

**2007 Fall NATIONAL ACS MEETING
Boston (Aug. 19-23, 2007)**

Program Meeting Chair: [Christine Landry-Coltrain](#)

Deadline for Abstracts and Polymer Preprints: April 2, 2007.*

***for general papers and some symposia (some symposium organizers may set an earlier deadline).**

Also note: THIS IS THE MONDAY JUST AFTER THE CHICAGO ACS MEETING.

ACS-wide Thematic Programming

Overall Theme: Biotechnology for Health and Wellness. Sub-themes: Material Innovations: from Nanotech to Biotech and Beyond; Nutritional Genomics; Chemistry of Systems Biology.

Metal-Containing and Metallo-Supramolecular Polymers and Materials

U. S. Schubert, Laboratory of Macromolecular Chemistry and Nanoscience, Eindhoven University of Technology and Dutch Polymer Institute (DPI), P.O. Box 513, Eindhoven, 5600 MB, Netherlands, +31 40 247 4083, fax +31 40 247 4186, e-mail: u.s.schubert@tue.nl ; I. Manners, Department of Chemistry, University of Toronto, 80 St. George Street, Toronto, ON M5S 3H6, Canada, 416-978-6157, fax 416-978-6157, e-mail: imanners@chem.utoronto.ca ; G. R. Newkome, Departments of Chemistry and Polymer Science, The University of Akron, Akron, OH 44325-4717, 330-972-6458, fax 330-972-2413, e-mail: newkome@uakron.edu.

Polymer Science of Everyday Things

David Bott, The High House, EotR Solutions, High Street, Inkberrow, Worcestershire WR7 4DT United Kingdom, Phone: 44 7802 788435, david@eotr-solutions.com; K. J. Wynne, Department of Chemical and Life Science Engineering, Virginia Commonwealth University, 601 West Main Street, Richmond, VA 23284, 804-828-9303, e-mail: kjwynne@vcu.edu; A. B. Salamone, Rochal Industries, 740 NW 6th St., Boca Raton, FL 33432, 561-866-0930, e-mail: ABSalamone@aol.com; Kenneth J. Wynne, Department of Chemical and Life Science Engineering, Virginia Commonwealth University, 601 West Main Street, Richmond, VA 23284, Phone: 804-828-9303, kjwynne@vcu.edu.

Polymers and Liquid Crystals

D. L. Gin, Department of Chemistry & Biochemistry and Department of Chemical and Biological Engineering, University of Colorado, Boulder, CO 80309, 303-492-7640, fax 303-492-8595, e-mail: gin@spot.colorado.edu ; C. A. Guymon, Department of Chemical and Biochemical Engineering, University of Iowa, Seamans Center 4125, Iowa City, IA 52242, 319-335-5015, fax 319-335-1415, e-mail: cguymon@engineering.uiowa.edu.

Polymer Design for Foods and Nutrition Co-sponsored with AGFD

T. E. Long, Department of Chemistry, Virginia Polytechnic Institute and State University, Blacksburg, VA 24061-0212, (540)231-2480, fax 540-231-8517, e-mail: telong@vt.edu; Craig D. Thatcher, Department of Large Animal Clinical Sciences, Virginia-Maryland Regional College of Veterinary Medicine, Blacksburg, VA 24061, cthatc@vt.edu, Phone: 540-231-6041.

Conjugated Polymer Materials and Hybrids: Synthesis, Macromolecular Assemblies, and Nanostructures

Rigoberto Advincula Department of Chemistry and Department of Chemical Engineering, University of Houston, 136 Fleming Bldg., Houston, TX 77204-5003, (713) 743-1760, Fax: 713-743-1755, radvincula@uh.edu.

Polymers from Renewable Resources

Marc A. Hillmyer, Department of Chemistry, University of Minnesota, 207 Pleasant St. SE, Minneapolis, MN 55455, Phone: 612-625-7834, hillmyer@chem.umn.edu; Geoffrey W. Coates, Department of Chemistry and Chemical Biology, Cornell University, Baker Laboratory, Ithaca, NY 14853, Phone: 607-255-5447, gc39@cornell.edu.

Synthetic and Biological Macromolecules for Emerging Nanotechnologies

Stephen J. Clarson, Professor of Chemical and Materials Engineering; 601B ERC, University of Cincinnati, Cincinnati, OH 45221-0012; Tel: 513-556-5430; Email: Stephen.Clarson@UC.Edu.

Imaging Techniques for the Characterization of Polymers and Polymer-Derived Materials

Marcus T. Cicerone, Polymers Division, National Institute of Standards and Technology, 100 Bureau Drive, Mail Stop 8542, Gaithersburg, MD 20899-8542, marcus.cicerone@nist.gov, Phone: 301-975-8104 (Fax 301-975-3928); Hiroshi Jinnai, Department of Macromolecular Science and Engineering, Kyoto Institute of Technology, Graduate School of Science and Engineering, Kyoto 606-8585 Japan, Phone: +81-75-724-7846, Fax: +81-75-724-7770, hjinnai@kit.ac.jp

Scaffolds and Matrices for Tissue Engineering and Regenerative Medicine Applications

Mark E. Van Dyke, The Wake Forest Institute for Regenerative Medicine, Wake Forest University School of Medicine, Medical Center Boulevard, Winston Salem, NC 27157-7290, Phone: 336-713-7266, Fax: 336-713-7290, mavandyk@wfubmc.edu; Benjamin Harrison, The Wake Forest Institute for Regenerative Medicine, Wake Forest University School of Medicine, Medical Center Boulevard, Winston Salem, NC 27157-7290, Phone: 336-713-7292, Fax: 336-713-7290, bharriso@wfubmc.edu; James Yoo, The Wake Forest Institute for Regenerative Medicine, Wake Forest University School of Medicine, Medical Center Boulevard, Winston Salem, NC 27157-7290, Phone: 336-713-7294, Fax: 336-713-7290, jyoo@wfubmc.edu.

2007 Fall Meeting

Herman Mark Award in Honor of Robert Langer

Christine Landry-Coltrain, Kodak Research Laboratories, Eastman Kodak Company, Build. 82/Floor 6, Rochester, NY 14450-2109, phone: 585-722-3683, christine.landry-coltrain@kodak.com; Joseph M. DeSimone, Department of Chemistry, University of North Carolina at Chapel Hill, CB# 3290, Chapel Hill, NC 27599-3290, phone: (919)962-2166, Fax: (919)962-5467, desimone@unc.edu

Herman Mark Scholar Award Symposium

Christine Landry-Coltrain, Kodak Research Laboratories, Eastman Kodak Company, Build. 82/Floor 6, Rochester, NY 14450-2109, phone: 585-722-3683, christine.landry-coltrain@kodak.com

National Starch & Chemical Award for Outstanding Graduate Research in Polymer Science and Engineering

Warren Ford, Department of Chemistry, Oklahoma State University, Stillwater, OK 74078, email: warren.ford@okstate.edu.

40 Years of Macromolecules

Timothy P Lodge, Department of Chemistry, University of Minnesota, Minneapolis, MN 55455, lodge@chem.umn.edu, Phone: 612 625-0877

Special Symposium in Honor of Sir Fraser Stoddart

Stuart Rowan, Department of Macromolecular Science & Engineering, Case Western Reserve University, 2100 Adelbert Road, Cleveland, OH 44106-7202, Tel: 216-368-4242, Fax: 216-356-4202, stuart.rowan@case.edu

General Papers: Functional Materials

D. Garcia, Arkema Inc., 900 First Avenue, King of Prussia, PA 19406, 610-878-6731, e-mail: dana.garcia@arkemagroup.com

General Papers: Polymers in Nanotechnology

D. Garcia, Arkema Inc., 900 First Avenue, King of Prussia, PA 19406, 610-878-6731, e-mail: dana.garcia@arkemagroup.com

POLY

DIVISION OF POLYMER CHEMISTRY

Program Not Yet Complete: June 18, 2007

Times, days, and paper numbers may not be final.

C. Landry-Coltrain and K. E. Uhrich, *Program Chairs*

2007 Fall Meeting

SUNDAY MORNING

Section A

Westin Boston Waterfront -- Grand Ballroom A

Synthetic and Biological Macromolecules for Emerging Nanotechnologies

Cosponsored by BIOHW

J. Hagen, D. E. Morse, S. V. Patwardhan, K. Shiba, D. W. Smith Jr., M. E. Van Dyke, I. Yamashita, L. E. Drechsler, D. M. Haddleton, W. Hawthorne, and C. W. Widenhouse, *Organizers*

S. J. Clarson, *Organizer, Presiding*

8:30 — Introductory Remarks.

8:40 — **1.** Be a scientist, save the world! Nanotechnology and energy. **W. Adams**, A. Jaffe, R. E. Smalley

9:20 — **2.** Engineering life into materials. **C. D. Montemagno**

10:00 — Intermission.

10:20 — **3.** Nanostructure construction by protein supramolecules in wet nanotechnology. **I. Yamashita**

11:00 — **4.** Novel families of ionene biomaterials. S. R. Williams, E. Borgerding, J. M. Layman, **T. E. Long**

11:30 — **5.** Muscles from synthetic block copolymers. **A. J. Ryan**

Section B

Westin Boston Waterfront -- Stone

Metal-Containing and Metallo-Supramolecular Polymers and Materials

Metallo-Supramolecular Polymers

Cosponsored by PMSE and BIOHW

U. S. Schubert, I. Manners, and G. R. Newkome, *Organizers, Presiding*

8:20 — Introductory Remarks.

8:30 — **6.** Metal coordination as synthon for the synthesis of polymeric materials. **M. Weck**, C. R. South, V. Pinon III

8:55 — **7.** Metallosupramolecular conjugated polymers. **C. Weder**

9:20 — **8.** Self-assembly of block copolymer micelles directed by metal-ligand interactions. P. Guillet, C -A. Fustin, C. Ott, U. S. Schubert, **J -F. Gohy**

9:45 — **9.** Synthesis of well-defined terpyridine-functionalized polystyrene by anionic polymerization. R. P. Quirk, **M. Olechnowicz**, C. Wesdemiotis, M. J. Polce

2007 Fall Meeting

10:05 — Intermission.

10:25 — **10.** Polyesters and metal-coordinating ligands: A happy marriage? **R. Hoogenboom**, A. Winter, V. Marin, H. Hofmeier, U. S. Schubert

10:50 — **11.** Metallobiomaterials with dibenzoylmethane polylactide macroligands. **C. L. Fraser**, G. Zhang, A. Pfister

11:15 — **12.** Tailor-made supramolecular building units prepared by anionic polymerization techniques. **C. Ott**, C. Guerrero-Sanchez, U. S. Schubert

11:35 — **Withdrawn 13.** Electrochromic functions of metallo-supramolecular polymers and the solid-state electronic devices. **M. Higuchi**, D. G. Kurth

Section C

Westin Boston Waterfront -- Grand Ballroom B (probably will be moved to Grand Ballroom C)

Special Symposium in Honor of Sir Fraser Stoddart

S. Rowan, *Organizer*

8:30 — **14.** Well-defined block copolymers through H-bonding: Unique properties and morphologies. **C. J. Hawker**, K. E. Schaefer, M. J. Kade, E. J. Kramer, W. B. Lee, R. Elliott, G. H. Fredrickson, E. Meijer

9:00 — **15.** Self-assembled urethane and urea "pseudo" polymers. **W. Hayes**, P. Woodward, A. Clarke, D. Hermida Merino, A. T. Slark

9:20 — **16.** Investigations into supramolecular polymer architectures. **S. J. Rowan**

9:40 — **17.** Microblock ionomer-membranes: Enhancement of fuel cell performance through control of ionomer sequence-distribution. **H. M. Colquhoun**, Z. Zhu, W. Mortimore, F. P. V. Paoloni, N. M. Walsby, D. Thompsett

10:10 — **18.** Templated supra-macromolecular assemblies. D. Chun, D. J. Milliron, **A. Nelson**

10:30 — **19.** Discrete aromatic stacking via the self-assembly of interpenetrated coordination cages. **M. Fujita**

11:00 — **20.** Single-walled carbon nanotube spectroscopic and electronic field-effect transistor measurements: A combined approach. **A. Star**

11:20 — **21.** Multifunctional materials via self-assembly. **M. Weck**

11:40 — **22.** Nanostructuring surfaces into three dimensions: Combining lithography and self-assembly. **J. Preece**

12:00 — **23.** The synthesis of large and small molecules using olefin metathesis catalysts. **R. H. Grubbs**

Section D

2007 Fall Meeting

Westin Boston Waterfront -- Otis

Polymer Science of Everyday Things

Polymeric Materials with Blood Contact

A. B. Salamone, D. Bott, and R. S. Moore, *Organizers*

W. J. Feast, *Presiding*

K. J. Wynne, *Organizer, Presiding*

8:25 — Introductory Remarks.

8:30 —24. Polymer-based embolization devices. G. Kaul, S. Keenan, J. O'Gara, S. Puri, **R. Richard**

9:00 —25. Drug eluting coronary stents. **M. Boden**, R. Richard, M. Schwarz, F. Strickler

9:30 —26. Sutures and shoelaces. **P. Calvert**

10:00 — Intermission.

10:30 —27. Cardiovascular catheters. **V. Davé**

11:00 —28. If you were a blood cell would you like my material? The question of blood compatibility in blood filtration. **M. Bertolucci**

11:30 —29. Current technologies in patients with chronic wounds. **H. Brem**

Section E

Westin Boston Waterfront -- Grand Ballroom C (probably will be moved to Grand Ballroom B)

Herman Mark Scholar Award Symposium

Herman Mark Young Scholar Award in Honor of Gregory Tew

C. Landry-Coltrain, *Organizer*

R. Dhamodharan, *Presiding*

8:30 — Introductory Remarks.

8:35 —30. Self-assembly of macromolecules and small molecules across the scales. **S. I. Stupp**

9:05 —31. Printable electronics: From living synthesis of conducting polymers to high mobility transistors. **R. D. McCullough**

9:35 —32. Ionic liquid marbles and ghosts. **T. McCarthy**, L. Gao

10:05 — Intermission.

10:25 —33. Understanding and manipulating protein-protein interactions in membranes. **W. F.**

2007 Fall Meeting

DeGrado

10:55 —34. An organic building block approach to novel macromolecular architectures. **J. S. Moore**

11:25 —35. Designing polymers with strong similarity to biology. **G. Tew**

Section F

Westin Boston Waterfront -- Douglas

General Papers: Functional Materials

D. Garcia, *Organizer*

J. Wang, *Presiding*

8:00 —36. Combination of ATRP and RAFT via "click" chemistry. **M. J. Nasrullah**, A. Vora, D. C. Webster

8:20 —37. Synthesis of functional polymers with complex architectures by combination of ATRP and click reactions. **H. Gao**, K. Matyjaszewski

8:40 —38. Phenols as accelerators for copper mediated – living radical polymerization in nonpolar solvents –set vs. ATRP? **P. M. Wright**, G. Mantovani, D. M. Haddleton

9:00 —39. Atom and reverse atom transfer radical graft copolymerization of methylmethacrylate on cellulose. **K. C. Gupta**

9:20 —40. Stimuli-responsive star-shaped polymers by living cationic polymerization: New methodologies for effective synthesis and stable gold nanoclusters. **S. Kanaoka**, N. Yagi, S. Kontani, Y. Fukuyama, S. Aoshima

9:40 —41. Synthesis of well-defined ROMP/anionic block copolymers. **S. B. Myers**, R. A. Register

10:00 —42. Synthesis of graft copolymer of syndiotactic polystyrene and PMMA via activation of inert C-H bonds and atom transfer radical polymerization. **J. Shin**, L. Browell, S. M. Jensen, C. Bae

10:20 —43. Synthesis and properties of functional composites formed from a responsive polymer and titania nanoparticles. **C. A. Coutinho**, V. K. Gupta

10:40 —44. Ring-opened polyphenethylnorbornene and its hydrogenated derivatives. **J. P. Bishop**, R. A. Register

11:00 —45. ATRP of sugar-carrying amphiphilic graft copolymer using PVDF as macroinitiator. **J.-Y. Wang**, Y.-Y. Xu, F. Zhang, Y.-L. Qian, B.-K. Zhu

11:20 —46. Soluble polyisobutylene-supported reusable catalysts for olefin cyclopropanation. **J. Tian**, D. E. Bergbreiter

11:40 —47. Acidity of poly(vinylphosphonic acid) and a comparison with analogous polyelectrolytes. G. Wegner, **B. Bingöl**, W. H. Meyer

2007 Fall Meeting

Undergraduate Polymer Science Symposium

Sponsored by SOCED, Cosponsored by POLY

P. Y. Furlan, Organizer, Presiding

10:30 —1. Biopolymers and bioinspired polymers for medical and personal care applications. **S. E. Morgan**

11:00 —2. Applying the polymer parameters to advanced polymeric membrane systems. **J. E. McGrath**

11:30 —3. Frontiers in alternative fuels and advanced technology vehicles: Activities and opportunities. **K. O. Havelka**

SUNDAY AFTERNOON

Section A

Westin Boston Waterfront -- Grand Ballroom A

Synthetic and Biological Macromolecules for Emerging Nanotechnologies

Cosponsored by BIOHW

S. J. Clarson, D. E. Morse, S. V. Patwardhan, K. Shiba, D. W. Smith Jr., M. E. Van Dyke, I. Yamashita, L. E. Drechsler, D. M. Haddleton, W. Hawthorne, and C. W. Widenhouse, Organizers

J. Hagen, Organizer, Presiding

1:30 —48. Polysaccharide-derivatized materials as controlled and responsive protein delivery vehicles. **K. L. Kiick**

2:00 —49. Self-assembling polymer-peptide conjugates: Toward scaffolds for regenerative medicine. P. Jing, **J. H. Collier**

2:30 —50. Directing cell migration using one-way microarrays. G. Kumar, C. C. Ho, **C. C. Co**

3:00 —51. Polylactide-paclitaxel nanoparticles with controlled sizes and toxicities. R. Tong, **J. Cheng**

3:20 — Intermission.

3:30 —52. Nanoporous polymer nanocomposites and biomaterials from high internal phase emulsions. **M. S. Silverstein**

4:00 —53. Silicone elastomers: Treatments for obesity. **C. W. Widenhouse**

4:30 —54. Electroactive controlled release thin films. **D. J. Schmidt**, K. C. Wood, N. Zacharia, P. T. Hammond

4:50 —55. Nanoparticle mediated oral delivery of insulin. E. Cabane, Z. Boukhal, J. P. Claverie, **Y. G. Durant**

2007 Fall Meeting

5:10 —56. Nanosized drug carrier systems from hydrophobically modified hydroxyethyl starch. **J. Kressler**, A. Beesher, K. Mäder

Section B

Westin Boston Waterfront -- Stone

Metal-Containing and Metallo-Supramolecular Polymers and Materials

Metallo-Supramolecular Polymers

Cosponsored by PMSE and BIOHW

U. S. Schubert, I. Manners, and G. R. Newkome, *Organizers*

C. L. Fraser and D. G. Kurth, *Presiding*

1:00 —57. Nanomolecular architectures: The application of crystal engineering to metallodendritic assembly. **G. R. Newkome**, C. N. Moorefield, P. Wang, S. Li, X. Lu

1:25 —58. Rigid π -conjugated 2,2':6',2''-terpyridines as building blocks for new supramolecular assemblies. **A. Winter**, M. Chiper, E. Tekin, D. A. M. Egbe, U. S. Schubert

1:45 —59. Supramolecular macromolecules containing terpyridine in the side chain. **G. Tew**, R. Shunmugam, K. Amer

2:05 —60. Synthesis, characterization and micelle formation of supramolecular ABA triblock copolymers. **M. A. R. Meier**, D. Wouters, C. Ott, P. Guillet, C -A. Fustin, J -F. Gohy, U. S. Schubert

2:30 —61. Metallo-supramolecular polymers: Self-assembly, structure and properties. **D. G. Kurth**

2:55 — Intermission.

3:10 —62. Probing selectivity of ultrasound induced chain scission in reversible coordination polymers. **J. M. Paulusse**, J. P. Huijbers, R. P. Sijbesma

3:35 —63. Theoretical modeling of equilibrium metallo-supramolecular gels. S. Wang, C -C. Chen, **E. E. Dormidontova**

3:55 —64. Investigating the effects of lanthanide ions in metallo-supramolecular polymers and gels. **S. J. Rowan**, W. Weng, A. M. Jamieson

4:20 —65. Tuning the size and morphology of metallo-supramolecular micelles. **P. Guillet**, C -A. Fustin, D. Wouters, S. Hoepfener, U. S. Schubert, J -F. Gohy

4:40 —66. Iron(II) tris(bipyridine)-centered star block copolymers based on a PEG macroinitiator. **G. L. Fiore**, J. L. Klinkenberg, A. Pfister, C. L. Fraser

Section C

Westin Boston Waterfront -- Grand Ballroom C

National Starch & Chemical Company Award for Outstanding Graduate Research in Polymer Science and Engineering

2007 Fall Meeting

W. T. Ford, *Organizer*

1:45 —67. Biologically-derived, non-planar, microlens arrays. K. J. Henderson, **E. T. Samulski**, L. E. Euliss, J. DeSimone

2:10 —68. Progress in alternate proton exchange membrane materials for fuel cells. **J. E. McGrath**

2:35 —69. Supramolecular nanomimetics: Replication of viruses, micelles, and other soft, self-assembled nanoscale objects. **B. Maynor**, I. LaRue, J. P. Rolland, A. A. Pandya, Z. Hu, S. S. Sheiko, J. DeSimone

3:00 —70. Microfluidic large scale integration. **S. R. Quake**

3:25 — Intermission.

3:40 —71. Dynamic balance: Sustaining a culture of innovation. **R. L. Henn**

4:05 —72. Graduate students and entrepreneurship. **J. M. Desimone**

4:30 — Award Presentation, R. Chandran.

4:35 —73. Putting perfluoropolyethers to work. **J. P. Rolland**, J. M. DeSimone

Section D

Westin Boston Waterfront -- Otis

Polymer Science of Everyday Things

Polymeric Materials with Tissue Contact

K. J. Wynne, A. B. Salamone, and R. S. Moore, *Organizers*

E. Luo, *Presiding*

D. Bott, *Organizer, Presiding*

1:25 — Introductory Remarks.

1:30 —74. Polymers that allow safe and unique properties for first aid dressings. **W. K. Dunshee**

2:00 —75. Skin healing with liquid bandages. **A. B. Salamone**

2:30 —76. Diaper chemistry: Developing polymers for babies and their parents. **L. E. Drechsler**

3:00 — Intermission.

3:30 —77. Polymeric catheters for bladder management: Current practice, problems and possibilities for the future. **W. J. Feast**

4:00 —78. Three millennia of condoms. **A. J. Ryan**

2007 Fall Meeting

4:30 —79. Personal lubricants: Enhancing intimacy with polymer science. **M. J. Fevola**, L. Gentner, N. Ahmad, J. J. LiBrizzi

Section E

Westin Boston Waterfront -- Grand Ballroom B

Herman Mark Scholar Award Symposium

Herman Mark Scholar Award in Honor of Craig Hawker

C. Landry-Coltrain, *Organizer*

J. M. Fréchet, *Presiding*

1:00 — Introductory Remarks.

1:05 —80. Supramolecular approach to nanoparticle-polymer composites. D. Chun, G. F. Eade, J. L. Hedrick, D. J. Milliron, **A. Nelson**, R. C. Pratt, C. G. Wade

1:35 —81. Investigations into new supramolecular polymers. **S. Rowan**

2:05 —82. Functional macromolecular architectures as versatile platforms for innovative vectors in nanomedicine. **E. Harth**

2:35 —83. Organic/inorganic nanocomposite materials from well-defined polymers and ferromagnetic nanoparticles: Novel building blocks for meso-scale assembly. **J. Pyun**

3:05 — Intermission.

3:25 —84. From dendrimers to supramolecular and covalent nanostructures. **K. L. Wooley**

3:55 —85. Functional polymers and other molecules at active surfaces and in layered assemblies: Designing for properties. **J. M. J. Frechet**

4:25 —86. Facile chemistry for the synthesis of polymeric nanostructures: From cardiovascular disease to microelectronics. **C. J. Hawker**

Section F

Westin Boston Waterfront -- Douglas

General Papers: Polymers in Nanotechnology

Cosponsored by BIOHW

D. Garcia, *Organizer*

R. Madathingal, *Presiding*

1:00 —87. Annexin-A5 binding block copolymer nanoparticles. **V. Schmidt**, C. Giacomelli, F. Lecolley, J. Lai-Kee-Him, A. R. Brisson, R. Borsali

1:20 —88. Novel magnetic nanocomposite based on thiol-ene photopolymers. **M. Qaddoura**, **U. Hafeli**

2007 Fall Meeting

1:40 —89. Novel synthesis of hierarchically structured block copolymer/layered silicate nanocomposites. **R. E. Behling**, E. W. Cochran

2:00 —90. Polyurethane foams reinforced by modified carbon nanotubes. **M. Kacperski**, P. A. Waske, Y. G. Durant, R. P. Johnson

2:20 —91. Covalent layer-by-layer assembly using aminated MWNTs and silica nanoparticles. **K -S. Liao**, D. Bergbreiter

2:40 —92. Relationship between bound fraction and glass transition temperature of poly(methyl methacrylate) adsorbed on modified silica surfaces. **R. Madathingal**, S. L. Wunder

3:00 —93. Self-assembly of poly(styrene-*b*-2-vinylpyridine) on neutral substrates. **S. Ji**, P. F. Nealey, P. Gopalan

3:20 —94. Hard and flexible coatings based on nanoparticle-filled hyperbranched polymers. **L. Fogelström**, E. Malmström, M. Johansson, A. Hult

3:40 —95. Structure and properties of polyethylene nanofibers from molecular dynamics simulations. **S. Curgul**, K. J. Van Vliet, G. C. Rutledge

4:00 —96. Nanotechnology in coffee rings. **Z. Lin**, S. W. Hong, J. Xu

4:20 —97. Combinatorial design of polymeric stabilizers for size-controlled synthesis of monodisperse gold nanoparticles in water. Z. Wang, B. Tan, I. Hussain, N. Schaeffer, M. Brust, **A. I. Cooper**

4:40 —98. Synthesis and montmorillonite-intercalated behavior of dendritic molecules. **R -J. Jeng**, T -Y. Juang, C -C. Tsai, Y. C. Chen, T -M. Wu, S. A. Dai

SUNDAY EVENING

Section A

BCEC -- Exhibit Hall - C

General Papers: Functional Materials

D. Garcia, *Organizer*

C. Wang and J. Wang, *Presiding*

6:00 - 8:00

99. Macromolecular assembly controlled by inclusion associations of α -, β - or γ -cyclodextrin. **X. Guo**, L. Li, L. Fu, R. K. Prud'homme, S. F. Lincoln

100. Selectivity of lipase (Novozyme 435) in pegylated and siloxane polymers. **R. Tyagi**, M. K. Pandey, V. B. Tucci, R. Kumar, J. Kumar, V. S. Parmar, A. C. Watterson

101. Relative reactivity of cationic monomers: Isobutylene, styrene and ring substituted styrenes. N. Kolishetti, **R. Faust**

2007 Fall Meeting

- 102.** Continuous atom transfer radical polymerization. **T. Noda**, A. J. Grice, D. M. Haddleton
- 103.** Novel synthetic method of thermosetting poly(phenylene ether) in water droplets/toluene-heterogeneous system. **J. Nunoshige**, Y. Shibasaki, M. Ueda
- 104.** Synthesis of polyisobutenyl succinic anhydrides: Product distribution and proposed reaction mechanism. **R. Rausa**
- 105.** Aggregation induced luminescence of polyisobutene succinic anhydrides and imides. A. Pucci, **R. Rausa**, F. Ciardelli
- 106.** Dielectric spectroscopy of polyguanidine polymers. **E. R. Garland**, D. R. Stevens, L. Guy, H -Z. Tang, B. M. Novak, L. I. Clarke
- 107.** Efficient synthesis of telechelic hydroxyallyl polyisobutylenes, a precursor to thermoplastic polyurethanes. **R. Rajkhowa**, R. Faust
- 108.** Electrochemical and optical behavior of bis-imidazolium ionic liquids. **W. Lee**, Y. Kim, J. Y. Kim, K. D. Ahn, E. Kim, T. H. Kim
- 109.** Synthesis and characterization of novel xylyl-based polyanhydrides and copolymers with salicylate-based poly(anhydride-esters). **C. Wang**, **K. E. Uhrich**
- 110.** High performance optical fiber coatings based on perfluorocyclobutyl (PFCB) aryl ether polymers. **S. M. Budy**, S. T. Iacono, W. Hawkins, P. Foy, J. Ballato, D. W. Smith Jr.
- 111.** Hyperbranched poly(arylene ether sulfone)s using an $A_2 + BB'B''$ approach: Effects of reactivity. **Z. Yu**, M. Simons, E. Fossum
- 112.** A facile synthesis route to hyperbranched polymers via olefin metathesis. **I. A. Gorodetskaya**, R. H. Grubbs
- 113.** Lipase (Novozyme 435) catalyzed chemoselective one pot synthesis of surfactants. **T. Farrell**, **R. Tyagi**, **M. K. Pandey**, V. S. Parmar, A. C. Watterson
- 114.** Self-assembly of the complexes of DNA with PAMAM dendrimers. **C -J. Su**, H -L. Chen, U -S. Jen, H -K. Lin, W -L. Liu
- 115.** Modular design of photo-regulated chiroptical switching elements: Amide-based oligomers. **G. D. Jaycox**, E. D. Felton
- 116.** Synthesis of high molecular weight polymers using ROMP. **M. Wathier**, S. S. Stoddart, M. W. Grinstaff
- 117.** Polymerizations of 2-ethylhexyl methacrylate in fluorinated solvents. **R. Karnati**, W. T. Ford
- 118.** Synthesis and polymerization of a new pyrrolidinone methacrylate monomer. **J -F. Morizur**, L. J. Mathias

2007 Fall Meeting

- 119.** Cobalt porphyrin mediated living radical polymerization of acrylic acid in water. **C.-H. Peng**, B. B. Wayland
- 120.** Block copolymers by a one pot, "green" process using ARGET ATRP in the presence of air. **W. Jakubowski**, **L. Mueller**, K. Matyjaszewski
- 121.** Synthesis of multisegmented and degradable polymers by atom transfer radical cross-coupling (ATRC). **R. Nicolaÿ**, K. Matyjaszewski
- 122.** Atom transfer radical dispersion polymerization of styrene in ethanol. **K. Min**, K. Matyjaszewski
- 123.** Atom transfer radical polymerization in the presence of Cu⁰ – mechanism and kinetics study. **W. Tang**, H. Dong, Y. Kwak, K. Matyjaszewski
- 124.** "Click" coupling of block copolymers prepared by ATRP. **P. L. Golas**, N. Tsarevsky, K. Matyjaszewski
- 125.** Comparing copper, ruthenium, and osmium atom transfer radical polymerization catalyst activity. **W. A. Braunecker**, W. C. Brown, K. Matyjaszewski
- 126.** Comparison of (ArO)₂TiClX (X = Cl, Cp) complexes in the living ring opening polymerization of caprolactone. **A. D. Asandei**, L. Tang, G. Saha, M. Gilbert, T. A. Hanna, L. Liu
- 127.** Room temperature synthesis of vinylidene fluoride/vinylethoxysilane copolymers with under uv irradiation. **A. D. Asandei**, Y. Chen
- 128.** Cp₂TiCl-Catalyzed styrene living radical polymerization initiated from 4-methoxybenzenesulfonyl chloride. **A. D. Asandei**, G. Saha
- 129.** Cp₂TiCl-Catalyzed graft copolymerization of pentafluorostyrene and dodecylfluoroheptyl acrylate from poly(glycidyl methacrylate) copolymers. **A. D. Asandei**, G. Saha
- 130.** Design and synthesis of novel crosslinked polydimethylsiloxanes for use in flame retardant applications. V. B. Tucci, **M. K. Pandey**, **R. Tyagi**, V. S. Parmar, J. Kumar, A. C. Watterson
- 131.** Development of hybrid particles using 1,2-bis(triethoxysilyl)ethane: Evaluation of reversed-phase chromatographic performance. **K. Wyndham**, N. Lawrence, K. Glose, J. Cook, D. Walsh, D. Brousniche, P. Iraneta, B. A. Alden, C. Boissel, T. H. Walter
- 132.** Preparation, isolation and evaluation of novel N-acyloxytrialkylammonium salts as initiators for free radical polymerization of methacrylates under photochemical, thermal and accelerant promoted thermal conditions. **O. Ansong**, S. Jansen, Y. Wei, H. Lu, S. Li, Y. Guo, G. Pomrink
- 133.** Evaluation of poly(methyl methacrylate-*b*-butyl acrylate-*b*-methyl methacrylate) and poly(styrene-*b*-butyl acrylate-*b*-styrene) as stent coatings for delivery of paclitaxel. **S. G. Brito**, F. Strickler, K. Chan, M. Schwarz, M. Boden
- 134.** Evaluation of poly(methyl methacrylate-*b*-*n*-butyl acrylate-*b*-methyl methacrylate) as a stent coating for paclitaxel delivery. **F. Strickler**, S. G. Brito, M. Schwarz, N. Teigen, M. Boden

- 135.** Flow-induced crystallization of model bimodal polyethylene copolymers. **D. Smirnova**, J. A. Kornfield
- 136.** Molecularly imprinted polymeric nanoparticles. M. J. Barasc, **Y. G. Durant**, S. Roy, J. P. Claverie
- 137.** Self-healing phenomenon during the electrical breakdown of a spin-coated polyester dielectric. **N. Venkatasubramanian**, J. T. Stricker, M. F. Durstock, T. D. Dang, K. J. Wiacek, S. Fries-Carr
- 138.** Poly(2,7-carbazoles) and polyindolo[3,2-b]carbazoles as field effect transistor. **N. Blouin**, S. Wakim, Y. Tao, M. Leclerc
- 139.** Synthesis of end-functionalized polymers with various sequences by living cationic polymerization and their thermosensitive behavior. **H. Shimomoto**, S. Kanaoka, S. Aoshima
- 140.** Synthesis of stimuli-responsive polymers by living cationic polymerization and their self-assemblies through ion complex formation. **Y. Oda**, T. Tsujino, S. Kanaoka, S. Aoshima
- 141.** Thermal degradation of poly(2-hydroxyethyl methacrylate) obtained by gamma radiation. **E. Vargün**, A. Usanmaz
- 142.** Catalytic curing and improved pyrolytic conversion of poly(methylcarbosilane). S -Y. Kim, M -H. Kim, Y -J. Kim, **H -G. Woo**, D -H. Kim, B -H. Kim, J. Jun, M -K. Han
- 143.** Hybrid organic-inorganic polymer electrolytes based on poly(oxyethylene)s containing oligo(ethyleneglycol) and polyhedral oligomeric silsesquioxane in the side chain. **H -S. Ryu**, J -C. Lee
- 144.** Light-initiated polymerization of methyl methacrylate with p-X-C₆H₄SiH₃ (X = F, CH₃, OCH₃)p. B -H. Kim, J. Jun, S -Y. Kim, M -H. Kim, Y -J. Kim, **H -G. Woo**, M -K. Han, H. Li
- 145.** Highly absorbing superabsorbent polymers. **T. K. Mudiyansele**, D. C. Neckers
- 146.** Ring opening metathesis polymers as matrix materials for platinum(II)porphyrin. **M. Sandholzer**, K. Stubenrauch, K. Waich, T. Mayr, G. Trimmel, F. Stelzer, C. Slugovc
- 147.** Synthesis and characterization of pendant nitro group containing poly(arylene ether)s and amine functionalized polymers therefrom. **A. Parthiban**, S. Mahmasoni, D. Y. Kusuma, H. Yu, T. R. Babu Rao, C. L. L. Chai
- 148.** Defect control of shrink materials for 248nm wavelength lithography. **J. S. Oh**, J. Kim, J. H. Kim, Y. H. Kim, T. S. Kim
- 149.** Withdrawn.
- 150.** Isotactic polystyrene with controlled molecular weight using olefins as chain transfer agents. **B. T. Gall**, F. Pelascini, H. Ebeling, J. Okuda, R. Mülhaupt
- 151.** Synthesis and characterization of NLO polymers containing dendritic structures. **Y. C. Chen**, S. A. Dai, R -J. Jeng

- 152.** Synthesis and characterization of poly(vinyl benzyl amine) and its derivatives. **W. H. Ting**, S. A. Dai, W. C. Su, R -J. Jeng
- 153.** Stable second-order nonlinear optical poly(amide-imide)-inorganic materials via sequential self-repetitive reaction. **H. L. Lin**, S. A. Dai, R -J. Jeng
- 154.** Photoresponsive poly(malonic esters) and their applications to optical memory media. **Y -K. Han**, M -J. Lee
- 155.** Block copolymers of styrene and lactide with varying lactide content. **A. Parthiban**, A. Likhitsup, H. Yu, C. L. L. Chai
- 156.** New method for the synthesis of polyisobutylene-*block*-poly(methyl methacrylate) by using double diphenylethylene monoanion. **T. Higashihara**, D. Feng, R. Faust
- 157.** Synthesis and characterization of hyperbranched polymer by cationic ring-opening polymerization of 3,4-epoxycyclohexanemethanol. **Y. Kitajyo**, M. Tamaki, H. Kaga, N. Kaneko, T. Satoh, T. Kakuchi
- 158.** Synthesis and characterization of novel triphenylamine derivatives containing ether bonds in the main chain. **K. Yamada**, J. Sim, S. Yokokura, H. Sato
- 159.** Synthesis and properties of sulfonated poly(phenylene). **K. Nakabayashi**, Y. Shibasaki, M. Ueda
- 160.** Facile synthesis of tadpole-shaped dendrimers based on aromatic polyamides. I. Washio, **Y. Ito**, Y. Shibasaki, M. Ueda
- 161.** High refractive index sulfur-containing polyacrylates with high Abbe numbers. **R. Okutsu**, Y. Shibasaki, M. Ueda
- 162.** Controlled ring-opening polymerization of epsilon-caprolactone using polymer-supported scandium catalyst. **A. Takasu**, **M. Oshimura**, T. Hirabayashi
- 163.** New dual catalytic system for combination of chain polymerization and step polymerization: Ring-opening polymerization of epsilon-caprolactone and successive dehydration polycondensation with dicarboxylic acid using same catalyst. **A. Takasu**, **T. Hisashi**, N. Yuuki, T. Hirabayashi
- 164.** Evaluation of stimuli responsive de novo β -hairpin peptides. **Y. Hirano**, N. Nishishita, Y. Morimoto
- 165.** Precise tuning of thermoresponsive property of poly(*N*-isopropylacrylamide)s by combination of ATRP and "click" chemistry. **R. Kakuchi**, A. Toda, A. Narumi, R. Sakai, T. Satoh, K. Sugiyama, C. W. Macosko, A. Hirao, T. Kakuchi
- 166.** Preparation of copolymer consisting of ethylenedioxythiophene and triphenylamine units. **Y. Matsuno**, J. Sim, H. Sato
- 167.** Preparation of surface reactive core-shell type nano-associates entrapping enzyme in the core. **A. Kawamura**, C. Kojima, M. Iijima, A. Harada, K. Kono

2007 Fall Meeting

- 168.** Synthesis and thermoresponsive property of poly(*N*-isopropylacrylamide) with aryl chain-end and its cyclodextrin-inclusion complex. **A. Narumi**, Q. Duan, Y. Miura, T. Satoh, H. Kaga, T. Kakuchi
- 169.** Preparation and binding properties of a self-assembled film based on modified cyclodextrin and diazoresin. X. Tian, **J. Zhi**, W. Zhao, Y. Pan, J. Shi, B. Tong, Y. Dong
- 170.** Relationship between functional groups and dielectric properties of hybrid films. **G. Xie**, D. Sun
- 171.** Synthesis of amphiphilic ABA triblock copolymer with well-defined glycopolymer segments via ATRP. **Y -Y. Xu**, J -Y. Wang, Y -L. Qian, F. Zhang, B -K. Zhu
- 172.** Studies on the thermal properties of star polymer with α -cyclodextrin core. **Y. Jiang**, L. Du, F. Lu, Y. Wu, W. Xu
- 173.** Studies on activity and stability of recombinant tissue-type plasminogen activator. **J. Gang**, C. Cao, J. Shao
- 174.** Emulsion polymerization of styrene using SMA-g-MPEG as surfactant. H. Wang, C. Tian, J. Yu, **F. Liu**
- 175.** Mechanical properties and morphology of tremolite/ABS composites. **X. Liu**, J. Fang, Z. Li, F. Liu
- 176.** Synthesis and characterization of soluble branched polymer via free radical copolymerization of styrene and divinylbenzene. C. Tian, J. Yu, H. Wang, **F. Liu**
- 177.** Synthesis and aggregation-induced emission of tetraphenylethylene derivatives and their blends with poly(methyl methacrylate). Y. Hong, Y. Dong, H. Tong, M. Häußler, J. W. Y. Lam, **B. Z. Tang**
- 178.** Synthesis and properties of a pyrazoline-containing hyperbranched polyarylene. **H. Peng**, N. Zhang, B. Z. Tang
- 179.** Pyridylphosphine ligand for iron-based atom transfer radical polymerization. **T. T. L. Nguyen**, Z. Xue, H. D. Q. Dang, S. K. Noh, W. S. Lyoo
- 180.** Atom transfer radical polymerization of methyl methacrylate using pyridylphosphine as a ligand. **Z. Xue**, J. Y. Kim, S. K. Noh, W. S. Lyoo
- 181.** Preparation of porous P(MMA-EGDMA) particles by seeded two-step swelling method. Y. Cui, Z. Hou, R. Li, **C. Kan**
- 182.** Nanocomposite of polyaniline/carbon nanotube as Pt catalyst carrier for methanol electrocatalytic oxidation. Y. Xu, X. Peng, Y. Deng, G. Lei, Y. Zheng, Y. Ma, **L. Dai**
- 183.** Preparation of Pt catalyst on PANI/C composite and its role on electrocatalytic oxidation of methanol. X. Peng, Y. Xu, Y. Deng, Y. Zheng, G. Lei, Y. Ma, **L. Dai**
- 184.** Synthesis of Fe₃O₄ polymer magnetic composite nanoparticles with carboxylate groups in self-emulsification. **C. Zhou**, W. Liu, G. Xu, X. Z. Kong

2007 Fall Meeting

- 185.** Electrochemical properties of the self-assembled films based on polyanilines and carboxylated polyanilines. M. Xiao, J. Zhi, **B. Tong**, W. Zhao, J. Shi, Y. Pan, **Y. Dong**
- 186.** Preparation of highly crosslinked monodisperse poly(styrene-co-divinylbenzene) microspheres by two-stage dispersion polymerization. M. Cao, **B. Tong**, J. Zhi, J. Shi, Y. Dong
- 187.** Withdrawn.
- 188.** Preparation of polyurethane and acrylic hybrid latexes. **X. Zhu**, X. Jiang, Z. Zhang, X. Z. Kong
- 189.** Formation and fragmentation of a reversible polymer network. **H. Huo, C. Wu**
- 190.** Rheological behaviors and structural transitions in a polyethersulfone modified epoxy system during phase separation. **S. Li**, Y. Yu, M. Wang, G. Zhan
- 191.** Two-dimensional time resolved light scattering used in the study on process of polymerization induced phase separation. **X. Tang**, L. Zhao
- 192.** Viscoelastic and molecular weight effect on phase separation in PEI modified epoxy blends. **W. Gan**, Y. Yu, S. Li

Section B

BCEC -- Exhibit Hall - C

General Papers: Polymers in Nanotechnology

Cosponsored by BIOHW

D. Garcia, *Organizer*

C. Wang and J. Wang, *Presiding*

6:00 - 8:00

- 193.** Synthesis, molecular and morphological characterization of second generation dendritic copolymers of butadiene and isoprene with different microstructures. **A. Avgeropoulos**, S. Rangou, E. L. Thomas, V. Krikorian
- 194.** Hydrogel encapsulated quantum dots. T. Cai, J. Li, J. Zhang, A. Lin, M. Marquez, **Z. Hu**, A. Neogi
- 195.** Nanoparticle dispersion utilizing polyhedral oligomeric silsesquioxane (POSS). **R. D. Cook**, P. A. Wheeler, R. Misra, S. E. Morgan
- 196.** Preparation and properties of effective epoxy/clay nanocomposites with exfoliated reactive flame retardant clay. W. S. Wang, Y. W. Wu, H. S. Chen, **Y. Chen-Yang**
- 197.** Enhancing dispersion and properties of MWNT-polymer nanocomposites by controlled noncovalent interactions. **D. Linton**, M. D. Dadmun
- 198.** Polymer-modified opal nanopores. **O. Schepelina**, I. Zharov
- 199.** Functionalized nanoparticles using active ester monomers as shell component. **N. Metz**, B. Lange, P. Theato, R. Zentel

2007 Fall Meeting

200. Fabrication of ordered anodic alumina pre textured from block copolymer micelles. **B. Kim**, S. Park, T. P. Russell, T. McCarthy

201. Thermal degradation of polypropylene. **R. Bernstein**, S. M. Thornberg, R. A. Assink, A. N. Irwin, J. M. Hochrein, J. R. Brown, D. K. Derzon, S. B. Klamo, R. L. Clough

202. Sequential formation of nanopores in thin films of block copolymer mixtures. **H. Mao**, T. P. Russell

203. Preparation of stable superhydrophobic surfaces: Poly(p-xylylene) conformal coating. **J. A. Lee**, T. J. McCarthy

204. Hydrolytic degradation of montmorillonite/poly(ϵ -caprolactone)-based polyurethane nanocomposites. **E. H. Jeong**, H. J. Jeon, T. G. Kim, J. H. Youk

205. Preparation of polystyrene based surface modifiers for nano-objects through living radical polymerization technique. **S. C. Hong**, J. H. Woo, I. H. Choi, Y. J. Lee, S.-S. Lee, M. Park

206. Nano-encapsulation of multiple fluorophores in thin films of diblock copolymer micelles. **S. I. Yoo**, K.-S. Kim, B.-H. Sohn

207. Chemical modification of C60 by destructive electrophilic substitution reaction in polyphosphoric acid/phosphorus pentoxide. **D.-H. Lim**, H.-J. Lee, L.-S. Tan, **J.-B. Baek**

208. In situ synthesis of Nylon 610 containing functionalized multiwalled carbon nanotubes via interfacial polymerization. **J.-Y. Jeong**, H.-J. Lee, L.-S. Tan, **J.-B. Baek**

209. In situ polymerization of polybenzoxazole in the presence of carbon nanotubes in polyphosphoric acid. **S.-M. Eo**, S.-J. Oh, L.-S. Tan, **J.-B. Baek**

210. One-pot purification of single-walled carbon nanotube in a mild polyphosphoric acid. **S.-W. Han**, S.-J. Oh, L.-S. Tan, **J.-B. Baek**

211. Synthesis of environmentally benign material sesbania gum-stabilized Ag nanoparticles. X. J. Feng, G. Gao, **W. Xu**

212. Synthesis of SiO₂/PS core/shell nanospheres with a self-templating method. Q. Zhang, Y. Zhai, R. Li, F. Liu, **G. Gao**

213. Synthesis of ZnS/PMAA/PMMA nanocomposite hybrids via catalytic chain transfer polymerization (CCTP). **S. Chen**, L. Chen, L. Guo, Q. Li, J. Wang

214. Synthesis of ZnS nanocrystals prepared by PMAA-b-PBA block copolymers via catalytic chain transfer polymerization (CCTP). **S. Chen**, L. Chen, J. Wang, L. Guo, Q. Li

215. Electro-optical properties of confined structured multilayer films prepared by the spin-assembly method. **H. Kim**, J. Cho, D. Y. Kim, K. Char

MONDAY MORNING

Westin Boston Waterfront -- Grand Ballroom A

Synthetic and Biological Macromolecules for Emerging Nanotechnologies

Cosponsored by BIOHW

S. J. Clarson, J. Hagen, S. V. Patwardhan, K. Shiba, D. W. Smith Jr., M. E. Van Dyke, I. Yamashita, L. E. Drechsler, D. M. Haddleton, W. Hawthorne, and C. W. Widenhouse, *Organizers*

D. E. Morse, *Organizer, Presiding*

8:30 —216. Physico-chemical studies of protein surface interactions. **C. C. Perry**, P. Roach

9:00 —217. Using branched macromolecules to sense surface properties with molecular resolution. **S. S. Sheiko**, F. C. Sun, H.-I. Lee, K. Matyjaszewski, D. Shirvaniants, M. Rubinstein

9:20 —218. Oligosaccharide-modified polymers as nucleic acid transfection agents. **J. M. Layman**, D. Appelhans, B. Voit, T. E. Long

9:40 —219. Oriented immobilization of antibody fragments on polymer brushes for highly sensitive biorecognition. **R. Iwata**, Y. Iwasaki, K. Akiyoshi

10:00 —220. Designing biocompatible and activatable nanoscale carriers of bioactive agents. **A. Almutairi**, M. Berezin, R. Rossin, M. J. Welch, C. J. Hawker, K. L. Wooley, J. M. J. Fréchet

10:30 — Intermission.

10:50 —221. Preparation and biodegradation of nanogels as carriers for carbohydrate drugs. **D. J. Siegwart**, J. K. Oh, K. Matyjaszewski

11:20 —222. Synthesis and characterization of nanocarrier containing antioxidant 4-methylcoumarin. **M. K. Pandey**, **R. Tyagi**, V. S. Parmar, V. B. Tucci, J. Kumar, T. Shea, A. C. Watterson

11:40 —223. Targeted, linear-dendritic diblock copolymer systems for DNA vaccination. **D. K. Bonner**, K. C. Wood, D. Nguyen, L. Tashima, Q. Leng, J. Chen, R. S. Langer, P. T. Hammond

12:00 —224. Deformation and fracture of protein materials: Balancing strength, energy dissipation and robustness. **M. J. Buehler**, T. Ackbarow, S. Keten

Westin Boston Waterfront -- Stone

Metal-Containing and Metallo-Supramolecular Polymers and Materials

Organometallic Polymers, Metallopolymers and Nanoparticles

Cosponsored by PMSE and BIOHW

U. S. Schubert, I. Manners, and G. R. Newkome, *Organizers*

R. J. Puddephatt, B. Hasenknopf, and F. Jaekle, *Presiding*

8:00 —225. Isotactic, syndiotactic and heterotactic architectures in self-assembled metal-containing polymers. **R. J. Puddephatt**, C. A. Wheaton

2007 Fall Meeting

8:25 —226. Investigation of acyclic diene metathesis as a method to synthesize organometallic polymers with molybdenum dimers in the backbone. **G. V. Shultz**, D. R. Tyler

8:50 —227. Diversity-oriented synthesis of π -conjugated polymers by reactions of regioregular organotitanium polymers. **I. Tomita**, W. M. Zhou, M. Otonashi, K. Fukuda

9:15 —228. Boron functionalization of polystyrene: From luminescent materials to block-copolymer nanostructures. **F. Jaekle**, Y. Qin, K. Parab, C. Cui

9:35 —229. Photodegradation of metal-containing polymers: Secondary thermal transitions and the cage-effect in solid-state polymers. **B. C. Daglen**, D. R. Tyler

10:00 —230. Polymer-functionalized gold nanorods and their self-organization into ring-like arrays. **E. R. Zubarev**, B. P. Khanal

10:15 — Intermission.

10:30 —231. Polymer-nanoparticle composites from block copolymer precursors. **R. B. Grubbs**, L. B. Sessions, A. Sundararaman, A. A. Bouchard, J. A. Garber

10:55 —232. Preparation of anisotropic crystalline metallopolymers using π -conjugated Schiff base-nickel complex. **H. Houjou**, Y. Watanabe, K. Araki

11:20 —233. Polyoxometalates as molecular building blocks. S. Favette, C. Allain, **B. Hasenknopf**, L. Ruhlmann

11:45 —234. Exciton dynamics in self-assembled conjugated materials for organic electroluminescence. **V. A. Montes**, P. Anzenbacher Jr.

Section C

Westin Boston Waterfront -- Grand Ballroom C

Conjugated Polymer Materials and Hybrids: Synthesis, Macromolecular Assemblies, and Nanostructures

Macromolecular Architectures

Cosponsored by BIOHW

K. Muellen, *Organizer*

P. Bauerle, *Presiding*

R. C. Advincula and S. Valiyaveetil, *Organizers, Presiding*

8:55 — Introductory Remarks.

9:00 —235. High triplet energy conjugated polymer hosts for electroluminescence. **A. B. Holmes**, S. E. Watkins, K. L. Chan, G. A. McCluskey, R. Borthwick, S. Y. Cho, A. C. Grimsdale

9:30 —236. Synthesis and properties of substituted polyacetylenes: Recent advances. **T. Masuda**, F. Sanda, M. Shiotsuki

2007 Fall Meeting

10:00 —237. Novel thiophene-based architectures and topologies. **P. Bauerle**

10:30 — Intermission.

10:40 —238. Polymer semiconductor nanostructures with 1-, 2-, and 3-D confinements: Synthesis, self-assembly, and device applications. **S. A. Jenekhe**

11:10 —239. Synthesis and characterization of pentacene-based oligomers and polymers. **T. Okamoto,**
Z. Bao

11:30 —240. Soluble and processable hyperbranched conjugated polyelectrolytes. **P. Taranekar,** Q.
Qiquan, H. Jiang, K. S. Schanze, J. R. Reynolds

Section D

Westin Boston Waterfront -- Otis

Polymer Science of Everyday Things

The Bionic Person

K. J. Wynne, D. Bott, and R. S. Moore, *Organizers*

R. J. Mrsny, *Presiding*

A. B. Salamone, *Organizer, Presiding*

8:25 — Introductory Remarks.

8:30 —241. The challenge of spinal disc replacement. **A. J. Clemow**

9:00 —242. Silicones in humans: From body art to life saving medical devices. **J. M. Lambert**

9:30 —243. The polymer chemistry of contact lenses: Improving comfort with bulk and surface modifications. **R. S. Ward,** J. Jacob

10:00 — Intermission.

10:30 —244. Intraocular lenses. **J. F. Kunzler**

11:00 —245. Hyaluronic acid: From essential body component to valuable medical products. **A. J. Coury**

11:30 —246. From willow bark to polyaspirin: Discovery and innovations. **K. E. Uhrich**

Section E

Westin Boston Waterfront -- Grand Ballroom B

Herman Mark Scholar Award Symposium

Herman Mark Senior Scholar Award in Honor of Krzysztof Matyjaszewski

2007 Fall Meeting

C. Landry-Coltrain, *Organizer*

H. Hall Jr., *Presiding*

8:00 — Introductory Remarks.

8:05 —247. Investigation of LCP polymerization by Maldi-TOF spectroscopy using novel tailor-made matrices. **A. Somogyi**, A. B. Padias, R. Bates, P. Shu, H. Hall Jr.

8:35 —248. Active-dormant species interconversion in ring-opening polymerizations. S. Penczek, P. Kubisa, **A. Duda**

9:05 —249. Copolyoxetane soft block polyurethanes for polymer surface modification. **K. J. Wynne**

9:35 —250. Understanding the role of the catalyst in ATRP: Toward better polymerization control. **N. V. Tsarevsky**

10:05 — Intermission.

10:25 —251. From well defined block copolymers to active carbon nanostructures with tunable electronic properties. **T. Kowalewski**

10:55 —252. Reactivity ratios in surface-initiated copolymerizations. D. L. Patton, K. A. Page, K. L. Genson, M. J. Fasolka, **K. L. Beers**

11:25 —253. ATRP as a tool for synthesis of nanostructured functional materials. **K. Matyjaszewski**

Section F

Westin Boston Waterfront -- Douglas

Polymers from Renewable Resources

G. W. Coates, *Organizer*

M. A. Hillmyer, *Organizer, Presiding*

8:20 — Introductory Remarks.

8:25 —254. Mother Nature as a source of new materials: Everything old is new again. **J. A. Moore**

8:50 —255. Synthesis and characterization of isosorbide carbonate-lactide copolymers. O. Betiku, M. Jenni, K. Ludescher, E. Meierdierks, J. Lunt, **J. D. Schroeder**

9:15 —256. Synthesis and properties of repeating sequence copolymers of PLGA. R. M. Stayshich, J. Li, **T. Y. Meyer**

9:40 —257. Water-soluble poly(hydroxyalkanoate)s. **C. Scholz**, J. Sparks

10:05 — Intermission.

10:30 —258. Organo-catalyzed ring-opening polymerization of o-carboxyanhydrides. **D. Bourissou**

2007 Fall Meeting

10:55 —259. Synthesis of chain end functionalized poly(ester)s by organic catalysis as a powerful tool for block copolymer construction. **A. P. Dove**

11:20 —260. Polyesters from renewable resources: Organocatalytic strategies for controlled polymerization reactions. **R. M. Waymouth**, J. L. Hedrick, R. C. Pratt, F. Nederberg, B. G. G. Lohmeijer, D. A. Culkin, O. Coulembier, N. E. Kamber, W. Jeong, M. K. Kiesewetter, E. J. Shin

MONDAY AFTERNOON

Section A

Westin Boston Waterfront -- Grand Ballroom A

Synthetic and Biological Macromolecules for Emerging Nanotechnologies

Cosponsored by BIOHW

S. J. Clarson, J. Hagen, D. E. Morse, K. Shiba, D. W. Smith Jr., M. E. Van Dyke, I. Yamashita, L. E. Drechsler, D. M. Haddleton, W. Hawthorne, and C. W. Widenhouse, *Organizers*

S. V. Patwardhan, *Organizer, Presiding*

1:30 —261. A synthesis approach to understand the role of peptide motifs in mineralization. **K. Shiba**

2:00 —262. Interactions of biomolecules with inorganic materials: Principles, applications and future prospects. **S. V. Patwardhan**, C. C. Perry

2:30 —263. Directed laboratory evolution of biomineralizing enzymes. **L. A. Bawazer**, D. P. Kolodin, M. Izumi, D. E. Morse

2:50 —264. Understanding silica nanostructure formation using natural structures and bio-inspired techniques. **M. J. Doktycz**, M. Hildebrand, S. T. Retterer, D. P. Allison

3:10 —265. Toward artificial diatoms: Structure-function studies of oligoamine-induced silica condensation. **D. Robinson**, B. A. Simmons, R. N. Zuckermann

3:30 — Intermission.

3:50 —266. Utilizing two capabilities of a single peptide aptamer for constructing nanostructures. **K-I. Sano**, K. Shiba

4:10 —267. Interactions of aluminium nanoclusters with proteins. **O. Deschaume**, A. Fournier, C. C. Perry

4:30 —268. Synthesis and characterization of water soluble and amphiphilic poly(ethylene glycol) coated magnetite nanoparticles. **Q. Xie**, A. A. Williams, R. D. Gandour, A. R. Esker

4:50 —269. Polymer modified gold and gadolinium nanoparticles for targeting, imaging, and treatment of cancer cells. **M. D. Konopacki**, S. G. Boyes

Section B

Westin Boston Waterfront -- Stone

2007 Fall Meeting

Metal-Containing and Metallo-Supramolecular Polymers and Materials

Organometallic Polymers, Metallopolymers and Nanoparticles

Cosponsored by PMSE and BIOHW

U. S. Schubert, I. Manners, and G. R. Newkome, *Organizers*

M. A. Winnik and G. J. Vancso, *Presiding*

1:00 —270. Polyferrocenylsilanes: New multifunctional materials. **I. Manners**

1:25 —271. Functionalized cycloheptatrienyl-cyclopentadienyl sandwich complexes as building blocks in metallo-supramolecular chemistry. **M. Tamm**, A. Kunst, S. Büschel

1:50 —272. Redox-responsive and macroporous polymeric microcapsules from water-soluble poly(ferrocenylsilanes). **Y. Ma**, W. Dong, M. A. Hempenius, H. Möhwald, G. J. Vancso

2:10 —273. Self-assembly of polyferrocenylsilane-b-poly(2-vinylpyridine) diblock copolymers in solution. **M. A. Winnik**, H. Wang, L. Shen, G. Guerin, I. Manners

2:35 —274. Templated self-assembly of poly(styrene-b-ferrocenyldimethylsilane) block copolymers using substrate topography. **C. Ross**, J. Y. Cheng, V. P. Chuang, G. J. Vancso

3:00 — Intermission.

3:15 —275. Engineering of interfaces and macromolecular nanotechnology with poly(ferrocenylsilanes). **G. J. Vancso**, M. I. Giannotti, M. A. Hempenius, Y. Ma, H. Schonherr, W. Shi, J. Song, E. Tocha, S. Zou

3:40 —276. Micellization of PFS block copolymers: A bottom-up approach for novel nanomaterials. I. Manners, M. A. Winnik, **X-S. Wang**, H. Wang, K. Liu

4:05 —277. Synthesis of AB diblock and ABA triblock copolymers comprised of polyisobutylene and poly(vinylferrocene) segments. **T. Higashihara**, R. Faust

4:20 —278. Strained [1]metallacyclophanes with aluminum and gallium in bridging positions: New monomers for ring-opening polymerizations. **J. Müller**, C. L. Lund, J. A. Schachner, J. W. Quail

Section C

Westin Boston Waterfront -- Grand Ballroom C

Conjugated Polymer Materials and Hybrids: Synthesis, Macromolecular Assemblies, and Nanostructures

Nanostructured Materials and Nanocomposites

Cosponsored by BIOHW

K. Muellen, *Organizer*

F. D. Blum, *Presiding*

R. C. Advincula and S. Valiyaveetil, *Organizers, Presiding*

2007 Fall Meeting

2:00 —279. Nanoconfinement for organic/inorganic hybrid materials. **K. Muellen**, R. Bauer, C. Clark Jr., M. Klapper, L. Zhi

2:30 —280. Gold nanoparticle-polyaniline nanocomposites. H. Xia, H. Chung, C. Sow, **H. S. Chan**

3:00 —281. Nanocomposites based on conjugated polymers and rodlike nanoparticles. **C. Weder**

3:30 — Intermission.

3:40 —282. Template electrosynthesis and structural characterization of various multisegmented metal-conjugated polymer nanowires. **V. Callegari**, S. M. Demoustier-Champagne, O. Reynes, L. Gence, S. Melinte, V. Bayot

4:00 —283. Irradiation and metal-containing conjugated-polymer nanocomposites. **F. D. Blum**, Z. Li, S. K. Pillalamarri, M. F. Bertino

4:30 —284. Fabrication and characterization of nanostructured carbon nanotubes/organic materials composites. **A. Baba**, F. Sato, N. Fukuda, H. Ushijima, K. Yase

Section D

Westin Boston Waterfront -- Otis

Polymer Science of Everyday Things

Polymers Deliver

K. J. Wynne, A. B. Salamone, and D. Bott, *Organizers*

A. J. Ryan, *Presiding*

R. S. Moore, *Organizer, Presiding*

1:25 — Introductory Remarks.

1:30 —285. Osmotic drug delivery: The science and engineering behind blood pressure tablets and other osmotic pharmaceuticals. **A. G. Thombre**

2:00 —286. Patches: Hormone/pain control/nicotine. **J -C. Chen**

2:30 —287. Polymers delivering benefits to our daily lives. M. Drzewinski, **M. J. Jurek**

3:00 — Intermission.

3:30 —288. Principle of OROS® technologies and successful development of various OROS® products. **L. C. Dong**, P. Shivanand

4:00 —289. The role of silicone elastomers in treatments for obesity. **C. W. Widenhouse**

4:30 —290. Using polymers to improve the delivery of drugs. **R. J. Mrsny**

Section E

2007 Fall Meeting

Westin Boston Waterfront -- Grand Ballroom B

Herman Mark Award in Honor of Robert Langer

C. Landry-Coltrain, *Organizer*

J. M. DeSimone, *Organizer, Presiding*

1:00 — Introductory Remarks.

1:05 —291. Role of artificial proteins in dismantling the barriers between polymer chemistry and biology. **D. A. Tirrell**

1:35 —292. Tissue engineering in the musculoskeletal system: Disease and repair. **J. Elisseeff**

2:05 —293. Paradigm shifting medical device creation: Leveraging material science and technology into entrepreneurial opportunity. **M. S. Williams**

2:35 —294. Designing novel biodegradable polymers: From polyanhydrides to polymer drugs. **K. E. Uhrich**

3:05 — Intermission.

3:25 —295. Hydrogel-based local drug delivery: Guidance from the pioneer. **A. J. Coury**

3:55 —296. Organic delivery vehicles for probing and treating biological systems: Adapting fabrication processes from the electronics industry for use in nanomedicine. **J. M. DeSimone**

4:25 —297. Novel biomedical materials. **R. S. Langer**

Section F

Westin Boston Waterfront -- Douglas

Polymers from Renewable Resources

M. A. Hillmyer, *Organizer*

G. W. Coates, *Organizer, Presiding*

1:25 —298. Mechanistic insights gained from studies of lactide polymerization by slow (M = Al) and fast (M = Ca) metal coordinate catalysts. **M. H. Chisholm**, J. Gallucci, K. T. Quisenberry, G. Yaman, Z. Zhou

1:50 —299. Insights into the mechanisms of cyclic ester polymerizations catalyzed by metal complexes. C. M. Silvernail, **W. B. Tolman**, M. A. Hillmyer

2:15 —300. Group 4 metal initiators for the stereoselective polymerization of rac-lactide. **M. D. Jones**, A. J. Chmura, C. J. Chuck, M. G. Davidson, M. D. Lunn

2:40 —301. Single-site rare earth catalysts for immortal ROP of lactide and ROP of morpholine-2,5-dione. A. Amgoune, P. Castro, C. M. Thomas, **J -F. Carpentier**

2007 Fall Meeting

3:05 — Intermission.

3:20 —302. Production of aliphatic polycarbonates from carbon dioxide and oxiranes and oxetanes. **D. J. Darensbourg**

3:45 —303. Plastics with reduced environmental impact: CO₂ as a comonomer for polymer synthesis. **S. D. Allen**

4:10 —304. Branched polylactides and polylactide particles. L. M. Pitet, K. P. McNamee, **D. M. Knauss**

4:35 —305. New polylactides from α -hydroxyacids derived from renewable resources. **G. L. Baker**, M. R. Smith III

5:00 —306. Perfluoropolyether-co-polylactide segmented copolymers: Surface, biodegradation, and rheological properties. D. Haynes, A. Singh, G. Harrison, C. C. Yang, K. J. L. Burg, **D. W. Smith Jr.**

Undergraduate Research Poster Session

Polymer Chemistry

Sponsored by CHED, Cosponsored by PMSE, POLY, and SOCED

N. Bakowski, *Organizer, Presiding*

2:30 - 4:30

348. Development of reactive coatings for decontamination of chemical and biological hazards. **D. L. Wang**, F. Gu, H. M. Jensen, C. E. Immoos

349. Electrospinning mesoporous bridged organosilanes. **M. K. Finch**, K. Balkus Jr., H. A. Liu

350. Polyurethane synthesis for use with polydiacetylene strain sensors. **C. J. Pollock**, J. S. Kauffman, W. T. Pennington

351. Synthesis and characterization of porphyrins immobilized in a sol-gel matrix. **D. E. McCall**, P. Simon, D. Nguyen, C. H. Lisse, R. A. Richards

MONDAY EVENING

Section A

BCEC -- Exhibit Hall - C

Sci-Mix

C. Landry-Coltrain, *Organizer*

8:00 - 10:00

104-107, 109-112, 118, 120, 123, 126-127, 131-132, 141, 145, 147, 150, 159-160, 184, 194-195, 197, 199-200, 202, 208. See previous listings.

2007 Fall Meeting

400-401, 403, 406-408, 410-411, 415, 417, 419-421, 424-426, 432, 434, 439, 441-442, 449, 458, 461-462, 469-471, 473, 477-478, 480-481, 485, 487, 499-501, 504. See subsequent listings.

TUESDAY MORNING

Section A

Westin Boston Waterfront -- Grand Ballroom A

Synthetic and Biological Macromolecules for Emerging Nanotechnologies

Session V

Cosponsored by BIOHW

S. J. Clarson, J. Hagen, D. E. Morse, S. V. Patwardhan, D. W. Smith Jr., M. E. Van Dyke, I. Yamashita, L. E. Drechsler, D. M. Haddleton, W. Hawthorne, and C. W. Widenhouse, *Organizers*

K. Shiba, *Organizer, Presiding*

8:30 —307. Enzyme-catalyzed polymer synthesis and modification reactions. **R. A. Gross**

9:00 —308. Biocatalytic and bioinspired routes to new silicon containing organic-inorganic hybrids and polymers. **S. J. Clarson**

9:30 —309. Enzymatic routes to fluorosilicone copolymers. **A. S. Palsule**, Y. Poojari, D. R. Stauss, V. Hadzivrettas, S. J. Clarson, R. A. Gross

9:50 —310. Enzymatic synthesis and microstructure analysis of silicone polyesteramides. **B. Sharma**, A. Azim, H. Azim, R. Gross, E. Zini, M. L. Focarete, M. Scandola

10:10 — Intermission.

10:30 —311. Aligned carbon nanotube membranes as biomimetic platforms. **B. J. Hinds**

11:00 —312. Enzymatic copolymerization of organosiloxanes. **Y. Poojari**, A. S. Palsule, D. R. Stauss, V. Hadzivrettas, S. J. Clarson, R. A. Gross

11:20 —313. Enzyme-mediated cross-linking of silicone polymers. **P. M. Zelisko**, K. R. Arnelien, T. C. Dudding, R. Simionescu, H. Stanisic

11:40 —314. A virus-based single-enzyme nanoreactor. **M. Comellas-Aragones**, H. Engelkamp, B. J. M. Verduin, J. J. L. M. Cornelissen, R. J. M. Nolte

Section B

Westin Boston Waterfront -- Stone

Metal-Containing and Metallo-Supramolecular Polymers and Materials

Materials with Special Properties

2007 Fall Meeting

Cosponsored by PMSE and BIOHW

U. S. Schubert, I. Manners, and G. R. Newkome, *Organizers*

W. K. Chan and M. Rehn, *Presiding*

8:10 —315. Metal containing polymers with wide absorption range for photovoltaic applications. **W. K. Chan**, K. W. Cheng, C. S. K. Mak, W. Y. Tam, A. B. Djuric

8:35 —316. Conjugated organometallic polymer containing both a lumophore and a redox center in the main chain. **P. D. Harvey**

9:00 —317. Platinum-acetylide oligomers: Triplet exciton and negative polaron structure and dynamics. **K. S. Schanze**, J. R. Keller, K. D. Glusac, E. O. Danilov, S. McIlroy, P. Sreearunotha, J. R. Miller

9:25 —318. From design to assembly of luminescent metal-based molecular functional materials. **V. W. Yam**

9:45 —319. Functional nanostructured phosphorescent materials driven by weak closed-shell metal-metal interactions and metal-ligand coordination. C -C. Kwok, S -C. Yu, I. H. T. Sham, **C -M. Che**

10:10 — Intermission.

10:25 —320. Polyfluorene-based iridium complex polymers for organic light-emitting diodes. **M. Rehn**, J. Langecker

10:50 —321. Copolymers by radical polymerization containing phosphorescent iridium(III) complexes. **C. Ulbricht**, C. R. Becer, A. Winter, U. S. Schubert

11:10 —322. Luminescent materials based on lanthanide-containing conducting metallopolymers. X -Y. Chen, X. Yang, **B. J. Holliday**

11:30 —323. Optoelectronic properties of conducting metallopolymers incorporating well-defined metal binding sites. A. Dennis, **R. C. Smith**

11:45 —324. Blue fluorescent host- red phosphorescent guest bearing polynorbornene. **F. Niedermair**, G. Kremser, F. Stelzer, C. Slugovc

Section C

Westin Boston Waterfront -- Grand Ballroom C

Conjugated Polymer Materials and Hybrids: Synthesis, Macromolecular Assemblies, and Nanostructures

Hybridization of Nanomaterials

Cosponsored by BIOHW

K. Muellen and S. Valiyaveetil, *Organizers*

J. D. McNeill, *Presiding*

R. C. Advincula, *Organizer, Presiding*

2007 Fall Meeting

9:00 — Introductory Remarks.

9:05 —325. Dendron-hybridized nanoparticles: Energy transfer and electrochemical cross-linking. **R. C. Advincula**

9:35 —326. Quantum dots covered with well-defined oligo(phenylene vinylene). P. K. Sudeep, **T. Emrick**

10:05 —327. Bioconjugated polymer dot nanoparticles. **J. D. McNeill**, C. Wu, C. J. Szymanski, Y. Zheng

10:35 — Intermission.

10:45 —328. Conjugated polymer - gold nanoparticle nanocomposites. B. Sih, **M. O. Wolf**

11:15 —329. New hybrid materials obtained via molecular recognition of diaminopyrimidine functionalized poly(3-hexylthiophene) and thymine functionalized CdSe semiconductor nanocrystals. **J. De Girolamo**, P. Reiss, A. Pron

11:35 —330. Conjugated polymer functionalized gold nanoparticles and surfaces. **M. S. Yavuz**, J. F. Rusling, T. A. P. Seery, G. A. Sotzing

Section D

Westin Boston Waterfront -- Otis

40 Years of Macromolecules

Cosponsored by ACS Publications, PMSE, and PRES

T. P. Lodge, *Organizer, Presiding*

8:00 —331. Expanding options in polyphosphazene science. **H. R. Allcock**

8:30 —332. Living stars. **N. Hadjichristidis**

9:00 —333. In situ and real-time studies of simultaneous living anionic copolymerization process and reaction-induced self-assembly by using a combined SANS, UV-vis, and SEC method. **T. Hashimoto**

9:30 —334. Multi-strand polymerization toward functional polymer material. **M. Antonietti**

10:00 — Intermission.

10:30 —335. Polymers and polymer assemblies in therapeutic applications. **J. M. J. Frechet**

11:00 —336. Macromolecules prepared using olefin metathesis. **R. H. Grubbs**

11:30 —337. Macromolecules: The editors' perspective. **T. P. Lodge**, R. W. Lenz, A -C. Albertsson

Section E

Westin Boston Waterfront -- Grand Ballroom B

2007 Fall Meeting

Polymers and Liquid Crystals

New Concepts in LC/ Polymer Systems

Cosponsored by BIOHW

C. A. Guymon, *Organizer*

D. L. Gin, *Organizer, Presiding*

8:30 —338. Liquid crystalline behavior in self-assembling peptide and conjugated systems. **S. I. Stupp**, S. Zhang, A. Mata, M. Greenfield, R. Capito

9:05 —339. Design, synthesis, and application of benzobis(imidazolium) salts as a new class of photoluminescent ionic liquid crystals. **C. W. Bielawski**, A. J. Boydston

9:40 —340. Self-organization of ionic liquids: Liquid-crystalline low-dimensional ion conductors. **T. Kato**, M. Yoshio, T. Ichikawa, H. Shimura, T. Mukai, A. Hamasaki, H. Ohno

10:15 — Intermission.

10:25 —341. Aligning shape persistent polymers in liquid crystal solutions. **T. M. Swager**

11:00 —342. Aligned phases of polymer coated magnetic nanoparticles and binary microphase separated blends. P. Keng, B. D. Korth, **J. Pyun**

11:35 —343. Liquid crystal polymers as directing medium: Creation of organized quantum dots composites. **R. V. Talroze**, G. A. Shandryuk, E. Matukhina, A. S. Merekalov, R. B. Vasiliev, A. M. Gaskov

Section F

Westin Boston Waterfront -- Douglas

Polymers from Renewable Resources

G. W. Coates, *Organizer*

M. A. Hillmyer, *Organizer, Presiding*

8:25 —344. Renewable green polymers. **A -C. Albertsson**

8:50 —345. New synthesis of functional polymers using renewable resources. **S. Kobayashi**, H. Uyama, T. Tsujimoto, M. Kuwabara

9:15 —346. Synthesis and degradation of biodegradable plastics. M. Sokolsky-Papkov, **A. J. Domb**

9:40 —347. New polymer intermediates from renewable resources. **J. Millis**

10:05 — Intermission.

10:30 —348. Natural product feedstocks for the synthesis of polymeric nanofilms. **C. M. Snively**, J. Lauterbach

2007 Fall Meeting

10:55 —349. Entanglement models for biobased polymer rheology: Percolation or packing? **R. P. Wool**

11:20 —350. Renewable polymer nanocomposites. **J. R. Dorgan**, B. Braun, M. J. Sobkowicz, K. W. Gneshin

11:45 —351. Comparison of nanosized calcium carbonate and organoclay polylactide (PLA) nanocomposites: Toughening and reinforcing effects. **J. Zhang**, L. Jiang, M. P. Wolcott

RNA Interference Based Therapeutics

Sponsored by CARB, Cosponsored by BIOL, BIOT, COMP, MEDI, ORGN, PMSE, POLY, and BTEC
M. Manoharan, *Organizer*

8:30 —37. Discovery and development of RNAi-based therapeutics: An overview. **M. Manoharan**

9:05 —38. Small RNA diversity and function. **P. D. Zamore**

9:40 —39. Structural biology of RNA silencing. **D. J. Patel**

10:15 — Intermission.

10:25 —40. LNA as a modification for siRNA designs and applications. **J. Wengel**

11:00 —41. Modified siRNAs containing 2'-fluorinated nucleotides. J. Watts, F. Robert, A. Kalota, J. Pelletier, J. García Fernández, J. Defaye, A. M. Gewirtz, **M. Damha**

11:35 —42. siRNAs with a Universal Base. **K. G. Rajeev**, J. Xia, T. Novobrantseva, S. S. Morskaya, R. K. Pandey, A. Geick, T. De Fougères, Z. Zimmerman, M. Manoharan

TUESDAY AFTERNOON

Section A

Westin Boston Waterfront -- Grand Ballroom A

Synthetic and Biological Macromolecules for Emerging Nanotechnologies

Cosponsored by BIOHW

S. J. Clarson, J. Hagen, D. E. Morse, S. V. Patwardhan, K. Shiba, M. E. Van Dyke, I. Yamashita, L. E. Drechsler, D. M. Haddleton, W. Hawthorne, and C. W. Widenhouse, *Organizers*

D. W. Smith Jr., *Organizer, Presiding*

1:30 —352. Functional materials based on clay aerogels. **D. A. Schiraldi**, M. D. Gawryla, J. R. Johnson III, J. Griebel

2:00 —353. Effect of nanophase particle concentration on the deformation during glass transition of a polymer nanocomposite. **J. L. Abot**, F. Wang

2:30 —354. Crosslinking polymer brushes for the fabrication of quasi-2-D "micro-objects". **J. E. Comrie**, W. T. S. Huck

2007 Fall Meeting

2:50 —355. DNA block copolymers: How to combine biological and synthetic macromolecules to generate nanoobjects. F. E. Alemдарoglu, M. Safak, **A. Herrmann**

3:10 — Intermission.

3:25 —356. Quantification of complex topologies in biological and synthetic macromolecules using neutron and X-ray scattering. **G. Beaucage**, A. S. Kulkarni

3:55 —357. Interfacial effects of nanometer fluorinated segments on energy controlled responsive polymeric films. **D. Perahia**

4:25 —358. Positional assembly of temperature-responsive biopolymers. **R. L. Teeuwen**, H. Zuilhof, F. A. de Wolf, J. C. M. van Hest

4:45 —359. Rational design and self-assembly of symmetric DNA star motifs. **Y. He**, Y. Tian, C. Mao

5:05 —360. Attaching and patterning nanoparticles on copolymer templates. **M. D. McConnell**, M. H. Lee, R. J. Composto, S. Yang

Section B

Westin Boston Waterfront -- Stone

Metal-Containing and Metallo-Supramolecular Polymers and Materials

Materials with Special Properties

Cosponsored by PMSE and BIOHW

U. S. Schubert, I. Manners, and G. R. Newkome, *Organizers*

V. M. Rotello, J. M. Papanikolas, and M. A. R. Meier, *Presiding*

1:00 —361. Integration of particle-polymer self-assembly with top-down fabrication techniques. **V. M. Rotello**

1:25 —362. Thin film characterization of metallo-supramolecular assemblies. **D. Wouters**, C. Ott, J. M. Kranenburg, M. Chipper, B. G. G. Lohmeijer, A. V. Kyrlyuk, U. S. Schubert

1:45 —363. Surface bottom-up synthesis of metal complex oligomers and polymers and their electrofunctionalities. **H. Nishihara**, Y. Nishimori

2:10 —364. Functional properties and optoelectronic applications of multifunctional metal-organic phosphorescent materials and polymers. **W. Y. Wong**

2:30 —365. Spintronic device applications of CoFe alloy nanoparticle thin films derived from a highly metallized polyferrocenylsilane. **K. Liu**, S. Aouba, A. Gougam, L. Friebe, W. Y. Chan, S. B. Clendenning, Z.-H. Lu, H. E. Ruda, I. Manners

2:50 —366. Direct growth of semiconductor nanoparticles within a conducting polymer matrix. **M. L. Mejia**, K. Agapiou, J. H. Rivers, X. Yang, R. A. Jones, B. J. Holliday

2007 Fall Meeting

3:05 — Intermission.

3:25 —367. Ultrafast energy transport dynamics in Ru(II) and Os(II) loaded polymers. T. J. Meyer, **J. M. Papanikolas**

3:50 —368. Side-chain functionalized polymers for organic light emitting diode applications. **A. Kimyonok**, M. Weck

4:10 —369. In situ chemical synthesis of polypyrrole-Ag nanocomposite. **C -S. Ha**, M. H. Ullah, I. Kim

4:30 —370. The kinetics and mechanism of the self-assembly of metal nanoparticles in block copolymers. **O. Gazit**, R. Tannenbaum

4:45 —371. Amorphous coordination polymers: Sol-gels, xerogels and aerogels. **B. Moulton**, B. Luisi, S. Han, K. D. Rowland Jr.

Section C

Westin Boston Waterfront -- Grand Ballroom C

Conjugated Polymer Materials and Hybrids: Synthesis, Macromolecular Assemblies, and Nanostructures

Self-Assembly and Thin Films

Cosponsored by BIOHW

R. C. Advincula, S. Valiyaveetil, and K. Muellen, *Organizers*

J. C. Grunlan and E. E. Nesterov, *Presiding*

2:00 —372. Conjugated polyelectrolytes: Macromolecular assemblies and nanostructured films. **K. S. Schanze**

2:30 —373. Facile fabrication of organic semiconducting microribbons by solution-phase self-assembly of conjugated molecules. W. H. Lee, D. H. Kim, **K. Cho**

2:50 —374. UV-resistant poly(3,4-ethylenedioxythiophene) films: Layer-by-layer assembly with absorbing particles. **J. C. Grunlan**, **T. Dawidczyk**

3:10 — Intermission.

3:40 —375. Conjugated polymer brushes and patterned surfaces. I. W. Moran, J. J. Peterson, E. C. Hagberg, S. B. Jhaveri, **K. R. Carter**

4:10 —376. Carbazole substituted unsymmetrical hexa-peri-hexabenzocoronenes: Synthesis, optical properties and self-assembly. **V. Sivamurugan**, J. Subbiah, S. Valiyaveetil

4:40 —377. Complex organic photovoltaic architectures through self-assembly and electropolymerization. **E. E. Nesterov**, E. Hwang

Section D

Westin Boston Waterfront -- Otis

2007 Fall Meeting

40 Years of Macromolecules

Cosponsored by ACS Publications, PMSE, and PRES

T. P. Lodge, *Organizer, Presiding*

1:00 —378. Chemical sensors based upon polymer electronics. **T. M. Swager**

1:30 —379. Nonionic amphiphilic block copolymers: Bigger and better. **F. S. Bates**

2:00 —380. Single molecule studies of polymer dynamics. **S. Chu**

2:30 —381. The role of polymer materials in advanced electronics. **E. Reichmanis**

3:00 — Intermission.

3:30 —382. Synthesis of novel macromolecules on messenger RNA templates. **D. A. Tirrell**

4:00 —383. Engineered drug therapies enabled by fabrication processes from the electronics industry. **J. DeSimone**

4:30 —384. ATRP after 12 years. **K. Matyjaszewski**

Section E

Westin Boston Waterfront -- Grand Ballroom B

Polymers and Liquid Crystals

Lyotropic and Amphiphilic LC/Polymer Systems

Cosponsored by BIOHW

D. L. Gin and C. A. Guymon, *Organizers*

J. Pyun, *Presiding*

1:30 —385. Self-assembly of rod amphiphiles into stimuli-responsive nanostructures. **M. Lee**

2:05 —386. Photopolymerization kinetics in polymerizable lyotropic liquid crystalline systems. **L. Sievens-Figueroa**, C. A. Guymon

2:30 —387. New approaches to the design of nanoporous catalysts and membranes based on polymerized lyotropic liquid crystal assemblies. **D. L. Gin**, C. S. Pecinovsky, M. Zhou, X. Lu, T. J. Kidd, J. E. Bara, X. Zeng, B. J. Elliott, R. D. Noble

3:05 — Intermission.

3:25 —388. Silica nanocasting of lyotropic liquid crystals: Material science or an analytical tool? **M. Antonietti**

4:00 —389. Nanostructured polymeric networks generated from lyotropic liquid crystals. J. D. Clapper, **C. A. Guymon**

2007 Fall Meeting

4:35 —390. Liquid crystal behavior and photo-induced birefringence in azobenzene surfactomesogens complexed with oppositely-charged polyelectrolytes. Q. Zhang, **C. G. Bazuin**, C. J. Barrett

Section F

Westin Boston Waterfront -- Douglas

Polymers from Renewable Resources

M. A. Hillmyer, *Organizer*

G. W. Coates, *Organizer, Presiding*

1:25 —391. Biomass as a source of photopolymerizable monomers and polymers. **J. V. Crivello**

1:50 —392. Novel monomers and polymers from plant oils. A. Rybak, P. Fokou, T. Jacobs, **M. A. R. Meier**

2:15 —393. Formation of wheat proteins-based natural polymer networks through polymer grafting and cross-linking reactions. **X. Zhang**

2:40 —394. Soy protein based resins and cellulose fiber reinforced high strength green composites. **A. N. Netravali**

3:05 — Intermission.

3:20 —395. Structure and properties of segmented polyurethanes from vegetable oil-based polyols. **Z. S. Petrovic**, Y. Xu, W. Zhang

3:45 —396. Soy-based polymers and their applications. **S. Z. Erhan**, Z. Liu

4:10 —397. Triglycerides as feedstocks for polyurethanes. **D. A. Babb**, A. B. Larre, A. K. Schrock, D. Bhattacharjee, M. F. Sonnenschein

4:35 —398. Fatty acid methyl esters as reactive diluents in coil-coatings. **K. Johansson**, M. Johansson

5:00 —399. Novel bioplastics and composites from natural oils. **R. C. Larock**

RNA Interference Based Therapeutics

Sponsored by CARB, Cosponsored by BIOL, BIOT, COMP, MEDI, ORGN, PMSE, POLY, and BTEC

M. Manoharan, *Organizer*

A. M. Gewirtz, *Presiding*

1:25 — Introductory Remarks.

1:30 —46. Delivering RNAi Therapeutics. **J. Maraganore**

2:05 —47. MicroRNAs as therapeutic targets. **C. F. Bennett**

2007 Fall Meeting

2:40 —48. Delivery of siRNA using stable nucleic acid lipid particles (SNALP). **I. MacLachlan**

3:15 — Intermission.

3:25 —49. A polymer-based nanoparticle delivery system for targeted, systemic delivery of siRNA. **J. D. Heidel**

4:00 —50. 2'-O-ALE (acetal levulinylester) and 2'-O-ester groups for 2'-hydroxyl protection in the solid-phase synthesis and delivery of siRNA. **J. G. Lackey**, G. Pascal, M. Hassler, M. J. Damha

4:15 —51. Lipophilic conjugates for the in vivo delivery of siRNA. **M. Jayaraman**, K. N. Jayaprakash, G. Wang, R. K. Pandey, T. Nakayama, T. Racie, T. Zimmermann, M. A. Maier, V. Kotelianski, K. G. Rajeev, M. Manoharan

4:30 —52. Metal-ion chelated siRNA used to study distribution and uptake of siRNA. **Y. Fan**, R. K. Pandey, M. A. Maier, K. G. Rajeev, D. W. Sah, M. Manoharan

TUESDAY EVENING

Section A

BCEC -- Exhibit Hall - C

Synthetic and Biological Macromolecules for Emerging Nanotechnologies

Cosponsored by BIOHW

S. J. Clarson, J. Hagen, D. E. Morse, S. V. Patwardhan, K. Shiba, D. W. Smith Jr., M. E. Van Dyke, I. Yamashita, L. E. Drechsler, D. M. Haddleton, W. Hawthorne, and C. W. Widenhouse, *Organizers*

6:00 - 8:00

400. Amphiphilic diblock copolymers from chiral monomers using Reversible Addition-Fragmentation chain Transfer (RAFT) polymerization. **J. Skey**, R. K. O'Reilly

401. Dihydroxy terminated polybutylmethacrylate: A precursor for dendrimer-linear polymer hybrid synthesis. **G. A. Bonzi**, S. P. Rannard, A. I. Cooper

402. Dimension of linear polymer and polymer brush of a polyampholyte in aqueous solutions with various ionic strengths. **Y. Matsuda**, M. Kobayashi, M. Annaka, K. Ishihara, A. Takahara

403. DNA block copolymer micelles: Synthesis, morphologies and interactions with living systems. **F. E. Alemendaroglu**, N. C. Alemendaroglu, P. Langguth, A. Herrmann

404. Electrostatic self-assembly of double-responsive block copolymer with oppositely charged surfactant. **M. Annaka**, K. Morishita

405. Grafting of poly(dimethylsiloxane) onto poly(styrene-*block*-Isobutylene-*block*-styrene). **T. Higashihara**, U. Ojha, R. Faust, F. Strickler

406. In situ raft polymerization from a streptavidin macrochain transfer agent. **K. L. Heredia**, G. Grover

407. Ion responsive polymeric vesicles. **L. Theogarajan**, S. Desai, M. Baldo, C. Scholz

- 408.** Nanogels of hydrophobized dendritic polysaccharide and interaction with proteins. **Y. Ozawa**, N. Morimoto, K. Akiyoshi
- 409.** Nanoprobe for optical molecular imaging. **S. Zheng**, R. Wang, A. Qiao, Z. Yang, J. Gelovani, C. Li
- 410.** Novel synthesis of neoglycopolymers by a combination of “click chemistry” and living radical polymerization. **J. Geng**, G. Mantovani, D. H. Haddleton
- 411.** Perfluorocyclobutyl polymers as a host material for phosphorescent Ir[III] complexes. **A. R. Neilson**, K. Zhu, C. M. Topping, J. Ballato, D. W. Smith Jr.
- 412.** Polylactide-doxorubicin nanoparticles with controlled sizes and high loadings. **R. Tong**, J. Cheng
- 413.** Preparation of octane-succinyl-chitosan and micellar solubilization of puerarin. **W. Sui**, C. Yin, Y. Wang, S. Dong
- 414.** Smart array of polymer beads using a removable polymer template on the glass surface. **J. Lee**, O. Kim, J. Jung, K. Na, D. Kim, S. Park, **J. Hyun**
- 415.** Synthesis of perfluoropolyether-co-poly lactide copolymers using ring opening polymerization and transesterification reactions. **D. Haynes**, D. W. Smith Jr.
- 416.** Thermosensitive properties of telechelic hydrophobically modified poly(n-isopropylacrylamide) in water. **K. Nishizono**, T. Fujimoto, F. M. Winnik, M. Annaka
- 417.** Toward phosphorus-containing polymers via SET LRP and ATRP. **C. Fidge**, G. Otter, G. Woodward, D. M. Haddleton

Section B

BCEC -- Exhibit Hall - C

Metal-Containing and Metallo-Supramolecular Polymers and Materials

Poster-Session

Cosponsored by PMSE and BIOHW

U. S. Schubert, I. Manners, and G. R. Newkome, *Organizers, Presiding*

6:00 - 8:00

- 418.** Coordination polymer gels. **K. D. Rowland Jr.**, B. Moulton, B. Luisi
- 419.** (Metallo)supramolecular click chemistry vs. click chemistry in polymer science. **R. Hoogenboom**, B. C. Moore, U. S. Schubert
- 420.** (Metallo-supramolecular)block copolymers in solution: Microscopic study of micellization. **D. Wouters**, C. Ott, M. Chiper, M. A. R. Meier, U. S. Schubert
- 421.** Supramolecular assembly of water-soluble poly(ferrocenylsilanes): Multilayer structures and properties on flat interfaces. **Y. Ma**, M. A. Hempenius, E. S. Kooij, W. Dong, H. Möhwald, G. J. Vancso

- 422.** Toward thermosensitive metallo-terpyridine supramolecular polymers. **M. Chiper**, D. Fournier, R. Hoogenboom, U. S. Schubert
- 423.** New terpyridine-functionalized poly(ester)s and metallo-polymers. **A. Winter**, U. S. Schubert
- 424.** Novel polysiloxane-functionalized terpyridines and their transition metal complexes. S. Landsmann, M. Chiper, **A. Winter**, U. S. Schubert
- 425.** Supramolecularly assembled functional nanocages. **A. O. Moughton**, R. K. O'Reilly
- 426.** Photophysical characteristics and anion binding studies of triarylborane functionalized polystyrene. **K. Parab**, K. Venkatasubbaiah, Y. Qin, F. Jäkle
- 427.** Side chain terpyridine motifs for supramolecular materials. **R. Shunmugam**, G. N. Tew
- 428.** Design of polymerizable phosphorescent iridium(III) complexes. **C. Ulbricht**, N. Rehm, E. Holder, K. Meerholz, U. S. Schubert
- 429.** Photodegradable polymers with organometallic dimers in the backbone: Synthesis, characterization, and degradation studies. **B. C. Dagle**, G. V. Shultz, D. R. Tyler
- 430.** Construction of functionalized catalysts using monoclonal antibodies with nonchiral rhodium complexes. **H. Yamaguchi**, T. Hirano, H. Kiminami, A. Harada
- 431.** Employing reversible addition fragmentation chain transfer polymerization to synthesize alkyne-functional amphiphilic diblock copolymers. **A. A. Bouchard**, L. B. Sessions, A. Sundararaman, R. B. Grubbs
- 432.** Functionalized homo- and heteroleptic terpyridine complexes via cis-[Ru(2,2':6'2"-terpyridine)(DMSO)Cl₂]. **C. Ott**, U. S. Schubert
- 433.** Mesoporous materials for enzyme adsorption. M. Park, S. S. Park, I. Kim, **C.-S. Ha**
- 434.** A terpyridine functionalized 5-arm star-shaped polymer for the fluorometric detection of transition metal ions. **M. A. R. Meier**, U. S. Schubert
- 435.** New metallo-supramolecular architectures based on polymers functionalized and rigid π -conjugated terpyridines. **M. Chiper**, A. Winter, D. A. M. Egbe, U. S. Schubert

Section C

BCEC -- Exhibit Hall - C

Conjugated Polymer Materials and Hybrids: Synthesis, Macromolecular Assemblies, and Nanostructures

Cosponsored by BIOHW

R. C. Advincula, *Organizer*

6:00 - 8:00

- 436.** Self-assembly of p-phenylenevinylene oligomers. **C. Grenier**
- 437.** A novel template for the formation of water-soluble conducting polymers. **F. Bruno**, S. Nagarajan, R. Nagarajan, J. Kumar, L. A. Samuelson
- 438.** Anomer-selective synthesis of poly(*p*-ethynylphenyl hexopyranoside)s: Effects of anomeric configuration on their stimulus response and lectin detection. **I. Otsuka**, T. Hongo, A. Narumi, R. Sakai, T. Satoh, H. Kaga, T. Kakuchi
- 439.** Biological and sensing applications of water-soluble poly(paraphenyleneethynylene)s. **R. Phillips**, I.-B. Kim, U. H. F. Bunz
- 440.** Crystalline structure of a conjugated semiconducting copolymer, poly{[2,5-di(2-(2-ethoxy-ethoxy)ethoxy)-1,4-phenylene vinylene]-alt-1,4-[phenylene vinylene]} (DTEO-alt-PV). **C.-L. Yeh**
- 441.** Fluorescent conjugated polymers as chemosensors. **W. Gui**, W. E. Jones Jr.
- 442.** Layer-by-layer assembly of poly(3,4-ethylenedioxythiophene): Tailoring film growth and sheet resistance. **T. Dawidczyk**, **J. C. Grunlan**
- 443.** New conjugated conducting polymers containing benzobisthiazole derivative and pyridine. **I. T. Kim**, S. H. Kim, D. W. Lim
- 444.** Novel donor-acceptor bulk-heterojunction material: Polythiophene-titanium oxide hybrid with excellent organic-inorganic compatibility. **Y.-M. Chang**
- 445.** Novel light emitting benzofluorene polymers. **S. Zheng**, G. Bennett, Q. Phan
- 446.** Novel light emitting polymers containing benzimidazole. **S. Zheng**, Q. Phan, K. M. Vaeth
- 447.** Novel semiconducting polymer bearing thiazolothiazole unit for organic field-effect transistors. **I. Osaka**, G. Sauvé, R. Zhang, R. D. McCullough
- 448.** Organic-inorganic nanocomposites prepared by grafting conjugated polymers onto quantum dots. **Z. Lin**, J. Xu, J. Wang, M. Mitchell, M. Jeffries-EL
- 449.** Organoborane substituted polythiophenes. **H. Li**, A. Sundararaman, K. Venkatasubbaiah, F. Jäkle
- 450.** Poly(*p*-phenylenevinylene) derivatives containing electron-transporting 1,10-phenanthroline segments. **D. Yu**, K. Zhu, P. K. Kristensen, T. G. Pedersen, R. Wimmer
- 451.** Preparation of spatially isolated oligothiophene fluorophore and their emission properties. **K. Takagi**, M. Momiyama, J. Ohta, S.-I. Matsuoka, M. Suzuki
- 452.** Self-assembly of a phenanthrylene amphiphile with oligo(ethylene oxide) dendrons. D. J. Hong, **M. Lee**
- 453.** Soluble polyphenylene homopolymers with a controlled polymer chain structure. **I. Natori**, S. Natori, H. Sato

454. Synthesis, characterization and application of new copolymer with benzobisthiazole derivative and thiophene derivative. **I. T. Kim**, S. J. Lee, S. W. Lee

455. Synthesis and anion sensing property of poly(phenylacetylene) bearing urea derivative of L-leucine as pendant. **R. Kakuchi**, S. Nagata, R. Sakai, T. Yonekawa, I. Otsuka, T. Satoh, T. Kakuchi

456. Synthesis and characterization of novel poly(p-phenylenevinylene) derivatives containing phosphine oxide moiety. S. J. Yoon, **J. M. Ku**, M. J. Yoon, T -H. Yoon

457. Synthesis and chiroptical property of poly(phenylacetylene) bearing maltohexaose. **T. Hongo**, I. Otsuka, A. Narumi, R. Sakai, T. Satoh, H. Kaga, T. Kakuchi

458. Synthesis of fluorescent conjugated polymer sensors with varying percentage loading of oligopyridine anion receptors. C. N. Malele, S. S. Pinnock, **W. E. Jones Jr.**

459. Synthesis of poly(m-methoxyaniline) with high crystallinity by emulsion polymerization. **X. Yiting**, Z. Yifang, L. Guangcai, D. Lizong, W. Huihuang

460. Synthesis of silylated styrenic monomers and copolymerization with 1,3-cyclohexadiene. nanoporous and nanorelief composite materials. **A. Avgeropoulos**, K. Misichronis, S. Rangou

461. Tuning the properties of alternating copolymers from perfluorobenzene and thiophene derivatives. **Y. Wang**, M. D. Watson

Section D

BCEC -- Exhibit Hall - C

Imaging Techniques for the Characterization of Polymers and Polymer-Derived Materials

M. T. Cicerone and H. Jinnai, *Organizers*

6:00 - 8:00

462. Single molecules of polymers: AFM imaging under liquid medium. **Y. Roiter**, S. Minko

Section E

BCEC -- Exhibit Hall - C

Polymers and Liquid Crystals

Cosponsored by BIOHW

D. L. Gin and C. A. Guymon, *Organizers*

6:00 - 8:00

463. Structure and evolution of ordered domains in deeply quenched polyethylene melt. **N. Lacevic**, R. H. Gee, L. E. Fried

464. Quantifying orientation and dynamics at the liquid crystal/alignment layer interface. **C. M. Snively**, D. B. Chase, J. Rabolt

2007 Fall Meeting

- 465.** Rheo-NMR investigation of director oscillations in tumbling nematic liquid crystals. **C. Schmidt**, I. Quijada-Garrido, N. Sinyavsky
- 466.** Synthesis and physical properties of naphthalene based side chain LC. **G. Coimbatore**, B. Sadashiva
- 467.** Morphological studies of Bragg reflection gratings written in holographic polymer dispersed liquid crystals by thiol-ene photopolymerization. **J. M. Wofford**, L. V. Natarajan, R. L. Sutherland, V. Tondiglia, P. F. Lloyd, T. J. Bunning
- 468.** Synthesis and characterization of end-functionalized polyisobutylenes for Sharpless-type click reactions. **U. Ojha**, R. Faust
- 469.** Density functional calculations as a probe of hydrogen bond strength and mesophase stability in supramolecular liquid crystalline polymers and small molecules. **C. J. Cook**, D. K. Witte, J. A. Phillips, K. N. Wiegel
- 470.** Supramolecular liquid crystalline polymers and small molecules formed from 2-pyridone assemblies. **D. K. Witte**, K. N. Wiegel
- 471.** Elucidating the structure of hyperbranched side-chain liquid crystalline polyacrylates. **A. Singh**, C. Pugh
- 472.** Preparation of supramolecular discotic liquid crystals containing hydrogen bonds. **S. J. Lee**, M. You, J. W. Kim, S. W. Lee, J. Y. Jho
- 473.** Role of the chemical structure and order of polymer matrix on the properties of nanocomposites with CdSe quantum dots. **G. A. Shandryuk**, A. S. Merekalov, V. Bykov, G. N. Bondarenko, R. B. Vasiliev, A. M. Gaskov, R. V. Talroze
- 474.** Surface-induced structure formation of polymer dispersed liquid crystals on chemically patterned substrate. **Z. Lin**, J. Wang, J. Xia, S. W. Hong, F. Qiu, Y. Yang
- 475.** Synthesis and characterization of a novel series of liquid crystalline ionomers. **C. Wu**, J.-M. Song, J.-S. Kim

Section F

BCEC -- Exhibit Hall - C

Polymers from Renewable Resources

M. A. Hillmyer and G. W. Coates, *Organizers*

6:00 - 8:00

476. Chemoenzymatic synthesis of amylose-grafted chitosan and chitin. **Y. Kaneko**, S.-I. Matsuda, J.-I. Kadokawa

477. Dimensional characterization of cellulosic nanowhiskers using multi-angle-laser-light scattering and electron microscopy. **B. Braun**, J. R. Dorgan

478. Renewable plastic composites with carbon nanospheres derived from cellulose. **M. J. Sobkowitz**, J. R. Dorgan, K. W. Gneshin

479. Adjustable wettability of methyl methacrylate modified ramie fiber by ATRP. **Z -T. Liu**, C. Sun, Z - W. Liu, J. Lu

480. Back pressure equal channel angular consolidation (BP-ECAC): A new method to process renewable natural polymer materials. **X. Zhang**

481. Biobased plasticizers for poly-vinyl chloride. **M. M. McCallum**, D. Fan, C. Y. Lee, D. K. Mohanty, D. J. LeCaptain

482. Comb-like ionomeric copolymer: Itaconic anhydride-co-stearyl methacrylate. **S. Shang**, S. J. Huang, R. A. Weiss

483. Novel group 4 initiators for the production of biocompatible polymers. **M. D. Jones**, A. J. Chmura, C. J. Chuck, M. G. Davidson, M. D. Lunn

484. Phosphazene bases for the organocatalytic living ring-opening polymerization of cyclic esters. **L. Zhang**, F. Nederberg, R. Pratt, R. Waymouth, J. L. Hedrick, C. G. Wade

485. Photocatalytic synthesis of difuran derivatives for use as biorenewable heat-resistant monomers. **C. Comer**, G. A. Aurand, J. L. P. Jessop

486. Stable biomimetic redox catalyst obtained by enzyme catalyzed amidation of Iron porphyrin. **S. Nagarajan**, R. Nagarajan, F. F. Bruno, L. A. Samuelson, J. Kumar

487. Stereoselective ring opening polymerization of racemic-lactide. **A. J. Chmura**, M. G. Davidson, M. D. Jones, A. A. D. Tulloch

488. Synthesis and characterization of a hydrophobic derivative of succinyl-chitosan. **W. Sui**, Y. Wang, S. Dong, Y. Chen

489. Synthesis of branched polylactides from oleic acid derived monomer. **E. B. Vogel**, M. R. Smith III, G. L. Baker

490. Polymerization of poly(itaconic acid). **M. Cao**, Y. G. Durant

491. Selective end-group functionalization of poly(lactide)s prepared by living ring-opening polymerization. **M. J. Stanford**, A. P. Dove

492. Synthesis and NMR studies of PLGA copolymers prepared with sequence and stereochemical control. **R. M. Stayshich**, K. Damodaran, T. Y. Meyer

493. Synthesis and ring-opening polymerization of cyclic diesters derived from malic acid. **R. J. Pounder**, A. P. Dove

494. Structure and mechanical properties of lignosulfonate/waterborne polyurethane blends. **W. Xia**, G.

2007 Fall Meeting

Cui, J. Wen, **J. Huang**

495. Styrene biosynthesis in microorganisms. **N. R. Washburn**, A. Dinin

496. Formation of cellulose gel with ionic liquid and preparation of regenerated cellulose from the gel. **J. I. Kadokawa**, M. -A. Murakami, Y. Kaneko

Section G

BCEC -- Exhibit Hall - C

Polymer Design for Foods and Nutrition

Cosponsored by AGFD

T. E. Long and C. D. Thatcher, *Organizers*

6:00 - 8:00

497. Folate targeted glutathione antioxidant delivery systems and their impact on intracellular oxidative status. **B. S. Lepene**, S. R. Williams, T. E. Long, C. D. Thatcher

498. Preparation and characterization of novel chitosan/resistant starch films. **A. Aigster**, J. D. Goff, S. Hannah

499. Design and synthesis of biodegradable polyanhydrides based on plant and food-derived antimicrobials for biofilm prevention. **A. L. Carbone**, L. E. Rosenberg, M. L. Chikindas, K. E. Uhrich

Section H

BCEC -- Exhibit Hall - C

Scaffolds and Matrices for Tissue Engineering and Regenerative Medicine Applications

Cosponsored by BIOHW

M. E. Van Dyke, J. Yoo, and B. Harrison, *Organizers*

6:00 - 8:00

500. Characterization of collagen-modified poly(2-hydroxyethyl methacrylate) hydrogels for use as corneal implants. **A. M. Oelker**, M. W. Grinstaff

501. Design of nanostructured hydrogel composites with functionalized helical rosette nanotubes as in situ curable orthopedic materials. **L. Zhang**, S. Ramsaywack, H. Fenniri, T. J. Webster

502. Designing cell adhesion 3-D-materials used of self-assembly peptides. N. Nishishita, **Y. Hirano**

503. In vitro dorsal root ganglia viability in a mimetic nerve guidance conduit environment. **J. Griffin**, M. Song, A. L. Carbone, K. Uhrich

504. Moldable and chemoselective polyesters for use in biology. M. N. Yousaf, **D. G. Barrett**

505. Tissue engineered cartilage formation with 3-D and dynamic environments. **S. H. Kim**, Y. Jung, S. -H. Kim, Y. H. Kim, B. G. Min

WEDNESDAY MORNING

Westin Boston Waterfront -- Grand Ballroom A

Synthetic and Biological Macromolecules for Emerging Nanotechnologies

Cosponsored by BIOHW

S. J. Clarson, J. Hagen, D. E. Morse, S. V. Patwardhan, K. Shiba, D. W. Smith Jr., I. Yamashita, L. E. Drechsler, D. M. Haddleton, W. Hawthorne, and C. W. Widenhouse, *Organizers*

M. E. Van Dyke, *Organizer, Presiding*

8:30 —506. Synthetic glycopolymers and protein bioconjugates from living radical polymerization. **D. M. Haddleton**, G. Mantovani, D. Brayden

9:00 —507. Biotin end-functional star polymers via TMM LRP and click chemistry. **S. Cauët**, G. Mantovani, V. Ladmiral, D. M. Haddleton

9:20 —508. Functionalizing polyesters and polycarbonates: Covalent tagging of alcohols for ring-opening polymerization. **R. C. Pratt**, F. Nederberg, R. M. Waymouth, J. L. Hedrick

9:40 —509. Tuning the stimuli-response of hyperbranched polymers prepared by RAFT. **B. S. Sumerlin**, A. P. Vogt

10:00 —510. Reactive derivatives of 4-vinylbenzoic acid: Building blocks for defined functional polymeric architectures. **P. Theato**, K. Nilles, D. Klinger

10:20 —511. Toward direct PEGylation of tyrosine fragments. **G. Mantovani**, M. W. Jones, D. M. Haddleton

10:40 — Intermission.

11:00 —512. Multifunctional polymeric microcarrier. H. Y. Cho, S. J. Kim, H. L. Kim, I. Jo, E. Ryu, B. G. Kim, S -W. Kim, **H -J. Paik**

11:20 —513. Synthesis of functional artificial biopolymers. **J. K. Montclare**

11:40 —514. Synthesis, properties and surface characterization of polyisobutylene-based thermoplastic elastomers containing poly(methyl methacrylate-*co*-hydroxyethyl methacrylate) as hard blocks. **D. Feng**, A. Chandekar, J. E. Whitten, R. Faust

12:00 —515. ¹H NMR characterization of helical folding in ortho-phenylene ethynylene oligomers. **M. M. Slutsky**, G. N. Tew

Westin Boston Waterfront -- Stone

Metal-Containing and Metallo-Supramolecular Polymers and Materials

Materials & Applications

2007 Fall Meeting

Cosponsored by PMSE and BIOHW

U. S. Schubert, I. Manners, and G. R. Newkome, *Organizers*

H. Maeda, J.-F. Gohy, and R. K. O'Reilly, *Presiding*

7:55 —516. Supramolecular coordination chemistry based on acyclic oligopyrroles. **H. Maeda**

8:20 —517. Metal-containing conjugated oligo- and polythiophenes. C. Moorlag, **M. O. Wolf**

8:45 —518. Synthesis and applications of structurally-dynamic metallopolymers based upon N-heterocyclic carbenes. **C. W. Bielawski**, K. A. Williams, A. J. Boydston

9:10 —519. Supramolecular organization of Schiff base complexes: Gels, fibers, and metallopolymers. **J. K.-H. Hui**, M. J. MacLachlan

9:30 —520. Sensing chemical warfare agents with terpyridine based macromolecules. **R. Shunmugam**, G. N. Tew

9:50 —521. Nanomagnetic polymers. **Z. M. AL-Badri**, M. Zhang, R. Shunmugam, T. P. Russell, G. Tew

10:05 — Intermission.

10:20 —522. Pincer metal complexes bound to nanosized supports: Homogeneous catalysts and biosensors. **G. van Koten**, H. P. Dijkstra, R. J. M. Klein Gebbink

10:45 —523. Metalloporphyrin nanoparticles as supramolecular catalysts. **C. M. Drain**, G. Smeureanu

11:05 —524. Functional hollow polymeric nanocages. **R. K. O'Reilly**, A. D. Ievins

11:25 —525. Macroscale and nanoscale investigation of metallo-supramolecular hybrid organogels. **D. M. Loveless**, M. J. Serpe, S. L. Jeon, S. L. Craig

11:40 —526. Medium-induced control and switching of nonlinear optical responses in dipolar Iron(II) pentacyanide complexes. **K. Clays**, B. J. Coe

Section C

Westin Boston Waterfront -- Grand Ballroom C

Conjugated Polymer Materials and Hybrids: Synthesis, Macromolecular Assemblies, and Nanostructures

Structure-Property Relationships

Cosponsored by BIOHW

R. C. Advincula and K. Muellen, *Organizers*

J. Locklin, *Presiding*

S. Valiyaveetil, *Organizer, Presiding*

9:00 — Introductory Remarks.

9:05 —527. Controlling the nm-scale architecture of conjugated polymer chains and bulk heterojunctions. **B. J. Schwartz**

2007 Fall Meeting

9:35 —528. Correlating molecular structure to field-effect mobility: The investigation of side-chain functionality in phenylene-thiophene oligomers. **J. Locklin**, A. Sung, Z. Bao

10:05 —529. Thermochromic polydiacetylene micro- and nanocrystals: Comparison with bulk crystals. X. Wang, **D. Sandman**, S. Chen, S. Gido

10:35 — Intermission.

10:45 —530. Electronic properties and applications of conjugated polyelectrolytes. **T-Q. Nguyen**, A. Garcia, R. Yang, G. Bazan

11:15 —531. Mesophase formation in poly(3-alkylthiophene)s containing long chain alkyl groups. **B. L. Lucht**, Y. Wang, A. Mills, W. B. Euler

11:35 —532. New poly (2,7-carbazole) derivatives for solar cell applications. **A. Michaud**, N. Blouin, G. David, M. Leclerc

Section D

Westin Boston Waterfront -- Otis

Scaffolds and Matrices for Tissue Engineering and Regenerative Medicine Applications

Cosponsored by BIOHW

B. Harrison and J. Yoo, *Organizers*

M. E. Van Dyke, *Organizer, Presiding*

8:30 —533. Protein biomaterial designs to direct cell and tissue outcomes. X. Wang, C. Vepari, L. Abraham, A. Murphy, X. Wang, **D. L. Kaplan**

9:00 —534. Biocompatible and tunable elastic hyaluronic acid hydrogel for adult stem cell differentiation. **F. Rehfeldt**, S. Cai, D. E. Discher

9:20 —535. Inorganic-organic hydrogels with tunable properties. Y. Hou, K. R. Regan, C. A. Schoener, M. S. Hahn, **M. A. Grunlan**

9:40 —536. Toward sequential growth factor delivery from scaffold surfaces. **M. L. Macdonald**, N. Brenner, G. Endale, N. Rodriguez, R. Langer, P. T. Hammond

10:00 — Intermission.

10:20 —537. Organic sol-gel chemistry as a flexible synthetic route to tissue engineering scaffolds. P. Borgaonkar, S. Sharma, M. Chen, S. Bhowmick, **D. F. Schmidt**

10:40 —538. An organocatalytic route to functional and biodegradable hydrogels. **F. Nederberg**, R. C. Pratt, A. F. Mason, R. M. Waymouth, J. L. Hedrick

11:00 —539. Synthesis and characterization of highly crosslinked hyaluronan hydrogels. **N. R. Washburn**, S. A. Bencherif, A. Srinivasan, J. Hollinger, F. Horkay, K. Matyjaszewski

2007 Fall Meeting

11:20 —540. Biodegradable star-shaped PEG-PLLA block copolymer-cholesterol conjugate exhibiting sol-gel transition as an injectable scaffold for tissue engineering. **Y. Ohya**, K. Nagahama, T. Ouchi

Section E

Westin Boston Waterfront -- Grand Ballroom B

Polymers and Liquid Crystals

Elastomeric and Network LCs

Cosponsored by BIOHW

D. L. Gin, *Organizer*

C. A. Guymon, *Organizer, Presiding*

8:30 —541. Creating work with light: Photoresponsive liquid crystalline elastomers based on azobenzene. **T. J. Bunning**, T. J. White, V. P. Tondiglia, L. V. Natarajan, R. Vaia, S. V. Serak, V. A. Groshik, N. V. Tabiryan

9:05 —542. Shape memory phenomena in liquid crystalline elastomers and networks. **P. T. Mather**, K. A. Burke, H. Cho

9:40 —543. Polymerization kinetics and phase separation effects in holographic polymer dispersed liquid crystals. **T. J. White**, L. V. Natarajan, V. P. Tondiglia, T. J. Bunning, C. A. Guymon

10:05 — Intermission.

10:30 —544. Functionalized liquid crystal networks: Toward soft actuators and organic zeolites. **D. J. Broer**, C. Luengo Gonzalez, C. L. Van Oosten, K. D. Harris, C. W. Bastiaansen, J. Lub

11:05 —545. Well-defined liquid crystal networks from telechelic polymers. **Y. Xia**, R. Verduzco, R. H. Grubbs, J. A. Kornfield

11:30 —546. Anisotropic gelation induced by a rod-like polyelectrolyte. **H. Furukawa**, Y. Shigekura, W. Yang, Y. Osada, J. P. Gong

Section F

Westin Boston Waterfront -- Douglas

General Papers: Functional Materials

D. Garcia, *Organizer*

M. Johnson, *Presiding*

8:00 —547. Electrochemical supercapacitors based on poly(xylyl viologen). **D. Irvin**, J. D. Stenger-Smith, J. A. Irvin

8:20 —548. Electroluminescence of poly(methyl methacrylate)-based random copolymers containing carbazole and oxadiazole pendant groups. **D. D. Evanoff Jr.**, J. B. Carroll, J. R. Lawrence, J. M. Houchins, R. D. Roeder, C. F. Huebner, S. E. Hayes, Z. J. Hunt, S. Foulger

2007 Fall Meeting

8:40 —549. Maximum contrast from electrochromic materials: Limitations of dual systems. **J. Padilla**, V. Seshadri, G. A. Sotzing, T. F. Otero

9:00 —550. Quantum amplified holographic recording in dewarbenzene-substituted glassy polymers. **D. R. Robello**, M. Mis, L. Ferrar, T. G. Brown, Y. Li

9:20 —551. Self-assembly of chromogenic dyes: Humidity sensing materials and piezochromic behavior. **J. Kunzelman**, B. R. Crenshaw, M. Kinami, C. Weder

9:40 —552. Siloxane-based hole injection materials for organic light emitting diodes. **D. L. Witker**, S. Xu, P. J. Schalk, T. Suzuki

10:00 —553. Thermo- and pH-responsive copolymers based on oligoethyleneglycol methacrylates. **R. Hoogenboom**, C. R. Becer, S. Hahn, D. Fournier, U. S. Schubert

10:20 —554. Functionalization of poly(propargyl acrylate) crystalline colloidal arrays through click chemistry. **D. D. Evanoff Jr.**, S. E. Hayes, Y. Ying, G. H. Shim, J. R. Lawrence, J. B. Carroll, R. D. Roeder, J. M. Houchins, C. F. Huebner, S. Foulger

10:40 —555. Functionalized vinyl-type polynorbornene: Synthesis and characterization of norbornene-styrene copolymers with excellent thermostability and optical properties. **T. B. Hoang**, Y. Tsunogae, S. Nojima, T. Shiono

11:00 —556. Group transfer polymerization of acrylates and methacrylates using N-heterocyclic carbene catalysts. **M. D. Scholten**, J. L. Hedrick, R. M. Waymouth

11:20 —557. Oligomerization of 1,1-diphenylethylene in the end-capping reaction of poly(styryl)lithium. R. P. Quirk, **C. A. Garces**, M. J. Polce, C. Wesdemiotis

11:40 —558. Synthesis of click/ester and click/ether dendrimers based on AB₂- and CD₂-monomers. **P. Antoni**, D. Nyström, C. J. Hawker, A. Hult, M. Malkoch

WEDNESDAY AFTERNOON

Section A

Westin Boston Waterfront -- Grand Ballroom A

Synthetic and Biological Macromolecules for Emerging Nanotechnologies

Cosponsored by BIOHW

S. J. Clarson, J. Hagen, D. E. Morse, S. V. Patwardhan, K. Shiba, D. W. Smith Jr., M. E. Van Dyke, I. Yamashita, L. E. Drechsler, D. M. Haddleton, W. Hawthorne, and C. W. Widenhouse, *Organizers*

1:30 —559. Synthetic versatility of trifluorovinyl aromatic ether monomers and intermediates. **D. W. Smith Jr.**, A. R. Neilson, S. T. Iacono, S. M. Budy, C. M. Topping, R. S. Hernandez

2:00 —560. Processing and modification of marine derived DNA for use in optoelectronic device applications. **J. Hagen**, J. G. Grote, S. J. Clarson

2:30 —561. Creation of self-sterilizing surfaces through plasma polymerization. **R. G. Dillingham**

2007 Fall Meeting

3:00 —562. Inkjet printing of insoluble biopolymer and polymer complexes. **P. Calvert**, S. Limem, S. Iyengar, P. K. Patra

3:30 — Intermission.

3:50 —563. Electrowetting: Applications in optics, lab-on-chip, textiles, and opportunities for development of new hydrophobic polymers. **J. Heikenfeld**

4:20 —564. Coulomb-staircase effect in silicon-nanodisk structures fabricated using damage-free CL neutral beam etching. **S. Samukawa**

4:50 —565. Helix-mediated supramolecular device and self-assembly for efficient energy/electron transport. **O-K. Kim**, M. F. Pepitone, J. S. Melinger, G. G. Jernigan, S. Chung, D. Lowy

Section B

Westin Boston Waterfront -- Stone

Metal-Containing and Metallo-Supramolecular Polymers and Materials

Materials & Applications

Cosponsored by PMSE and BIOHW

U. S. Schubert, I. Manners, and G. R. Newkome, *Organizers*

R. Hoogenboom, Y. Chujo, and H. Sleiman, *Presiding*

1:00 —566. Main chain type conjugated hybrid polymers. **Y. Chujo**

1:35 —567. Supramolecular ABA triblocks: Understanding reaction parameters and designing new materials. **M. Chiper**, M. A. R. Meier, D. Wouters, U. S. Schubert

1:55 —568. Coordination ROP in solution and solvent-free synthesis of MOFs. **S. L. James**

2:20 —569. Lanthanide-containing polymers as elemental tags for antibody based assays. X. Lou, G. Zhang, I. Herrera, R. Kinach, O. Ornatsky, V. Baranov, **M. Nitz**, M. A. Winnik

2:40 —570. Formation of concentric ferromagnetic nanotubes from self-assembled phospholipids with extraordinary magnetization. **M. Yu**, M. W. Urban

3:00 — Intermission.

3:15 —571. Responsive electronic transition metal based materials. **T. M. Swager**

3:40 —572. Assembling metals and nanoparticles one by one with DNA. **H. F. Sleiman**, F. A. Aldaye, H. Yang, M. A. Slim

4:05 —573. Europium-containing polymers as humidity-sensing materials. **A. C. Knall**, A. Pein, N. Noormofidi, F. Stelzer, C. Slugovc

4:20 —574. Conjugated polymer-metal composites as naked eye sensor arrays for biogenic amines in

2007 Fall Meeting

water. M. S. Maynor, T. K. Deason, T. L. Nelson, R. W. Tilford, **J. J. Lavigne**

4:40 —575. Highly coloured organometallic thermoplastics: Polymers incorporating azo dyes. **A. S. Abd-El-Aziz**, P. O. Shipman, D. J. Winram

Section C

Westin Boston Waterfront -- Grand Ballroom C

Conjugated Polymer Materials and Hybrids: Synthesis, Macromolecular Assemblies, and Nanostructures

Fabrication and Devices

Cosponsored by BIOHW

K. Muellen, *Organizer*

T -Q. Nguyen, *Presiding*

R. C. Advincula and S. Valiyaveetil, *Organizers, Presiding*

2:00 —576. Novel strategies for the fabrication of solution processed multilayer oleds: Oxetane crosslinking without photoacid. **K. Meerholz**

2:30 —577. Regioregular polythiophenes: Transistor optimization and sensors. **R. D. McCullough**, G. Sauv , J. R. Cooper, M. C. Iovu, I. Osaka, D. N. Lambeth, B. Li, L. Weiss, G. Fedder, T. Kowalewski

3:00 —578. Measuring and controlling exciton diffusion in organic semiconductors. **I. D. W. Samuel**

3:30 — Intermission.

3:40 —579. Spin casting with alkanethiols: A new approach toward high efficiency bulk heterojunction solar cells. **G. C. Bazan**, J. Peet, M. Daniel, T -Q. Nguyen, A. J. Heeger, J. Y. Kim

4:10 —580. High performance functionalized asymmetric linear acenes for organic TFTs. **M. L. Tang**, A. D. Reichardt, Z. Bao

4:30 —581. Electrical and gas sensing properties of conjugated polymer nanostructures. **Y. Cao**, J. Kim, T. S. Mayer, T. E. Mallouk

Section D

Westin Boston Waterfront -- Otis

Scaffolds and Matrices for Tissue Engineering and Regenerative Medicine Applications

Cosponsored by BIOHW

M. E. Van Dyke and J. Yoo, *Organizers*

B. Harrison, *Organizer, Presiding*

1:30 —582. A versatile strategy for the fabrication of core-sheath structured nanofiber yarns. **X. Li**, C. Yao

1:50 —583. Ampicillin-based poly(anhydride-amide) coatings for medical devices. **M. L. Johnson**, R. Casas, D. V. Patwardhan, S. K. Pollack, K. E. Uhrich

2007 Fall Meeting

2:10 —584. Cell encapsulation hydrogel matrix "cell-container" prepared by spontaneous reversible gelation between water-soluble phospholipid polymer bearing phenylboronic acid moiety and polyols. **T. Konno**, K. Ishihara

2:30 —585. Covalent surface modification of degradable polymers. A -C. Albertsson, **M. Kallrot**, U. Edlund

2:50 — Intermission.

3:10 —586. Cytocompatible phospholipid polymer hydrogel scaffold with bioconjugation of cell adhesive peptide sequence. **K. Ishihara**, E. Maeta, M. Takai, T. Konno

3:30 —587. Preparation of aligned porous biodegradable polymers by directional freezing. **H. Zhang**, A. I. Cooper

3:50 —588. Preparation of zein/poly(lactide-co-glycolide) continuous nanofiber yarns by coupled electrospinning. **C. Yao**, **X. Li**, T. Song

4:10 —589. Ring opening metathesis polymers as macroinitiator-coinitiator systems for the photopolymerization of acrylates. **M. Sandholzer**, M. Schuster, R. Liska, C. Turecek, F. Varga, F. Stelzer, C. Slugovc

4:30 —590. Tunable biomineralization in gel interior: Electrophoresis approach provides smart ion delivery. **J. Watanabe**, M. Akashi

Section E

Westin Boston Waterfront -- Grand Ballroom B

Polymers and Liquid Crystals

LC Polymers

Cosponsored by BIOHW

D. L. Gin and C. A. Guymon, *Organizers*

C. W. Bielawski, *Presiding*

1:30 —591. Effects of liquid crystallinity on the self-assembly of rod-coil block copolymers. **R. A. Segalman**, B. D. Olsen

2:05 —592. Hierarchical nanostructures of mesogen jacketed bent-core liquid crystalline block copolymers. **K. K. Tenneti**, X. Chen, C. Y. Li, X. Wan, Q -F. Zhou, L. Rong, B. S. Hsiao

2:30 —593. Self-assembly of polypeptide-based rod-coil block copolymers. A. D. Richardson, **D. A. Savin**

3:05 — Intermission.

3:25 —594. From rod to coil: Tuning the conformational characteristics via side-chain liquid crystals. **E. W. Cochran**, S. H. Kim

4:00 —595. Architectural effects in side-chain liquid crystalline polymers: Hyperbranched SCLCPs. **C. Pugh**, A. Singh

4:35 —596. Morphology of side chain liquid crystalline block copolymers: Influence of liquid crystal content. **E. Verploegen**, T. Zhang, L. Tian, P. T. Hammond

Section F

Westin Boston Waterfront -- Douglas

General Papers: Functional Materials

D. Garcia, *Organizer*

A. L. Carbone, *Presiding*

1:00 —597. ATRP as a tool to obtain functional surface modifications on biofiber based surfaces: Dual-responsive grafts. **E. Malmström**, J. Lindqvist, D. Nyström, E. Östmark, P. Antoni, M. Johansson, A. Hult

1:20 —598. Superhydrophobic biofiber surfaces obtained via ATRP and postfunctionalization reactions. **D. Nyström**, J. Lindqvist, E. Östmark, P. Antoni, M. Malkoch, M. Johansson, E. Malmström, A. Hult

1:40 —599. Synthesis and activity of novel antimicrobial surfaces. **A. E. Madkour**, J. M. Dabkowski, K. Nusslein, G. N. Tew

2:00 —600. Incorporation of amide-functionalized SWNT in silica network through sol-gel processing. **R. Narain**, K. Babooram

2:20 —601. Synthesis of radiopaque, iodinated salicylic acid-derived poly(anhydride-esters) using melt-condensation and solution polymerization techniques. **A. L. Carbone**, M. Song, K. E. Uhrich

2:40 —602. Versatile functionalization of poly(vinyl alcohol) for grafting of biofunctional building blocks. **D. A. Ossipov**, J. Hilborn

3:00 —603. Graft copolymerization of polyacrylamide-based cationic water-soluble polymers. J -S. Presello, **R. Subramanian**

3:20 —604. Impact of blockiness and tacticity on the self-assembly of amphiphilic copolymers in water. R. C. W. Liu, A. Pallier, M. Brestaz, N. Pantoustier, **C. Tribet**

3:40 —605. Membrane transport behavior and the lability of chloride on polyphosphazenes bearing bulky substituents. **F. F. Stewart**, J. R. Klaehn, C. J. Orme

4:00 —606. Multi-partial post-polymerization functional group inter-conversion of regio-regular poly(thiophene)s. **T. Israsena Na Ayudhya**, J. J. Lavigne

4:20 —607. PEGylation of shell crosslinked nanoparticles and their biodistribution assessment. **G. Sun**, J. Xu, A. Hagooley, R. Rossin, Z. Li, D. A. Moore, M. J. Welch, K. L. Wooley

2007 Fall Meeting

4:40 —608. New methodology for the anionic synthesis of alkoxy-silyl-functionalized polymers. R. P. Quirk, **M. Ocampo**, R. L. King, M. J. Polce, C. Wesdemiotis

THURSDAY MORNING

Section A

Westin Boston Waterfront -- Grand Ballroom A

Synthetic and Biological Macromolecules for Emerging Nanotechnologies

Cosponsored by BIOHW

S. J. Clarson, J. Hagen, D. E. Morse, S. V. Patwardhan, K. Shiba, D. W. Smith Jr., M. E. Van Dyke, L. E. Drechsler, D. M. Haddleton, W. Hawthorne, and C. W. Widenhouse, *Organizers*

I. Yamashita, *Organizer, Presiding*

8:30 —609. Hydrophobic silsesquioxane nanoparticles. **J. M. Mabry**, A. Vij, S. T. Iacono

9:00 —610. Formation and reaction of poss derivatives. **Y. Kawakami**

9:30 —611. Determination of thickness and refractive indices of polyhedral oligomeric silsesquioxane thin films by multiple incident media ellipsometry. **U. Karabiyik**, M. Mao, A. R. Esker, S. Satija

9:50 —612. Manipulation of free-standing polysaccharide nanosheets and their application on a nano-adhesive plaster. **S. Takeoka**, T. Fujie, Y. Okamura

10:10 —613. Viscoelastic nanocomposite hydrogels: Influence of polymer Mw and ionic strength on structure. **G. Schmidt**, P. Schexnaider, E. Loizou, P. Butler, L. Porcar

Section B

Westin Boston Waterfront -- Stone

Metal-Containing and Metallo-Supramolecular Polymers and Materials

Dendrimers, Hyperbranched Systems, Stars and Others

Cosponsored by PMSE and BIOHW

U. S. Schubert, I. Manners, and G. R. Newkome, *Organizers*

B. Z. Tang, D. Astruc, and I. D. W. Samuel, *Presiding*

8:05 —614. Supramecular metallodendrimers as nanoreactors for molecular recognition. **D. Astruc**, C. Ornelas, J. Ruiz Aranzaes, E. Cloutet

8:40 —615. Alkynylruthenium dendrimers: Syntheses and multiphoton absorption. **M. G. Humphrey**, M. P. Cifuentes, M. Samoc

9:05 —616. Cobalt-containing hyperbranched poly(silylenearylene)s. J. Liu, M. Häußler, J. W. Y. Lam, A. Qin, **B. Z. Tang**

9:30 —617. Fine controlled metal-assembly in dendrimers. **K. Yamamoto**

2007 Fall Meeting

9:55 — Intermission.

10:15 —618. Homogeneous electron transfer between redox-active cluster core dendrimers. **C. B. Gorman**, Y -R. Hong, A. Sharma

10:35 —619. Mimicking of iron-sulfur cluster proteins: Synthesis and electrochemical behavior of amphiphilic dendrimers. **A. Sharma**, N. Kim, C. Gorman

10:55 —620. Phosphorescent dendrimers: Efficient solution-processed OLED materials. J. C. Ribierre, A. Ruseckas, K. R. Knights, S. V. Staton, P. L. Burn, **I. D. W. Samuel**

11:15 —621. Click chemistry and dendrimer synthesis as tools for designing efficient optical power limiting platinum(II) acetylides. **R. Westlund**, E. Glimsdal, M. Lindgren, C. Lopes, E. Malmström

11:30 —622. Amphiphilic poly(2-oxazoline)s bearing palladium carbene complexes for C-C coupling reactions in micellar catalysis. **D. Schönfelder**, R. Weberskirch, O. Nuyken

11:55 — Concluding Remarks.

Section C

Westin Boston Waterfront -- Grand Ballroom C

Conjugated Polymer Materials and Hybrids: Synthesis, Macromolecular Assemblies, and Nanostructures

Biorelated Concepts

Cosponsored by BIOHW

K. Muellen, Organizer

S. Zauscher, Presiding

R. C. Advincula and S. Valiyaveetil, Organizers, Presiding

9:00 — Introductory Remarks.

9:05 —623. Biosensors based on a cationic polythiophene: Detection of dna and proteins. **M. Leclerc**, A. Najari, H. A. Ho

9:35 —624. Water-soluble conjugated polymers and their complexes for biosensory applications. **I -B. Kim**, R. Phillips, U. H. F. Bunz

10:05 — Intermission.

10:15 —626. Biomimetic synthesis of water soluble conducting copolymers. **F. Bruno**, S. A. Fossey, S. Nagarajan, R. Nagarajan, J. Kumar, L. A. Samuelson

10:45 —627. Fabrication of bioconjugated and hybrid polymeric nanostructures by field-induced scanning probe lithography. A. Garcia, A. Hucknall, M. Johannes, R. Clark, A. Chilkoti, **S. Zauscher**

11:15 —625. Withdrawn.

Westin Boston Waterfront -- Otis

Imaging Techniques for the Characterization of Polymers and Polymer-Derived Materials

X-Ray, Force, and Electron Microscopies

M. T. Cicerone, *Organizer*

H. Jinnai, *Organizer, Presiding*

8:00 — Introductory Remarks.

8:05 —628. Imaging of mechanical properties for surface and internal phase of multiphase polymer thin films. H. Sugihara, K. Oya, H. Murase, K. Tanaka, K. Akabori, T. Kajiyama, **A. Takahara**

8:45 —629. Transmission electron microtomography of multicomponent block copolymer systems. **R. J. Spontak**, J. T. Weaver, A. O. Gozen, V. Abetz, S. D. Smith, J. Genzer, D. A. Agard

9:25 —630. Structural imaging with a modern transmission electron microscope. **M. Kawasaki**, H. Furukawa

10:05 —631. LV-TEM imaging of nanosilica formation in thermoreversible block copolymer gel. **J. Texter**, R. Schwarz, P. Stepan

10:30 —632. Characterizing polymers through molecular visualization. **S. S. Sheiko**, F. C. Sun, J. R. Boyce, S. Y. Yu

10:55 —633. Nanostructured morphology of polymer conetworks: Resolving the controversy between AFM and TEM images for disordered nanophase separated multicomponent polymers. R. Thomann, **B. Iván**, G. Erdödi, A. Domján, J. Scherble, R. Mülhaupt

11:20 —634. Polymerization shrinkage of polymeric dental composites characterized by X-ray microcomputed tomography. **S. Lin-Gibson**, J. Sun

11:45 —635. Synchrotron X-ray tomography of flame retardants in polymers. **L. G. Butler**

12:10 —636. Blowing bubbles in PMMA with the SEM. J. Kraut, R. Hiesgen, L. Ge, **J. Texter**

Westin Boston Waterfront -- Grand Ballroom B

Polymer Design for Foods and Nutrition

Cosponsored by AGFD and BTEC

T. E. Long and C. D. Thatcher, *Organizers*

S. E. Duncan, *Presiding*

9:00 —637. Synthesis and association of phosphonium cation-containing polyesters for food packaging applications. **E. B. Anderson**, T. E. Long, S. Unal

2007 Fall Meeting

9:20 —638. Suitability of poly(styrene) for food packaging. **B. A. Howell**

9:40 —639. Heat seal design and optimization. **R. D. Moffitt**

10:00 —640. Health benefits of dietary resistant starch, a non digestible fermentable glucose polymer. **M. J. Keenan**, J. Zhou, A. M. Raggio, K. L. McCutcheon, R. T. Tulley, M. Hegsted, H. G. Bateman, I. Brown, A. Birkett, S. S. Newman, R. J. Martin

10:20 — Intermission.

10:40 —641. Development of antioxidant peptides from milk protein. S. Hogan, **K. Zhou**

11:00 —642. Psyllium derivatives and their health beneficial properties. **L. L. Yu**, Z. Cheng

11:20 —643. Controlled release of active ingredients from polymer food packaging by molecular encapsulation with cyclodextrins. **J. L. Koontz**, J. E. Marcy

THURSDAY AFTERNOON

Section A

Westin Boston Waterfront -- Grand Ballroom A

General Papers: Functional Materials

D. Garcia, *Organizer*

J. Griffin, *Presiding*

1:00 —644. Continuous copolymerization of vinylidene fluoride with hexafluoropropylene in supercritical carbon dioxide. **T. S. Ahmed**, J. M. DeSimone, G. W. Roberts

1:20 —645. Controlled synthesis of fluorinated block copolymers with pendant sulfonates. S. Hvilsted, **I. Dimitrov**, K. Jankova

646. Withdrawn.

1:40 —647. Controlled dispersion polymerization in supercritical carbon dioxide by RAFT. **A. M. Gregory**, K. J. Thurecht, S. M. Howdle

2:00 —648. Degradable polyurethanes based on imine and acetal chemistry. M. Kacperski, P. A. Waske, **Y. G. Durant**, R. P. Johnson

2:20 —649. Dynamic mechanical behavior of polymers containing silica nanoparticles. **A. Kraft**, V. Arrighi, P. M. E. Adams, G. Karotsis, A. McAnaw, I. J. McEwen, L. Ragupathy, C. Waring

2:40 —650. Glass binding polymers: Persistent and renewable antibacterial coatings for surfaces. **V. Sambhy**, B. R. Peterson, A. Sen

3:00 —651. Influence of polymer architecture on anticorrosion coating efficiency. **A. S. Quincy**, Y. G. Durant

3:20 —652. Synthesis of ion sequestration particles for anticorrosion coatings. **Z. Z. Zguris**, Y. G. Durant

3:40 —653. Materials engineering and fabrication of colloiddally based, color tailorable organic light emitting devices. **C. F. Huebner**, S. Foulger, J. R. Lawrence, D. D. Evanoff Jr., J. B. Carroll, J. M. Houchins, Y. Ying

4:00 —654. Micellization of multiblock copolymers on surfaces. C -A. Fustin, H. Huang, R. Hoogenboom, U. S. Schubert, **J -F. Gohy**

4:20 —655. Microporous organic polymers for methane storage. **C. D. Wood**, D. Bradshaw, E. Stöckel, B. Tan, A. Trewin, M. J. Rosseinsky, A. I. Cooper

Section B

Westin Boston Waterfront -- Stone

General Papers: Polymers in Nanotechnology

Cosponsored by BIOHW

D. Garcia, *Organizer*

T. W. Smith and M. J. Nasrullah, *Presiding*

1:00 —656. Phosphoric acid induced micellization of styrene-ethylene oxide block copolymers. **T. W. Smith**, M. Ayubali, M. Kotlarchyk, A. Langner

1:20 —657. Novel resins containing amide and phosphate functional groups and their role in metal ion complexation in aqueous solutions. **A. N. Pustam**, S. D. Alexandratos

1:40 —658. A kinetic study for the reversible addition fragmentation chain transfer polymerization of N-isopropylacrylamide: Slow and fast initiation. **R. Narain**, H. Bouchekif

2:00 —659. Block copolymer surface modifiers to enable new groundwater remediation technologies based on nanoscale zero valent iron particles. K. Sirk, N. B. Saleh, T. Phenrat, H -J. Kim, P. L. Golas, G. V. Lowry, K. Matyjaszewski, **R. D. Tilton**

2:20 —660. Controlled design of amphiphilic block-copolymers using ring-opening polymerization and click chemistry. **P. Lundberg**, P. Antoni, L. Fogelström, M. Malkoch, A. Hult

2:40 —661. Grafting of poly(ϵ -caprolactone) from microfibrillated cellulose films - for biocomposite applications. **H. Lönnberg**, L. Fogelström, E. Malmström, Q. Zhou, H. Brumer, T. T. Teeri, S. Samir, L. Berglund, A. Hult

3:00 —662. Loading capacity of copolymer micelles enhanced by specific interactions. **C. Giacomelli**, V. Schmidt, R. Borsali

3:20 —663. Polyelectrolyte multilayers used to design mechanically responsive films. **P. Schaaf**, J. Voegel, P. Lavalley Sr., J. Hemmerlé, D. Mertz, P. Marie, V. Roucoules

3:40 —664. Polymer networks based on dendrimer monomers. **C. Nilsson**, N. Simpson, M. Malkoch,

2007 Fall Meeting

M. Johansson, E. Malmström

4:00 —665. Synthesis and self-assembly of symmetric abcba pentablock copolymers. **A. J. Meuler**, M. A. Hillmyer, F. S. Bates

4:20 —666. Synthesis and study of thermoresponsive micellar assemblies from amphiphilic triblock copolymers. **A. Sundararaman**, T. Stephan, R. B. Grubbs

4:40 —667. Water-soluble core cross-linked star polymers with a degradable, disulfide-functionalized core. **T. K. Goh**, A. Blencowe, S. E. Shaw, G. G. Qiao

Section C

Westin Boston Waterfront -- Grand Ballroom C

Conjugated Polymer Materials and Hybrids: Synthesis, Macromolecular Assemblies, and Nanostructures

Materials Processing

Cosponsored by BIOHW

R. C. Advincula, K. Muellen, and S. Valiyaveetil, *Organizers*

D. Zepeda and A. L. Briseno, *Presiding*

1:30 —668. Facile conversion of precursor aromatic ladder polymers and oligomers. **W. Niu**, A. Sharma, W. J. Behof, C. B. Gorman

2:00 —669. One-dimensional nanostructured n-channel ladder polymer transistors. **A. L. Briseno**, Y. Xia, S. A. Jenekhe

2:30 —670. Disubstituted polyacetylene brushes grown via surface directed metathesis polymerization. **S. B. Jhaveri**, K. R. Carter

2:50 — Intermission.

3:00 —671. Morphological, photophysical and thermal properties of luminescent organic-inorganic hybrids based on DCN and TEOS. **A. Martinez-Richa**, M. Trejo-Duran, R. Vera-Graziano, E. Alvarado-Mendez, V. Castaño

3:30 —672. Synthesis and characterization of Donor-Acceptor functionalized PPV di-block copolymers for photovoltaics. **D. Zepeda**, J. P. Ferraris

3:50 —673. Self-assembly of o-phenylene ethynylene macrocycles. **J. Jiang**, S. H. Seo, J. Y. Chang, G. Tew

Section D

Westin Boston Waterfront -- Otis

Imaging Techniques for the Characterization of Polymers and Polymer-Derived Materials

Optical and Other Microscopies

2007 Fall Meeting

H. Jinnai, *Organizer*

M. T. Cicerone, *Organizer, Presiding*

1:30 — Introductory Remarks.

1:35 —674. Microstructure characterization of drug-polymer composite coatings. **M. K. McDermott**, D. V. Patwardhan, R. Casas, B. J. Dair, C -S. Kim, S. K. Pollack, D. M. Saylor, J. M. Soffer, J. Toy, C. X. Wang

2:00 —675. Coherent anti-Stokes Raman scattering imaging of drug distribution and release from polymer films. **H. Wang**, E. Kang, I. K. Kwon, J. Robinson, K. Park, J. X. Cheng

2:25 —676. Two-photon fluorescence and FLIM 3-D imaging in polymer films. Z -L. Huang, **K. D. Belfield**

2:50 —677. Fluorescent tags for amino resins. **A. Philbrook**, C. J. Easton, S. Earnshaw

3:15 —678. Optical ellipsometry: Characterization of polymer structural transformations. B. Feinberg, **G. Y. Georgiev**, P. Cebe

3:40 —679. Imaging analysis of a poly(glycolide-co-lactide) monofilament during in vitro degradation. **M. Deng**, D. Burkley, R. Vetrecin, G. Chen

4:05 —680. Spatially-resolved polymer degradation via ESR imaging: Software development and prospects. **S. Schlick**, K. Kruczala

4:30 —681. Neutron imaging of an electrically-stimulated water gradient in ionic polymer metal composite actuators. J. K. Park, K. A. Page, D. S. Hussey, **R. B. Moore**

Section E

Westin Boston Waterfront -- Grand Ballroom B

Polymer Design for Foods and Nutrition

Sensory Issues in Food Packaging

Cosponsored by AGFD and BTEC

T. E. Long and C. D. Thatcher, *Organizers*

E. B. Anderson and J. L. Koontz, *Presiding*

1:00 —682. To eat or not to eat: Fish freshness assessment using a conjugated polymer. T. L. Nelson, I. Tran, M. S. Maynor, **J. J. Lavigne**

1:30 —683. Collagen films with antioxidant for flavor protection in pet food. **S. F. O'Keefe**, D. M. Greene Lakins, C. Alvarado

2:00 —684. Sensory impacts from polymer pipes interacting with drinking water oxidants. **A. M. Dietrich**

2:30 — Intermission.

2007 Fall Meeting

2:45 —685. Packaging solutions for sensory degradation in foods and beverages due to photooxidation. **J. B. Webster**, S. E. Duncan, J. E. Marcy, S. F. O'Keefe, S. N. Sims

3:15 —686. Flavor and aroma of food and package interactions: Perception and communication. **S. E. Duncan**