24AM N28.00008: Polymer brushes dynamics by evanescent wave dynamic light scattering
Benoit Loppinet, Vassiliki Michailidou, George Fytas, Juergen Ruehe

9:36AM N28.00009: Electromechanical Recognition of Molecules Adsorbed on Microcantilevers
Sangmin Jeon, Dongkyu Lee, Thomas Thundat

9:48AM N28.00010: Dependence of surface diffusivity on the molecular conformation of single hydrophobic polyelectrolytes molecules
Jiang Zhao, Shengqin Wang

10:00AM N28.00011: Adsorption of polymers onto selective mixed brushes.
A.I Chervanyov, G. Heinrich

10:12AM N28.00012: Nano-meter structured three-phase contact line and its surface-guided alignment effect
Gang Liu, Jiang Zhao

10:24AM N28.00013: Surface diffusion of adsorbed polymers studied by molecular dynamics simulation
Wonki Roh, Erik Luijten

10:36AM N28.00014: Solvent and salt effects on the adsorption of polymers to charged surfaces
Govardhan Reddy, Arun Yethiraj

10:48AM N28.00015: Mean-field theory of planar absorption of RNA molecules
Toan Nguyen, Robijn Bruinsma, William Gelbart

Session N30. DPOLY: Block Copolymer Phase Behavior

Wednesday morning, 8:00 am, Baltimore Convention Center 327

Chair: Thomas Epps, National Institute of Standards and Technology

8:00AM N30.00001: Equilibrium Phase Diagram of a Model Rod-Coil Block Copolymer
B.D. Olsen, R.A. Segalman

8:12AM N30.00002: Phase behavior of linear ABC triblock copolymer
Joon Chatterjee, Frank S. Bates

8:24AM N30.00003: Electron tomography of a novel non-cubic network phase in ABC copolymers
Gerd E. Schroeder, Stephen T. Hyde, Hermis Iatrou, Nikos Hadjichristidis, Satoshi Akasaka, Hirokazu Hasegawa

8:36AM N30.00004: The morphology and phase diagram of H-shaped ABC block copolymers.
Zhaoyan Sun, Zhongyuan Lu, Lijia An

8:48AM N30.00005: Phase behavior of poly(pentafluorostyrene-b-methyl methacrylate) block copolymers
Tracy Bucholz, Yueh-Lin Loo

9:00AM N30.00006: Perforated layer structures in liquid crystalline block copolymers
Kishore Tenneti, Xiaofang Chen, Christopher Li, Yingfeng Tu, Xinhua Wan, Qi-Feng Zhou, Igors Sics, Benjamin Hsiao

9:12AM N30.00007: Self-assembly of polydisperse acrylic block copolymers
Anne-Valerie Ruzette, Ludwik Leibler, Florence Chauvin, Denis Bertin, Pierre Gerard

9:24AM N30.00008: Electrospun poly(styrene-b-isoprene) fibers that exhibit internal structure
Sergio Mendez, Vibha Karla, Prashant Kakad, Marleen Kamperman, Yong Joo

9:36AM N30.00009: Confinement induced novel morphologies of block copolymers
An-Chang Shi, Bin Yu, Baohui Li

9:48AM N30.00010: Self-assembly of three-dimensional morphologies in a diblock copolymer melt confined in a cylindrical nanopore
Weihua Li, Robert A. Wickham

10:00AM N30.00011: Effects of confinement on the order-disorder transitionin diblock copolymer melts and crystallization
Dadong Yan, Bing Miao, Charles C. Han, An-Chang Shi

10:12AM N30.00012: Effect of Cross-linking on the Structure and Thermodynamics of Lamellar Block Copolymers
Enrique Gomez, Nitash Balsara, Jayajit Das, Arup Chakraborty

10:24AM N30.00013: Influence of Conformational Asymmetry on the Phase Behavior of Ternary Homopolymer/Block Copolymer Blends around the Bicontinuous Microemulsion Channel
Ning Zhou, Timothy Lodge, Frank Bates

10:36AM N30.00014: Swelling and Shrinkage of Lamellar Domain of Conformationally Restricted Block Copolymers by Metal Chloride
Dong Hyun Lee, Jin Kon Kim, June Huh, Du Yeol Ryu

10:48AM N30.00015: Azimuthal Orientational Correlations due to Excluded Volume Epitaxy in Growing Anisotropic Grains
Ashoutosh Panday, Samuel Gido

Session N32. DMP DPOLY: Focus Session: Carbon Nanotubes: Composites and Applications

Wednesday morning, 8:00 am, Baltimore Convention Center 329

Chair: Andrew Rinzler, University of Florida

Invited Speakers: Baughman

8:00AM N32.00001: The Solid-State Fabrication, Structure, and Multifunctional Applications of Strong Carbon Nanotube Yarns and Transparent Sheets
Invited Speaker: R.H. Baughman

8:36AM N32.00002: Mechanical Reinforcement of Functionalized Carbon Nanotube-Polyethylene Polymer Composites
Merlyn Pulikkathara, Valery Khabashesku

8:48AM N32.00003: Adhesion and Reinforcement in Carbon Nanotube Polymer Composite
Chenyu Wei

9:00AM N32.00004: Multi-scale Real-Space Characterization of Carbon Nanofiber Composites
Benji Maruyama, Sirina Putthanarat, Lawrence Drummy, Richard Vaia, Jonathan Spowart, Carla Leer, Ferrie Van Hattum

9:12AM N32.00005: Radial Elasticity of Nanotubes
Ismael Palaci, Stephan Fedrigo, Harald Brune, Christian Klinke, Elisa Riedo

9:24AM N32.00006: Dissipation in suspended carbon nanotube oscillators
P. Alex Greaney, Jeffrey C. Grossman

9:36AM N32.00007: Structure and Mechanical Properties of Model Nanotube Composites
Andrew B. Schoch, Kenneth R. Shull, L. Catherine Brinson, Wesley R. Burghardt, Thomas O. Mason, Neil J. Kidner, Supaporn Wansom, Leta Y. Woo

9:48AM N32.00008: In vivo MRI of single-wall carbon nanohorns through magnetite nanoparticle attachment
Jin Miyawaki, Masako Yudasaka, Hideto Imai, Hideki Yorimitsu, Hiroyuki Isobe, Eiichi Nakamura, Sumio Iijima

10:00AM N32.00009: Sensor applications and spin-transport measurements in carbon nanotube nanocomposites
J. Sanders, J. Gass, H. Srikanth, F.K. Perkins, E.S. Snow

10:12AM N32.00010: Characterisation of a Hydroxyapatite and Carbon Nanotube Bioceramic Composite
C. Kealley, B. Ben-Nissan, A. van Riessen, M. Elcombe

10:24AM N32.00011: The physical properties and possible applications of metal coated carbon nanotubes
Engin Durgun, Sefa Dag, Salim Ciraci

10:36AM N32.00012: Field Emission from Carbon Nanotubes: From Isolated Nanotubes to Matrix Cathodes.
David Carey, Richard Smith, Ravi Silva

10:48AM N32.00013: Thermal Field Emission from a Single Carbon Nanotube
Gongpu Zhao, Jian Zhang, Qi Zhang, Han Zhang, Tie Tang, Otto Zhou, Lu-Chang Qin

Monday

Session Title	A4. Particle Self Assembly	A24. Crystalline and Structured Polymers	A25. Organic Field Effect Transistors	A28. Polymer Blends	A30. Block Copolymer Dynamics
Room	308	321	322	325	327
Chair	Santore	Murthy	Martin	Migler	Balsara
8:00AM	*Crocker*	*Olson*	*Marks*	*Lodge*	*Morse*
8:12AM		*Winter*		*Bedrov*	
8:24AM		*Fernandez-Ballester*		*Liu*	
8:36AM	*Starr*	*Alamo*	*Katz*	*Matkar*	*Ranjan*
8:48AM		*Wunderlich*	*Dickey*	*Ruegg*	*Zhang*
9:00AM		*Lacevic*	*Psurek*	*Kamath*	*Sacristan*
9:12AM	*Hammond*	*Carvalho*	*Dunn*	*Kuksenok*	*Liu*
9:24AM		*Zhu*	*Li*	*Dong*	*Bansil*
9:36AM		*Hu*	*Dholakia*	*Balijepalli*	*Zhang*
9:48AM	*Douglas*	*Yuryev*	*Hamadani*	*Han*	*Matsen*
10:00AM		*Aou*	*Chapman*	*Xu*	*Bosse*
10:12AM		*Ni*	*Hines*	*Tao*	*Meng*
10:24AM	*Walker*	*Creek*	*Breban*	*Anthamatten*	*Magerle*
10:36AM		*Li*	*Sangwan*	*Kulkarni*	*Marencic*
10:48AM		*Chatterjee*	*Hsu*	*Prusty*	

Session Title	B26. Single Molec Biophysics	C1. DPOLY Poster Session I, Exhibit Hall, all presentations 11:15AM - 2:15PM				
Room	323	*Migler*	*Bhargava*	*Hong*	*Manrique*	*Hong*
Chair	Betterton	*Han*	*Sohn*	*Yang*	*Mercier*	*Hore*
11:15AM	*Nelson*	*Doiphode*	*Zheng*	*Harada*	*Sohn*	*Holmes*
11:27AM		*Yarin*	*Li*	*Drazenovich*	*Collazo*	*Dickey*
11:39AM		*Irita*	*Melnichenko*	*Pathak*	*Carvajal*	*Lin*
11:51AM	*You*	*Lacevic*	*Choi*	*Bang*	*Calisir*	*Esmaili*
12:03PM	*Kotsev*	*Rafailovich*	*Jiang*	*Bae*	*Hu*	*Hule*
12:15PM	*Bhattacharya*	*Schmidt-Rohr*	*White*	*Wang*	*Bras*	*Jang*
12:27PM	*Mannion*	*Atorngitjawat*	*Tominaga*	*Koo*	*Gido*	*Kim*
12:39PM	*Reisner*	*Carrillo*	*Prusty*	*Huffer*	*Park*	*Powers*
12:51PM	*Li*	*Jeon*	*Xia*	*Ugur*	*Brinker*	*Samuilov*
1:03PM	*DeLong*	*Southard*	*Pynn*	*DeSilva*	*Hosoda*	*Kim*
1:15PM	*Aalberts*	*Uijttewaal*	*Tenneti*	*Huber*	*Sun*	*Hartschuh*
1:27PM	*Lagerqvist*	*Wu*	*Ji*	*Chen*	*Bita*	*Cheng*
1:39PM	*Solis*	*Wang*	*Papalia*	*Dionne*	*Najafov*	*Wu*
1:51PM	*Vladescu*	*Chen*	*Visconti*	*Sambriski*	*Najafov*	*Tangirala*
2:03PM	*Meller*	*Li*	*Sharma*	*Erguney*	*DeSilva*	*Deshmukh*
		Amanuel	*Li*	*Dai*	*Yang*	*Lastella*
		Li	*Bunning*	*Patnaik*	*Lee*	
		Kim	*Chang*	*Nakamura*	*Surve*	

Session Title	D4. Organic Electronics	D25. Particle Dynamics and Organization	D26.Dynamics of Biopolymer Interaction	D28. Block Copolymer Thin Films	D30. Multiphase Polymer Materials
Room	308	322	323	325	327
Chair	Ryu	Starr	Williams	Bailey	Dhinojwala
2:30PM	*Friend*	*Smith*	*Wang*	*Karim*	*Fytas*
2:42PM				*Foster*	*Liu*
2:54PM				*Akgun*	*Kim*
3:06PM	*Martin*	*Martin*	*Shokri*	*Virgili*	*Parsons*
3:18PM		*Dionne*	*Kuznetsov*	*Lopes*	*Tambasco*
3:30PM		*Zhang*	*Vilar*	*Stein*	*Depa*
3:42PM	*Loo*	*Rahedi*	*Wuite*	*Khanna*	*Patel*
3:54PM		*Composto*		*Cochran*	*Maniadis*
4:06PM		*Benkoski*		*Misner*	*Pasquini*
4:18PM	*Chabinyc*	*Yang*	*Guttal*	*Ryu*	*Rafailovich*
4:30PM		*Szleifer*	*Wang*	*Tirumala*	*Karabiyik*
4:42PM		*Kugler*	*Wunderlich*	*Arceo*	*Reagan*
4:54PM	*Lin*	*Lee*	*Zeng*	*Li*	*Brenner*
5:06PM			*Rouzina*	*Francis*	*Kuppa*
5:18PM			*Chi-Cheng*	*Edmonds*	*Chen*

Tuesday

Session Title	G4. Polymer Physics Prize	G24. Polymer Nanomaterials I	G25. Struct & Dyn of Functional Macromolecules	G28. µphysical Properties of Block Polymers I	G30. Electronic Transport in Organic Films
Room	308	321	322	325	327
Chair	Muthukumar	Char	Cui	Hobbie	Fuchou
8:00AM	*Leibler*				
8:12AM					
8:24AM					
8:36AM	*Möller*	*Hagman*	*Purdy*	*Discher*	*deFeyter*
8:48AM		*Kim*	*Zong*		
9:00AM		*Meli*	*Yang*		
9:12AM	*Fredrickson*	*Manias*	*Lai*	*Madsen*	*Charra*
9:24AM		*Paul*	*Boukari*	*Larue*	
9:36AM		*Yang*	*Slater*	*Li*	
9:48AM	*Candau*	*Anastasiadis*	*Thomas*	*He*	*Ndobe*
10:00AM		*Jiang*	*Reiss*	*Bhargava*	*Giridharagopal*
10:12AM		*Nguyen*	*Bonnaillie*	*Cui*	*Cho*
10:24AM	*Colby*	*Querner*	*Lawler*	*Chen*	*Painelli*
10:36AM		*Du*	*Hoagland*	*Dormidontova*	*Burtman*
10:48AM		*Bhatnagar*		*Perahia*	*Prigodin*

Session Title	H24. Polymers at Interfaces	H25. Particle Dynamics and Organization	H28. Transport in Conjugated Organics	H30. Padden Award Symposium
Room	321	322	325	327
Chair	Soles	Walker	Gundlach	Mayes
11:15AM	*Sheiko*	*Venkatraghavan*	*Silva*	*Eitouni*
11:27AM	*Kundagrami*	*Pryamitsyn*		*Harton*
11:39AM	*Pagliusi*	*Cipriano*		*Massa*
11:51AM	*Nanjundiah*	*Surve*	*Krellner*	*Stoykovich*
12:03PM	*Wang*	*Rottler*	*Yang*	*Zhang*
12:15PM	*Mukherji*	*Sides*	*Drori*	
12:27PM	*Wang*	*Santore*	*Gambetta*	
12:39PM	*Brass*	*Owens*	*Schwalm*	
12:51PM	*Lyuksyutov*	*Schweizer*	*Liao*	
1:03PM	*Murray*	*Ade*	*Fuentes-Cabrera*	
1:15PM	*Rao*	*Srinivasarao*	*Puschnig*	
1:27PM	*Koberstein*	*Dobriyal*	*Ding*	
1:39PM	*Narayanan*	*Nakatani*	*Tong*	
1:51PM	*Huang*		*Troisi*	
2:03PM	*Chen*		*Madigan*	

Session Title	K18. Dillon Medal Symposium	K24. Polymer Nanomaterials II	K25. Polymer Electrolytes and Conduction	K28. µphysical Properties of Block Polymers II
Room	315	321	322	325
Chair	Watanabe	Alizadeh	Ozbas	Discher
2:30PM	*Urayama*			
2:42PM				
2:54PM				
3:06PM	*Douglas*	*Yodh*	*Shogbon*	*Santore*
3:18PM	*Colby*	*Kedem*	*Odusanya*	
3:30PM	*Krishnamoorti*	*Lee*	*Isaacs-Sodeye*	
3:42PM	*Watanabe*	*Mirau*	*Wang*	*Raghavan*
3:54PM	*Vega*	*Bryning*	*Singh*	*Savin*
4:06PM	*Kornfield*	*Li*	*Fullerton*	*Pakstis*
4:18PM	*Rubinstein*	*Islam*	*Bogoslovov*	*Lamm*
4:30PM	*Ratna*	*Luo*	*Klein*	*Greenfield*
4:42PM	*Larson*	*Polizos*	*He*	*Hayward*
4:54PM	*Balsara*	*Zhu*	*Brunson*	*Williams*
5:06PM	*Kyu*	*Clancy*	*Jeschke*	
5:18PM	*Tanaka*	*Moon*	*Wang*	

L18. DPOLY Business Meeting, Room: Baltimore Convention Center 315

Wednesday

Session Title	N4. Polymer Crystallization	N24. Struct & Dyn in Polymer Thin Films	N25. Organic Photovoltaics	N28. Polymer Adsorption	N30. Block Copolymer Phase Behavior	N32. Nanotubes: Composites and Applications
Room	308	321	322	325	327	329
Chair	Khoury	Granick	Shtein	Lin	Epps	Rinzler
8:00AM	*Cheng*	*Esker*	*Inganäs*	*Beyer*	*Olsen*	*Baughman*
8:12AM		*Jiang*		*Crowe*	*Chatterjee*	
8:24AM		*Szoszkiewicz*		*Kuhlman*	*Schroeder*	
8:36AM	*Hsiao*	*Fakhraai*	*Kulkarni*	*Foley*	*Sun*	*Pulikkathara*
8:48AM		*Koga*	*Muller*	*Minko*	*Bucholz*	*Wei*
9:00AM		*Mundra*	*Park*	*Hong*	*Tenneti*	*Maruyama*
9:12AM	*Ungar*	*Li*	*Williams*	*Kim*	*Ruzette*	*Palaci*
9:24AM		*Priestley*	*Xu*	*Loppinet*	*Mendez*	*Greaney*
9:36AM		*Besancon*	*Meng*	*Jeon*	*Shi*	*Schoch*
9:48AM	*Muthukumar*	*Kim*	*Narayanan*	*Zhao*	*Li*	*Miyawaki*
10:00AM		*Oyerokun*	*May*	*Chervanyov*	*Yan*	*Sanders*
10:12AM		*Michalek*	*Pachter*	*Liu*	*Gomez*	*Kealley*
10:24AM	*Granasy*	*Chung*	*Titus*	*Roh*	*Zhou*	*Durgun*
10:36AM		*Farrar*	*Arif*	*Reddy*	*Lee*	*Carey*
10:48AM		*Lefebvre*	*Shaheen*	*Nguyen*	*Panday*	*Zhao*

Session Title	P30. Organic Interfaces	Q1. DPOLY Poster Session II, Exhibit Hall, all presentations 11:15AM - 2:15PM				
Room	327	*Schaefer*	*Xiong*	*Jeong*	*Herminghaus*	*Cho*
Chair	Loo	*Acchione*	*Chiari*	*Pogodina*	*Yang*	*Ranjan*
11:15AM	*Rosei*	*Kumar*	*Crist*	*Pierre*	*Lygeraki*	*Abbas*
		Hu	*Wang*	*Kasimatis*	*Retsos*	*Park*
		Tapadia	*Birnkrant*	*Pryamitsyn*	*Wang*	*Mark*
11:51AM	*Lee*	*Benetatos*	*Bubeck*	*Mu*	*Koh*	*Huang*
12:03PM	*Marginean*	*Nap*	*Wang*	*Akbulut*	*Jiang*	*Huang*
12:15PM	*Erdin*	*Chan*	*Segalman*	*Chotpattananont*	*Huang*	*Soontornworajit*
12:27PM	*Jiang*	*Taylor*	*Grzywacz*	*Puvanatvattana*	*Farmer*	*Koombhongse*
12:39PM	*Feng*	*Koga*	*Hales*	*Naimlang*	*Heffernan*	*Wang*
12:51PM	*Miller*	*Li*	*Shin*	*Hiamtup*	*Hexemer*	*Balazs*
1:03PM	*Zheng*	*Longo*	*Zhang*	*Pytel*	*Herman*	*Li*
		Goswami	*Wang*	*Han*	*Young*	*Streletzky*
		Gordon	*Yashin*	*Kim*	*Liang*	*Prabhu*
		Schulz	*Zimberlin*	*Bhat*	*Coughlin*	*Chan*
		Jaquith	*Wang*	*Tsige*	*Purdy*	*Rand*
		Alexander-Katz	*Lee*	*Murphy*	*Tagami*	*Wang*
		Winston Horn	*LaPlante Ramalingam*	*Gavrilenko Kareh*	*Yucel Ryu*	*Kalish Fabre*

Session Title	R4. Ionic, Dipolar and H-bonding Polymers	R24. Block Copolymer Applications	R25. Adhesion & Viscoelasticity in Thin Films	R26. Counterion Dynamics in Biopolymers	R30. Polymer Nanocomposites
Room	308	321	322	323	327
Chair	Kumar	Xu	Winey	Travesset	Karim
2:30PM	*Breedveld*	*Durkee*	*Nunalee*	*Wong*	*Hooper*
2:42PM		*Leiston-Belanger*	*Castronovo*		*Xie*
2:54PM		*Vedrine*	*Yin*		*Picu*
3:06PM	*Dormidontova*	*Xu*	*Retsos*	*Travesset*	*Torkelson*
3:18PM		*Nagarajan*	*Barnette*	*Netz*	*Rittigstein*
3:30PM		*Chen*	*Zappone*		*Dolidze*
3:42PM	*Pochan*	*Yokoyama*	*Johnston*		*Kang*
3:54PM		*Cresce*	*Flory*	*Petersen*	*Deshmukh*
4:06PM		*Wargacki*	*Henle*	*McCarthy*	*Sievert*
4:18PM	*Cremer*	*Zou*	*Wieland*	*Chen*	*Sen*
4:30PM		*Char*	*Yang*	*He*	*Kropka*
4:42PM		*Shin*	*Jeon*	*Dunkleberger*	*Gupta*
4:54PM	*Prabhu*	*Park*	*Wood-Adams*	*Mishra*	*Ginzburg*
5:06PM		*Chipara*	*Rice*	*Wen*	*Lee*
5:18PM		*Jones*		*Andresen*	*Xu*

Thursday

Session Title	U4. Lithography	U24. Liquid-Crystalline Polymers	U25. Oligoacene Semiconductors	U26. Cytoskeletal Dynamics	U30. Mechanical Properties I
Room	308	321	322	323	327
Chair	Prabhu	Pasquali	Rogers	Marchetti	Hermel-Davidock
8:00AM	*Willson*	*Ye*	*Anthony*	*Ahmadi*	*Marder*
8:12AM		*Rendon*	*Yang*	*Marchetti*	
8:24AM		*Smalyukh*	*Podzorov*	*Cheng*	
8:36AM	*Dammel*	*Wang*	*Takeya*	*Pernodet*	*Crosby*
8:48AM		*Zhu*	*Kloc*	*Pan*	*Budzien*
9:00AM		*Dayal*	*Siegrist*	*Smith*	*Phatak*
9:12AM	*Nealey*	*Cheng*	*So*	*Danuser*	*Yurdumakan*
9:24AM		*Jeong*	*Haas*	*Carlsson*	*Reynolds*
9:36AM		*Gottlieb*	*Laarhoven*	*Lee*	*Raegen*
9:48AM	*Jones*	*Hernandez*	*He*	*Schwarz*	*Guvendiren*
10:00AM		*Rackaitis*	*Yan*	*Raviv*	*White*
10:12AM		*Hutchinson*	*Park*	*Alonso-Latorre*	*Holmes*
10:24AM	*Hinsberg*		*Li*	*Mengistu*	*Meng*
10:36AM			*Pflaum*		*Amanuel*
10:48AM			*Tsetseris*		*Fabre*

Session Title	V24. Charged and Ion-Containing Polymers	V25. Polymer Nanocomposites	V28. Rheology of Biopolymer Solutions	V30. Mechanical Properties II
Room	321	322	325	327
Chair	Sokolov	Beyer	Savin	Holmes
11:15AM	*Kumar*	*Dhinojwala*	*Sisan*	*Sue*
11:27AM	*Vora*		*Schmidt*	
11:39AM	*Wakabayashi*		*Pomerance*	
11:51AM	*Benetatos*	*Bhatt*	*Klossner*	*Wool*
12:03PM	*Zhou*	*Winey*	*Krause*	*Hoy*
12:15PM	*Eggert*	*Gorga*	*Curtis*	*Abrams*
12:27PM	*Yin*	*George*	*Larsen*	*Lee*
12:39PM	*Popov*	*McAninch*	*DiDonna*	*Lee*
12:51PM	*Dou*	*Miller*	*Gal*	*Ozturk*
1:03PM	*Butler*	*Dadmun*	*Hallatschek*	*Soong*
1:15PM	*Jusufi*	*Horsch*	*Hassan*	*Weidisch*
1:27PM	*Grason*	*Baghdadi*	*Hu*	*Hawley*
1:39PM	*Goswami*	*Oberhauser*	*Ozbas*	*Hermel-Davidock*
1:51PM		*Nazarenko*	*Huh*	*Balta-Calleja*
2:03PM		*Kannan*	*Seitz*	*Corte*

Session Title	W4. Carbon Nanotube Dispersions	W7. Physics of Cell Elasticity and Tissue Formation	W24. Lithography	W25. Gels and Networks	W28. Ordered Optoelectronic Organics	W30. Biopolymers at Interfaces
Room	308	307	321	322	325	325
Chair	Krishnamoorti	Nelson	Jones	Tirumala	Katz	Pochan
2:30PM	*Hobbie*	*Riveline*	*Soles*	*Guice*	*Zhang*	*Ober*
2:42PM				*Scruggs*	*Schmit*	
2:54PM				*Agrawal*	*Jiang*	
3:06PM	*Pasquali*	*Bruinsma*	*Jonas*	*Anderson*	*Guha*	*Golubovic*
3:18PM				*Unal*	*Gredig*	*Jeon*
3:30PM				*Michelman-Ribeiro*	*Zhang*	*Choi*
3:42PM	*Poulin*	*Janmey*	*Asakawa*	*Webber*	*Duzhko*	*Wei*
3:54PM			*Pelletier*	*Sharma*	*Holden*	*Rosenberg*
4:06PM			*Kim*	*Cohen*	*Urbas*	*Kaya*
4:18PM	*Windle*	*Safran*	*Moon*	*Chan*	*Beckel*	*Xu*
4:30PM			*Bolorizadeh*	*Qin*	*Graham*	*Coridan*
4:42PM			*Alizadeh*	*Xing*	*Tulek*	*Gopinathan*
4:54PM	*Winey*	*Suresh*	*Willson*	*Yashin*	*Lenski*	*Sowa*
5:06PM			*Fourkas*	*Rottach*	*Tunnell*	*Prasad*
5:18PM			*Fujimoto*	*Schieber*		*Liu*

Friday

Session Title	Y24. Polymer Melts & Solutions	Y25. Charged Polymers: Computation	Y28. Magnetism etc in Conjugated Organics	Y29. Noise and Fluctuation in Biosystems	Y30. Biopolymers I: Phase Transitions
Room	321	322	325	326	327
Chair	Horkay	Abrams	Nikolou	Jung	Onuchic
8:00AM	*Milner*	*Dobrynin*	*Bergeson*	*Balazsi*	*Garcia*
8:12AM	*Wu*	*Wang*	*Edelstein*	*Blake*	
8:24AM	*Katsov*	*Patel*	*Raju*	*Volfson*	
8:36AM	*Liao*	*Forrey*	*Wang*	*vanOudenaarden*	*Onuchic*
8:48AM	*Ghosh*	*Wang*	*Sheng*		
9:00AM	*Tapadia*	*Bertrand*	*Yang*		
9:12AM	*Wang*	*Ou*	*Yoo*	*Walczak*	*Ghafouri*
9:24AM	*Butler*	*Santangelo*	*Adetunji*	*Hwa*	*Schwab*
9:36AM	*Wang*	*Velichko*	*Zimbovskaya*	*Bundschuh*	*Ruiz-Garcia*
9:48AM	*Usta*	*Hakem*	*Perez*	*Dong*	*Hammouda*
10:00AM	*Pyda*	*Sayar*	*Kovalev*	*Levine*	*Robertson*
10:12AM	*Ashbaugh*	*Witte*	*Matsui*	*deGennes*	*Padala*
10:24AM	*Titievsky*	*Belyi*			*Reichhardt*
10:36AM	*Guenza*	*Wang*			*Nakamura*
10:48AM	*Shmidman*	*Guaqueta*		*Milton*	*Ikawa*

Session Title	Z4. Biopolymers	Z24. Polymer Melts & Solutions: Rheo & Dyn	Z25. Molecular Dynamics: Theory and Simulation
Room	308	321	322
Chair	Kannan	Thio	Cochran
11:15AM	*Vogel*	*Lipson*	*Andricioaei*
11:27AM		*Banda*	*Bernardin*
11:39AM		*Ozisik*	*Faller*
11:51AM	*Sheetz*	*Meerwall*	*Lu*
12:03PM		*Kumar*	*Schmit*
12:15PM		*Lang*	*Ala-Nissila*
12:27PM	*Perkins*	*Register*	*Virnau*
12:39PM		*OConnell*	*Waheed*
12:51PM		*Wang*	*Sokoloff*
1:03PM	*Greer*	*Fu*	*McCoy*
1:15PM		*Boukany*	*Porter*
1:27PM		*Curro*	*Feng*
1:39PM	*Horkay*	*Croll*	*Li*
1:51PM		*Panagiotopoulos*	*Shin*
2:03PM		*Karatasos*	*Yeung*

Session P30. DPOLY DMP: Focus Session: Organic Interfaces

Wednesday midday, 11:15 am, Baltimore Convention Center 327

Chair: Lynn Loo, University of Texas, Austin

Invited Speakers: Rosei

11:15AM P30.00001: Properties of Organic Molecules at Metal Surfaces
Invited Speaker: Federico Rosei

11:51AM P30.00002: Direct measurements of contact resistances in asymmetric pentacene thin-film transistors with polyaniline and gold electrodes
Kwang Seok Lee, Timothy Smith, Joung Eun Yoo, Keith Stevenson, Yueh-Lin (Lynn) Loo

12:03PM P30.00003: Nm-resolution studies of Au/molecular-film/GaAs junctions using ballistic electron emission microscopy (BEEM)
C. Marginean, C. Tivarus, J.P. Pelz, Hossam Haick, David Cahen

12:15PM P30.00004: A Possible Mechanism For Photoinduced Effects In Molecule-Based Magnets
Serkan Erdin, Michel Van Veenendaal

12:27PM P30.00005: First-priciples calculation of conductance through molecular devices
Feng Jiang, Yongxi Zhou, Yunyie Liang, Hao Chen, R. Note, Hiroshi Mizuseki, Yoshiyuki Kawazoe

12:39PM P30.00006: The electronic structure and polymerization of a self-assembled monolayer
Danqin Feng, David Wisbey, Yian Tai, Yaroslav Losovyj, Michael Zharnikov, Peter Dowben

12:51PM P30.00007: A first-principles study of p-stacking in charged oligothiophenes in the presence of counterions
Nicholas Miller, Damian Scherlis, Nicola Marzari

1:03PM P30.00008: Dipole-Induced Orientation of Fluorophenols on Si(111)
Fan Zheng, J. L. McChesney, Xiaosong Liu, F.J. Himpsel

Session Q1. DPOLY Poster Session II

Wednesday midday, 11:15 am, Baltimore Convention Center Exhibit Hall

Q1.00001: DPOLY POSTER SESSION II

Q1.00002: Effect of Hydrogen Bonding End Groups on the Bulk Diffusion of Polymers
Kathleen Schaefer, Craig Hawker, Edward Kramer
Q1.00003: Thermal Conductivity of Carbon Nanotube/Liquid Nanofluid
Thomas Acchione, Fangming Du, John Fischer, Karen Winey
Q1.00004: Experimental and Theoretical Study of Raman Spectra of Polyisobutylene
Pradeep Kumar, Jamie Messman, Brian Annis, Bobby Sumpter, Charles Feigerle
Q1.00005: Examining the origin of spatial shear-rate variation in Couette flow of entangled polymer solutions
Thomas Y. Hu, Amy Philips, Shi-Qing Wang
Q1.00006: Opening the black-box of entangled polymers in flow: A first time-resolved velocity profile determination upon step shear
Prashant Tapadia, Sham S. Ravindranath, Shi-Qing Wang
Q1.00007: Influence of Neutralization Methods on the Self-Assembly of Nanoscale Ionic Aggregates in Ionomers.
Nicholas Benetatos, Karen Winey
Q1.00008: Cylindrical Polyelectrolyte Brushes
Rikkert Nap, Igal Szleifer
Q1.00009: Poly(Ethylene-Methacrylic Acid) Ionomers Neutralized by Solution and Melt Methods
Christopher Chan, Karen Winey
Q1.00010: Structure calculations for hydrated ionomer membranes
Philip Taylor, Mehdi Hamaneh
Q1.00011: Direct observation of enhanced mobility near the surface of polymer nanocomposite thin films
Tadanori Koga, C. Lin, J. Jiang, J. Koo, M. Rafailovich, J. Sokolov, S. Narayanan, D. Lee, L. Lurio, S. Sinha
Q1.00012: Viscosity Measurements of Very Thin Polymer Films
Chunhua Li, Tadanori Koga, Clive Li, Jun Jiang, Laurence Lurio, Sunil Sinha, Suresh Narayanan, Miriam Rafailovich, Jonathan Sokolov
Q1.00013: Tethered Ligand-Receptor Binding in Confined Environments
G. Longo, I. Szleifer
Q1.00014: Growth of poly-DL-lysine hydrobromide single crystal on mica(001) surfaces.
Dipak Goswami, Xiaogang Liu, Yi Zhang, John Okasinski, Khalid Salaita, Peng Sun, Michael Bedzyk, Chad Mirkin
Q1.00015: Electrostatic conformation and hydrodynamic properties of a polyelectrolyte studied using static light scattering and viscosity
Charles Gordon, Debbie Rigney, Gina Sorci
Q1.00016: Transport along freely suspended actin cortex models in a controlled microfluidic environment
Simon Schulz, Tamas Haraszti, Wouter Roos, Christian Schmitz, Jens Ulmer, Stefan Graeter, Joachim P. Spatz
Q1.00017: Time-resolved electric force microscopy of charge traps in polycrystalline pentacene films
Michael Jaquith, Erik Muller, John Marohn

Q1.00018: Shear flow induced unfolding of collapsed polymers.
Alfredo Alexander-Katz, Roland Netz
Q1.00019: Dynamics of polar guest molecules contained in cryptophane molecular crystals
Erick Winston, Robert Horansky, Matthew Myers, John Price, Jaroslav Vacek
Q1.00020: Tethered Polymer Interactions with Attractive Surface Potentials
Ryan Van Horn, Joseph X. Zheng, Huiming Xiong, William Y. Chen, Kyungmin Lee, Roderic P. Quirk, Bernard Lotz, Edwin L. Thomas, An-Chang Shi, Stephen Z.D. Cheng
Q1.00021: Single crystal engineering of block copolymers
Huiming Xiong, Joseph X. Zheng, Ryan M. Van Horn, Y. Guo, Roderic P. Quirk, Stephen Z. D. Cheng
Q1.00022: Overall Crystallization Kinetics of Polymorphic Poly (propylenes)
Ysela Chiari, Kimberly Thompson, Rufina Alamo
Q1.00023: Melting in Copolymer Blends
Buckley Crist
Q1.00024: Ultra-Small Angle Neutron Scattering Study of Polyethylene Crystallization from Solution
Howard Wang, Narayan Das, Kaikun Yang
Q1.00025: Holographic Patterning and Crystallization of a Semicrystalline polymer
Michael Birnkrant, Christopher Li, Lalgudi Natarajan, Vincent Tondiglia, Richard Sutherland, Timothy Bunning
Q1.00026: Comparative Determinations of Orientation in Injection-Molded Thermotropic Liquid Crystalline Copolyester (TLCP) Plaques
Robert Bubeck, Stanley Rendon, Wesley Burghardt, Daniel Fischer
Q1.00027: Coupling of Lithium-Polymer Complexes and Electric Field: Routes to Enhance the Alignment of Block Copolymer Thin Films
Jia-Yu Wang, Julie Leiston-Belanger, Suresh Gupta, Ting Xu
Q1.00028: Structure of Rod-Coil Block Copolymer Thin Films
R.A. Segalman, B.D. Olsen
Q1.00029: Renormalized One-Loop Theory of Fluctuations in Homopolymer Blends and Diblock Copolymer Melts
Piotr Grzywacz, David Morse
Q1.00030: Investigation of the Phase Behavior of Amphiphilic Triblock Copolymers (PAA-b-PMA-b-PS in Mixed Solvents
Kelly Hales, Honggang Cui, Zhibin Li, Darrin Pochan, Zhiyun Chen, Qai Ki, Karen Wooley
Q1.00031: Overall static conformation of chain molecules in nanoscopic cylinders
Kyusoon Shin, Juin-Tai Chen, Priyanka Dobriyal, Pappannan Thiyagarajan, Thomas Russell
Q1.00032: Effects of shear flow on reactive coupling of polymer chains at melt interfaces
Jianbin Zhang, Timothy Lodge, Christopher Macosko
Q1.00033: Cation Effects on Electroactive Responses of Conjugated Polymers
Xuezheng Wang, Elisabeth Smela
Q1.00034: Modeling self-oscillation and waves in a reactive polymer gel
Victor Yashin, Anna Balazs
Q1.00035: Measuring the Local Modulus of Soft Polymer Networks
Jessica Zimberlin, Alfred Crosby
Q1.00036: Monte Carlo Simulation of Reversibly Associating Networks
Shihu Wang, Chun-Chung Chen, Elena E. Dormidontova

Q1.00037: Formation of nanoparticles during melt mixing a thermotropic liquid crystalline polyester and sulfonated polystyrene ionomers
Hyuksoo Lee, Lei Zhu, R. A. Weiss
Q1.00038: Characterization of Release Mechanism in Polymeric Drug Delivery Systems
Arthur James LaPlante, Robin Marie Plachy, Kaoru Aou, Jake Ferguson, Shaw Ling Hsu
Q1.00039: Transport behavior of small molecules out of various poly (vinylidene fluoride) copolymer morphologies
Suriyakala Ramalingam, Guolin Wu, Feng Yi, Shaw Ling Hsu
Q1.00040: An Analysis of the Solidification Process in Immiscible and Crystallizable Polymer Blends.
Young Gyu Jeong, Natalia Pogodina, Shaw Ling Hsu
Q1.00041: The Role of Percolation in the Rheological Behavior of Binary and Ternary Blends.
Natalia Pogodina, Young Gyu Jeong, Suriyakala Ramalingam, Shaw Ling Hsu
Q1.00042: Production of Exfoliated Polyethylene-Organoclay Nanocomposites and Its Effect on Mechanical Properties and Thermal Stability.
Cynthia Pierre, John M. Torkelson
Q1.00043: Oxygen Permeation as a Quantitative Means of Ranking Exfoliation in Polymer-Clay Nanocomposites.
Kosmas G. Kasimatis, Cynthia Pierre, Amanda M. Walker, John M. Torkelson
Q1.00044: Origins of Linear Viscoelastic Behavior of Polymer-Nanoparticle Composites
Victor Pryamitsyn, Venkat Ganesan
Q1.00045: Effect of Molecular Weight on Load Transfer in Nanotube / Polymer Composites
Minfang Mu, Fangming Du, Reto Haggenmueller, Karen Winey
Q1.00046: Templated Nanocarbon Black Nanocomposite Electrodes for Rechargeable Lithium Batteries
Ozge Akbulut, Elsa A. Olivetti, Donald R. Sadoway, Anne M. Mayes
Q1.00047: Creep and Recovery Behaviors of a Polythiophene-based Electrorheological Fluid
Datchanee Chotpattananont, Anuvat Sirivat
Q1.00048: Electric Field Generated Stress Moduli in Polythiophene/Polyisoprene Elastomer Blends
Toemphong Puvanatvattana, Anuvat Sirivat
Q1.00049: Electromechanical response of a silicone elastomer containing PPV
Sumonman Naimlang, Anuvat Sirivat
Q1.00050: Creep and Recovery of Electroactive Polyaniline Suspension
Piyanoot Hiamtup, Anuvat Sirivat
Q1.00051: Anisotropy of Electroactive Strain in Textured Polypyrrole Actuators
Rachel Pytel, Edwin Thomas, Ian Hunter
Q1.00052: Detecting composition and monomer sequence distribution in random copolymers with interaction chromatography
Junwon Han, Chang Y. Ryu, James J. Semler, Jan Genzer
Q1.00053: Interplay between polymer and nanopore sizes for polymer adsorption in nanopores
Chansu Kim, Chang Y. Ryu
Q1.00054: Recent developments in multivariant surface-tethered polymer assemblies
Rajendra Bhat, Michael Tomlinson, Jason Stone, Jan Genzer
Q1.00055: Evaporation and interdiffusion of solvent in polymer films
Mesfin Tsige, Gary S. Grest

Q1.00056: Adsorption of Biodegradable Diblock Copolymers PEO-PLA and PEO-PCL to Colloidal Polystyrene
Karen A. Murphy, Jessica M. Mendes, Daniel A. Savin
Q1.00057: Optical Properties of Molecules and Molecular Aggregates Adsorbed on Solid Surfaces. First Principle Study.
Alexander Gavrilenko, Mikhail Noginov, Carl Bonner, Vladimir Gavrilenko
Q1.00058: Wetting Morphologies in Triangular Grooves
Krishnacharya Kareh, Martin Brinkmann, Stephan Herminghaus, Ralf Seemann, Bruce Law
Q1.00059: Freezing of Polymer Thin Films and Surfaces: The Small Molecular Weight Puzzle
Stephan Herminghaus, Ralf Seemann, Karin Jacobs, Katharina Landfester
Q1.00060: Film Formation with Reactive Hydrophobic and Polar Groups in Aqueous Solution: A Bond-Fluctuating Computer Simulation Model
Shihai Yang, Samuel Bateman, Ras Pandey, Marek Urban
Q1.00061: Enhancement of X-ray Reflectometry for the Depth-Profiling of Polymer Films using Polymeric Substrates
Maria I. Lygeraki, Haris Retsos, Spiros H. Anastasiadis, Chris Toprakcioglu, Alekos A. Vradis, Yves Gallot
Q1.00062: Switchable Adhesion Properties From Low and High Tg Polymeric Brushes
Haris Retsos, Yvette Tran, Ganna Gorodyska, Anton Kiriy, Manfred Stamm, Costantino Creton
Q1.00063: Principles of resonant soft x-ray reflectivity -- a novel tool in polymer research
Cheng Wang, Tohru Araki, Shane Harton, Tadanori Koga, Harald Ade
Q1.00064: Calorimetric Tg and Heat Capacity of Polystyrene Thin Films
Yung Koh, Gregory McKenna, Sindee Simon
Q1.00065: Dissipative particle dynamics simulations of dilute polymer solutions confined in a slit with interactive surfaces
Wenhua Jiang, Jianhua Huang, Mohamed Laradji, Yongmei Wang
Q1.00066: Dissipative particle dynamic simulations of solvent flow through nanometer sized smart channel coated with stimuli responsive polymer brush
Jianhua Huang, Mohamed Laradji, Yongmei Wang
Q1.00067: Exfoliation of stacked sheets: effects of temperature and platelet size by a Monte Carlo simulation
Barry Farmer, Ras Pandey
Q1.00068: Correlations of System Mobility with Various Scalar Metrics
Julieanne Heffernan, Robert Baca, John McCoy, Joanne Budzien, Douglas Adolf
Q1.00069: A Monte Carlo Study of Frozen Lattices on Curved Surfaces
A. Hexemer, E. J. Kramer, G. H. Fredrikson, V. Vitelli, D. R. Nelson
Q1.00070: A Molecular Dynamics Study of the Odd-Even Effect in Self-Assembled Monolayers
Lawrence Herman, Paul Mikulski, Judith Harrison
Q1.00071: Fabrication of Biopolymer Nanofibers of Hyaluronic Acid via Electrospinning
Denice Young, Hailey Queen, Wendy Krause
Q1.00072: Influence of D-Penicillamine on the Viscosity of Hyaluronic Acid Solutions
Jing Liang, Wendy E. Krause, Ralph H. Colby
Q1.00073: Electrospinning of Biocompatible Nanofibers
Andrew J. Coughlin, Hailey A. Queen, Seth D. McCullen, Wendy E. Krause
Q1.00074: Structure and interactions of human respiratory mucin
Kirstin Purdy, John Sheehan, Michael Rubinstein, Gerard Wong

Q1.00075: Theoretical simulation of compression of single bovine carbonic anhydrase II molecule by AFM tip
Katsunori Tagami, Masaru Tsukada
Q1.00076: Self Assembly of b-Hairpin Peptides into Hydrogel Networks: Tuning Supramolecular Properties Through Molecular Design
Tuna Yucel, Chris Micklitsch, Joel Schneider, Darrin Pochan
Q1.00077: Flory c of the homologous series of deuterated polystyrene-b-poly(n-alkyl methacrylates): small angle neutron scattering and theoretical studies
Du Yeol Ryu, Kristopher A. Lavery, Thomas P. Russell, Junhan Cho, Dong Hyun Lee, Jin Kon Kim
Q1.00078: A new field-theoretic simulation method for compressible systems containing block copolymers
Junhan Cho
Q1.00079: Stability of the orthorhombic Fddd phase in diblocks using Landau theory of weak crystallization
Amit Ranjan, David Morse
Q1.00080: Depletion interaction effects on diblock copolymer micelles in selective solvents
Sayeed Abbas, Timothy Lodge
Q1.00081: Order-Disorder Transition and Critical Micelle Temperature in Concentrated Block Copolymer Solutions
Moon Jeong Park, Kookheon Char, Jin Kon Kim, Timothy P. Lodge
Q1.00082: Crystallization studies of polyethylene -poly(ethylene glycol) graft copolymers
P.R. Mark, G.E. Hovey, N.S. Murthy, K. Breitenkamp, M. Kade, T. Emerick
Q1.00083: Electroluminescence Emission of Fully Conjugated Heterocyclic Aromatic Rigid-rod Polymer Doped in Multi-wall Carbon Nanotube
Jen Wei Huang, Shih Jung Bai
Q1.00084: Layer Effects of Photovoltaic Heterojunction of Fully Conjugated Heterocyclic Aromatic Rigid-rod Polymer Poly-p-phenylenebenzobisoxazole
Jen Wei Huang, Shih Jung Bai
Q1.00085: Induced Interaction between Polypyrrole and SO2 via Molecular Sieve 13X
Boonchoy Soontornworajit, Anuvat Sirivat
Q1.00086: Influence of Green Fluorescent Protein (GFP) Nanoparticles on the Optical and Mechanical Properties of Silk in Bio-Nanocomposites with Photonic Properties
Sureeporn Koombhongse, Ronald Eby, Sharon Jones, Mark Walker, Rajesh Naik, Kathryn Wahl
Q1.00087: Fluctuations and Phase Transition-Like Phenomena of a Filled Elastomer Under Deformation
Xiaorong Wang, Mindaugas Rackaitis
Q1.00088: Controlling the interaction between two rolling microcapsules on elastic substrates
Anna Balazs, Alexander Alexeev, Rolf Verberg
Q1.00089: Tunable Nanoparticle Arrays by Immobilizing Nanoparticles on Polymer Single Crystal Surface
Bing Li, Christopher Li
Q1.00090: Assessment of structure, dynamics, and stability of HPC microgel nanoparticles in good and poor solvents
Kiril Streletzky, John McKenna, Jerry Hillier, Rami Mohieddine
Q1.00091: Optical Effects on Laser Ablated Polymer Surfaces
R.D. Prabhu, R. Govinthasamy, N.S. Murthy

Q1.00092: Lessons from Biology: How Patterns Control Adhesion
Edwin Chan, Alfred Crosby, Tina Thomas
Q1.00093: Elastomer Friction: Understanding Schallamach Waves.
Charles Rand, Alfred Crosby
Q1.00094: On Fundamentals of Filler Reinforcement: an Investigation Using Polymeric Nanoparticles
Xiaorong Wang
Q1.00095: AFM-TEM observations of effect of ``melt'' time on polytetrafluoroethylene morphology.
J.P. Kalish, R.A. Williams, J. Wang, P.H. Geil, T.-C. Long, P. Xu
Q1.00329: Amphiphilic diblock copolymers with adhesive properties: structure and swelling with water
Pascale Fabre, Sylwia Poivet, Frédéric Nallet, Kai Schierholz, Ginu Abraham, Eric Papon, Yves Gnanou, Raymond Ober, Olivier Guerret, Nour-Eddine El-Bounia

Session R4. DPOLY: Ionic, Dipolar and H-bonding Polymers

Wednesday afternoon, 2:30 pm, Baltimore Convention Center 308

Chair: Sanat Kumar, Rensselaer Polytechnic Institute

Invited Speakers: Breedveld, Dormidontova, Pochan, Cremer, Prabhu

2:30PM R4.00001: Solvent-induced changes in the structure and rheology of polyelectrolyte solutions.
Invited Speaker: Victor Breedveld

3:06PM R4.00002: Theoretical Modeling of Hydrogen Bonded and Metal-Ligand Associating Polymers
Invited Speaker: Elena Dormidontova

3:42PM R4.00003: Soultion assembly of charged block copolymers and block copolypeptides
Invited Speaker: Darrin Pochan

4:18PM R4.00004: Water Solubility of Polymers with Salt: the Hofmeister Series
Invited Speaker: Paul Cremer

4:54PM R4.00005: Polyelectrolyte effects in polymers for lithography
Invited Speaker: Vivek Prabhu

Session R24. DPOLY: Block Copolymer Applications

Wednesday afternoon, 2:30 pm, Baltimore Convention Center 321

Chair: Ting Xu, National Institute of Standards and Technology

2:30PM R24.00001: Catalysts from Block Copolymers
David Durkee, Nitash Balsara, Alexis Bell

2:42PM R24.00002: Thermally Crosslinkable Diblock Copolymer Templates
Julie Leiston-Belanger, Thomas Russell, Eric Drockenmuller, Craig Hawker

2:54PM R24.00003: Ordered Hexagonal Arrays of Holes with 40 nm Period by Shear Alignment of Diblock Copolymer Bilayers
Jose Vedrine, Douglas Adamson, Richard Register, Thomas Pickthorn, Paul Chaikin

3:06PM R24.00004: Reversible Nanostructures Assembled from Amphiphilic Block Copolymers
Chen Xu, Xuefeng Fu, Michael Fryd, Bradford Wayland, Karen Winey, Russell Composto

3:18PM R24.00005: Patterned mesoporous media via 3-D replication in supercritical Carbon dioxide.
Sivakumar Nagarajan, Thomas Russell, James Watkins, Joan Bosworth, Peter Busch, Detlef Smilgies, Christopher Ober

3:30PM R24.00006: Ordered Nanostructured Carbon Generated from Pyrolyzed Polymer Precursors inside Anodic Aluminum Oxide Template
Jiun-Tai Chen, Kyusoon Shin, Julie Leiston-Belanger, Mingfu Zhang, Thomas Russell

3:42PM R24.00007: Soft molding to align cylindrical nanodomains of block copolymers
Hideaki Yokoyama, Lei Li

3:54PM R24.00008: Nanopatterning of Viruses and Proteins Using Microphase Separated Block Copolymers
Arthur Cresce, Angela Lewandowski, William Bentley, Peter Kofinas

4:06PM R24.00009: Surface Directed Assembly of Viral Monolayers
S. Wargacki, R. Naik, D. Phillips, M. Francis, V. Ward, E. Thomas, R.A. Vaia

4:18PM R24.00010: Guided Molecular Self-Assembly of Block Copolymer and Nanoparticles
Shan Zou, Gilbert Walker

4:30PM R24.00011: Effect of Casting Solvent on the Morphology of Block Copolymer / Maghemite Nanoparticle Mixtures
Kookheon Char, Moon Jeong Park

4:42PM R24.00012: 2-D Hierarchical Structure of Block Copolymer / Bio-nanoparticle Complexes
Dongseok Shin, Thomas Russell

4:54PM R24.00013: Effect of Interacting Nanoparticles on the Ordered Morphology of Block Copolymer / Nanoparticle Mixtures
Moon Jeong Park, Yu Jin Kang, Kookheon Char

5:06PM R24.00014: Magnetic Properties of Ni Nanoparticles Dispersed in Polystyrene-Isoprene-Polystyrene Triblockcopolymers
Mircea Chipara, You Qiang, Linfeng Guo, Aminian Hossein, Jeffrey M. Zaleski, Sy-Hwang Liou

5:18PM R24.00015: Penetrant Diffusion in a SEBS Triblock Copolymer by Pulse Field Gradient NMR
Alan Jones, Marcus Giotto, Alana Canfield, Guoxing Lin

Session R25. DPOLY: Adhesion and Viscoelasticity in Polymer Thin Films

Wednesday afternoon, 2:30 pm, Baltimore Convention Center 322

Chair: Karen Winey, University of Pennsylvania

2:30PM R25.00001: QCM Studies of Polymer Gel Spreading in Liquid Environments
Frank Nunalee, Bruce Lee, Phillip Messersmith, Kenneth Shull

2:42PM R25.00002: Frictional properties of hydrophobic nanopatches in different solvents.
Matteo Castronovo, Robert Hudej, Denis Scaini, Martina Dell'Angela, Loredana Casalis, Giacinto Scoles

2:54PM R25.00003: Viscoelastic behavior of PDMS thin films with POSS nanofillers
Wen Yin, Jianjun Deng, John R. Hottle, Hyong-Jun Kim, Alan R. Esker

3:06PM R25.00004: Modified Side-Chain Liquid Crystalline Polymer Thin Films as Low Adhesion Surfaces
Haris Retsos, Daewon Lee, Costantino Creton, Kookheon Char

3:18PM R25.00005: Polydispersity Effects on Polymer-Polymer Welding.
Anna Barnette, Richard Wool, Ian McAninch

3:30PM R25.00006: Lubrication by glycoprotein brushes.
Bruno Zappone, Marina Ruths, George W. Greene, Jacob Israelachvili

3:42PM R25.00007: Understanding Polymer Adhesion: Calculations of Adsorption of Organic Molecules onto Si and SiO2 Surfaces
Karen Johnston, Risto Nieminen

3:54PM R25.00008: Differential pressure experiment to probe adhesive interactions in thin films
Anny Flory, David Brass, Kenneth Shull

4:06PM R25.00009: Capillary wave dynamics on viscoelastic polymer thin-films: Monolayers and bilayers
Mark Henle, Alex Levine

4:18PM R25.00010: AFM-based Microrheology of Thin Polymer Films
Christopher Wieland, Chih-Kang Shih

4:30PM R25.00011: Molecular recoiling forces in ultra-thin films of long entangled polymer chains
Arnold Chang-Mou Yang, Tony Ming-Hsun Yang, Sen-Yen Hou, Yu-Lun Chang

4:42PM R25.00012: The Effect of Nanobubbles on Microcantilever Bending
Sangmin Jeon, Ramya Desikan, Fang Tian, Thomas Thundat

4:54PM R25.00013: Measuring local viscoelastic properties of complex materials with atomic force microscopy
Paula Wood-Adams, Wensheng Xu

5:06PM R25.00014: The kinetics of the reaction of telechelics at a soft interface by neutron reflectivity
J. Kevin Rice, Helen Ji, Mark Dadmun, Jimmy Mays

Session R26. DBP DPOLY: Focus Session: Counterion Dynamics in Charged Biopolymer Systems

Wednesday afternoon, 2:30 pm, Baltimore Convention Center 323

Chair: Alex Travesset, Ames Laboratory

Invited Speakers: Wong, Netz

2:30PM R26.00001: Counterion liquids between biological polyelectrolytes
Invited Speaker: Gerard Wong

3:06PM R26.00002: Bjerrum Pairing Correlations at Charged Interfaces
Alex Travesset, David Vaknin

3:18PM R26.00003: Charged Polymers in Electric Fields
Invited Speaker: Roland Netz

3:54PM R26.00004: Migration of DNA on electrically inhomogeneous surfaces
Eric Petersen, Bingquan Li, Vladimir Samuilov, Xiaohua Fang, Jonathan Sokolov, Miriam Rafailovich

4:06PM R26.00005: Evidence for High Conductivity in the Pili of Geobacter sulfurreducens: ``Nano-wires'' in a Prokaryotic Electron Transport Chain?
Kevin D. McCarthy, Gemma Reguera, Teena Mehta, Julie S. Nicoll, Xinyu Wang, Mark T. Tuominen, Derek R. Lovley

4:18PM R26.00006: Dynamical Transition of the Protein Observed in Terahertz Dielectric Response
Jing-Yin Chen, Joseph Knab, Andrea Markelz

4:30PM R26.00007: Terahertz dielectric response dependence on protein melting and hydration
Yunfen He, J.R. Knab, B. Shah, A.G. Markelz

4:42PM R26.00008: Inorganic Surface and Structure Adhesion of Amino Acids and Peptides
LaRue Dunkleberger, Robert Willett, Loren Pfeiffer

4:54PM R26.00009: Interactions between the HIV-TAT transduction domain and cell membranes
Abhijit Mishra, Gerard Wong

5:06PM R26.00010: Temperature Effects on Threshold Counterion Concentration to Induce Aggregation of fd Virus
Qi Wen, Jay Tang

5:18PM R26.00011: Ion Distribution around DNA: Can Transitions Be Observed?
Kurt Andresen, Lisa Kwok, Xiangyun Qiu, Hye Yoon Park, Jessica Lamb, Lois Pollack

Session R30. DPOLY: Polymer Nanocomposites

Wednesday afternoon, 2:30 pm, Baltimore Convention Center 327

Chair: Alamgir Karim, National Institute of Standards and Technology

2:30PM R30.00001: Bridging, Steric Stabilization, Aggregation and Phase Separation in Polymer Nanocomposites
Justin B. Hooper, Kenneth S. Schweizer

2:42PM R30.00002: Glass transition behavior of polystyrene/silica nanocomposites.
Yuping Xie, Sudeepto Sen, Sanat Kumar, Amitabh Bansal

2:54PM R30.00003: Molecular model for the rheology of polymer nanocomposites
Catalin Picu, Alireza Sarvestani

3:06PM R30.00004: Comparison of the Glass Transition Temperature (Tg)-Confinement Effect in Real and Model Polymer Nanocomposites.
John M. Torkelson, Perla Rittigstein, Linda J. Broadbelt, Rodney D. Priestley

3:18PM R30.00005: Polymer-Nanoparticle Interfacial Interactions in Polymer Nanocomposites: Confinement Effects on Glass Transition Temperature and Suppression of Physical Aging.
Perla Rittigstein, John M. Torkelson

3:30PM R30.00006: Relaxation and Glass Transition in Confined and Filled Polymers.
Vladimir Dolidze, Edwin Arroyo, Manuel Rivera, Fouad Aliev

3:42PM R30.00007: Directed Assembly of Nanoparticle Arrays using Block Copolymer Templates
Huiman Kang, Andrew N. Mangham, Mark P. Stoykovich, Robert J. Hamers, Paul F. Nealey

3:54PM R30.00008: Surface segregation of silver nanoparticles in the in-situ synthesized Ag/PMMA nanocomposites.
Ranjan D. Deshmukh, Russell J. Composto

4:06PM R30.00009: Selective Metallization of Well Aligned PS-b-P2VP Block Copolymers in Thin Films and in Confined Geometries
James D. Sievert, James J. Watkins, Thomas P. Russell

4:18PM R30.00010: Static and Dynamic Neutron Scattering Studies of Polystyrene-Silica Nanocomposites.
Sudeepto Sen, Yuping Xie, Sanat Kumar, Derek Ho, Victoria Garcia-Sakai

4:30PM R30.00011: Structure and properties of poly(methyl methacrylate) (PMMA)-fullerene (C60) nanocomposites
Jamie Kropka, Peter Green

4:42PM R30.00012: Self-Corralling of nanorods under electric fields.
Suresh Gupta, Qingling Zhang, Todd Emrick, Thomas Russell

4:54PM R30.00013: Theoretical and Experimental Studies of New Polymer-Metal High-Dielectric Constant Nanocomposites
Valeriy Ginzburg, Michael Elwell, Kyle Myers, Robert Cieslinski, Sarah Malowinski, Mark Bernius

5:06PM R30.00014: Epoxy-silica composites for micro-electronic applications: effect of filler
Hyuksoo Lee, Myeongho Hong, Choonkeun Lee, Ilsang Maeng, Jaechoon Cho, Sangmoon Lee, Jeongbok Kwak, Seunghyun Ra

5:18PM R30.00015: Quantum dots tailored with water soluble conjugated polymer
Jun Xu, Joseph Shinar, Zhiqun Lin

Session U4. DPOLY: Lithography

Thursday morning, 8:00 am, Baltimore Convention Center 308

Chair: Vivek Prabhu, National Institute of Standards and Technology

Invited Speakers: Willson, Dammel, Nealey, Jones, Hinsberg

8:00AM U4.00001: Step and Flash Imprint Lithography
Invited Speaker: Grant Willson

8:36AM U4.00002: Will optical lithography live forever?
Invited Speaker: Ralph Dammel

9:12AM U4.00003: Directed assembly of block copolymer containing materials on chemically nanopatterned substrates: a platform for two and three-dimensional nanofabrication
Invited Speaker: Paul Nealey

9:48AM U4.00004: Probing the 3-Dimensional Structure of Nanomanufactured Materials using CD-SAXS
Invited Speaker: Ronald Jones

10:24AM U4.00005: Characterization of Materials for Nanoscale Lithography
Invited Speaker: William Hinsberg

Session U24. DPOLY: Liquid-Crystalline Polymers

Thursday morning, 8:00 am, Baltimore Convention Center 321

Chair: Matteo Pasquali, Rice University

8:00AM U24.00001: Patterns and Defects in Nematic Elastomers
Fangfu Ye, Tom Lubensky

8:12AM U24.00002: In situ synchrotron studies of structure development during injection molding of liquid crystalline polymers
Stanley Rendon, Wesley Burghardt

8:24AM U24.00003: Liquid crystalline pattern formation in drying droplets of biopolymers
Ivan Smalyukh, Olena Zribi, John Butler, Oleg Lavrentovich, Gerard Wong

8:36AM U24.00004: Orientational dynamics of dipolar or magnetized rigid nematic liquid crystal polymers and suspensions in imposed flow and external fields
Qi Wang

8:48AM U24.00005: Spacer length controlled lamello-columnar to oblique-columnar mesophase transition in liquid crystalline DNA
Lei Zhu, Li Cui, Jianjun Miao

9:00AM U24.00006: Binary phase diagrams of liquid crystal/polymer systems exhibiting crystal, smectic, and nematic transitions
P. Dayal, R. Matkar, V. Ginzburg, T. Kyu

9:12AM U24.00007: Interfacial Characteristics of Semi Fluorinated Polymeric and Polymeric Liquid Crystalline Surfaces
Gang Cheng, Bryan Spraul, Dennis Smith, Dvora Perahia

9:24AM U24.00008: The Origin of Supra-Molecular Columnar Structures from Symmetrically Tapered Bisamides
Kwang-Un Jeong, Hong Shen, Mattew J. Graham, Huabing Wang, Mingming Guo, Frank W. Harris, Stephen Z. D. Cheng

9:36AM U24.00009: Crystallization, the gel point and DQ NMR in PDMS networks
Moshe Gottlieb, Yoav Hayoun, Inbal Preker, Rachel Yerushalmi-Rozen, Kay Saalwaechter

9:48AM U24.00010: Phase Separation of Model Segmented Poly(Carbonate Urethanes)
Rebeca Hernandez, Elena Hung, James Runt

10:00AM U24.00011: How Does Rubber Crystallizes Upon Application of Strain
Mindaugas Rackaitis, Xiaorong Wang

10:12AM U24.00012: Melt-processable high acrylonitrile copolymers
Shawn R. Hutchinson, Juan Hinestroza, Bhupender S. Gupta, David R. Buchanan, Alan E. Tonelli

Session U25. DPOLY DMP: Focus Session: Oligoacene Semiconductors

Thursday morning, 8:00 am, Baltimore Convention Center 322

Chair: John Rogers, University of Illinois

8:00AM U25.00001: Preparation and properties of substituted acenes for organic electronics: pentacene through heptacene
John Anthony

8:12AM U25.00002: Conducting AFM and 2D GIXD Studies on Pentacene Thin Films
Hoichang Yang, Chang Y. Ryu, Tae Joo Shin, Kilwon Cho, Mang-Mang Ling, Zhenan Bao

8:24AM U25.00003: Hall Effect Measurements in Organic Single-Crystal FETs
Vitaly Podzorov, Etienne Menard, John Rogers, Michael Gershenson

8:36AM U25.00004: Hall effect in organic single-crystal field-effect transistors
J. Takeya, Koichi Yamada, K. Tsukagoshi, Y. Aoyagi, T. Takenobu, Y. Iwasa

8:48AM U25.00005: Control of Channel Conductivity of Rubrene Single Crystal Field Effect Transistors.
Christian Kloc, Magnus Wikberg, Woo-Young So, Dave V. Lang, Theo Siegrist, Arthur P. Ramirez

9:00AM U25.00006: Thermal Expansion and Molecular Motion in Rubrene and Tetracene
Theo Siegrist, Christian Kloc, Magnus Wikberg, Simon Haas

9:12AM U25.00007: A Systematic Study of Metal Contacts on Single Crystalline Rubrene
Woo-young So, A. Mike Sergent, Christian Kloc, Arthur Ramirez

9:24AM U25.00008: Negative Thermal Expansion in Pentacene
S. Haas, T. Siegrist, P. Pattison, B. Batlogg

9:36AM U25.00009: Charge transport in single-crystals of pentacene studied with temperature dependent THz time-domain spectroscopy.
H. A. van Laarhoven, M. Koeberg, E. Hendry, M. Bonn, C. F. J. Flipse

9:48AM U25.00010: Optical emission and vibrational modes of uniform pentacene monolayers
Rui He, Nancy Tassi, Graciela Blanchet, Aron Pinczuk

10:00AM U25.00011: Sensitivity of 1/f Noise to Chemical Constituents in Pentacene Thin Film Transistors
W. X. Yan, E. Gomar-Nadal, Masa Ishigami, M. S. Fuhrer, E. D. Williams

10:12AM U25.00012: Interface and Contact Formation in Pentacene Monolayer Transistors
Byoung-nam Park, Soonjoo Seo, Fan Zheng, Franz Himpsel, Paul Evans

10:24AM U25.00013: Growth and structure of pentacene thin films
Boquan Li

10:36AM U25.00014: Electron and hole transport in organic single crystals
J. Pflaum, A.K. Tripathi, S. Meyer

10:48AM U25.00015: Oxygen and water defect formation processes in pentacene.
Leonidas Tsetseris, Sokrates Pantelides

Session U26. GSNP DBP DPOLY: Focus Session: Cytoskeletal Dynamics

Thursday morning, 8:00 am, Baltimore Convention Center 323

Chair: Christina Marchetti, Syracuse University

Invited Speakers: Danuser

8:00AM U26.00001: Isotropic, nematic and polarized states in active motor-filament solutions
Aphrodite Ahmadi, M. Cristina Marchetti, Tanniemola B. Liverpool

8:12AM U26.00002: Rheology of active polymer solutions
M. Cristina Marchetti, Tanniemola B. Liverpool

8:24AM U26.00003: Thermally Controlling the Polymeric Cytoskeleton in Living Cells
Chao-Min Cheng, Philip LeDuc

8:36AM U26.00004: How to detect single cancer cell?
Nadine Pernodet, Jessica Fields, Lenny Slutsky, Taylor Bernheim, Kaustabh Ghosh, Shouren Ge, Miriam Rafailovich

8:48AM U26.00005: The Effects of Chronological Age on the Cellular Mechanics of Human Dermal Fibroblasts
Z. Pan, V. Hung, S. Kambhampati, S.R. Ge, M. Rafailovich, K. Ghosh, R. Clark, Y.J. Liu, T. Nakamura, X.Z. Shu, G. Prestwich

9:00AM U26.00006: Interplay between crosslinkers and dynamic molecular motor-induced instabilities in the moderation of biopolymer organization
David Smith, David Humphrey, Falko Ziebert, Walter Zimmermann, Josef Käs

9:12AM U26.00007: The mechanics of cell protrusion
Invited Speaker: Gaudenz Danuser

9:48AM U26.00008: Tensile Force Generation by Actin-Myosin Networks
Anders Carlsson

10:00AM U26.00009: Simulation of Actin-Polymerization Near Moving Surface
Kun-Chun Lee, Andrea Liu

10:12AM U26.00010: The Fysics of Filopodia (or The Physics of Philopodia)
Jen Schwarz, Ajay Gopinathan, Kun-Chun Lee, Andrea Liu, Louise Yang

10:24AM U26.00011: Lipid-Protein Nanotubes with Open or Closed Ends, Microtubules Bundles and Inverted Tubulin Nanotubes
Uri Raviv, Daniel J. Needleman, Miguel A. Ojeda-Lopez, Youli Li, Herb P. Miller, Leslie Wilson, Cyrus R. Safinya

10:36AM U26.00012: The mechanics of cell crawling over a flat surface
Baldomero Alonso-Latorre, Javier Rodriguez-Rodriguez, Alberto Aliseda, Rudolf Meili, Richard Firtel, Juan Lasheras

10:48AM U26.00013: Micromechanical Properties of Endothelial Cell Cytoskeleton
Meron Mengistu, Linda Lowe-Krentz, H. Daniel Ou-Yang

Session U30. DPOLY: Focus Session: Mechanical Properties: Deformation, Rupture and Failure

Thursday morning, 8:00 am, Baltimore Convention Center 327

Chair: Teri Hermel-Davidock, Dow Chemical Company

Invited Speakers: Marder

8:00AM U30.00001: Shock Wave Theory for Rupture of Rubber
Invited Speaker: Michael Marder

8:36AM U30.00002: Tuning the Adhesion of Soft Elastomers with Topographic Patterns
Alfred Crosby, Edwin Chan

8:48AM U30.00003: Finite Element Calculations Using a New Constitutive Model for the Chemical Aging of Rubber
Joanne Budzien, David Lo, John G. Curro, Dana Rottach

9:00AM U30.00004: Effect of chain bridging on mechanical properties of lamellae-forming block copolymers
Alhad Phatak, Lisa Lim, Cletis Reaves, Frank Bates

9:12AM U30.00005: Probing the Contact and Sliding of Elastomer/Polymer Interfaces
Betul Yurdumakan, Kumar Nanjundiah, Ali Dhinojwala

9:24AM U30.00006: Mesoscopic Random Lattice Models of Rupture in Rubber
David Reynolds, Michael Marder

9:36AM U30.00007: Annealing History Dependence of Young's Modulus in Thin Polymer Films Using an Axi-symmetric Peel Test Apparatus
Adam N. Raegen, Kari Dalnoki-Veress

9:48AM U30.00008: Contributions to the Adhesion of Glassy Polymers from Radical Recombination and Segmental Interpenetration at Elevated Temperatures
Murat Guvendiren, Michelle Lefebvre, Christine Dettmer, Sonbinh Nguyen, Kenneth Shull

10:00AM U30.00009: Adhesion and Spatial Distribution of Water in the Presence of Moisture: Surface Chemistry Affects.
Chrisopher White, Bryan Vogt, Emmett O'Brien, Wen-li Wu

10:12AM U30.00010: Quantifying Ballistic Armor Performance: A Minimally Invasive Approach
Gale Holmes, Jaehyun Kim, William Blair, Walter McDonough, Chad Snyder

10:24AM U30.00011: Measurement of the Viscoelastic Bulk Modulus
Yan Meng, Sindee Simon

10:36AM U30.00012: Influence of Physical Aging on the Mechanical Properties of a Random Polypropylene-Polyethylene Copolymer
Samuel Amanuel, Xiaofeng Chen, Rahmi Ozisik, Sanford S. Sternstein

10:48AM U30.00013: Fracture versus cavitation in probe-tack geometry: theory and experiments
Pascale Fabre, Jérémie Teisseire, Frédéric Nallet, Cyprien Gay

Session V24. DPOLY: Charged and Ion-Containing Polymers: Properties

Thursday midday, 11:15 am, Baltimore Convention Center 321

Chair: Alexei Sokolov, University of Akron

11:15AM V24.00001: Morphology Diagrams for Polyelectrolytic Diblock Copolymers
Rajeev Kumar, Murugappan Muthukumar

11:27AM V24.00002: Synthesis, Solution Phase Behavior, and Properties of Ionic/Nonionic Block Copolymers
Mehul Vora, Frank Bates

11:39AM V24.00003: Morphological Origin of Thermomechanical Behavior in Semicrystalline Ethylene/Methacrylic Acid Ionomers
Katsuyuki Wakabayashi, Richard A. Register

11:51AM V24.00004: Influence of Chain Flexibility on the Self-Assembly of Nanoscale Ionic Aggregates in Ionomers.
Nicholas Benetatos, Karen Winey

12:03PM V24.00005: The Effect of Counterions on the Blend Miscibility of Polystyrene with Sulfonated Polystyrene Ionomers
Nancy C. Zhou, Wesley R. Burghardt, Russell J. Composto, Karen I. Winey

12:15PM V24.00006: Viscosity of Aqueous Polyelectrolyte Solutions with Oppositely Charged Surfactant
Matthew Eggert, Ralph Colby

12:27PM V24.00007: Simulations of Volume Phase Transitions in Polyelectrolyte Networks Upon Counterion Exchange
De-Wei Yin, Juan J. de Pablo

12:39PM V24.00008: Electrophoretically Assessing Polyelectrolyte Effective Charge
Alexey Popov, David Hoagland

12:51PM V24.00009: SAXS Determination of the Correlation Length of Semidilute Polyelectrolyte Solutions
Shichen Dou, Ralph H. Colby

1:03PM V24.00010: Phase behavior of semidilute polyelectrolyte mixtures of F-actin and DNA
John Butler, Olena V. Zribi, Gerard C. L. Wong, Ramin Golastanian

1:15PM V24.00011: Counterion correlations in charged macromolecular systems
Arben Jusufi, Yu Mei, Matthias Ballauff

1:27PM V24.00012: Chiral Symmetry Breaking and Elastic Response of Frustrated Polyelectrolyte Bundles
Gregory Grason, Robijn Bruinsma

1:39PM V24.00013: Studies of Glassy Dynamics in Ionomer melts
Monojoy Goswami, Sanat Kumar, Aniket Bhattacharya

Session V25. DPOLY: Polymer Composites - Nanotubes and Nanoclays

Thursday midday, 11:15 am, Baltimore Convention Center 322

Chair: Rick Beyer, Army Research Laboratory (Aberdeen)

Invited Speakers: Dhinojwala

11:15AM V25.00001: Synthetic Gecko Foot-hairs from Multiwalled Carbon Nanotubes
Invited Speaker: Ali Dhinojwala

11:51AM V25.00002: Flow Kills Conductivity of Single Wall Carbon Nanotubes (SWNT) Composites
Sanjiv Bhatt, Christopher Macosko

12:03PM V25.00003: Fabrication and Characterization of Polyamide Nanocomposites Using Functionalized Nanotubes.
Karen I. Winey, M. Moniruzzaman, J. Chattopadhyay, W. E. Billups

12:15PM V25.00004: Electrical, Mechanical, and Morphological Characterization of Carbon Nanotube filled Polymeric Nanofibers
Russell Gorga, Laura Clarke, Seth McCullen, Satyajeet Ojha, Wesley Roberts

12:27PM V25.00005: Thermomechanical Properties of Polystyrene-MWNT Nanocomposites.
Anupa George, Sudeepto Sen, Yuping Xie, Schadler Linda, Sanat Kumar

12:39PM V25.00006: Carbon Nanotube Composites from Modified Plant Oils
Ian McAninch, Richard Wool

12:51PM V25.00007: Carbon Fibers from Chicken Feather Keratin
Melissa E. Miller, Richard Wool

1:03PM V25.00008: Enhanced Dispersion in Polymer Nanocomposites by Optimized Hydrogen Bonding
Mark Dadmun, Asif Rasheed, Phillip Britt, David Geohegan, Ilia Ivanov, Han Gi Chae, Satish Kumar

1:15PM V25.00009: Supercritical CO2 Processing: A Novel Method for Producing Highly Dispersed Clay-Polymer Nanocomposites
Steven Horsch, Esin Gulari, Rangaramanujam Kannan

1:27PM V25.00010: Evidence of re-entrant behavior in polymer-nanoclay systems
Hoseein Baghdadi, Surita Bhatia

1:39PM V25.00011: Organoclay Networking in Polypropylene-Clay Nanocomposites
James Oberhauser, Mark Treece

1:51PM V25.00012: Morphology and Gas Barrier of Polystyrene-Clay Nanocomposites
Sergei Nazarenko, Syed Qutubuddin

2:03PM V25.00013: Rheology of Supercritical CO2 dispersed Polymer/Clay Nanocomposites
Rangaramanujam Kannan, Steven Horsch, Ganapathy Subramanium, Esin Gulari

Session V28. DPOLY: Rheology of Biopolymer Solutions

Thursday midday, 11:15 am, Baltimore Convention Center 325

Chair: Daniel Savin, University of Vermont

11:15AM V28.00001: Massively-parallel fluorescence correlation spectroscopy using a spinning disk confocal microscope
Daniel R. Sisan, Rich Arevalo, Cat Graves, Ryan McAllister, Jeffrey S. Urbach

11:27AM V28.00002: Diffractive Imaging of Single Biomolecules
Nathan Schmidt, Robert Coridan, John Butler, Thomas Angelini, Jian-Min Zuo, Gerard Wong

11:39AM V28.00003: Mechanical Properties of Actin Networks near the Polymerization Transition
Andrew Pomerance, Erin Rericha, Wolfgang Losert

11:51AM V28.00004: Rheological Investigation of Protein Interactions in Synovial Fluid
Rebecca Klossner, Wendy Krause, Ralph Colby

12:03PM V28.00005: Influence of Anti-inflammatory Drugs on the Rheological Properties of Synovial Fluid and Its Components
Wendy E. Krause, Rebecca R. Klossner, Jing Liang, Ralph H. Colby

12:15PM V28.00006: Micromechanics of the pericellular matrix
J. E. Curtis, H. Boehm, C. H. J. Schmitz, J. P. Spatz

12:27PM V28.00007: Microrheology of active actin networks
Travis H. Larsen, Eric M. Furst

12:39PM V28.00008: Filamin cross-linkers as rheology regulators in biopolymer networks
Brian DiDonna, Alex Levine

12:51PM V28.00009: Microrheology of Microtubules ``Networks"
Naama Gal, Craig Mandato, Maria Kilfoil

1:03PM V28.00010: Anisotropic dynamic response of stiff biopolymers
Oskar Hallatschek, Benedikt Obermayer, Erwin Frey, Klaus Kroy

1:15PM V28.00011: Biopolymers in Aqueous Medium: Solvent Forces Explored through Atomistic Dynamics Simulations and Continuum Modeling of Solvent Effects
Sergio A. Hassan

1:27PM V28.00012: Random energy model for heteropolymer sequence design: the role of solvation
Longhua Hu, Alexander Grosberg

1:39PM V28.00013: Recovery and Stiffening -Transition of Hydrogels Formed Via Peptide Self-Assembly
Bulent Ozbas, Karthikan Rajagopal, Joel P. Schneider, Darrin J. Pochan

1:51PM V28.00014: Nanoscale structure and dynamics of colloid-semiflexible polymer solutions
Ji Yeon Huh, Eric M. Furst

2:03PM V28.00015: Relaxation Behavior of Acrylic Triblock Copolymer Gels
Michelle Seitz, Kenneth Shull, Wesley Burghardt

Session V30. DPOLY: Focus Session: Mechanical Properties: Microscale Deformation and Failure

Thursday midday, 11:15 am, Baltimore Convention Center 327

Chair: Gale Holmes, National Institute of Standards and Technology

Invited Speakers: Sue

11:15AM V30.00001: Fundamental Fracture Behavior of Polymer Nanocomposites
Invited Speaker: Hung-Jue Sue

11:51AM V30.00002: Adhesion at Entangled Polymer Interfaces: A Unified Approach..
Richard Wool

12:03PM V30.00003: Effect of entanglement density on mechanical properties of glassy polymers
Robert Hoy, Mark Robbins

12:15PM V30.00004: Entanglement Effects in Plastic Deformation of Filled Linear Polymer Glasses
Cameron Abrams, David Richardson

12:27PM V30.00005: Nanoparticles alignment, exclusion and entrapment during failure of Glassy Polymer Nanocomposite
Jong-Young Lee, Qingling Zhang, Todd Emrick, Alfred Crosby

12:39PM V30.00006: Crazing in Glassy Polymer Nanocomposites
Jong-Young Lee, Qingling Zhang, Todd Emrick, Alfred Crosby

12:51PM V30.00007: Tensile Modulus Measurements of Carbon Nanotube Incorporated Electrospun Polymer Fibers
Yavuz Ozturk, JaeMin Kim, Kwanwoo Shin

1:03PM V30.00008: Rate-dependent Mechanical Deformation Behavior of POSS-filled and Plasticized Poly(vinyl chloride).
Sharon Soong, Robert Cohen, Mary Boyce

1:15PM V30.00009: Tensile Properties and Hysteresis Behavior of Graft Copolymers with Complex Molecular Architecture
R. Weidisch, U. Staudinger, Y. Zhu, S.P. Gido, D. Uhrig, J.W. Mays, N. Hadjichristidis, H. Iatrou

1:27PM V30.00010: Structure and Tensile mechanical properties of poly(ester urethane) materials.
Marilyn Hawley, Robert Houlton, Philip Rae, E. Bruce Orler, Debra Wrobleski

1:39PM V30.00011: Identification of key deformation mechanisms of polyethylene materials via in-situ x-ray scattering
Theresa Hermel-Davidock, Willem DeGroot, Mehmet Demirors, Brian Landes, Rajen Patel, Tracy Peltier

1:51PM V30.00012: Microindentation Studies in Polymers at Very Low Crystallinities
Francisco Balta-Calleja, Araceli Flores

2:03PM V30.00013: Effect of crystalline organization on toughness.
Laurent Corte, Ludwik Leibler

Session W4. DPOLY: Carbon Nanotube Dispersions

Thursday afternoon, 2:30 pm, Baltimore Convention Center 308

Chair: Ramanan Krishnamoorti, University of Houston

Invited Speakers: Hobbie, Pasquali, Poulin, Windle, Winey

2:30PM W4.00001: From Networks to Nematics -- Carbon Nanotubes as Soft Matter
Invited Speaker: Erik K. Hobbie

3:06PM W4.00002: Single-walled carbon nanotubes in strong acids: controlling solubility and the liquid crystal phase.
Invited Speaker: Matteo Pasquali

3:42PM W4.00003: Phase Behavior of Carbon Nanotube Suspensions
Invited Speaker: Philippe Poulin

4:18PM W4.00004: Carbon Nanotube Suspensions: some underlying issues
Invited Speaker: Alan Windle

4:54PM W4.00005: Processes for Dispersing Single Wall Carbon Nanotubes in Polymers and How to Determine Their Spatial and Alignment Distributions.
Invited Speaker: Karen I. Winey

Session W7. DBP DPOLY: Physics of Cell Elasticity, Interactions and Tissue Formation

Thursday afternoon, 2:30 pm, Baltimore Convention Center 307

Chair: Philip Nelson, University of Pennsylvania

Invited Speakers: Riveline, Bruinsma, Janmey, Safran, Suresh

2:30PM W7.00001: Nucleation and growth of cell contacts
Invited Speaker: Daniel Riveline

3:06PM W7.00002: Integrin activation and cell adhesion by mechanical forces
Invited Speaker: Robijn Bruinsma

3:42PM W7.00003: Cell morphologies depend on substrate rigidity.
Invited Speaker: Paul Janmey

4:18PM W7.00004: Physics of adhesion and elasticity of biological cells
Invited Speaker: S.A. Safran

4:54PM W7.00005: Cell mechanics and human disease states
Invited Speaker: Subra Suresh

Session W24. DPOLY: Focus Session: Lithography

Thursday afternoon, 2:30 pm, Baltimore Convention Center 321

Chair: Ronald Jones, National Institute of Standards and Technology

Invited Speakers: Soles, Jonas

2:30PM W24.00001: Nanoimprint Lithography: Process Induced Stresses and Pattern Stability
Invited Speaker: Christopher Soles

3:06PM W24.00002: Nanometer-scale control of the crystallization of oligomers and polymers.
Invited Speaker: Alain M. Jonas

3:42PM W24.00003: UV Polarizer Fabricated by Diblock Copolymer Lithography
Koji Asakawa, Vincent Pelletier, Mingshaw Wu, Douglas H. Adamson, Richard A. Register, Paul M. Chaikin

3:54PM W24.00004: Simple Analytic Model for Nanowire Array Polarizers
Vincent Pelletier, Koji Asakawa, Mingshaw Wu, Richard Register, Paul Chaikin

4:06PM W24.00005: Robust Nanopatterns from Self-Assembly of a Diblock Copolymer and an Inorganic Precursor
Ho-Cheol Kim, Linnea Sundstrom, Leslie Krupp, Eugene Delenia, Charles Rettner, Martha Sanchez, Mark Hart, Ying Zhang

4:18PM W24.00006: Fabrication of inorganic photonic crystals from interference lithography
Jun Hyuk Moon, Shu Yang

4:30PM W24.00007: Effects on Low Voltage Electron Beam Lithography
Mehdi Bolorizadeh, David C. Joy

4:42PM W24.00008: Hierarchical Organization of Nanoparticle Composites through Nano-Imprinting
Azar Alizadeh, Chris Keimel, Kenneth Conway, Andrea Peters

4:54PM W24.00009: Mesoscale Simulation of the Lithography Process
Grant Willson, Gerard Schmid, Jason Meiring

5:06PM W24.00010: New Directions in 3-D Multiphoton Lithography.
John Fourkas, Christopher LaFratta, Richard Farrer, Linjie Li, Michael Naughton

5:18PM W24.00011: High efficient LEDs having columnar structure surface fabricated by block copolymer lithography
Akira Fujimoto, Koji Asakawa

Session W25. DPOLY: Gels and Networks

Thursday afternoon, 2:30 pm, Baltimore Convention Center 322

Chair: Vijay Tirumala, National Institute of Standards and Technology

2:30PM W25.00001: Tunable and Reversible Swelling of a p(tBA)-b-p(HEMA-co-DMAEMA) Block Copolymer
Kyle Guice, Yueh-Lin Loo

2:42PM W25.00002: Highly Responsive Self-Assembled Gels from Triblock Copolymers in Liquid Crystal Solvent
Neal Scruggs, Rafael Verduzco, Julia Kornfield

2:54PM W25.00003: Nanoparticle-reinforced associative PLA-PEO-PLA hydrogels
Sarvesh Agrawal, Naomi Sanabria-Delong, Surita Bhatia, Gregory Tew

3:06PM W25.00004: Controlling the Self-Assembly of ABCBA Pentablock Copolymer Gels in Water Solution by the Hydrophobic Effect
Joshua Anderson, Alex Travesset

3:18PM W25.00005: PEO Hydrogels Prepared by End-linking with PAMAM Dendrimers
Burcu Unal, Ronald C. Hedden

3:30PM W25.00006: Probe diffusion in polymer solutions and hydrogels using fluorescence correlation spectroscopy
Ariel Michelman-Ribeiro, Hacene Boukari, Ferenc Horkay, Ralph Nossal

3:42PM W25.00007: Large-strain deformation and fracture of tough hydrogels
Rebecca Webber, Guillaume Miquelard, Costantino Creton, Jian Ping Gong

3:54PM W25.00008: Rheological behavior of Slide Ring Gels.
Vivek Sharma, Jong Seung Park, Jung O. Park, Mohan Srinivasarao

4:06PM W25.00009: Mechanical and swelling properties of PDMS interpenetrating polymer networks
Claude Cohen, Seong Hyun Yoo

4:18PM W25.00010: Generation of Oriented Buckling Patterns by Modulation of Local Elastic Moduli
Edwin Chan, Alfred Crosby

4:30PM W25.00011: Melting Point Depression of Small Molecules in Cross-linked and Uncross-linked Polyisoprene: Deviations from Flory-Huggins Theory
Qian Qin, Gregory McKenna

4:42PM W25.00012: Elastic Fluctuations and Rubber Elasticity
Xiangjun Xing, Paul Goldbart, Leo Rradzihovsky

4:54PM W25.00013: Developing a lattice spring model to simulate the behavior of polymer gels
Victor Yashin, Anna Balazs

5:06PM W25.00014: MD simulations of chemically reacting networks: analysis of permanent set
Dana Rottach, John Curro, Joanne Budzien, Gary Grest, Aidan Thompson

5:18PM W25.00015: A Gaussian Slip-Link Model for Polymer Single and Double Networks
Jay D. Schieber, Mahnaz Eskandari, Hamid Arastoopour

Session W28. DPOLY DMP: Focus Session: Ordered Optoelectronic Organics

Thursday afternoon, 2:30 pm, Baltimore Convention Center 325

Chair: Howard Katz, Johns Hopkins University

2:30PM W28.00001: The phase diagram of the organic charge transfer salts (TMTTF)2X
F. Zhang, W. Yu, B. Alavi, A. Baur, C. A. Merlic, S. E. Brown

2:42PM W28.00002: Intermolecular bonding in conjugated polymers: The effect on aggregate morphology.
Jeremy Schmit, Alex Levine

2:54PM W28.00003: Effects of polymer side chains on the self-assembling of conjugated polymer in thin film
Yunfei Jiang, Yiqing Wang, Uvw H. F. Bunz, Dvora Perahia

3:06PM W28.00004: Chain morphologies in semi-crystalline polyfluorene: evidence from Raman scattering
S. Guha, C. Volz, M. Arif

3:18PM W28.00005: Structural Changes in Phthalocyanine Thin Films from Analyte Vapor Exposure
Thomas Gredig, Ge Liu, Corneliu N. Colesniuc, Forest I. Bohrer, Andrew C. Kummel, Ivan K. Schuller

3:30PM W28.00006: Electronic Structure of Potassium-doped Magnesium Phthalocyanine measured using Soft X-ray Spectroscopies.
Yufeng Zhang, Shancai Wang, Leyla Colerkerol, Timothy Learmonth, Lukasz Plukinski, Kevin Smith, James Downes, Anne Matsuura

3:42PM W28.00007: Polaron transport in triphenylene-based discotic liquid crystals
Volodimyr Duzhko, Alexander N. Semyonov, Robert J. Twieg, Kenneth D. Singer

3:54PM W28.00008: Atomic Force Microscope-Based Surface Potential and Surface Photovoltage Studies of Porphyrin Nanorod Thin Films
Todd Holden, Walter Smith, A.D. Schwab, J.C. de Paula

4:06PM W28.00009: Holographic liquid crystal photonic materials stabilized with monoacrylate LC monomer.
Augustine Urbas, Eric Beckel, Vincent Tondiglia, Lalgudi Natarajan, Timothy Bunning

4:18PM W28.00010: Electrooptic Properties of Holographic Polymer-Stabilized Cholesteric Liquid Crystals
Eric Beckel, Melissa Ingram, Lalgudi Natarajan, Vincent Tondiglia, Richard Sutherland, Timothy Bunning

4:30PM W28.00011: High Refractive Index Poly(thiophene) for Organic 3-D Photonic Crystals with a Complete Photonic Band Gap
Matthew J. Graham, Shi Jin, Frank W. Harris, Stephen Z.D. Cheng

4:42PM W28.00012: Universal Distribution of Random Lasing Thresholds in Polymer Films
Abdullah Tulek, Valy Vardeny, Mikhail Raikh

4:54PM W28.00013: Thermopower of Pentacene Thin-film Transistors
Daniel Lenski, Alexandra Curtin, M.S. Fuhrer

5:06PM W28.00014: In-Situ Measurements of Organic Electronic Devices Fabricated via Transfer Printing on Flexible Substrates
Andrew Tunnell, Daniel R. Hines, Vince W. Ballarotto, Mihaela Breban, Ellen D. Williams

Session W30. DPOLY DBP: Focus Session: Biopolymers at Interfaces

Thursday afternoon, 2:30 pm, Baltimore Convention Center 325

Chair: Darrin Pochan, University of Delaware

Invited Speakers: Ober

2:30PM W30.00001: Studies in Biological-Materials Interfaces.
Invited Speaker: Christopher Ober

3:06PM W30.00002: Universality Classes and Unusual Thermodynamics of Unbinding Transitions of Semi-flexible Polymers Confined to a Surface
Leonardo Golubovic, Lianghui Gao

3:18PM W30.00003: Polymer confinement and bacterial gliding motility
Junhwan Jeon, Andrey Dobrynin

3:30PM W30.00004: Direct Observation of Biaxial Confinement of a Semi-flexible Filament in a Channel
M.C. Choi

3:42PM W30.00005: Conformation of Lysozymes Confined to nano Particles
Yuying Wei, R. Kenneth Marcus, Dvora Perahia

3:54PM W30.00006: Interaction forces and surface morphology of microtubule-associated protein tau
Kenneth Rosenberg, Jennifer Ross, Eric Feinstein, Stuart Feinstein, Jacob Israelachvili

4:06PM W30.00007: Surface Plasmon Resonance Studies of Polysaccharide Self-Assembly on Cellulose
Abdulaziz Kaya, Alan R. Esker, Wolfgang G. Glasser

4:18PM W30.00008: Assembly artificial proteins and conjugated porphyrins for biomolecular materials
Ting Xu, Joe Strzalka, Shixin Ye, Sophia Wu, Jiayu Wang, Thomas P. Russell, Michael Therien, J. Kent Blasie

4:30PM W30.00009: Structural Transitions of F-actin Polyelectrolyte Bundles in the Presence of Strongly Size-mismatched Cations
Robert Coridan, Lori K. Sanders, Wujing Xian, Gerard C. L. Wong

4:42PM W30.00010: Defect Induced Morphologies of Biopolymer Bundles
Ajay Gopinathan, Mark Henle, Uri Raviv, Daniel Needleman

4:54PM W30.00011: Polyamine Induced Bundling of F-actin
Glenna Z. Sowa, David S. Cannell, Emil Reisler, Andrea J. Liu

5:06PM W30.00012: The fluctuating-rod limit of semiflexible biopolymers
Ashok Prasad, Yukoh Hori, Jané Kondev

5:18PM W30.00013: Statistical and Mechanical Properties of Semiflexible Polymers in an External Field
Ya Liu, Bulbul Chakraborty

Session Y24. DPOLY: Polymer Melts & Solutions: Structure & Solubility

Friday morning, 8:00 am, Baltimore Convention Center 321

Chair: Ferenc Horkay, National Institutes of Health

8:00AM Y24.00001: Why Good Solvents Are Seldom All That Good
S. T. Milner, M.-D. Lacasse, W. W. Graessley

8:12AM Y24.00002: Re-examination of the slow mode in semidilute solutions
Chi Wu

8:24AM Y24.00003: On Fluctuations in Polymer Systems: Field Theoretic Simulations
Kirill Katsov, Erin Lennon, Glenn Fredrickson

8:36AM Y24.00004: Molecular Dynamics Simulations of a Dendritic Polyelectrolyte with Flexible Spacers in Salt-free Solution
Qi Liao, Yong Lin, Xigao Jin, Charles C. Han

8:48AM Y24.00005: Solution and Melt Rheology of Polypropylene Comb and Star Polymers
Arnav Ghosh, Ralph H. Colby, Jeffrey M. Rose, Anna E. Cherian, Geoffrey W. Coates

9:00AM Y24.00006: Watching nucleation and growth of chain disentanglement in large-amplitude oscillatory shear of entangled polymer solutions
P. Tapadia, A. Philips, Shi-Qing Wang

9:12AM Y24.00007: Anomalous Sorption of Carbon Dioxide in Polymer Thin Films
Xiaochu Wang, Isaac Sanchez

9:24AM Y24.00008: Gas Diffusion in Polyethylene Terepthalate By Molecular Dynamics
Simon Butler, David Adolf

9:36AM Y24.00009: Overcoming the difficulty in performing large step-strain experiments: A first reliable comparison with Doi-Edwards tube model
Paula X. Wang, Shi-Qing Wang

9:48AM Y24.00010: Simulations of the dynamics of polymer solutions in unidirectional flows
Berk Usta, Jason Butler, Tony Ladd

10:00AM Y24.00011: Heat Capacity of Liquid Poly(vinyl methyl ether) With and Without Water
Marek Pyda, B. Wunderlich, K. Van Durme, B. Van Mele

10:12AM Y24.00012: Thermodynamically Constrained Inverse Monte Carlo Determination of Effective Pair Interactions
Henry Ashbaugh, Lu Yang, Shekhar Garde, Sanat Kumar

10:24AM Y24.00013: Equivalence of particle and field representation of coarse-grained polymer models
Kirill Titievsky, Kenneth Beers

10:36AM Y24.00014: Coarse-graining and dynamics of complex macromolecular liquids: melts and blends
Marina Guenza

10:48AM Y24.00015: Kac-Dirac propagators modeling crossover between entangled and unentangled conformations in polymer melts
Yitzhak Shnidman

Session Y25. DPOLY: Charged and Ion-Containing Polymers: Computation

Friday morning, 8:00 am, Baltimore Convention Center 322

Chair: Cameron Abrams, Drexel University

8:00AM Y25.00001: A New Necklace Model
Andrey Dobrynin, Michael Rubinstein, Qi Liao

8:12AM Y25.00002: Electrostatic Complexation between Membrane and Colloid
Jiafang Wang, M. Muthukumar

8:24AM Y25.00003: Molecular Dynamics Simulations of Multilayer Polyelectrolyte Films
Pritesh Patel, Junhwan Jeon, Patrick Mather, Andrey Dobrynin

8:36AM Y25.00004: Langevin dynamics simulations of dsDNA translocation through synthetic nanopores
Christopher Forrey, Murugappan Muthukumar

8:48AM Y25.00005: Modeling Layer-by-Layer Assembly of Flexible Polyelectrolytes
Qiang Wang

9:00AM Y25.00006: Tethered Polyelectrolytes under the Action of an Electric Field: A Molecular Dynamics Study
Martin M. Bertrand, Gary W. Slater

9:12AM Y25.00007: Simulations of comb polyelectrolytes
Zhaoyang Ou, M. Muthukumar

9:24AM Y25.00008: Spanning the gap between strong and weak-coupling electrostatics for charged rods
Christian Santangelo

9:36AM Y25.00009: Electrostatic attraction between cationic-anionic assemblies with surface compositional heterogeneities
Yury Velichko, Monica Olvera de la Cruz

9:48AM Y25.00010: Relevance of Solvent Characteristics on Ion-Binding and the Structure Formation of Neutral Polymers in Electrolyte Solutions
Ilhem Faiza Hakem, Michael Bockstaller

10:00AM Y25.00011: A Model Polyelectrolyte System with Hierarchical Self-Assembly: How important is counterion valency?
Mehmet Sayar, Christian Holm

10:12AM Y25.00012: Conformational Properties and Phase Behavior of Mixed Brushes between Charged and Neutral Polymers: SCF Modeling Using the Edwards Hamiltonian Approach
Kevin Witte, Sangtae Kim, You-Yeon Won

10:24AM Y25.00013: Electrostatic Origin of Single-Stranded Genome Packing in Viruses
Vladimir Belyi, M. Muthukumar

10:36AM Y25.00014: Regimes of Conformational Transitions of Diblock Polyampholytes
Zuowei Wang, Michael Rubinstein

10:48AM Y25.00015: Polyelectrolyte condensation by linear molecules of variable length: a grand-canonical Monte Carlo study
Camilo Guaqueta, Erik Luijten

Session Y28. DPOLY DMP: Focus Session: Magnetic and Doping Effects in Conjugated Organics

Friday morning, 8:00 am, Baltimore Convention Center 325

Chair: Maria Nikolou, Cornell University

8:00AM Y28.00001: Anomalous Magnetoresistance Phenomena in Organic Semiconductors
Jeremy D. Bergeson, Derek M. Lincoln, Ruth Shima Edelstein, Vladimir N. Prigodin, Arthur J. Epstein

8:12AM Y28.00002: Preparation, Magnetism, and Applications of Thin Films of the Organic Semiconductor V[TCNE]x~2
R. Shima Edelstein, D.M. Lincoln, J.-W. Yoo, N.P. Raju, J.D. Bergeson, A.J. Epstein, J.B. Kortright

8:24AM Y28.00003: Magnetoresistance and Ferrimagnetic Resonance (FMR) on Thin Films of Organic-based Magnetic Semiconductor V[TCNE]x~2 with Tc above 350 K.
N.P. Raju, R. Shima Edelstein, A.J. Epstein

8:36AM Y28.00004: Studies of spin transport in organic spin-valves
Fujian Wang, Cungeng Yang, Jing Shi, Z. Valy Vardeny

8:48AM Y28.00005: Semiconducting Organic Thin Film Devices with Large Magnetoresistance
Y. Sheng, Ö. Mermer, G. Veeraraghavan, T.D. Nguyen, T.L. Francis, M. Wohlgenannt

9:00AM Y28.00006: The Role of Spin Relaxation in ODMR Measurements
C. Yang, E. Ehrenfreund, Z.V. Vardeny

9:12AM Y28.00007: Structure-property relationships of water-dispersible, conductive PANI-PAMPSA
Joung Eun Yoo, Kwang Seok Lee, James Norman, Matthew Espe, Yueh-Lin Loo

9:24AM Y28.00008: The Optical Conductivity and Dielectric Constant of Polyaniline Nanofiber-based Film
Oludurotimi O. Adetunji, Nan-Rong Chiou, Arthur J. Epstein

9:36AM Y28.00009: Charge transport in conducting polymer nanofibers
Natalya Zimbovskaya

9:48AM Y28.00010: Effects of confinement on the transport properties of CSA doped polyaniline
Raul Perez, Neliza Leon, Idalia Ramos, Nicholas Pinto, Pawan Kahol

10:00AM Y28.00011: Gas sensing using the microwave conductivity of conducting polymer nanofiber thin films.
Alexey Kovalev, Lintao Cai, Theresa Mayer

10:12AM Y28.00012: Anomalous transmission through a periodic subwavelength hole array in heavily doped conducting polymer films
Tatsunosuke Matsui, Z. Valy Vardeny, Amit Agrawal, Ajay Nahata, Reghu Menon

Session Y29. DBP DPOLY: Focus Session: Noise and Fluctuation in Biological Systems

Friday morning, 8:00 am, Baltimore Convention Center 326

Chair: Peter Jung, Ohio University

Invited Speakers: van Oudenaarden, de Gennes

8:00AM Y29.00001: How stability can lead to variability: An example from eukaryotic gene expression
Gabor Balazsi, William Blake, Farren Isaacs, Kevin Murphy, James J. Collins

8:12AM Y29.00002: How stability can lead to variability: Induction timecourse of a eukaryotic gene
William Blake, Gabor Balazsi, Farren Isaacs, Kevin Murphy, Yina Kuang, David R. Walt, James J. Collins

8:24AM Y29.00003: Origins of extrinsic variability in eukaryotic gene expression
Dmitri Volfson, Jennifer Marciniak, William J. Blake, Natalie Ostroff, Lev S. Tsimring, Jeff Hasty

8:36AM Y29.00004: Noisy cellular decision-making: from temporal to spatial choices
Invited Speaker: Alexander van Oudenaarden

9:12AM Y29.00005: Absolute Rate Theories of Epigenetic Stability
Aleksandra M. Walczak, Jose N. Onuchic, Peter G. Wolynes

9:24AM Y29.00006: Noise and correlations in genes silenced by small RNA.
Terence Hwa, Erel Levine

9:36AM Y29.00007: A model for codon position bias in RNA editing
Ralf Bundschuh, Tsunglin Liu

9:48AM Y29.00008: From Asymmetric Exclusion Processes to Protein Synthesis
Jiajia Dong, Beate Schmittmann, Royce K.P. Zia

10:00AM Y29.00009: Intrinsic Fluctuations, Robustness and Tunability in Signaling Cycles.
Joseph Levine, Hao Yuan Kueh, Leonid Mirny

10:12AM Y29.00010: The Nature of Memory Objects in the Brain
Invited Speaker: Pierre-Gilles de Gennes

10:48AM Y29.00011: Resource allocation in neural networks for motor control
J. Milton, J. Cummins, J. Gunnoe, M. Tollefson, J.L. Cabrera, T. Ohira

Session Y30. DPOLY DBP: Focus Session: Biopolymers I: Phase Transitions

Friday morning, 8:00 am, Baltimore Convention Center 327

Chair: Jose Onuchic, University of California, San Diego

Invited Speakers: Garcia, Onuchic

8:00AM Y30.00001: Temperature and Pressure effects on folding/unfolding of proteins
Invited Speaker: Angel Garcia

8:36AM Y30.00002: The energy landscape for folding and function
Invited Speaker: Jose Onuchic

9:12AM Y30.00003: RNA folding inside a virus capsid and dimensional reduction.
Rouzbeh Ghafouri, Robijn Bruinsma, Joseph Rudnick

9:24AM Y30.00004: On the Melting Transition of RNA
David Schwab, Robijn Bruinsma

9:36AM Y30.00005: Trapping and Condensing DNA at the Air/Water Interface
Jaime Ruiz-Garcia

9:48AM Y30.00006: Insight into the Helix-to-Coil Transition in DNA
Boualem Hammouda

10:00AM Y30.00007: Diffusion of Isolated DNA molecules: dependence on length and topology
Rae M. Robertson, Stephan Laib, Douglas E. Smith

10:12AM Y30.00008: Mobility of DNA on supported lipid bilayers
Chakradhar Padala, Richard Cole, Sanat Kumar, Ravi Kane

10:24AM Y30.00009: Electrophoresis of DNA on a disordered two-dimensional substrate
Cynthia J. Olson Reichhardt, Charles Reichhardt

10:36AM Y30.00010: Kinetic Modeling of Designed Signaling DNA Aptamers
Issei Nakamura, Razvan Nutiu, Jasmine Yu, Yingfu Li, An-Chang Shi

10:48AM Y30.00011: AFM Imaging of Counterion-Induced Phase Transition of Biological Polyelectrolyte Network on a Photopolymer Containing Azo-Dye
Taiji Ikawa, Osamu Watanabe, Youli Li, Cyrus Safinya

Session Z4. DPOLY DBP: Biopolymers

Friday midday, 11:15 am, Baltimore Convention Center 308

Chair: Rangaramanujam Kannan, Wayne State University

Invited Speakers: Vogel, Sheetz, Perkins, Greer, Horkay

11:15AM Z4.00001: Bonds that strengthen under force
Invited Speaker: Viola Vogel

11:51AM Z4.00002: Cellular Force, and Geometry Sensing (Over Time) Can Detect Matrix Rigidity: Local Modules Produce Global Signals
Invited Speaker: Michael Sheetz

12:27PM Z4.00003: Looking for steps of individual enzymes moving along DNA
Invited Speaker: Thomas Perkins

1:03PM Z4.00004: Thermodynamics and Structure of Polymerizing Actin
Invited Speaker: Sandra Greer

1:39PM Z4.00005: Synthetic and Biopolymer Gels
Invited Speaker: Ferenc Horkay

Session Z24. DPOLY: Polymer Melts & Solutions: Rheology & Dynamics

Friday midday, 11:15 am, Baltimore Convention Center 321

Chair: Yonathan Thio, Georgia Tech

11:15AM Z24.00001: Predicting the Positions and Breadths of the Glass Transitions in Polymer-Diluent Mixtures
J.E.G. Lipson, S.T. Milner

11:27AM Z24.00002: A Novel Technique to Measure Enthalpy Recovery for Polymer Glasses Subsequent to Temperature and Plasticizer Concentration Jumps.
Lameck Banda, Mataz Alcoutlabi, Gregory McKenna

11:39AM Z24.00003: Glass Transition Temperature of Polyetherimide: Relationship between Thin Films and Nanoporous Materials
Rahmi Ozisik, Tong Liu, Richard W. Siegel

11:51AM Z24.00004: Dynamics of Polyethylene, Studied by Monte-Carlo Simulations
E. von Meerwall, H. Lin, W.L. Mattice

12:03PM Z24.00005: Molecular dynamics studies of slow relaxation phenomena in glassy polymeric systems.
Sanat Kumar, Sergei Shenogin, Arun Yethiraj, Jack F. Douglas

12:15PM Z24.00006: On the determination of primitive paths in entangled polymer melts and networks
Michael Lang, Michael Rubinstein

12:27PM Z24.00007: Properties of Well-Defined Elastomeric Poly(alkylnorbornene)s and Their Hydrogenated Derivatives
Richard Register, John Hatjopoulos, John Bishop

12:39PM Z24.00008: The viscoelastic properties of ultrathin polymer films as measured with a novel nanobubble inflation technique
Paul OConnell, Gregory McKenna

12:51PM Z24.00009: Viscoelastic Properties of Metathesis Synthesized Linear and Cyclic Macromolecules
Jian Wang, Gregory McKenna, Irina Gorodetskaya, Robert Grubbs

1:03PM Z24.00010: Observation of high viscous stress of oriented polyolefin under uniaxial tensile
Qiang Fu, Bing Na, Hao Zou, Ke Wang, Qin Zhang, Charles C. Han

1:15PM Z24.00011: Probing the breakdown of chain entanglement in simple shear: The effect of molecular weight distribution
Pouyan Boukany, Shi-Qing Wang

1:27PM Z24.00012: Short-Range Helical Ordering of Isotactic Vinyl Polymers in the Liquid State
John G. Curro, A. Habenschuss, Gustavo A. Carri

1:39PM Z24.00013: Concurrent Physical Aging and Polymer Degradation during Weathering of Coatings
Stuart Croll, Dilhan Fernando

1:51PM Z24.00014: Scaling of critical properties for dendritic polymers
Athanassios Panagiotopoulos

2:03PM Z24.00015: Statics and Dynamics in model Dendrimer Melts
Kostas Karatasos

Session Z25. DPOLY: Molecular Dynamics: Theory and Simulation

Friday midday, 11:15 am, Baltimore Convention Center 322

Chair: Eric Cochran, Iowa State University

11:15AM Z25.00001: Computational Methods for Enhanced Conformational Kinetics
Ioan Andricioaei

11:27AM Z25.00002: Application of a Semi-Grand Canonical Monte Carlo (SGMC) Method for the Simulation of Non-Equilibrium Systems
Frederick Bernardin, Gregory Rutledge

11:39AM Z25.00003: Multiscale modeling of polystyrene dynamics in different environments
Roland Faller, Qi Sun, Florence Pon

11:51AM Z25.00004: Multiscale simulation of polyethylene in bulk
Zhongyuan Lu, Zhaoyan Sun, Lijia An, Charles C. Han

12:03PM Z25.00005: Polymer dynamics within a harmonic confinement potential
Jeremy Schmit, Joshua Martin, Bulbul Chakraborty, Jané Kondev

12:15PM Z25.00006: Monte Carlo simulations of polymer translocation through a nanopore
Tapio Ala-Nissila, Kaifu Luo, Ilkka Huopaniemi, See-Chen Ying

12:27PM Z25.00007: Calculating probability distributions for knot sizes and locations
Peter Virnau, Yacov Kantor, Mehran Kardar

12:39PM Z25.00008: The Role of Quenched Randomness in the Stereochemical Sequences of Atactic Vinyl Polymers ~
Numan Waheed, Wayne L. Mattice

12:51PM Z25.00009: Friction between Polymer Brushes
Jeffrey Sokoloff

1:03PM Z25.00010: Effects of Confinement on Tethered Chains
John McCoy, Titus Ispirescu, John Curro

1:15PM Z25.00011: Mixtures of Monomer and Dimer Square-well Fluids
James Porter, Jane Lipson

1:27PM Z25.00012: Field-Theoretic Models for Supramolecular Polymers
Edward Feng, Won Bo Lee, Glenn Fredrickson

1:39PM Z25.00013: Hybrid Two-Chain Simulation and Integral Equation Theory: Application to Polyethylene Liquids
Huimin Li, David T. Wu, John G. Curro, John D. McCoy

1:51PM Z25.00014: Phase coherence in LDOT diblock copolymer films
Kwanwoo Shin, Junhan Cho, Kwangsoo Cho, Ji Hyuk Kim, Sushil K. Satija, Du Yeol Ryu, Jin Kon Kim

2:03PM Z25.00015: Relation between cyclization of polymers with different initial conditions
Chuck Yeung, Barry Friedman

Special DPOLY Events

Sunday March 12, 2006

DPOLY Reception, time and location TBD - check your email

This DPOLY reception recognizes Ludwik Leibler (recipient of the 2006 Polymer Physics Prize) and Kenji Urayama (recipient of the 2006 Dillon Medal).

Tuesday March 14, 2006

DPOLY Business Meeting, Room 315, Baltimore Convention Center, 5:30 – 6:30 pm

Award Lectures

Polymer Physics Prize, Ludwik Leibler,

On nanostructured dispersions and toughness of semi-crystalline polymers
8:00 am, Tuesday March 14, 2006, Room 308, Baltimore Convention Center

Padden Prize Symposium,

11:15 am, Tuesday March 14, 2006, Room 327, Baltimore Convention Center

Dillon Medal, Kenji Urayama,

Stimuli Responses of Topology-Controlled Polymer Networks and Liquid Crystalline Gels
2:30 pm, Tuesday March 14, 2006, Room 315, Baltimore Convention Center

Edward A. Bouchet Award, Angel Garcia,

Temperature and Pressure effects on folding/unfolding of proteins
8:00 am, Friday March 17, 2006, Room 326, Baltimore Convention Center

Beller Lectureship, Pierre-Gilles de Gennes,

The Nature of Memory Objects in the Brain
10:12 am, Friday March 17, 2006, Room 326, Baltimore Convention Center