

2004 Spring meeting

2004 Spring NATIONAL ACS MEETING

Anaheim, CA (March 28 - Apr. 1, 2004)

Program Meeting Chair: Doug Kiserow

Deadline for Abstracts and Polymer Preprints: November 30, 2003.*

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

Advanced Membranes For Challenging Applications

W. J. Koros, Chemical Engineering, Georgia Institute of Technology, 778 Atlantic Dr, Atlanta, GA 30332-0100, 404-385-2845, fax 404-385-2683, e-mail: wjk@che.gatech.edu; G. Lipscomb, Department of Chemical and Environmental Engineering, University of Toledo, NI 3048 Mail Stop 305, 2801 West Bancroft Street, Toledo, OH 43606-3390, e-mail: glenn.lipscomb@utoledo.edu

Biomacromolecule Interactions with Synthetic Surfaces

K. L. Wooley, Department of Chemistry, Washington University, One Brookings Drive, Campus Box 1134, St. Louis, MO 63130-4899, 314-935-7136, fax 314-935-9844, e-mail: klwooley@artsci.wustl.edu; J. P. Armistead, Physical Sciences Division 331, Office of Naval Research, 800 North Quincy Street, Arlington, VA 22217-5660, 703 696-4315, fax 703-696-6887, e-mail: armistj@onr.navy.mil; L. Chrisey, Cognitive, Neural and Biomolecular Division 342BB, Office of Naval Research, 800 N. Quincy St., Arlington, VA 22217-5660, 703-696-4504, e-mail: chrisey@onr.navy.mil

Conducting Polymers

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Ionic Liquids In Polymer Systems

R. D. Rogers, Department of Chemistry and Center for Green Manufacturing, The University of Alabama, Tuscaloosa, AL 35487, 205-348-4323, e-mail: RDRogers@bama.ua.edu; C. S. Brazel, Department of Chemical Engineering, The University of Alabama, A127 Bevell Research Center, Box 870203, The University of Alabama, Tuscaloosa, AL 35487-0203, (205) 348-9738, fax (205) 348-7558, e-mail: CBrazel@coe.eng.ua.edu

Metal-containing And Metallo-supramolecular Polymers And Materials

(Cosponsored with pmse). U. S. Schubert, Macromolecular Chemistry and Nanoscience, Eindhoven University of Technology, P.O. Box 513, Eindhoven, 5600 MB, Netherlands, +31 40 247 4083, fax +31 40 247 4186, e-mail: u.s.schubert@tue.nl; 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; I. Manners, Department of Chemistry, University of Toronto, 80 St. George Street, Toronto, ON M5S

2004 Spring meeting

3H6, Canada, 416-978-6157, fax 416-978-6157, e-mail: imanners@alchemy.chem.utoronto.ca

Polymerization and Polymer Processing in Supercritical Fluids

G. W. Roberts, Department of Chemical Engineering, North Carolina State University, Raleigh, NC 27695, 919-515-7328, fax 919-515-3465, e-mail: groberts@eos.ncsu.edu; J. R. Royer, Milliken Research Corporation M-405, PO Box 1927, 920 Milliken Rd, Spartanburg, SC 29304, 864-503-6342, fax 864-503-2417, e-mail: Joe.Royer@milliken.com

Polymers and Materials for Anti-terrorism and Homeland Defense

J. G. Reynolds, Lawrence Livermore National Laboratory, P. O. Box 808, L-092, University of California, Livermore, CA 94551, 925-422-6028, fax 925-424-3543, e-mail: reynolds3@llnl.gov; B. R. Hart, Lawrence Livermore National Laboratory, P. O. Box 808, L-092, University of California, Livermore, CA 94551, 925-423-1970, fax 925-422-3160, e-mail: hart14@llnl.gov; C. L. Hill, Department of Chemistry, Emory University, 1515 Pierce Dr, Atlanta, GA 30322, 404-727-6611, fax 404-727-6076, e-mail: chill@emory.edu

Silicones and Silicone-Modified Materials

S. J. Clarson, Department of Materials Science and Engineering, University of Cincinnati, 492 Rhodes Hall, University of Cincinnati, Cincinnati, OH 45221-0012, 513-556-5430, fax 513-556-2569, e-mail: sclarson@uceng.uc.edu; M. J. Owen, Dow Corning Corporation, Midland, MI 48686-0994, (517) 496-5826, fax (517) 496-5121, e-mail: michael.j.owen@dowcorning.com; M. E. Van Dyke, Southwest Research Institute, P.O. Drawer 28510, San Antonio, TX 78228-0510, (210) 522-3068, fax (210) 522-5122, e-mail: mvandyke@swri.org; S. D. Smith, Corporate Research Division, Procter & Gamble Company, Cincinnati, OH 45239, 513-627-2102, fax 513-627-1610, e-mail: smith.sd@pg.com
ACS Award in Polymer Chemistry in Honor of Virgil Percec
K. Wooley, Department of Chemistry, Washington University, One Brookings Drive, Campus Box 1134, St. Louis, MO 63130, 3149357136, fax 314-935-9844, e-mail: klwooley@artsci.wustl.edu; C. Hawker, IBM Almaden Research Center, 650 Harry Road, San Jose, CA 95120-6099, 408-927-2377, fax 408-927-3310, e-mail: hawker@almaden.ibm.com; M. Sawamoto, Department of Polymer Chemistry, Kyoto University, Graduate School of Engineering, Kyoto 606-8501, Japan, +81-75-753-5603, fax +81-75-753-5623, e-mail: sawamoto@star.polym.kyoto-u.ac.jp

P. J. Flory Education Award

L. M. Robeson, Corporate Science and Technology Center, Air Products and Chemicals, Inc, 7201 Hamilton Blvd., Allentown, PA 18195, 610-481-5026, fax 610-481-6517, e-mail: robosolm@apci.com; T. E. Long, Department of Chemistry, Virginia Polytechnic Institute and State University, Blacksburg, VA 24061-0212, (540)231-2480, e-mail: telong@vt.edu; C. D. Smith, Air Products and Chemicals, Inc, 7201 Hamilton Blvd., Allentown, PA 18195-1501, 610-481-6496, fax 610-706-5994, e-mail: smithcd2@apci.com

General Papers

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

2004 Spring meeting

DIVISION OF POLYMER CHEMISTRY

Final Program, 227th ACS National Meeting, Anaheim, CA, March 28-April 1, 2004

D. J. Kiserow, *Program Chair*

SUNDAY MORNING

Section A

Coast -- Plaza A

Metal-Containing and Metallo-Supramolecular Polymers and Materials

Metallo-Supramolecular Polymers

Cosponsored with INOR, and PMSE

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

8:30 - Introductory Remarks. **G. R. Newkome**, I. Manners, U. S. Schubert.

8:40 - 1. Synthesis of polymeric metal complex biomaterials by metalloinitiation and chelation routes. **C. L. Fraser**, R. M. Johnson

9:15 - 2. Toward metallo-supramolecular ABA triblock and (AB)_n multiblock copolymers. **B. G. G. Lohmeijer**, U. S. Schubert

9:40 - 3. Electrostatic self-assembly of fluorescent perylene bisimide coordination polymers. **F. Würthner**, R. Dobrawa, D. G. Kurth

10:05 - Intermission.

10:25 - 4. Blocky macromolecules containing terpyridine for supramolecular materials. **G. N. Tew**

10:50 - 5. Metallo-supramolecular coordination polymers: Polyelectrolyte behaviour. **S. Schmatloch**, A. M. J. van den Berg, U. S. Schubert

11:15 - 6. Metallo-supramolecular polymers and gels. **S. J. Rowan**, J. B. Beck

11:40 - 7. Metallo-supramolecular coordination polyelectrolytes and their amphiphile complexes. **D. G. Kurth**

Section B

Coast -- Plaza D

Biomacromolecule Interactions with Synthetic Surfaces

K. L. Wooley and J. P. Armistead, *Organizers*

L. Chrisey, *Organizer, Presiding*

8:00 - 8. Effect of solution conditions on the nanoscale interaction between human serum albumin and poly(ethylene oxide). M. Rixman, C. Macias, **C. Ortiz**

8:30 - 9. Adhesion and proliferation of selected cells on surfaces coated with phosphorylcholine-based polymers. **F. M.**

2004 Spring meeting

Winnik, F. Mwale, Y. Gong, A. Petit

8:50 - 10. Recognition properties of platelet membrane protein (rGPIb α)-conjugated particles made of polymerized albumin and phospholipids under flow conditions. S. Takeoka, **E. Tsuchida**, Y. Ikeda

9:10 - 11. Scanning probe microscopic observation of DNA interaction with silanized surfaces. S. Yoda, S. P. Han, H. Kudo, K. J. Kwak, **M. Fujihira**

9:30 - 12. Adsorption of extracellular polymeric substances (EPS) from *Bacillus Subtilis* onto Goethite: Batch equilibrium and spectroscopic studies. **A. Omoike**, J. Chorover

9:50 - 13. Adhesion forces between marine diatoms and a fouling release surface determined with atomic force microscopy. P. F. M. Terán Arce, **R. Avci**, I. Beech, K. E. Cooksey, B. W. Cooksey

10:10 - Intermission.

10:20 - 14. Effect of nanoscale physical/chemical properties of organic monolayers on adhesion/adsorption behavior of proteins. **K. Cho**, E. C. Cho, Y. D. Kim, T. B. Oh

10:40 - 15. SFG studies on interfacial protein structures at protein solution/synthetic polymer interfaces in situ. J. Wang, X. Chen, M. L. Clarke, **Z. Chen**

11:00 - 16. Focal contact adhesions to engineered surfaces and the effect on cell morphology, mechanical properties, and membrane receptors. **A. W. Feinberg**, J. F. Schumacher, A. B. Brennan

11:20 - 17. Probing electronic signatures associated with ion translocation through synthetic bilayers. **R. S. Duran**, P. A. V. Anderson, J. R. Long, I. Koeper, W. Knoll

11:40 - 18. Engineering polyelectrolyte multilayer (PEM) surfaces to create cell resistant and adhesive surfaces. **S. kidambi**, I. Lee, **C. chan**

Section C

Coast -- Plaza B

Advanced Membranes For Challenging Applications

Gas and Vapor Separations

G. Lipscomb, *Organizer*

W. J. Koros, *Organizer, Presiding*

8:30 - Introductory Remarks.

8:35 - 19. Challenges in composite Pd Pd/alloy membranes for high temperature hydrogen separations. **Y. H. Ma**, E. E. Engwall, I. P. Mardilovich, M. E. Ayturk, B. C. Akis, F. Guazzone

8:55 - 20. Effect of air exposure on hydrogen selective Pd-Cu membranes. **F. Roa**, J. D. Way

9:15 - 21. SAPO-34 membranes for CO₂/CH₄ separation. S. Li, J. L. Falconer, **R. D. Noble**

9:35 - 22. MFI type zeolite membranes for hydrogen separation at high temperatures. H. Zou, **J. Y. S. Lin**

9:55 - 23. Carbon nanotubes as high flux/high selectivity gas separation membranes. **A. Skoulidas**, H. Chen, S. Chong, J. K. Johnson, D. Sholl

10:15 - 24. Methane facilitated transport using copper(II) biphenyl dicarboxylate-triethylenediamine/poly(3-acetoxyethylthiophene) mixed matrix membranes. H. Yehia, T. J. Pisklak, J. P. Ferraris, K. J. Balkus Jr., **I. H. Musselman**

10:35 - 25. Dendrimer-based nanocomposite membranes for VOC recovery and other applications. S. Yoo, S. O. Gonzalez, E. E. Simanek, **D. M. Ford**

2004 Spring meeting

Section D

Coast -- Garden A

General Papers

D. Garcia, *Organizer*
M. Laskoski, *Presiding*
8:30 - Break.

8:50 - 26. Oligomeric cyanate ester resins: A new class of thermosetting polymers. **M. Laskoski**, T. M. Keller

9:10 - Lunch.

9:30 - 27. Preparation and characterization of poly(propylene oxide) dimethallyl and epoxy dimethallyl ethers. N. Prevost, A. A. Lambert III, **N. Sachinvala**, K. Maskos

9:50 - 28. Poly(arylene sulfide sulfone) copolymer composites for proton exchange membrane fuel cell systems: Extraction and conductivity. **K. B. Wiles**, C. M. de Diego, J. E. McGrath

10:10 - 29. Preparation of blood compatible surface by surface-initiated polymerization of 2-methacryloyloxyethyl phosphorylcholine. **V. P. Hoven**, P. Suk-In, M. Srinanthakul, S. Kiatkamjornwong, Y. Iwasaki

10:30 - 30. Enzymatic polymerizations for biomedical applications. **K. Omrane**, E. Bryant, A. Mueller

10:50 - 31. Incorporation DNA with diblock copolymers. **Q. Mu**, J. Lu, A. Lewis, S. P. Armes

11:10 - 32. A-B-A Triblock copolymers derived from 5-methyl-5-benzyloxycarbonyl-1,3-dioxan-2-one (MBC) and L,L-lactide. **J. M. Messman**, R. F. Storey, C. N. Tang, A. J. Pesek

11:30 - 33. Core-surface crosslinked micelles fabricated from PCL/PEG brush copolymers. P. Xu, M. Radosz, **Y. Shen**

11:50 - 34. Surface properties and morphologies of polyurethane via amphiphilic polyoxetane telechelics. **T. Fujiwara**, K. J. Wynne

12:10 - 35. Telechelic polyelectrolytes a novel class of associative polymers. **C. Tsitsilianis**, I. Katsampas, V. Sfika, N. Stavrouli

12:30 - 36. Novel synthesis of 2,2'-halogenated-4,4'-, 5,5'-tetramethyl biphenyl and their derivative dianhydrides. **L. Sun**, D. Zhang, H. Wang, Z. D. S. Cheng, W. F. Harris

12:50 - 37. Emulsion-based control of electrospun fiber morphology. **J. C. Sy**, I. Chen, V. P. Shastri

ACS Award in Industrial Chemistry

Symposium in Honor of Joseph C. Salamone

Cosponsored with BMGT

SUNDAY AFTERNOON

Section A

Coast -- Plaza A

Metal-Containing and Metallo-Supramolecular Polymers and Materials

2004 Spring meeting

Metallo-Supramolecular Polymers

Cosponsored with INOR, and PMSE

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

J. Gohy and C. D. Eisenbach, *Presiding*

1:30 - 38. Polymer self-assembly using organic and metal-containing recognition elements. **V. M. Rotello**

2:05 - 39. Recent advances in the characterization of terpyridine-based supramolecular polymers. **M. A. R. Meier**, B. G. G. Lohmeijer, U. S. Schubert

2:25 - 40. Computer modeling of reversible association in metallo-supramolecular polymers. **C. Chen**, E. E. Dormidontova

2:45 - 41. Amphiphilic macroligands as versatile support materials in organic chemistry and polymer synthesis. **R. Weberskirch**, M. T. Zarka, T. Kotre

3:05 - 42. Metallo-supramolecular micelles. **J. Gohy**, B. G. G. Lohmeijer, U. S. Schubert

3:25 - Intermission.

3:45 - 43. Recognition directed self-organization of bipyridin-encoded macromolecules upon copper(I)-ion complex formation. **C. D. Eisenbach**, U. S. Schubert, K. Dirnberger, J. Kersten

4:05 - 44. Electroluminescent metal complexes. **L. De Cola**, S. Welter, E. Plummer, (. J. W. Hofstraat, K. Brunner

4:25 - 45. Biohybrid giant amphiphiles by metal-to-ligand coordination. K. Velonia, P. Thordarson, U. S. Schubert, **A. E. Rowan**, R. J. M. Nolte

4:45 - 46. Functional polymers with charge transport chains and dye centers via ATRP. **M. Thelakkat**, K. Peter

5:05 - 47. New sensory materials: Highly conductive transition metal-organic hybrid polymers. **T. M. Swager**

Section B

Coast -- Plaza D

Biomacromolecule Interactions with Synthetic Surfaces

J. P. Armistead and L. Chrisey, *Organizers*

K. L. Wooley, *Organizer, Presiding*

1:00 - 48. SAMs and biofunctional surfaces: The "inert surface" problem. **G. M. Whitesides**, E. Ostuni, R. Chapman, M. Grunze, X. Jiang

1:30 - 49. Quantitative response measurement of cell substrate interactions via RT-PCR. **M. L. Becker**, L. O. Bailey, N. R. Washburn

1:50 - 50. DNA-DNA and DNA-surface interactions measured using homo-oligonucleotides. **D. Y. Petrovykh**, H. Kimura-Suda, A. M. Opdahl, M. J. Tarlov, L. J. Whitman

2:10 - 51. Monolayer engineered microchannels for motor protein transport platforms. **A. K. Boal**, J. M. Bauer, S. B. Rivera, R. G. Manley, R. P. Manginell, G. D. Bachand, B. C. Bunker

2:30 - Intermission.

2:40 - 52. Diverse cell adhesion properties on bioinspired phospholipid polymer surface with oligo(lactic acid)-graft segments. **J. Watanabe**, K. Ishihara

3:00 - 53. Biocidal polymers via polymeric surface modifying additives. **K. J. Wynne**, U. Makal, T. Fujiwara, D. Ohman, L. Wood

3:20 - 54. Protein resistant carbohydrate-derived side-chain polyethers. **Z. Guan**, M. Metzke, J. Z. Bai

2004 Spring meeting

3:40 - 55. Surface-active materials with antifouling properties. **C. K. Ober**, S. Krishnan, J. P. Youngblood, A. Hexemer, E. J. Kramer, J. A. Finlay, M. E. Callow

4:00 - 56. Crosslinked hyperbranched fluoropolymer (HBFP) - poly(ethylene glycol) (PEG) networks as efficient anti-fouling coatings: An insight into the role of surface composition, topography, and morphology. **C. S. Gudipati**, J. Johnson, K. L. Wooley

4:20 - 57. Surface modification of poly(methyl methacrylate) for controlling cell adhesion. **H. Choi**, P. Boccazzi, A. J. Sinskey, P. E. Laibinis, K. F. Jensen

4:40 - 58. Enzymatic synthesis of a low thrombogenic heart valve coating. A. Mueller, **A. M. Benson**, E. M. Graves, K. Omrane, M. Mandalaywala, A. L. Haas

Section C

Coast -- Plaza B

Advanced Membranes For Challenging Applications

Liquid Separations

W. J. Koros, *Organizer*

G. Lipscomb, *Organizer, Presiding*

1:30 - Introductory Remarks.

1:35 - 59. Interaction forces governing fouling of polymeric membranes. **E. M. V. Hoek**, G. K. Agarwal

1:55 - 60. Chemical modification of the surface of a sulfonated membrane by formation of a sulfonamide bond. G. Chamoulaud, **D. Bélanger**

2:15 - 61. Sequential formation of hydrogel multilayers through surface initiated photopolymerization. **S. Kizilel**, V. H. Perez-Luna, F. Teymour

2:35 - 62. Multilayer polyelectrolyte films for nanofiltration of salts and sugars. **M. L. Bruening**, B. Stanton, J. J. Harris

2:55 - 63. Novel challenge for improvement of membrane performance in dehydration of ethanol/water by a new membrane separation method. **T. Uragami**

3:15 - 64. Crosslinked membranes for the recovery of a homogeneous catalyst. **D. J. Desrocher**, M. E. Rezac

3:35 - 65. Novel hydrophobic NF membrane prepared from PAN UF membrane by plasma-grafting styrene. **Z. Zhao**, **J. Li**, P. Qin, D. Zhang, C. Chen

Section D

Coast -- Garden A

General Papers

D. Garcia, *Organizer*

J. M. Russell, *Presiding*

1:30 - 66. Optimization of interfacial interactions to achieve nanoscale dispersion of clay in polymer/clay nanocomposites. **D. Pradeep Kumar**, M. D. Dadmun

1:50 - 67. Synthesis, assembly mechanism, and sensor application of nanostructures comprised of biotinylated CdS@SiO₂ nanoparticles. **P. J. Costanzo**, T. E. Patten, T. A. P. Seery

2:10 - 68. Organic nanotubes based on intramolecular crosslinking of helically folding polymers. S. Hecht, **A. Khan**

2004 Spring meeting

2:30 - 69. Synthesis and characterization of novel nanostructured carbons prepared by pyrolysis of self-assembled or pre-assembled polyacrylonitrile-based copolymer precursors. **C. Tang**, K. Qi, N. V. Tsarevsky, S. Jia, B. Dufour, L. Bombalski, J. Legeleiter, K. L. Wooley, K. Matyjaszewski, T. Kowalewski

2:50 - 70. Alignment of nematic liquid crystals using self-assembled carbon nanotubes. **J. M. Russell**, S. Oh, M. Nakata, O. Zhou, E. T. Samulski

3:10 - 71. Functional aggregates by self-assembly of thiophene containing diblock copolymers. **D. M. Vriezema**, A. Kros, J. Hoogboom, A. E. Rowan, R. J. M. Nolte

3:30 - 72. Synthesis and solution state self-assembly of amphiphilic linear-dendritic block copolymers. **K. K. Stokes**, P. T. Hammond

3:50 - 73. Synthesis and self-assembly of polybutadiene-b-peptides. **A. Kros**

4:10 - 74. Synthesis and optical property of a novel fluorescent poly(aryl ether) containing 4-chloro-2,5-diphenyloxazole. **N. Pimpha**, F. W. Harris, S. Tantayanon

4:30 - 75. New polyarylate and polyarylate-co-polycarbonate thermoplastics incorporating a high aspect-ratio tetraarylbisphenol. **T. S. Filipova**, D. Boyles, J. T. Bendler, M. Medalen, G. Longbrake

4:50 - 76. Novel investigations and applications for neodymium based catalysts. **L. Friebe**, O. Nuyken, H. Windisch, W. Obrecht

5:10 - 77. Graft copolymerization of methyl methacrylate onto coir fibers using KMnO₄-H₂SO₄ system. **W. P. M. Abeysekera**, X. Li, Z. Han, Q. Du

ACS Award in Industrial Chemistry

Symposium in Honor of Joseph C. Salamone

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SUNDAY EVENING

Section A

Convention Center -- Hall A

General Papers

Polymer Characterization and Synthesis

D. Garcia, *Organizer, Presiding*

5:00 - 7:00

78. Polymerization of MA and AA initiated by chlorocarbon/metallocene. **H. Woo**, M. Cho

79. Synthesis and characterization of silicon-containing polysilanes copolymers by sol-gel condensation of poly(ethoxysilane)s prepared by catalytic dehydrocoupling of hydrosilanes with ethanol. **H. Woo**, B. Kim

80. Polyethyleneimine oligolysine block-polymers for use as transfection agents. **T. W. J. Steele**, W. T. Shier

81. Toward the development of an ethanol bioanode employing PQQ as a coenzyme in a tetrabutylammonium bromide treated Nafion membrane. **B. L. Treu**, S. D. Minteer

2004 Spring meeting

- 82.** Voltammetric investigation of MIP coated silica microparticle/Nafion composite modified electrodes. **J. Ulyanova**, S. D. Minter
- 83.** Selective byproduct removal via molecular imprinting. **G. T. Rushton**, K. S. Shimizu
- 84.** Surface initiated polymerization of carbazole containing methacrylates by physical vapor deposition for improved hole injection layers. H. Bekku, K. Katsuki, H. Usui, **D. L. Patton**, J. Locklin, R. C. Advincula
- 85.** A grafting approach to preparing new biocompatible polymer materials with potential as tissue engineering scaffolds. **G. J. Price**, J. B. Chaudhuri, J. Davey
- 86.** Graft copolymers of PDMA-g-PMMA: Solvent quality induced association behavior and its application in dsDNA separation. **J. Zhang**, Y. Wang, D. Liang, Q. Ying, B. Chu
- 87.** Finite size clusters and infinite network formed by telechelic cationic polyelectrolytes. **C. Tsitsilianis**, G. Gotzamanis, S. C. Hadjiyannakou, C. S. Patrickios
- 88.** Surface bioactive modification of biodegradable polyester using self-assembly method based on diazoresin. L. Gao, G. Yao, X. Li, A. Zhang, Z. Feng, **Y. Dong**, Y. Cao, E. Duan
- 89.** Hydrogen bonding and molecular conformation in self-assembled discotic liquid crystals. **C. Xue**, F. Ilhan, S. Jin, S. Z. D. Cheng, M. A. Meador, R. K. Eby
- 90.** Heavy metal responsive decontaminating coatings. **S. Butler**, **M. Zancanella**, H. N. Gray
- 91.** Relaxation behaviors of lyotropic (acetyl)(ethyl)cellulose/acrylic acid solutions with different chiro-optical properties. Q. Dai, R. D. Gilbert, S. A. Khan, **J. F. Kadla**
- 92.** Morphology of sulfonated polystyrene ionomer particles prepared from aqueous solution. J. Kim, **M. W. Kang**, Y. Park, S. Oh, J. Yu
- 93.** Dynamic mechanical properties of PSMANa ionomer mixtures. J. Kim, **J. Song**, S. H. Oh
- 94.** One and two-photon optical properties of ionic block copolymers with phenylenediethylenebipyridinium-chromophores. **V. Strehmel**, A. M. Sarker, P. M. Lahti, F. E. Karasz, M. Heydenreich, **B. Strehmel**
- 95.** Control of self-assembly by perfluorinated counter anions in salt-induced micellization of a pyridine-containing diblock copolymer. **E. Yoshida**, M. Tanaka, T. Takata
- 96.** Effect of substrates on a morphology of self-assembled randomly copolymerized poly(styrene-co- sodium methacrylate). **J. Yu**, S. H. Oh, J. Kim
- 97.** Thermal mechanical properties and transport processes of Nafion polymer electrolyte membranes on the nanoscale. **J. H. Wei**, R. M. Overney
- 98.** Polybetaine copolymers in polyelectrolyte multilayers buildup. **D. S. Salloum**, **H. H. Rmaile**, C. B. Bucur, J. B. Schlenoff
- 99.** Effects of temperature on the adsorption processes of bolaform amphiphiles and polyelectrolytes in layer by layer deposition. **J. Locklin**, D. L. Patton, R. Hoacuja, A. Corona, R. Advincula
- 100.** Controlling molecular mobility of confined semiconducting polymers on the nanoscale. **T. Gray**, R. M. Overney
- 101.** Electrospinning using liquid reservoir collector. **H. Kim**, K. Kim, H. Jin, I. Chin
- 102.** Antibacterial polyesters with phosphonium salts. **S. Konagaya**, H. Ohashi, H. Ishihara, T. Endo
- 103.** Novel antibacterial acrylic acid-grafted copolyester with a phosphonium salt. **S. Konagaya**, H. Ohashi, S. Hayakawa, H. Ishihara, T. Endo
- 104.** A study on the formation of antigen-antibody complexes. **L. Shiau**

2004 Spring meeting

- 105.** O-Acetylation and water retention of alginates. M. Chai, **J. Cepela**
- 106.** Application of (vinyl alcohol)-(vinyl amine) copolymer. **M. Aoyama**, M. Tomida
- 107.** Fabrication of nanocomposite films of titanium oxide and azobenzene dye by the surface sol-gel process and the layer-by-layer electrostatic assembly. **M. Park**, R. C. Advincula, W. Blanton, X. Fan, M. C. Advincula
- 108.** PMMA-clay nanocomposites by alane-intercalated clay activators and metallocene dialkyls. **W. R. Mariott**, E. Y. -. Chen
- 109.** Preparation and characterization of PSt and PMMA nanocomposite with emulsion polymerization via reversible addition-fragmentation chain transfer agent. **G. J. Jiang Sr.**, H. Cheng
- 110.** Synthesis of surface initiated polyaniline-silica nanocomposites. **S. K. Pillalamarri**, F. D. Blum, M. F. Bertino
- 111.** Effect of nanoparticles on cure behavior and properties of epoxy/layered silicate nanocomposites. D. R. Dean, M. Theodore, A. Obore, **E. Nyairo**
- 112.** Polyurethane-carbon nanotube composites for electroactive shape memory actuator. **Y. C. Jung**, J. W. Kim, N. S. Goo, J. W. Cho
- 113.** Synthesis of edge functionalized laponite clay. **J. Wang**, P. A. Wheeler, J. S. Baker, L. J. Mathias
- 114.** Influence on morphology from the pendent group of the organoclay in epoxy nanocomposites. **C. Chen**, T. T. Benson
- 115.** Thermoplastic elastomeric polypropylene reinforced with clay, other layered silicates or fumed silica. **R. Abu-Hussein**, G. R. Rajan, Y. T. Vu, M. K. Hassan, J. Mark, T. Kwee, K. A. Mauritz, C. Myers
- 116.** Synthesis and characterization of siloxy-containing imidazolium surfactants for polymer-clay nanocomposites. **P. A. Wheeler**, L. J. Mathias
- 117.** Magnetic polymer composite particles composed by miniemulsion polymerization. **H. Wen**, Z. Han, B. Liu, F. Liu
- 118.** Preparation of polyolefin/clay via support catalyst. **G. J. Jiang Sr.**, J. C. Lin, J. M. Hwu, L. C. Chou, C. H. Chan
- 119.** Synthesis and properties of BMI modified novolak resin /titania nanocomposites. **G. Lu**, Y. Huang, Y. Yan, T. Zhao, Y. Yu
- 120.** Polystyrene-functionalized multiple-walled carbon nanotubes made by covalently linking acyl chlorides with living polystyryllithium. **R. C. Tsiang**, H. Huang
- 121.** Preparation of MHMA-based coating via photopolymerization and evaluation of film properties. T. J. Smith, **E. Kaya**, L. J. Mathias
- 122.** Reprogrammable imprinted polymers. **J. M. Lavin**, K. D. Shimizu
- 123.** Diels-Alder trapping of photochemically generated dienes with acrylic esters: A novel approach to photocured polymer film development. **F. Ilhan**, D. S. Tyson, D. Smith, M. A. B. Meador, M. A. Meador
- 124.** Diels-Alder polymerization between bis(cyclopentadienone) and diacetylene: application for light-emitting material. S. Jung, S. Park, **H. Cho**
- 125.** Chromophore-containing poly(1-phenyl-pentyne)s: Synthesis and their light-emitting properties. C. W. Law, J. W. Y. Lam, Y. Dong, **B. Z. Tang**
- 126.** One and two-photon photochemistry and photophysics of poly(arylenevinylene)s containing a biphenyl moiety. **V. Strehmel**, A. M. Sarker, P. M. Lahti, F. E. Karasz, M. Heydenreich, H. Wetzels, S. Haebel, **B. Strehmel**
- 127.** Synthesis and properties of water-soluble, light-emitting disubstituted polyacetylenes. H. Tong, J. W. Y. Lam, Y. Dong, M. Häußler, **B. Z. Tang**

2004 Spring meeting

- 128.** Development of photolabile-protecting groups that rapidly release bioactive compounds on photolysis with visible light. **V. R. Shembekar**, B. K. Carpenter, L. Ramakrishnan, G. P. Hess
- 129.** New hyperbranched poly(aryleneethynylene)s: Synthesis, thermal stability, and light emitting properties. M. Haeussler, J. W. Y. Lam, T. Hui, R. Zheng, **B. Z. Tang**
- 130.** Fluorescence study of maleated ethylene-propylene random copolymers: Effect of maleic anhydride microstructure. **M. Zhang**, J. Duhamel, P. Meessen, M. van Duin
- 131.** Chromatographic measurement of surface energies and correlation with photodegradation of kaolin filled polyethylene. **G. J. Price**, D. Ansari
- 132.** Synthesis and characterization of thermally cross-linkable, two-photon responsive chromophores. **L. Tan**, R. Kannan, A. G. Dombroskie, S. R. Simko, M. D. Houtz, G. S. He, T. Lin, P. N. Prasad
- 133.** Photo reaction of acridine and poly(methyl methacrylate-*co*-methacrylic acid) in benzene. **M. Tsuchiya**, T. Kojima
- 134.** Supramolecular LCDs: Hierarchical alignment of polysiloxanes. **J. Hoogboom**, P. M. L. Garcia, A. E. Rowan, T. Rasing, R. J. M. Nolte
- 135.** Non-conjugated polymer hosts for lanthanide complexes in near-infrared light emitting diodes. **J. K. Mwaura**, A. S. Knefely, K. S. Schanze, J. M. Boncella, J. R. Reynolds
- 136.** UV study of the degree of hydrolysis in polyacrylamide. R. Wu Sr., L. Guo Jr., J. Zhou Sr., R. Zhang Sr., D. Zhang Jr., **F. Liu Sr.**
- 137.** Study of structure and properties of coir fiber reinforced thermoplastic NR composites. **X. Li**, W. P. M. Abeysekera, Z. Han, Q. Du
- 138.** Physical aging behavior of 6F-PEEK and m-TPEEK studied by MDSC. W. Hu, B. Liu, L. Zhang, **Z. Jiang**, Z. Wu, T. Matsumoto
- 139.** Nonisothermal crystallization kinetics of block copolymers composed of poly(ether ether ketone)(PEEK) and poly(ether ether ketone ketone)(PEEKK). Y. Zhang, Q. Liu, Y. Niu, **Z. Jiang**
- 140.** Study on phase transition characteristic of poly (vinyl alcohol)/polyethylene glycol graft copolymer. M. Zhang, Y. Na, **Z. Jiang**
- 141.** Comparative study on the transition characteristic of poly (vinyl alcohol) (PVA) modified with polyethylene glycol (PEG) by chemical bonding and physical blending methods. Y. Na, M. Zhang, Y. Niu, **Z. Jiang**
- 142.** Dynamic mechanical properties of CaCO₃/PEEK composites. Z. Bing, J. Xiangbo, **J. Zhenhua**, Y. Chuang
- 143.** Crystallization behaviour of CaCO₃ nanoparticles filled PEEK composites. X. Ji, Z. Bing, **J. Zhenhua**
- 144.** In situ composites based on blends of a poly(ether ether ketone) and thermotropic liquid crystalline polymers under injection molding conditions. W. Dong, Z. Bing, W. Guibin, **J. Zhenhua**
- 145.** Low melt viscosity resins for resin transfer molding. **L. Wang**, F. W. Harris, K. C. Chuang
- 146.** Study on nano-silica tube reinforced PEEK composites. Z. Bing, J. Xiangbo, **J. Zhenhua**
- 147.** Effect of bisphenol s-type polycarbonate on the morphology of polyethersulfones and polycarbonate blend. D. Jiang, Y. Niu, B. Zhou, Y. Yang, **Z. Jiang**
- 148.** Investigation on the structure change of isotactic polypropylene during thermal degradation. **P. He**, Y. Xiao, X. Zhu, D. Yan
- 149.** Advanced polymer dielectrics for capacitive energy storage. **N. Venkatasubramanian**, T. D. Dang, M. J. Dalton, L. D. Williams, H. J. Bentley, R. P. Monter, S. Fries-Carr

2004 Spring meeting

150. ABPBI membrane for a fuel cell application. **H. Kim**, S. Y. Cho, S. J. An, J. Kim, Y. C. Eun, H. Yoon, D. H. Lee, H. Kweon, **S. Y. Nam**, H. Park, C. H. Lee, K. H. Yew, Y. M. Lee
151. Cure properties of glycidyl carbamate oligomers reacted with amines. **P. A. Edwards**, G. Striemer, D. C. Webster
152. Observing the crosslinking of a benzophenone-modified poly(acrylic acid) film by UV-vis and FT-IR imaging. **M. D. Millan**, M. Park, D. L. Patton, J. Locklin, S. Deng, R. C. Advincula
153. Fire-resistant polymers based on char formation rather than halogenation. **K. A. Ellzey**, T. Emrick, R. J. Farris
154. Evaluation of intrinsic viscosity and absorbed layer thickness of latex systems. **Z. Han**, Q. Zhang, H. Wen, B. Yang
155. Relationship of interactions and viscosity in latex systems. **Z. Han**, H. Wen, Q. Zhang, B. Yang
156. Synthesis of radiation curable resin with controlled viscosity. **W. Huh**, J. Y. Kim, S. Lee
157. Radius of gyration of polystyrene combs and centipedes in a Θ solvent. **K. Terao**, B. S. Farmer, Y. Nakamura, H. Iatrou, K. Hong, J. W. Mays
158. Segmental dynamics in poly(methyl acrylate)- d_3 on silica. Molecular mass effects. **B. Metin**, F. D. Blum
159. Evaporative light scattering detection coupled to microcolumn liquid chromatography for the analysis of underivatized amino acids. **B. Liu Sr.**, H. Wen, A. Yu Sr.
160. Solid-state ^{19}F MAS NMR analysis of the γ -phase of poly(vinylidene fluoride). **J. Park**, I. Kim, K. Aimi, S. Ando, **C. Ha**
161. Progress of study in the polyelectrolyte using Monte Carlo simulation. **Q. Zhang**, H. Wen, J. Zhou, B. Yang, Z. Han
162. Monte Carlo simulations of rigid rods in anisotropic external potentials. Y. Chen, C. LeFave, **H. Fynewever**, C. Shew
163. Study on three-dimensional configurations of SSO nanostructural blocks: A quantum mechanical investigation for ladderlike structure of vinylsilsesquioxane. **L. Hu**, X. Zhang, D. Sun
164. Construction of an energy cascade model in a polyaromatic dendrimer based on anthracene-perylene conjugates. **M. Takahashi**, H. Morimoto, Y. Suzuki, M. Yamashita, H. Kawai
165. Modeling linear-low density polyethylene. **J. C. Sworen**, J. M. Berg, K. B. Wagener
166. Encapsulation of carbon black into the styrene/acrylic acid copolymer microspheres. R. Zhang Sr., X. Yan Jr., R. Wu, D. Zhang, X. Liu, L. Guo, Q. Li Jr., **F. Liu Sr.**
167. Encapsulation of highly fluorinated drugs by semifluorinated block copolymers. **K. C. Hoang**, S. Mecozzi
168. Encapsulation-release property of amphiphilic hyperbranched polysaccharide for hydrophilic guest molecules. **Y. Kitajyo**, Y. Sakai, T. Imai, T. Satoh, H. Kaga, T. Kakuchi
169. Magnetite coated polystyrene hybrid particles prepared by miniemulsion polymerization. **H. Wen**, Z. Han, **B. Liu**, J. Zhao, R. Zhang, M. Zhang, G. Gao, F. Liu
170. Titania-coated polystyrene spheres for electronic ink. **J. H. Sung**, I. B. Jang, H. J. Choi, I. Chin
171. Analysis of semi-volatile or volatile organic compounds in air with mass spectrometry. **B. Liu Sr.**, H. Wen, A. Yu Sr.
172. Preparation of colloidal clusters using oligonucleotides as linker molecules. **Y. Cho**, S. Yang
173. Nylon degradation: Thermal-oxidation and oxygen consumption. **R. Bernstein**, D. K. Derzon, K. T. Gillen
174. Application of optical fiber pH sensor: Sensors based on chemical bond of the dye with the surface of materials. **J. Ham**, E. Kang, H. Paik, J. Lee
175. Green tack of butyl polymers. **M. F. Tse**

2004 Spring meeting

- 176.** Temperature and pH dependence of ketoprofen release from poly(N-hydroxyacrylamide). E. Kenawy, F. I. Abdel-Hay, M. H. El-Newehy, **R. M. Ottenbrite**
- 177.** Release of ketoprofen from hydroxamic acid derivatives of poly(ethylene-alt-maleic anhydride). E. Kenawy, F. I. Abdel-Hay, M. H. El-Newehy, **R. M. Ottenbrite**
- 178.** Analysis of fluoropolymer processing aids in LLDPE (linear low density polyethylene) formulations. **D. Garcia**, R. Lewis, M. Sharp, S. Zerafati
- 179.** ¹³C DEPT NMR study of poly(vinyl acetate) synthesized by degenerative transfer polymerization with alkyl iodides. **M. C. Iovu**, V. Simplaceanu, R. R. Gil, K. Matyjaszewski
- 180.** Chemical reduction of Nylons: Synthesis of polyalkyleneimines with controlled charge density. **M. Herrera-Alonso**, T. J. McCarthy
- 181.** Color generation in polyester/polyamide blends. **S. A. Bandi**, D. Schiraldi
- 182.** Living, syndioselective polymerization of alkyl methacrylates by a titanium alkyl cation. **E. Y. - Chen**, W. R. Mariott
- 183.** Electron beam irradiation effect on henequen natural fiber and its biocomposite with poly(butylene succinate). **S. O. Han**, M. H. Han, D. Cho, L. T. Drzal
- 184.** Characterization of poly(trifluoroethylene) films and poly(trifluoroethylene) adsorption. **I. Anac**, T. McCarthy, V. Hoven
- 185.** Ti(III) catalyzed self condensing vinyl polymerization of glycidyl methacrylate. **A. D. Asandei**, G. Saha
- 186.** Ti(III)-catalyzed living radical polymerization of styrene initiated by trimethoxybenzaldehyde. **A. D. Asandei**, Y. Chen
- 187.** Synthesis and catalytic activity of long chain quaternary ammonium poly(propyleneimine) dendrimers. **R. L. Sherman Jr.**, E. Murugan, W. T. Ford
- 188.** Catalytic behavior of silica-immobilized zinc beta-diiminate complexes in the ring-opening polymerization of lactide. **K. Yu**, C. W. Jones
- 189.** Living cationic polymerization of isobutylene with mixtures of titanium tetrachloride/titanium tetrabromide. **M. Tawada**, R. Faust
- 190.** Synthesis of amphiphilic diblock star polymers with palladium porphyrin cores. **K. Baek**, W. R. Dichtel, J. M. J. Frechet
- 191.** Toward controlled radical polymerization of α,β -trifluorostyrene. **A. D. Asandei**, R. A. Weiss, I. W. Moran, Y. Chen, G. Saha
- 192.** 9-Bromofluorene as an initiator in controlled radical polymerizations. **C. C. Goodman**, D. Chon, E. S. Tillman
- 193.** Synthesis of PLGA foams by high temperature supercritical CO₂ expanded ring opening copolymerization of d,l-lactide and glycolide. **A. D. Asandei**, C. Erkey, D. J. Burgess, C. Saquing, G. Saha, B. S. Zolnik
- 194.** A new series of CBDO based co-polyesters. **C. J. Booth**, N. C. Hoppens, T. W. Hudnall, A. Foster
- 195.** Alternative approach to phenol terminated hyperbranched poly(arylene ether phosphine oxide)s. **S. Hopkins**, E. Fossum
- 196.** Preparation and properties of poly(aryl ether thianthrene)s. **J. B. Edson**, D. M. Knauss
- 197.** Synthesis, mesomorphism, and photoluminescence of biphenyl-containing poly(1-phenyl-1-octyne)s with different functional bridge groups. Y. Dong, J. W. Y. Lam, L. M. Lai, **B. Z. Tang**

2004 Spring meeting

- 198.** Synthesis and helical conformation of poly(phenylpropiolate)s containing different chiral pendant groups. Y. P. Dong, J. W. Y. Lam, K. K. L. Cheuk, **B. Z. Tang**
- 199.** Synthesis and helical conformation of poly(phenylacetylene)s containing L-leucine (1S,2R,5S)-(+)-menthyl ester pendants. L. M. Lai, K. K. L. Cheuk, J. W. Y. Lam, **B. Z. Tang**
- 200.** Helical polyacetylenes: Synthesis and chiroptical properties of poly(phenylpropiolate)s containing (1R,2S,5R)-(-)-menthol and cholesterol pendent groups. Y. Dong, J. W. Y. Lam, K. K. L. Cheuk, **B. Z. Tang**
- 201.** Synthesis and characterization of a novel fluorine-containing PAEKs containing 1,4-naphthylene units. Y. Zhang, Y. Niu, D. Wang, G. Wang, **Z. Jiang**
- 202.** Efficient synthesis of hyperbranched polyetherketones (PEKs) from A3 + B2 polymerization by using different monomer solubility in reaction medium. **J. Baek**, C. B. Lyons, L. Tan
- 203.** Inverse emulsion polymerization of acrylamide. D. Zhang Jr., R. Zhang Sr., M. Zhang Jr., G. Gao Sr., X. Song Sr., D. M. Wang III, **F. Liu Sr.**, Y. Li Jr.
- 204.** Emulsion polymerization of styrene and acrylic acid in the presence of carbon black. R. Zhang Sr., L. Guo, M. Zhang Jr., H. Wen Jr., D. Zhao, Q. Chen Sr., G. Gao Sr., **F. Liu Sr.**
- 205.** Synthesis and characterization of fluorine-containing polyarylsulfone. H. Ma, F. Zhou, D. Zhao, C. Chen, G. Wang, Z. Jiang, **Z. Wu**
- 206.** A novel sulfonated poly(aryl ether sulfone)s derived from 3,3',5,5'-tetramethyl diphenyl-4,4'-diol. H. Lu, X. Li, **H. Na**
- 207.** A novel sulfonated poly(aryl ether ketone)s derived from methylhydroquinone. C. Zhao III, C. Liu, **H. Na**
- 208.** Synthesis of poly(ether ether ketone)s containing a tertiary amine. W. A. Feld, **K. M. McGinty**
- 209.** Using reactivity ratios to control hyperbranching polycondensation reactions. **J. Guyo**, E. Fossum
- 210.** Asymmetric polymerization near ceiling temperature in radical polymerization of menthylacrylates. **H. Tanaka**, M. Niwa
- 211.** Determination of the relative reactivity ratios of monomer, core, and growing polymer in hyperbranching polymerization reactions of AB₂ monomers that form poly(arylene ether)s. **L. A. Bedrossian**, E. Fossum
- 212.** Synthesis of cyclopropyl containing polymers: Co-polymerization of (dimethylamino)phenyloxosulfonium cyclopropylide with dimethylsulfoxonium methylide. **R. Sulc**, X. Zhou, K. J. Shea
- 213.** Synthesis and modification of poly(ethyl 2-cyanoacrylate) film on silicon wafer. **Z. Lu**, T. J. McCarthy
- 214.** Cobalt porphyrin controlled living radical polymerization of acrylic acid in water. **Z. Lu**, Y. Li, B. B. Wayland
- 215.** Novel synthesis of poly(ethyleneglycol-b-ε-caprolactone) block copolymers. **M. S. Kim**, K. S. Seo, S. Y. Jeong, G. Khang, S. H. Cho, H. B. Lee
- 216.** Block copolymers of *t*-butyl acrylate and styrene by reversible addition-fragmentation chain-transfer polymerization. B. C. Benicewicz, **M. J. Nasrullah**, R. Vajjala
- 217.** Solvent-free maleic anhydride grafted cellulose acetate butyrate (MA-g-CAB): synthesis and characterizations. A. Wibowo, A. K. Mohanty, S. Desai, **M. Misra**, L. T. Drzal
- 218.** Preparation of (vinyl alcohol)-(vinyl amine) copolymer. **M. Tomida**, M. Aoyama
- 219.** Synthesis of 1-(4-vinylbenzyl)thymine and its polymerization by RAFT and ATRP techniques. X. Yang, P. Xu, S. Ding, M. Radosz, **Y. Shen**
- 220.** Polyacrylamide films with nanoprotusions on silicon wafers by ATRP. K. Sha, H. Li, K. Zhang, Y. Xu, **J. Wang**

2004 Spring meeting

- 221.** Synthesis of well-defined homo- and copolymers containing tetrazole units by combining atom transfer radical polymerization and "click" chemistry. **N. V. Tsarevsky**, B. Dufour, K. Matyjaszewski
- 222.** The rate of deactivation in atom transfer radical polymerization in protic and aqueous media. **N. V. Tsarevsky**, T. Pintauer, K. Matyjaszewski
- 223.** Reverse atom transfer radical polymerization of methyl methacrylate in aqueous dispersed system. K. Zhang, H. Zhang, S. Zhao, H. Li, **J. Wang**
- 224.** Synthesis and characterization of blockmacromolecular coupling agent by ATRP. H. Zhang Sr., Y. Dong Sr., Y. Jiang, H. Li Sr., K. Zhang, **J. Wang**
- 225.** Novel low temperature initiation systems for radical polymerization of methyl methacrylate (2). **T. Makino**, H. Shimonaka, E. Okamoto, T. Tokimitsu
- 226.** Synthesis and characterization of the star polymer with cyclodextrin core. Y. Jiang, H. Zhang, L. Zhang, D. Wang, M. Wu, **J. Wang**
- 227.** Preparation and characterization of micro¨C sized functional P(St¨C MMA¨C AA) latex particles. K. Kai, **K. Chengyou**, X. Qiang, D. Yi, L. Deshan
- 228.** Polymerization of methacrylamide initiated by different redox pairs in presence and absence of oxygen: A kinetic study. **A. Srivastava**, S. Rahmani, K. Behari
- 229.** Synthesis and characterization of new water-soluble bis-quaternary ammonium acrylate polymers. **B. Dizman**, M. O. Elasri, L. J. Mathias
- 230.** Multi-functional block copolymers prepared by RAFT polymerization. **J. Hwang**, H. D. Maynard
- 231.** Preparation and characterization of poly(ethylene oxide) bis-triallylammonium bromides. **A. A. Lambert III**, N. Prevost, N. Sachinvala, K. Maskos, D. A. Grimm, W. P. Niemczura
- 232.** Preparation and properties of poly(L-lactic acid-co-succinic acid-co-1,4-butene diol). C. M. Lee, J. H. Shim, **M. Kim**, J. Yoon
- 233.** Copolymerization of trimethylsilyl diazomethane and dimethylsulfoxonium methylide using the polyhomologation reaction. **J. Bai**, **K. J. Shea**
- 234.** Synthesis of amino acid based block copolymers via atom transfer radical polymerization in aqueous media at ambient temperature. **I. Chung**, P. Britt, J. W. Mays
- 235.** Charge-transfer radical copolymerization of methyl methacrylate and olefins. **N. Tetsuya**, T. Toru, **M. Takayuki**
- 236.** Synthesis and characterization of thermally stable polymers derived from spirochromane diphenol. **H. Zhou**, D. Sowersby, S. Venumbaka, J. W. Fitch III, P. E. Cassidy
- 237.** Synthesis and characterization of temperature-sensitive peptide copolymer gels. **S. Tanimoto**, N. Yagi, H. Yamaoka
- 238.** Synthesis of poly(isobutylene)-poly(alkyl methacrylate) block copolymers by the combination of cationic and anionic polymerizations. **J. C. Cho**, R. Faust
- 239.** Synthesis of poly[(4-hydroxystyrene)-b-isobutylene-b-(4-hydroxystyrene)] triblock copolymers via living cationic sequential block copolymerization of isobutylene with 4-(tert-butyltrimethylsilyloxy)styrene. **L. Sipos**, R. Faust
- 240.** An evaluation of the synthetic strategies producing well-defined carboxyl-end-capped polystyrene through anionic polymerization. **H. Ji**, J. W. Mays
- 241.** Synthesis of substituted azobenzene oligomers and comparisons of their third-order nonlinearities to a substituted azobenzene polymer. **K. M. Lott**, M. Wright, D. Kuciauskas

2004 Spring meeting

- 242.** Living cationic block copolymerization of isobutylene with styryl-POSS macromers. **I. Kim**, R. Faust
- 243.** Use of functional alkoxyamines for block copolymers synthesis. P. Dufils, C. Petit, D. Gigmes, **E. Beaudouin**, S. Marque, D. Bertin, P. Tordo, O. Guerret, J. L. Couturier
- 244.** Vegetable oil macromonomers as copolymerizable hydrophobes in miniemulsion polymerization. **C. Quintero**, S. K. Mendon, O. W. Smith, S. F. Thames
- 245.** Synthesis and characterization of a chiral polymer containing 1, 1'-bi-2-naphthyl moiety. H. Cao, T. Ben, X. Wang, N. Liu, X. Liu, Y. Wei, **W. Zhang**
- 246.** Synthesis and properties of norbornene-based gradient copolymers via ring-opening metathesis polymerization. **C. M. Dettmer**, M. K. Gray, J. M. Torkelson, S. T. Nguyen
- 247.** Polymer brush grown from silicon gel surface by ATRP. H. Li, H. Zhang, Y. Xu, K. Zhang, P. Ai, **J. Wang**
- 248.** Reverse atom transfer radical polymerization of styrene in water-borne system. K. Zhang, H. Zhang, H. Li, D. Wang, **J. Wang**
- 249.** Synthesis and characterization of novel poly(aryl ether sulphone) with methoxyl pendent groups. X. Yue, L. Aize, J. Yuhui, **J. Zhenhua**
- 250.** Synthesis and characterization of crosslinkable poly(aryl ether sulphone). J. Yang, L. Aize, Y. Jin, **J. Zhenhua**
- 251.** Synthesis and characterization of poly(aryl ether ketone)s with methoxy pendant groups. L. Aize, Y. Jin, **J. Zhenhua**
- 252.** Poly(arylene ether nitrile)s with trifluoromethyl groups. W. Dong, J. Yuhui, W. Guibin, **J. Zhenhua**
- 253.** Synthesis and properties of new amorphous poly(arylene ether nitrile). W. Dong, J. Wei, W. Guibin, **J. Zhenhua**, X. Rao
- 254.** Synthesis and characterization of poly(aryl ether ketone) with pendant propenyl. D. Xiaohui, Y. Yanhua, **J. Zhenhua**
- 255.** Synthesis and structural characterization of hyperbranched poly(aryl ether ketone)s from A2+B3 systems. J. Chen, M. Jianxin, Z. Chunling, **J. Zhenhua**, W. Lifeng
- 256.** Synthesis and characterization of poly(aryl ether ketone)s with group(4-phenoxyphenyl). M. Jianxin, W. Yang, **J. Zhenhua**, W. Zhiqi
- 257.** Synthesis and polymorphism of a hyperbranched prepolymer of poly(aryl ether ketone)s containing 1,3-bis(4-fluorobenzoyl)benzene. M. Jianxin, Z. Chunling, C. Jie, **J. Zhenhua**, W. Lifeng
- 258.** Synthesis and properties of a novel poly(aryl ether ketone). W. Yang, M. Jianxin, Z. Cunsheng, **J. Zhenhua**, W. Zhiqi

MONDAY MORNING

Section A

Coast -- Plaza A

Metal-Containing and Metallo-Supramolecular Polymers and Materials

Discrete Metal-Containing Systems and Surface Assemblies

Cosponsored with INOR, and PMSE

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

E. C. Constable and C. M. Drain, *Presiding*

8:10 - 259. Metal-directed self assembly of nanostructures: A panacea or a problem? **E. C. Constable**, C. E. Housecroft

8:45 - 260. Grid forming metal coordinating ligands as supramolecular initiators. **R. Hoogenboom**, U. S. Schubert

2004 Spring meeting

9:05 - 261. Metal-containing modified peptide nucleic acids. **C. Achim**, R. Franzini, R. M. Watson, G. K. Patra

9:30 - 262. Orthogonal copolymer functionalization using metal coordination and hydrogen bonding. **J. M. Pollino**, M. Weck

9:50 - 263. Combinatorial approach to the metal mediated self-assembly of poly(thiophene)s. **J. J. Lavigne**, C. O'Sullivan, M. S. Maynor

10:10 - Intermission.

10:30 - 264. Assembly of large ring molecules around nanosize multimetal cartwheel templates. **G. van Koten**, A. Chuchuryukin, H. Dijkstra, R. J. M. Klein Gebbink, G. P. M. van Klink

11:05 - 265. Morphology study of linear metallo-supramolecular polymer films. **D. Wouters**, A. A. Alexeev, H. Hofmeier, S. Schmatloch, U. S. Schubert

11:25 - 266. Self-organization of self-assembled porphyrin arrays on surfaces. **C. M. Drain**, J. D. Batteas, J. C. Garno, T. Milic, G. Smeureanu

11:50 - 267. Fabrication of ATP-responsive nanodevices utilizing molecular chaperons. **K. Kinbara**, T. Aida

Section B

Coast -- Plaza Bllrm B/C

Silicones and Silicone-Modified Materials

M. E. Van Dyke, M. J. Owen, S. D. Smith, and J. J. Fitzgerald, *Organizers*

S. J. Clarson, *Organizer, Presiding*

8:30 - 268. Say yes to silicones! [Si to Si!]. **M. J. Owen**

9:00 - 269. Silicone-based block and graft copolymers via atom transfer radical polymerization. **K. Matyjaszewski**

9:30 - 270. Effect of structural variations on the synthesis and structure-property behavior of segmented silicone-urethane and silicone-urea copolymers: I. Polymer synthesis. **I. Yilgor**, E. Yilgor, B. Erenturk, H. Ozhalici, J. P. Sheth, G. L. Wilkes

10:00 - 271. Effect of structural variations on the synthesis and structure-property behavior of segmented silicone-urethane and silicone-urea copolymers: II. Structure-property behavior. **J. P. Sheth**, I. Yilgor, E. Yilgor, G. L. Wilkes

10:30 - Intermission.

10:50 - 272. Phosphonate-functionalized trimethoxysilane and its copolymerization. **S. Gallagher**

11:10 - 273. Novel application-specific silicones for gas chromatographic separations. **D. V. Patwardhan**, F. L. Dorman, C. M. English

11:30 - 274. All acid catalysts used in ring opening polymerisation of cyclosiloxanes are not created equal. A. R. Bassindale, P. G. Taylor, T. H. Lane, **K. E. Alvarez**

11:50 - 275. Mechanistic study on diphenylsilacyclobutane-potassium tert-butoxide system as a "carbanion pump" in anionic polymerization. **J. Y. Hyun**, Y. Kawakami

12:10 - 276. Thermal and dielectric behaviors of binary mixtures of a side chain liquid crystal siloxane copolymer and a nematic solvent. **Y. Zhao**, S. Dong, D. E. Schuele, S. Nazarenko, S. Rowan, A. M. Jamieson

Section C

Coast -- Garden A/B

2004 Spring meeting

Advanced Membranes For Challenging Applications

Fuel Cells

W. J. Koros, *Organizer*

G. Lipscomb, *Organizer, Presiding*

8:30 - Introductory Remarks.

8:35 - 277. Improving efficiency in chlor-alkali systems using encapsulated high field magnetic materials in composite modified anodes. **D. A. Capretto**, S. D. Minteer

8:55 - 278. Immobilizing oxidoreductase enzymes in surfactant and symmetrical ammonium treated Nafion. **C. M. Moore**, S. D. Minteer

9:15 - 279. Physical properties of sulfonated diels-alder polyphenylenes: Applications for PEM Fuel Cells. **C. J. Cornelius**, C. H. Fujimoto

9:35 - 280. Proton conducting block copolymers: Sulfonation, characterization, and application to the direct methanol fuel cell. **Y. A. Elabd**, E. Napadensky, C. W. Walker

9:55 - 281. Sulfonation of fluorine-containing poly(ether ketone)s and poly(ether nitrile)s for proton-conducting membranes. **Y. Sakaguchi**, A. Kaji, S. Nagahara, K. Kitamura, S. Takase, K. Omote, Y. Asako, K. Kimura

10:15 - 282. Synthesis and characterization of highly sulfonated polyarylenethioethersulfones for fuel cells applications. **T. D. Dang**, **Z. Bai**, M. J. Dalton, E. Fossum

10:35 - 283. Nafion-acid functionalized zeolite beta nanocomposite proton exchange membranes. **B. A. Holmberg**, X. Wang, J. M. Norbeck, Y. Yan

10:55 - 284. Progress toward new materials for proton exchange membranes (PEM)s in fuel cells (FC)s. **M. D. Guiver**, G. P. Robertson, Y. Gao, P. Xing, S. Mikhailenko, S. Kaliaguine

Section D

Coast -- Plaza D

ACS Award in Polymer Chemistry in Honor of Virgil Percec

C. Hawker, *Organizer*

M. Sawamoto and K. L. Wooley, *Organizers, Presiding*

8:30 - Award Introduction.

9:00 - 285. A highly efficient approach to materials synthesis using click chemistry. **C. J. Hawker**, J. Pyun, A. Nugent, J. M. J. Frechet, B. Voit, A. Scheel, V. V. Fokin, M. G. Finn, A. K. Feldman, P. Yu, K. B. Sharpless

9:30 - 286. Polymers containing iptycenes: New properties from high internal free volume materials. **T. M. Swager**

10:00 - 287. A concept for a molecular walker driven by light. **M. Moeller**

10:30 - 288. Importance of biotechnology and nanotechnology for polymer materials. **J. A. Put**

11:00 - 289. Luminescent and mineralized liquid crystals. **S. I. Stupp**, K. Tajima, M. Sofos, J. F. Hulvat

11:30 - 290. Harnessing multivalency in unnatural systems. J. D. Badjic, **J. F. Stoddart**

12:00 - 291. Synthesis of complex polymers for use as photoresists for semiconductor manufacture. **A. E. Feiring**, Y. Brun, F. Davidson, M. Fryd, K. W. Leffew, F. L. Schadt III

2004 Spring meeting

12:30 - 292. Transition metal-catalyzed living radical polymerization: Evolution of catalysts. **M. Sawamoto**

Section E

Coast -- Park D

P. J. Flory Education Award

L. M. Robeson, T. E. Long, and C. D. Smith, *Organizers*

K. B. Bota and M. Spinu, *Presiding*

8:30 - 293. Synergies of macromolecular topology and functionality for performance. **T. E. Long**, M. G. McKee, A. S. Karikari, S. Unal, I. Ilgor, G. L. Wilkes, T. C. Ward

9:00 - 294. New fluoropolymer-based elastomers for next generation microfluidic devices. **J. M. DeSimone**, J. Rolland, S. Quake

9:30 - 295. Polymer complexes with magnetic nanoparticles. **J. S. Riffle**, V. V. Baranauskas, A. Y. Carmichael, J. D. Goff, M. Vadala

10:00 - 296. Adventures in education and research with Garth, Jim, and Tom. **J. F. Geibel**

10:30 - 297. Synthesis and structure of biologically oriented polyolefins. **K. B. Wagener**, T. E. Hopkins

11:00 - 298. Results on elastomers and rubberlike elasticity useful in teaching physical chemistry. **J. E. Mark**

MONDAY AFTERNOON

Section A

Coast -- Plaza A

Metal-Containing and Metallo-Supramolecular Polymers and Materials

Metal-Containing Materials and Applications

Cosponsored with INOR, and PMSE

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

W. K. Chan and U. H. F. Bunz, *Presiding*

1:30 - 299. Solid-state light-emitting electrochemical cells based on the tris-chelated ruthenium (II) complex. **M. Rubner**

2:05 - 300. Electron transfer through H-bonded peptide assemblies. **H. Kraatz**

2:30 - 301. Optical properties of transition metal containing conjugated oligomers and polymers. **K. S. Schanze**

2:55 - 302. Evolution of lowest singlet and triplet excited states with electronic structure of fluorene group in platinum(II) polyyne polymers. **W. Wong**

3:20 - 303. Long-range triplet energy transfer in metallo-polymers. **A. Harriman**, A. C. Benniston

3:45 - Intermission.

4:10 - 304. Soluble, conjugated metal-containing polymers. **M. J. MacLachlan**, A. C. W. Leung, J. H. Chong

4:30 - 305. Synthesis and properties of organometallic conjugated polymers. W. Steffen, S. Scholz, **U. H. F. Bunz**

4:50 - 306. Use of metal-containing conjugated polymers in photovoltaic devices. **W. K. Chan**, C. S. Hui, H. L. Wong, C. Y. Kwong, A. B. Djurisic

2004 Spring meeting

5:10 - 307. Transition-metal containing chromophores for functional nonlinear optics: Enhancing, fine-tuning and switching the nonlinear response. **K. Clays**

Section B

Coast -- Plaza Bllrm B/C

Silicones and Silicone-Modified Materials

M. E. Van Dyke, S. D. Smith, J. J. Fitzgerald, and S. J. Clarson, *Organizers*

M. J. Owen, *Organizer, Presiding*

1:30 - 308. Polysiloxane elastomers. **J. E. Mark**

2:00 - 309. New approaches to modification of siloxane properties by crosslinking. T. M. Gädda, **W. P. Weber**

2:30 - 310. Polysiloxane with functional groups regularly distributed along the chains. L. Beouch, R. Kerboua, O. Fichet, D. Teyssié, **S. Boileau**

3:00 - 311. Silicon-cellulose interpenetrating polymer networks. O. Fichet, J. Laskar, F. Vidal, **D. Teyssié**

3:30 - 312. Elastomeric networks by Pt-mediated hydrosilations of 5eactive carboranylenesiloxanes and siloxane crosslinkers. **M. K. Kolel-Veetil**, T. M. Keller

3:50 - Intermission.

4:10 - 313. Crosslinking of α,ω -(epoxy)fluorosiloxanes with α,ω -diaminoalkanes: Cure behavior and properties. **M. A. Grunlan**, N. S. Lee, W. P. Weber

4:30 - 314. Novel cross-linked network cyclic siloxanes with internal oligo(ethylene glycol) side chains: Synthesis and conductivity. **Z. Zhang**, L. J. Lyons, K. Amine, R. West

Section C

Coast -- Garden A/B

Advanced Membranes For Challenging Applications

Advanced Membrane Structures

G. Lipscomb, *Organizer*

W. J. Koros, *Organizer, Presiding*

1:30 - Introductory Remarks.

1:35 - 315. Preparation and analysis of peroxide core microcapsules. **B. H. McFarland**, J. A. Pojman

2:00 - 316. Barrier packaging in the pharmaceutical industry: Applications and modeling. **R. Mahajan**, R. T. Chern

2:25 - 317. Ion irradiation modified polyimides for gas separations. **M. R. Coleman**, X. Xu, J. Ilconich, L. Hu

2:50 - 318. Ion beam modification of permselective membranes for chemical biological protective clothing. **E. Wilusz**, W. Zukas, Z. A. Fekete, F. E. Karasz

3:15 - 319. Variation of glass transition temperature in a thin polymer film studied by positron annihilation spectroscopy. **J. Zhang**, H. Chen, Y. Li, R. Suzuki, T. Ohdaira, Y. C. Jean

3:40 - 320. Self-assembly of hybrid polymer nanocomposites via incorporation of inorganic buiding blocks into organic polymers. **S. Chen**, J. Sui, P. He, L. Chen

Section D

2004 Spring meeting

Coast -- Plaza D

ACS Award in Polymer Chemistry in Honor of Virgil Percec

K. Wooley and M. Sawamoto, *Organizers*

C. Hawker, *Organizer, Presiding*

1:30 - 321. Supramolecular chemistry applied to the assembly of nanostructures and to their subsequent manipulation.

Q. Zhang, J. L. Turner, Q. Ma, K. S. Murthy, **K. L. Wooley**

2:00 - 322. Reprogramming protein synthesis. **D. A. Tirrell**, A. J. Link, I. Kwon, S. Son

2:30 - 323. Self-assembled architectures from bio-hybrid amphiphiles. **R. J. M. Nolte**

3:00 - 324. Supramolecular and macromolecular approaches to functional nanomaterials. **T. Aida**

3:30 - 325. Mechanistic studies of neutral Ni(II) ethylene polymerization catalysts derived from anilinetropone ligands. **M. Brookhart**, J. C. Jenkins, L. Zhang

4:00 - 326. Synthesis of defined polymer structures. **R. H. Grubbs**

4:30 - 327. The modular approach to supramolecular materials. **E. W. Meijer**

5:00 - Award Introduction.

5:05 - 328. Nature as a model for the elaboration of new concepts in polymer chemistry. **V. Percec**

Section E

Coast -- Park D

P. J. Flory Education Award

T. E. Long, *Organizer*

L. M. Robeson, *Organizer, Presiding*

C. D. Smith, *Facilitator*

1:30 - 329. Polymer deformation at various levels of morphology. **R. S. Stein**

2:00 - 330. N-Heterocyclic carbenes: A new and versatile platform for organocatalytic living polymerization. **J. L. Hedrick**, R. M. Waymouth, G. W. Nyce, A. Sentman, S. Csihony

2:30 - 331. Elastic instabilities in rubber: Aneurysms, wrinkles, and kinks. **A. N. Gent**

3:00 - 332. Polycarbonate nanocomposites. **D. R. Paul**, P. Yoon, T. D. Fornes

3:30 - 333. Polymer education at Virginia Tech: Undergraduate and summer programs. **T. C. Ward**, J. E. McGrath, G. L. Wilkes

3:50 - 334. Graduate education in Macromolecular Science and Engineering at Virginia Tech: The past to the present. **G. L. Wilkes**, T. C. Ward, J. E. McGrath

4:10 - 335. Polymer education at Virginia Tech: Continuing education. **J. E. McGrath**, G. L. Wilkes, T. C. Ward

MONDAY EVENING

Section A

Convention Center -- Hall A

2004 Spring meeting

Sci-Mix

D. J. Kiserow, *Organizer*

8:00 - 10:00

87-89, 95, 97-98, 100, 109, 117-118, 123, 128, 133, 139, 152, 154, 156, 159, 167, 169, 174, 181, 183, 190-191, 193, 200-203, 208, 211, 226, 233, 235, 241-242, 244-247, 255. See previous listings.

410-411, 419-420, 424-426, 430, 434, 483, 486, 488, 494, 500, 504-506, 508-509, 516, 526-527, 531. See subsequent listings.

TUESDAY MORNING

Section A

Coast -- Plaza A

Metal-Containing and Metallo-Supramolecular Polymers and Materials

Metallo-Supramolecular Dendrimers

Cosponsored with INOR, and PMSE

U. S. Schubert and I. Manners, *Organizers*

D. Astruc, *Presiding*

G. R. Newkome, *Organizer, Presiding*

8:10 - 336. Metallodendrimers: Fractals and photonics. **G. R. Newkome**, T. Cho, P. Wang

8:45 - 337. Metalla-phosphorus dendrimers: Synthesis and properties. **J. Majoral**, A. Caminade, R. Laurent

9:10 - 338. The role of dendrimer structure on the rate and driving force for electron transfer to its core. **C. B. Gorman**

9:35 - 339. Syntheses and nonlinear optical properties of alkynylruthenium dendrimers. **M. G. Humphrey**, C. E. Powell, M. P. Cifuentes, J. P. Morrall, M. Samoc

10:00 - Intermission.

10:20 - 340. Giant ferrocenyl dendrimers. J. Ruiz, C. Ornelas, **D. Astruc**

10:55 - 341. Photoactive dendrimers as hosts of metal ions. **P. Ceroni**, V. Vicinelli, G. Bergamini, V. Balzani, S. Lee, F. Voegtle

11:20 - 342. Superior stability of dendron and dendron-box protected colloidal nanocrystals. **X. Peng**

Section B

Coast -- Plaza D

Silicones and Silicone-Modified Materials

Silicone and Silicone-Modified Materials

M. E. Van Dyke, S. D. Smith, S. J. Clarson, and J. J. Fitzgerald, *Organizers*

M. J. Owen, *Organizer, Presiding*

8:30 - 343. Silicon-containing hyperbranched polymers via bimolecular polymerization. **P. R. Dvornic**, J. Hu, D. J. Meier, R. M. Nowak

9:00 - 344. Synthesis of novel silicon-containing monomers for cationic polymerization. **J. V. Crivello**, M. Jang

9:30 - 345. Polycarbosiloxane linear and network polymers. **L. V. Interrante**, J. Li, N. Lu

2004 Spring meeting

10:00 - 346. Effects of pH on the gelation time in the sol-gel polymerization of 1,6-bis(trimethoxysilyl)hexane. **D. A. Loy**, A. Straumanis, D. A. Schneider, B. Mather, A. Sanchez, C. R. Baugher, K. J. Shea

10:20 - 347. Role of process conditions on organosilicone gel rheological properties. **M. A. Krencieski**, M. J. O'Brien, S. Rajaraman

10:40 - Intermission.

11:00 - 348. Universal gel-point prediction in enlinking polymerisations. **J. I. Cail**, R. F. T. Stepto

11:20 - 349. Synthesis and properties of poly(methylphenylsiloxane) homopolymers and diblock copolymers. H. W. Ahn, A. Jadhav, J. O. Stuart, X. K. Zhang, C. E. Selby, **S. J. Clarson**

11:40 - 350. Aggregation mechanism of trisilanolisobutyl-POSS langmuir films at the air/water interface: Poly(dimethylsiloxane) polarity effects. **H. Kim**, J. Deng, J. R. Hottle, J. K. Hoyt, J. S. Riffle, B. D. Viers, A. R. Esker

12:00 - 351. Study of adhesion promotion of epoxy-coated aluminium in the presence of aminopropyltrimethoxysilane: The role of drying time and pH. **M. Mohseni**, M. Mirabedini, K. Shamardani

12:20 - 352. Synthesis and catalytic applications of tris(trimethoxysilylpropyl) isocyanurate grafted "Pd"-nanoclusters. M. Chauhan, R. Pantano, J. S. Rathore, **B. P. S. Chauhan**

Section C

Coast -- Plaza B

Conducting Polymers

Synthesis

J. P. Armistead, *Organizer*

S. A. Jenekhe, *Organizer, Presiding*

8:30 - 353. New electron-rich conjugated polymers. F. Dierschke, J. Jacob, A. K. Mishra, A. C. Grimsdale, **K. Müllen**

9:00 - 354. Synthesis of diblock, triblock, and star copolymers of PPV derivatives: A route to donor-acceptor blocks. J. J. Gutierrez, N. Luong, D. Zepeda, **J. P. Ferraris**

9:30 - 355. New insights into the mechanism of the Gilch polymerization leading to the PPV. **M. Rehahn**, J. Wiesecke

9:50 - 356. Synthesis and properties of new small band gap n-type conjugated polymers: Semiladder polyquinoxalines. **Y. Zhu**, S. A. Jenekhe

10:10 - Intermission.

10:30 - 357. Preparation of new π -conjugated polymers by organometallic processes and chemical properties of the polymers. **T. Yamamoto**

11:00 - 358. Solution processable and electrochromic dioxothiophene-based polymers. **J. R. Reynolds**, B. D. Reeves, C. R. G. Grenier, A. A. Argun, A. Cirpan, T. D. McCarley

11:30 - 359. Polyalkylaminothiophenes: Initial studies of a new class of functionalized polythiophenes. J. A. Stafford, S. D. Rothstein, D. E. Tallman, **S. C. Rasmussen**

11:50 - 360. In situ end group modification of regioregular poly(3-alkylthiophenes) via Grignard metathesis (GRIM) polymerization. **M. Jeffries-El**, G. Sauv e, M. Iovu, R. D. McCullough

Section D

Coast -- Garden A

2004 Spring meeting

Polymerization and Polymer Processing in Supercritical Fluids

Transport Properties & Advanced Processing

J. R. Royer, *Organizer*

G. W. Roberts, *Organizer, Presiding*

8:30 - Introductory Remarks.

8:35 - 361. How best to process polymers with SCF solvents. **M. A. McHugh**

9:30 - 362. Transport properties of polystyrene solutions swollen with supercritical carbon dioxide. **R. E. Whittier**, S. A. Tanner, D. Xu, J. H. van Zanten, G. W. Roberts, D. J. Kiserow

9:55 - 363. Motion and phase behavior of CO₂-processed teflon AF and copolymers measured by high temperature NMR. **L. A. Madsen**, A. Chao, E. T. Samulski

10:20 - Intermission.

10:30 - 364. SCF solubility of aromatic-based monomers, dimers, and polymers. Z. Shen, M. Wright, K. M. Lott, **M. A. McHugh**

10:55 - 365. Polymer nanocomposites prepared by supercritical carbon dioxide-assisted polymer processing. **M. Garcia-Leiner**, A. J. Lesser

11:20 - 366. CO₂-assisted depolymerization of poly(ethylene terephthalate). **J. D. Patterson**, J. R. Royer, G. W. Roberts, S. A. Khan

Section E

Coast -- Garden B

General Papers

D. Garcia, *Organizer*

L. G. Stanek, *Presiding*

8:30 - 367. Synthesis of heteroarm star-shaped amphiphiles with 12 alternating arms of polybutadiene and polyethylene oxide. **J. Xu**, E. R. Zubarev

8:50 - 368. Photocrosslinking of star-shaped poly(D,L-lactide)s containing an ethoxylate core. **A. S. Karikari**, C. D. Thatcher, T. E. Long

9:10 - 369. Synthesis of novel Y-shaped pH-responsive block copolymers based on poly(alkylene oxide). **Y. Cai**, S. P. Armes

9:30 - 370. Synthesis and characterization of copolymers of N,N-dimethylacrylamide and methyl methacrylate with 2-vinyl-4,4'-dimethylazlactone. **L. G. Stanek**, S. M. Heilmann, W. B. Gleason

9:50 - 371. Novel iron catalysts for atom transfer radical polymerization based on tridentate salicyaldiminato ligands. V. C. Gibson, **R. K. O'Reilly**, A. J. P. White, D. J. Williams

10:10 - 372. Reversibly supported catalysts on silica gel for atom transfer radical polymerization of methyl methacrylate. **Y. Shen**, S. Ding, M. Radosz

10:30 - 373. Design, behavior, and recycling of silica-supported Cu-Bipyridine ATRP catalysts. **J. V. Nguyen**, C. W. Jones

10:50 - 374. A tetradentate ligand forming highly active catalysts for atom transfer radical polymerization. **Y. Shen**, S. Ding, M. Radosz

2004 Spring meeting

11:10 - 375. Click chemistry in polymer synthesis. **S. Punna**, D. D. Díaz, C. Li, K. B. Sharpless, V. V. Fokin, M. G. Finn

11:30 - 376. Synthesis and functionalization of copolymers using click chemistry. **R. K. O'Reilly**, C. J. Hawker, K. L. Wooley

11:50 - 377. Diradical-initiated polymerization via Bergman cyclization. J. S. Moore, **J. D. Rule**, S. R. Wilson

TUESDAY AFTERNOON

Section A

Coast -- Plaza A

Metal-Containing and Metallo-Supramolecular Polymers and Materials

Organometallic Polymers and Nanoparticles

Cosponsored with INOR, and PMSE

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

M. Rehahn, *Presiding*

I. Manners, *Organizer, Presiding*

1:30 - 378. Functional and supramolecular metallopolymers. **I. Manners**

2:05 - 379. Carbanion-pump mediated endcapping as a key-step in the synthesis of organometallic block copolymers. **M. Rehahn**, C. Klöninger

2:25 - 380. Poly(ferrocenylsilanes) for nanolithography. **M. A. Hempenius**, F. F. Brito, R. G. H. Lammertink, M. Péter, G. J. Vancso

2:45 - 381. Synthesis, self-assembly, shell crosslinking and surface patterning of polyferrocenylsilane-based block copolymers. **M. A. Winnik**, X. Wang, J. Ruez, A. C. Arsenault, G. A. Ozin, I. Manners

3:05 - 382. Silametallacycles: Isolation, characterization and ring-opening polymerizations. **K. H. Pannell**, H. K. Sharma, F. Cervantes-Lee

3:25 - 383. Reactive polymers possessing metallacycles in the main chain. **I. Tomita**

3:45 - 384. Nanolithographic and nanopatterning applications of highly metallized cluster-based polymers. **A. Y. Cheng**, S. B. Clendenning, I. Manners

4:05 - 385. Surface micropatterning and lithography with poly(ferrocenylmethylphenylsilane). **I. Korczagin**, H. Xu, S. Golze, M. A. Hempenius, G. J. Vancso

4:25 - 386. Synthesis and layer-by-layer self-assembly of water-soluble polyferrocenylsilanes. **Z. Wang**, J. Halfyard, J. Galloro, M. Ginzburg, N. Coombs, A. Lough, G. A. Ozin, I. Manners

4:45 - 387. Metal-phosphine polymers and their precursors. **S. L. James**

5:05 - 388. General and facile synthesis of highly ordered large-pore periodic mesoporous organosilicas (PMO) templated by triblock copolymers. W. Guo, I. Kim, **C. Ha**

Section B

Coast -- Plaza D

Silicones and Silicone-Modified Materials

M. E. Van Dyke, M. J. Owen, J. J. Fitzgerald, and S. J. Clarson, *Organizers*

S. D. Smith, *Organizer, Presiding*

2004 Spring meeting

1:30 - 389. Silicone biomaterials: A review. **M. E. Van Dyke**

2:00 - 390. Controlling protein deposition at silicone elastomer interfaces. A. Ragheb, H. Chen, M. L. Marshall, M. Hrynyk, H. Sheardown, **M. A. Brook**

2:30 - 391. Interaction of proteins with functionalized silicones. **P. M. Zelisko**, J. J. Coo-Ranger, M. A. Brook

3:00 - Biomaterials Tutorial.

3:30 - Intermission.

4:00 - 392. DNA attachment chemistry on flexible silicone elastomer surface: Toward plastic microarrays. **A. A. Vaidya**, M. Norton

4:20 - 393. Multi-cycle recovery characterization of silicone elastomers and hydrogels for medical device application. **L. Tsou**, Y. Lai

4:40 - 394. Settlement and release of *Balanus* and *Ulva* as a function of PDMS elastomer surface energy. **T. G. Estes**, A. W. Feinberg, M. E. Callow, G. Swain, A. B. Brennan

Section C

Coast -- Plaza B

Conducting Polymers

Theory and Structure/Property Relationships

J. P. Armistead and S. Jenekhe, *Organizers*

M. D. McGehee, *Presiding*

1:30 - 395. Chain-length dependence of singlet and triplet formation rates in organic light-emitting diodes. **J. E. Bredas**

2:00 - 396. Exciton-exciton annihilation and the production of interchain species in conjugated polymer films: Comparing the ultrafast stimulated emission and photoluminescence dynamics of MEH-PPV. **B. J. Schwartz**, I. B. Martini

2:30 - 397. Electron-vibrational dynamics of photoexcited polyfluorenes. I. Franco, **S. Tretiak**

2:50 - 398. Fluorenone-containing Polyfluorenes: Efficient green electroluminescent materials and excellent models for studying the origin of green emission. **A. P. Kulkarni**, X. Kong, S. A. Jenekhe

3:10 - Intermission.

3:30 - 399. Ordered bulk heterojunction photovoltaic cells. K. M. Coakley, Y. Liu, **M. D. McGehee**

4:00 - 400. Control of optical polaron production in semiconducting polymers using host-guest chemistry in hexagonal nanoporous silica. A. Cadby, **S. H. Tolbert**

4:30 - 401. Molecular weight dependent mobilities in regioregular poly(3-hexyl-thiophene) diodes and transistors. **C. T. Goh**, R. J. Kline, M. D. McGehee, E. N. Kadnikova, J. Liu, J. M. J. Fréchet

4:50 - 402. Molecular weight dependence on microcrystalline domain development of RRP3HT in thin films. **H. Yang**, T. J. Shin, L. Yang, Z. Bao, C. Y. Ryu, K. Cho

5:10 - 403. Donor-acceptor based polymers for photovoltaics. **B. C. Thompson**, C. J. DuBois Jr., Y. Kim, J. R. Reynolds

Section D

Coast -- Garden A

Polymerization and Polymer Processing in Supercritical Fluids

2004 Spring meeting

Polymerizations

J. R. Royer, *Organizer*

G. W. Roberts, *Organizer, Presiding*

1:30 - Introductory Remarks.

1:45 - 404. Modeling the molecular weight distribution of Poly(vinylidene fluoride) synthesized continuously in supercritical carbon dioxide. **T. S. Ahmed**, J. M. DeSimone, G. W. Roberts

2:15 - 405. Analysis of ethylene and ethylene vinyl acetate co-polymerizations using in-situ ATR FTIR in supercritical carbon dioxide. X. Li, M. Jia, **P. Charpentier**

2:45 - 406. Kinetics and mechanism of polymerization of L-lactide in supercritical chlorodifluoromethane. **J. W. Pack**, S. H. Kim, S. Y. Park, Y. W. Lee, Y. H. Kim, J. S. Lim

3:15 - Intermission.

3:30 - 407. Kinetics of the continuous precipitation polymerization of acrylic acid in supercritical carbon dioxide. **T. Liu**, J. M. DeSimone, G. W. Roberts

4:00 - 408. Effect of cosolvents on the polymerization of acrylamide in supercritical carbon dioxide. **Z. Bin**, C. Mingcai, L. Wei

4:30 - 409. Peculiarities of propylene oxide copolymerization with supercritical carbon dioxide. **A. Khokhlov**, T. V. Rakhimov, A. M. Sakharov, E. E. Said-Galiev, V. V. Il'in, Z. N. Nysenko

TUESDAY EVENING

Section A

Convention Center -- Hall A

Advanced Membranes For Challenging Applications

G. Lipscomb, *Organizer*

W. J. Koros, *Organizer, Presiding*

6:00 - 8:00

410. Enhanced electrochemical properties of PP membrane via plasma polymerization coating. F. Basarir, K. Song, **T. Yoon**

411. Nafion-acid functionalized zeolite beta nanocomposite proton exchange membranes. **B. A. Holmberg**, X. Wang, J. M. Norbeck, Y. Yan

412. Brand-new encapsulating method of insulating fluid via phase-inversion emulsification. **M. Hayashi**, H. Yoshizawa, K. Hanada

413. Polymer electrolytes with improved mechanical properties. **C. Weder**, **A. Kokil**, **M. Schroers**

414. Preparation of sulfonated poly(ether sulfone nitrile)s and characterization as proton-conducting membranes. **Y. Sakaguchi**, K. Kitamura, S. Nagahara, S. Takase

415. Preparing microcapsules having various pore sizes on capsule-membrane by phase separation method. **E. Kamio**, K. Hanada, Y. Kitamura, H. Yoshizawa

416. Properties and proton conductivities of highly sulfonated polyarylenethioether sulfones for fuel cells. **Z. Bai**, L. D. Williams, M. F. Durstock, **T. D. Dang**

417. Silk/Green fluorescent protein (GFP) membranes. **S. Putthanarat**, J. Magoshi, T. Tanaka, D. Ott, S. Juhl, M. O. Stone, R.

2004 Spring meeting

Eby Sr.

418. Study on the effect of the polyimide structure on the pervaporation membrane performance. Z. Chen, G. Hu, B. Han, **C. Chen, J. Li**

419. Study on the viscosity of the poly(phthalazine ether sulfone ketone) solution and its effect on the gelation rate. P. Qin, Z. Chen Sr., B. Han, Z. Zhao, B. Sun, J. Li, **C. Chen**

420. New multiblock copolymers containing hydrophilic-hydrophobic segments for proton exchange membranes. **H. Ghassemi**, W. Harrison, T. Zawodzinski, J. E. McGrath

Section B

Convention Center -- Hall A

Biomacromolecule Interactions with Synthetic Surfaces

J. P. Armistead and L. Chrisey, *Organizers*

K. Wooley, *Organizer, Presiding*

6:00 - 8:00

421. Analysis of myoglobin adsorption to Cu(II)-IDA and Ni(II)-IDA functionalized Langmuir monolayers by grazing incidence neutron and X-ray techniques. **H. Yim**, M. S. Kent, D. Y. Sasaki, S. Satija, J. Majewski, T. Gog

422. Biotinylated and enzyme-immobilized carrier prepared by hetero-bifunctional latex beads. **Y. Du**, T. Tomohiro, G. Zhang, K. Nakamura, M. Kodaka

423. Combinatorial synthetic approach toward novel multi-functionalized biocides. **J. H. Wynne**, A. W. Snow, J. Jones-Meehan

424. Hydrolytic behaviors of antiomeric poly(lactide)-mixed monolayers at the air/water interface: Sterocomplexation effects. **W. Lee**, D. Ann

425. Polyethylene oxide functionalized nanobeads and silsesquioxanes. **S. Kulkarni, H. Zhang**, S. L. Wunder

426. Single macromolecule in-vivo micro analysis: Size, MW, and shape. **S. Wu**, Y. Tang

427. Surface characterization of nanostructured polyelectrolytes/biopolymers/TiO_x composites on CpTi and Ti6Al4V. **M. Advincula**, R. C. Advincula, J. E. Lemons

428. Surface morphology of the disposable color lens. **Y. Chen**, B. Narayanswamy, D. Fan, C. Mike

429. 3-D Bionanocomposite surfaces and interfaces: Fabrication and characterization. N. Kohli, S. Vaidya, R. Y. Ofoli, R. M. Worden, **I. Lee**

430. A study of water-induced reorganization of amphiphilic graft copolymers containing polydimethylsiloxane and poly(2-hydroxyethyl methacrylate) by angle dependent XPS. **L. Chen**, P. L. Valint, J. A. Gardella

431. Activity of genetically expressed Maxi-K ion channels reconstituted in non-native extremophile lipid bilayers using patch-clamp pipettes. **J. Zhang**, K. Fang, C. R. Williams, R. B. Price, P. A. V. Anderson, R. S. Duran

432. Effects of topology upon transfection efficiency: Synthesis, characterization, and transfection of poly-2-(dimethylamino)ethyl methacrylate and poly-2-(dimethylamino)ethyl methacrylate-co-polyethylene glycol-dimethacrylate. **A. N. Rudisin**, W. H. Eystone, W. R. Huckle, T. E. Long

433. Free-volume depth profile in drug delivery polymeric systems studied by positron annihilation spectroscopy. **Y. Li**, H. Chen, J. Zhang, R. Suzuki, T. Ohdaira, M. M. Feldstein, Y. C. Jean

434. Protein adsorption and cell adhesion on surface-patterned microhydrogels. **P. Krsko**, M. R. Libera

435. Synthesis of block copolymers containing pi-conjugated polyfluorene and polypeptide blocks. **X. Kong**, S. A. Jenekhe

2004 Spring meeting

436. Toward detoxification of cardiac myocytes on microelectrode arrays using polymerized silica core-shell nanocapsules. **A. V. Jovanovic**, M. Pottek, C. Thielemann, W. Knoll, R. S. Duran

437. Biomacromolecules immobilized by interactions with charged synthetic membranes. **Q. T. Nguyen**, J. Marcq, K. Glineel, M. Pontie

Section C

Convention Center -- Hall A

Conducting Polymers

J. P. Armistead and S. Jenekhe, *Organizers*

B. J. Schwartz, *Presiding*

6:00 - 8:00

438. Design and synthesis of a new polythiophene block copolymer. **S. Maaref**, S. Thomas, S. Sun

439. Toward a synthesis of thiophene-based conducting polymers bearing hemi-labile ligands. **S. J. Howell**, C. S. Day, R. E. Nofle

440. Evolution of morphology in nano-scale light emitting domains of MEH-PPV/PMMA blends. **N. A. Iyengar**, R. S. Duran, K. S. Schanze, J. R. Reynolds

441. A new low bandgap conducting polymer based on pyrrole moiety. **I. T. Kim**, S. W. Lee, M. H. Kwak, S. J. Kim, G. B. Park, H. W. Kim

442. Biocatalytic synthesis and ion transport properties of pegylated polyelectrolytes. **R. Kumar**, V. S. Parmar, L. Samuelson, A. C. Watterson, K. G. Chittibabu, J. Kumar

443. Crystal morphology of phenyl-capped tetraaniline in the leucoemeraldine oxidation state. C. Liang, Y. Youhai, M. Huaping, L. Xiaofeng, Z. Yunchun, W. Yen, **Z. Wanjin**

444. Design and synthesis of polymerizable tridentate hosts for encapsulation of organoiodides. T. W. Hanks, **P. Deb**, B. T. Holmes, W. T. Pennington

445. Direct writing of polyterthiophene nanowires using electrochemical oxidative nanolithography (ECON). **S. Jang**, M. Marquez, G. A. Sotzing

446. Dispersibility of tanninsulfonic acid-doped polyaniline (TANI-PANI) in aqueous systems. **K. K. Taylor**, C. N. Cavin, B. C. Berry, T. Viswanathan

447. Easily oxidized high band gap conjugated polymers. **R. M. Walczak**, A. A. Argun, J. R. Reynolds

448. Electrochemical synthesis of polyaniline nanofibers. **R. M. Villahermosa**, R. E. Anderson, D. D. Sawall, A. R. Hopkins

449. Electron-transport agents incorporated into polyester ionomers. **W. T. Ferrar**, M. F. Molaire, J. R. Cowdery, L. J. Sorriero, D. S. Weiss, J. M. Hewitt

450. Electropolymerization of EDOT at high-pressure studied by electrochemical-surface plasmon resonance spectroscopy. **A. Baba**, K. Tamada, W. Knoll

451. Highly conducting graphite/ICP composites. **S. E. Bourdo**, T. Viswanathan

452. How absorption and emission spectra change by confining a conducting polymer. **S. C. Bae**, Z. Lin, J. Turner, S. Granick

453. Infrared spectroscopic analysis of selected bands of the xanthate precursor monomers and polymer of poly(p-phenylene vinylene)(PPV). **G. A. Arbuckle-Keil**, D. M. Byler, Y. Patel

2004 Spring meeting

- 454.** Inter and intra molecular phase separation environment effects on PI-PEO block copolymers for batteries and fuel cells. **C. Xue**, M. A. B. Meador, R. K. Eby, S. Z. D. Cheng, J. J. Ge, V. A. Cubon
- 455.** Layer-by-layer assembly of poly(p-phenylene vinylene)s. Z. Liang, **Q. Wang**
- 456.** Magnetic conducting water-dispersible lignosulfonic acid-doped polyaniline/iron oxide nanocomposites. **B. C. Berry**, T. Viswanathan
- 457.** Model studies for the corrosion-inhibiting interactions at polyaniline/metal interfaces. **F. L. Klavetter**, M. A. Rouser, B. Hetayothin
- 458.** New luminescent 1,10-phenanthroline- and pyridine-containing π -conjugated polymers: Synthesis and optical response to protic acid and metal ions. **T. Yasuda**, T. Yamamoto
- 459.** Novel synthetic route for conjugated thiophenes. **W. G. Skene**
- 460.** Novel water soluble conducting polymers. **W. G. Skene**
- 461.** Oligoanilines and poly(acrylamide)s containing oligoanilines. **R. Chen**, **B. C. Benicewicz**
- 462.** Polymer blend based photovoltaic devices. **Y. Kim**, B. C. Thompson, N. A. Iyengar, G. Padmanaban, S. Ramakrishnan, J. R. Reynolds
- 463.** Preparation of ultra-thin polyacetylene films by dehydration of polyvinyl alcohol. **M. Kozlov**, T. J. McCarthy
- 464.** Preparation, solid state structure, and optical properties of cyclodextrin pseudopolyrotaxane constituted of π -conjugated polymers. **I. Yamaguchi**, T. Yamamoto
- 465.** Processable dioxythiophene based polymers with branched substituents. **C. R. G. Grenier**, B. D. Reeves, A. A. Argun, J. R. Reynolds
- 466.** Reactive oligomer intermediates in the Yamamoto coupling mediated polymerization of 2,7-dibromofluorenes. **S. Madhusoodhanan**, M. E. Thompson, T. E. Hogen-Esch
- 467.** Reversible thermochromism of novel self-layered hydrogen-bonded supramolecular polymers containing polydiacetylene. **Z. Yuan**, C. Lee, S. Lee
- 468.** Self-assembly of poly(aniline-co-o-anthranilic acid) copolymers and PVP into spherical formations. L. Xiaofeng, C. Jingyu, Y. Youhai, C. Liang, M. Huaping, W. Yen, **Z. Wanjin**
- 469.** Study on the chemical oxidation process of parent aniline pentamer. C. Liang, Y. Youhai, M. Huaping, L. Xiaofeng, W. Yen, **Z. Wanjin**
- 470.** Synthesis and characterization of a conjugated water soluble polyzwitterion. **H. H. Rmaile**, **D. S. Salloum**, J. B. Schlenoff
- 471.** Synthesis and properties of new soluble aromatic polyimides based on diaryl substituted pyromellitic dianhydrides. **D. Zhang**, J. Hu, F. W. Harris
- 472.** Synthesis and properties of photo acid generators for conducting patterns of polyaniline. D. Lee, **H. Hwang**, C. Lee, S. Lee
- 473.** Synthesis of chiral polydiacetylenes from amino acids. T. W. Hanks, **L. R. Ramsey**, P. Deb
- 474.** Synthesis of poly(3-hexylthiophene) di-block copolymers using atom transfer radical polymerization. **M. C. Iovu**, E. E. Sheina, G. Sauv , M. Jeffries-EL, J. Cooper, R. D. McCullough
- 475.** Synthesis, characterization, and self-assembly of an oligoaniline derivative. L. Xiaofeng, C. Jingyu, Y. Youhai, C. Liang, M. Huaping, W. Yen, **Z. Wanjin**
- 476.** Synthesis, characterization, and optical properties of a new soluble ppp-thiophene derivative copolymer. **I. T. Kim**, S.

2004 Spring meeting

W. Lee, S. Y. Kim, C. M. Lee, C. G. Kim

477. Synthetic methodology toward new propylenedioxythiophene polymers. **B. D. Reeves**, C. R. G. Grenier, A. A. Argun, A. Cirpan, G. B. Cunningham, T. D. McCarley, J. R. Reynolds

478. Ultrathin films using layer-by-layer electrodeposition and crosslinking of mixed band-gap conjugated polymers. **P. Taranekar**, R. C. Advincula

479. Ultrathin hybrid semiconductor films by alternate layer-by-layer deposition of oligothiophene and CdS nanoclusters. **K. Onishi**, J. Locklin, D. L. Patton, R. C. Advincula

480. Water soluble, low band gap, ring sulfonated polythieno[3,4-b]thiophene. **B. Lee**, G. A. Sotzing

Section D

Convention Center -- Hall A

Ionic Liquids In Polymer Systems

C. S. Brazel and R. D. Rogers, *Organizers, Presiding*

6:00 - 8:00

481. Attempted nitroxide-mediated free radical polymerization in 1-butyl-3-methylimidazolium hexafluorophosphate. H. Zhang, K. Hong, **J. W. Mays**, C. J. Hawker

482. Polymer-in-ionic liquid electrolytes. **D. R. MacFarlane**, C. Tiyapiboonchaiya, J. M. Pringle, M. Forsyth, J. sun

483. Polymerization of methyl methacrylate in a room temperature ionic liquid at room temperature. **H. Zhang, J. W. Mays**

484. Statistical copolymerizations of acrylates and styrene in 1-butyl-3-methylimidazolium hexafluorophosphate: Reactivity ratios and sequence distributions calculations. **H. Zhang, J. W. Mays**

Section E

Convention Center -- Hall A

Metal-containing And Metallo-supramolecular Polymers And Materials

Cosponsored with INOR, and PMSE

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

6:00 - 8:00

485. Bulk morphology of a metallo-supramolecular block copolymer. **B. G. G. Lohmeijer**, U. S. Schubert, J. Gohy, M. Al-Hussein, W. H. de Jeu

486. Coordination polymers: Measurements and modeling of solution viscosities. P. P. A. M. V. D. Schoot, **S. Schmatloch**, A. M. J. van den Berg, U. S. Schubert

487. New potential materials for polymer solar cells: Polymeric ruthenium bipyridine complexes. **U. S. Schubert**, V. Marin, E. Holder

488. Polycaprolactone-bipyridines for novel polymeric ruthenium polypyridyl complexes for applications in solid electrolyte based solar cells. V. Marin, E. Holder, **R. Hoogenboom**, U. S. Schubert

489. Solid electrolyte bipyridine macroligands for ruthenium polypyridyl complexes: New materials for applications in dye-sensitized solar cells. **U. S. Schubert**, V. Marin, E. Holder

490. Synthesis and characterization of a star shaped supramolecular block copolymer. **M. A. R. Meier**, U. S. Schubert

491. New soluble functional copolymers of methacrylates and bipyridine ruthenium complexes. E. Holder, V. Marin, **M. A. R. Meier**, U. S. Schubert

2004 Spring meeting

492. Synthesis and characterization of crown ether containing poly(L-lactide)s. **R. Hoogenboom**, D. Wouters, Y. Zhang, U. S. Schubert
493. Soluble organic/inorganic hybrid polymers containing kinetically labile copper(I) complexes. **M. Rehahn**, J. Kubasch
494. Study on the polyimide hybrid membrane material containing transitional metal organic complex for hydrogen separation. D. Shi Sr., **Y. Kong II**, J. Yang III, Y. Wang IV
495. Synthesis of new silane-based bis(cyanate) ester monomers for sse in high performance composite resins. **M. Wright**
496. Cyanide-bridged compounds as contrasting agents for AFM imaging of single polycation molecules. **A. Kiriya**, G. Gorodyska, S. Minko, M. Stamm
497. Inorganic-organic hybrid polymers constructed by salicylates. **L. Zhu**
498. Dicobalt hexacarbonyl complexes of alkyne containing liquid crystals: A new class of metallomesogens. **E. Scharrer**, D. Young
499. Dual functional materials for interface modifications in solid-state dye-sensitized TiO₂ solar cells. **K. Peter**, H. Wietasch, B. Peng, M. Thelakkat
500. Metal/2,6-bis(benzimidazolyl)pyridine binding: Toward metallo-supramolecular polymers. S. J. Rowan, **J. B. Beck**, J. S. Chen
501. Nanostructured composite TiO_x by stepwise sol-gel processing and electrostatic layer-by-layer deposition of polyelectrolytes and proteins. **M. Advincula**, R. C. Advincula, J. E. Lemons

Section F

Convention Center -- Hall A

Polymerization and Polymer Processing in Supercritical Fluids

G. W. Roberts, *Organizer*

J. R. Royer, *Organizer, Presiding*

6:00 - 8:00

502. Determining the solubility, cloud point, swelling, and crystallization properties of materials in supercritical carbon dioxide. **K. J. James**, K. R. Krewson

Section G

Convention Center -- Hall A

Polymers and Materials for Anti-terrorism and Homeland Defense

J. G. Reynolds, B. R. Hart, and C. L. Hill, *Organizers, Presiding*

6:00 - 8:00

503. Fabrication of organic-inorganic hybrid co-polymer nanofibers via electrospinning. **A. C. Patel**, L. Shuxi, Y. Wei
504. Non-aqueous based gels with broad temperature performance. **J. L. Lenhart**, P. J. Cole, R. Hedden
505. Molecular imprinted sensor arrays coupled with PCA and LDA in the identification of unknowns. **N. T. Greene**, K. S. Shimizu
506. Hexafluoroisopropanol functionalized poly(silabutanes) for chemical sensor applications. **D. L. Simonson**, E. J. Houser, J. L. Stepnowski, R. A. McGill

Convention Center -- Hall A

Silicones and Silicone-Modified MaterialsS. D. Smith and J. J. Fitzgerald, *Organizers*S. J. Clarson, M. J. Owen, and M. E. Van Dyke, *Organizers, Presiding***6:00 - 8:00****507.** A new family of POSS monomers suitable for forming urethane polymerizable nanocomposite coatings. **K. Constantopoulos**, D. J. Clarke, E. Markovic, D. Uhrig, S. R. Clarke, J. G. Matisons, G. Simon**508.** Bridged polysilsesquioxane xerogels. **K. J. Shea**, J. H. Small, S. T. Hobson, J. A. Tran, D. A. Loy**509.** Development of integrated chemical systems for the simultaneous formation of hybrid organic-inorganic interpenetrating polymer networks. **L. Zhao**, B. J. Clapsaddle, K. J. Shea, J. H. Satcher Jr.**510.** Ionic silicone surfactants in water-in-silicone oil emulsions containing proteins. **J. J. Coo-Ranger**, P. M. Zelisko, M. A. Brook**511.** Microstructure, interfacial interaction, and properties of polyimide/poly (vinylsilsesquioxane) nanohybrids. M. A. Wahab, I. Kim, **C. Ha****512.** Nature of the alkoxide group, solvent, catalyst, and monomer concentration on the gelation and porosity of hexylene-bridged polysilsesquioxanes. **D. A. Loy**, J. H. Small, M. Minke, C. R. Baugher, B. M. Baugher, D. A. Schneider, H. W. Oviatt, K. J. Shea**513.** Novel single and interpenetrating networks based on fluorinated polysiloxanes. **V. Darras**, S. Boileau, O. Fichet, D. Teyssié**514.** Novel thermal crosslinking of siloxanes. **J. M. Mabry**, W. P. Weber**515.** Pb(II) and Cd(II) adsorption behavior of a D2EHPA-loaded silsesquioxane. **M. Sánchez-Castellanos**, R. Véliz-Fuentes, E. Rodríguez de San Miguel, J. de Gyves**516.** Polysilsesquioxanes as solid electrolytes for proton exchange membrane fuel cell applications. **M. Khiterer**, D. A. Loy, J. H. Small, K. J. Shea**517.** Preparation and characteristics of polyorganosiloxane composite containing manganese zinc ferrite powder. **D. W. Kang**, H. G. Yeo, H. J. Kang**518.** Preparation and microwave absorption of nano polysilazane-modified FeNi magnetic particles. A. X. Liu, **M. Y. Ru**, **F. J. Meng**, L. C. Zhang, Q. Z. Zhang, Q. F. Zhou, X. R. Wu**519.** Reactivity ratios of isobutyl POSS-styrene and styrene monomers. T. S. Haddad, **B. M. Moore**, R. I. Gonzalez, C. Schlafer**520.** Reinforcement of poly(dimethylsiloxane) elastomers using bioinspired silica. **V. P. Taori**, M. K. Hassan, S. V. Patwardhan, J. E. Mark, S. J. Clarson**521.** Selectivity in anionic and cationic ring-opening polymerization of tetramethyl-1-(3'-trifluoromethylphenyl)-1-phenylcyclotrisiloxane. **T. M. Gädda**, W. P. Weber**522.** Selectivity in anionic and cationic ring-opening polymerization of tetramethyl-1-[3',5'-bis(trifluoromethyl)phenyl]-1-phenylcyclotrisiloxane. **A. K. Nelson**, T. M. Gädda, W. P. Weber**523.** Short chain polysiloxanes with oligo(ethylene glycol) side chains as polymer electrolytes for lithium polymer batteries. **Z. Zhang**, N. A. A. Rossi, L. J. Lyons, K. Amine, R. West**524.** Silicon-containing polymeric sulfonamides. **D. W. Emerson**, B. J. Johnson, L. Song, A. Ali, K. Auer

2004 Spring meeting

- 525.** Specific refractive index increments for isobutyl POSS-polystyrene copolymers. T. S. Haddad, **S. R. Largo**, R. I. Gonzalez, C. Schlaefer
- 526.** Synthesis and characterization of alternating cyclotetrasiloxanes. K. T. Nguyen, A. Schamschurin, **J. G. Matison**s, S. R. Clarke, D. Uhrig
- 527.** Synthesis and surface structure of polyester/poly(dimethylsiloxane)/polyester triblock copolymers and its reorientation under water. **W. Lee**, J. A. Gardella Jr.
- 528.** Synthesis of ω -Si-H tetra-branched star PDMS. Conversion by photo-acid catalyzed crosslinking to films. G. Cai, **W. P. Weber**
- 529.** Synthesis of 1,9-bis[glycidylxypropyl]penta-(1H',1H',2H',2H'-perfluoroalkylmethylsiloxane)s and copolymerization with piperazine. **M. A. Grunlan**, N. S. Lee, W. P. Weber
- 530.** Synthesis of PBO/PEG-grafting polysiloxane for biocompatible biomaterials. **G. Fan**, F. Abdoulaye, W. Collins
- 531.** Thermoplastic silicone elastomers. **O. Schaefer**, A. Kneissl, S. Delica, J. Weis, F. Csellich
- 532.** Ultrathin polystyrene/POSS blends. **J. R. Hottle**, B. A. Vastine, R. I. Gonzalez, A. R. Esker

WEDNESDAY MORNING

Section A

Coast -- Plaza A

Metal-Containing and Metallo-Supramolecular Polymers and Materials

Organometallic Polymers and Nanoparticles

Cosponsored with INOR, and PMSE

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

A. S. Abd-El-Aziz and F. Jäkle, *Presiding*

8:10 - 533. Synthesis of novel organoarsenic polymers. **Y. Chujo**, K. Naka, T. Umeyama

8:45 - 534. Formation of intra- and intermolecular Lewis acid - Lewis base complexes from well-defined organoboron polymers. Y. Qin, **F. Jäkle**

9:05 - 535. Photodegradable polymers containing metal-metal bonds along their backbones: Mechanistic study of stress-induced rate accelerations in the photochemical degradation of polymers. **D. R. Tyler**, R. Chen

9:25 - 536. Photonics in coordination/organometallic polymers build with diphosphines and diisocyanides. **P. D. Harvey**

9:50 - Intermission.

10:10 - 537. Precise synthesis of organometallic macromolecules composed of transition metal acetylide units. **K. Onitsuka**, S. Takahashi

10:35 - 538. Transition metal/polythiophene hybrid polymers and materials. **M. O. Wolf**, C. Moorlag, O. Clot

11:00 - 539. Azo dye functionalized oligomers and polymers containing neutral and cationic cyclopentadienyliron complexes. **A. S. Abd-El-Aziz**, R. M. Okasha, T. H. Afifi, P. O. Shipman

11:25 - 540. Self assembly, ring opening polymerization, and metal-containing polymers. **R. J. Puddephatt**

11:50 - 541. Photochemical electron and energy transfer in derivatized polystyrene and oligoproline assemblies. **T. J. Meyer**

Coast -- Plaza D

Silicones and Silicone-Modified Materials

Silicones and Silicone-Modified Materials

M. E. Van Dyke, M. J. Owen, S. D. Smith, and S. J. Clarson, *Organizers*

J. J. Fitzgerald, *Organizer, Presiding*

8:30 - 542. Synthetic routes to bioinspired silica utilizing macromolecules and biomacromolecules. S. V. Patwardhan, K. Shiba, **S. J. Clarson**

9:00 - 543. Effects of polyamine topology on templated silica growth. **S. K. Pollack**, J. Naciri, I. Stanish, M. Sanabria-Morales

9:30 - 544. Siloxane biocatalysis. A. R. Bassindale, **K. F. Brandstadt**, T. H. Lane, P. G. Taylor

10:00 - 545. Versatile synthesis of nanometer sized hollow silica spheres. **G. Dubois**, J. J. L. M. Cornelissen, V. Y. Lee, E. F. Connor, T. P. Magbitang, H. Kim, W. Volksen, R. D. Miller

10:20 - 546. Formation and application of cubic silsesquioxanes. **Y. Kawakami**, C. Pakjamsai, M. Seino

10:40 - Intermission.

11:00 - 547. Living free radical polymerization of silicon-containing block copolymers. **S. Yang**, K. Fukukawa, P. Gopalan, M. Ueda

11:20 - 548. Preparation and properties of alkoxy(methyl)silsesquioxanes as coating agents. **T. Gunji**, Y. Abe, K. Arimitsu

11:40 - 549. Syntheses and properties of ladder oligosilsesquioxanes. T. Gunji, **Y. Abe**, K. Arimitsu

12:00 - 550. Development of advanced bilayer silicone resists for ArF and F2 lithography. **S. Kanagasabapathy**, G. G. Barclay, J. F. Cameron, G. Pohlers, F. Huby, K. Wiley

12:20 - 551. Hardness and elastic modulus profiles of silsesquioxane films and monolithics based on trialkoxysilanes. **L. Hu**, X. Zhang, D. Sun

Coast -- Plaza B

Conducting Polymers

Synthesis and Nanostructures

J. P. Armistead and S. Jenekhe, *Organizers*

M. E. Galvin, *Presiding*

8:30 - 552. Strategies for n-type molecular and polymeric electrical conductors: Design, synthesis, and characterization. A. Facchetti, G. R. Hutchison, M. Yoon, J. Letizia, M. A. Ratner, **T. J. Marks**

9:00 - 553. Synthesis and structure/property correlation of cyano substituted oligo(phenylenevinylene)s. H. Wang, W. You, **L. Yu**

9:30 - 554. Facile synthesis of amphiphilic conjugated block copolymers. **H. Wang**, F. Wudl

9:50 - 555. π -Stacked poly(dibenzofulvene): Structure and photophysical/electronic properties. **T. Nakano**, T. Yade

10:10 - Intermission.

2004 Spring meeting

10:30 - 556. Micro and nanostructuring of PAEs. Y. W. Wang, J. N. Wilson, **U. H. F. Bunz**

11:00 - 557. Large scale template-free synthesis of polyaniline nanofibers. J. Huang, **R. B. Kaner**

11:30 - 558. Direct synthesis of polythiophene thin films and patterns from the monomer adsorbed on a substrate via photochemical pathway. **S. Natarajan**, S. H. Kim

11:50 - 559. Electrochemical synthesis of polypyrrole in ionic liquids. **J. M. Pringle**, J. Efthimiadis, P. C. Howlett, J. Efthimiadis, G. G. Wallace, D. R. MacFarlane, M. Forsyth

Section D

Coast -- Plaza C

Polymerization and Polymer Processing in Supercritical Fluids

Novel Materials

G. W. Roberts, *Organizer*

J. R. Royer, *Organizer, Presiding*

8:30 - Introductory Remarks.

8:35 - 560. Polymer materials and processing methods for environmentally friendly semiconductor manufacturing. V. Q. Pham, N. Felix, V. Jakubek, Y. Mao, K. K. Gleason, **C. K. Ober**

9:30 - 561. Synthesis of silica aerogel particles and polyethylene nanocomposites by a novel sol-gel route in supercritical carbon dioxide. R. Sui, X. Li, A. Rizkalla, **P. Charpentier**

9:55 - 562. Polymer-additive powder formation using SCF technology. **M. A. McHugh**, D. Li, G. S. Huvard

10:20 - Intermission.

10:30 - 563. Polymer metallization in supercritical carbon dioxide. **T. Koga**, J. Jerome, M. Rafailovich, J. Sokolov

10:55 - 564. Synthesis of polycyclohexylethylene in a solvent expanded by supercritical CO₂. **D. Xu**, R. G. Carbonell, G. W. Roberts, D. J. Kiserow

11:20 - 565. Ultrafine poly(tetrafluoroethylene) as a stabilising agent for paraffin emulsification in supercritical carbon dioxide and formation of composite core-shell microparticles. M. O. Gallyamov, V. M. Bouznik, A. K. Tsvetnikov, R. A. Vinokur, L. N. Nikitin, E. E. Said-Galiev, O. V. Lebedeva, **A. R. Khokhlov**, K. Schaumburg

WEDNESDAY AFTERNOON

Section A

Coast -- Plaza A

Metal-Containing and Metallo-Supramolecular Polymers and Materials

Organometallic Polymers and Nanoparticles

Cosponsored with INOR, and PMSE

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

J. C. Swarts and H. Schlaad, *Presiding*

1:30 - 566. Metal-containing block copolymers as precursors to nanoparticle-copolymer composites. **R. B. Grubbs**, L. A. Miinea, L. B. Sessions, K. D. Ericson, B. R. Cohen, B. J. Stokes, G. J. Sheng, D. Glueck

1:55 - 567. Polymer-cobalt complexes and their conversion to oxidatively-stable cobalt nanoparticles. **V. V.**

2004 Spring meeting

Baranauskas, J. S. Riffle

2:15 - 568. Hyperbranched cobalt-containing poly(aryleneethynylene)s and their uses as precursors to nanostructured magnetic ceramic materials. M. Haeussler, J. W. Y. Lam, **B. Z. Tang**

2:40 - 569. NHC based palladium complexes on amphiphilic poly(2-oxazoline)s for a micellar catalytic variant of Heck reaction. **D. Schönfelder**, R. Weberskirch, O. Nuyken

3:00 - 570. Liquid crystal and electrochemical properties of phthalocyanines. **J. C. Swarts**, E. H. G. Langner, R. F. Shago, W. L. Davis

3:20 - Intermission.

3:40 - 571. Magnetic/semiconducting nanocylinders via polychelates of cylindrical core-shell polymer brushes. M. Zhang, M. Drechsler, **A. H. E. Müller**

4:00 - 572. Colloidal properties of block copolymers based on 2-(acetoacetoxy)ethyl methacrylate: Organic-inorganic hybrid materials. T. Krasia, **H. Schlaad**

4:20 - 573. Metal cluster-supported supramolecular design and discovery. **Z. Zheng**

4:40 - 574. Synthesis and catalytic property of dendrimer-metal nanocomposites. **K. Esumi**

5:00 - 575. Extraction of gold nanoparticles from dendrimer templates. **J. C. Garcia-Martinez**, R. M. Crooks

5:20 - Concluding remarks. **G. R. Newkome, I. Manners, U. S. Schubert.**

Section B

Coast -- Plaza D

Silicones and Silicone-Modified Materials

M. E. Van Dyke, M. J. Owen, S. D. Smith, and J. J. Fitzgerald, *Organizers*

S. J. Clarson, *Organizer, Presiding*

1:30 - 576. TM-AFM on condensation cured PDMS with fumed silica: "The case of the disappearing filler!". **K. J. Wynne**, T. Fujiwara, Y. Chujo, T. Ogoshi, G. Galli, E. Chiellini, M. Bertolucci

2:00 - 577. Bioadhesion to microengineered siloxane elastomers. **A. B. Brennan**, M. L. Carman, T. G. Estes, A. W. Feinberg, J. F. Schumacher, L. H. Wilson

2:30 - 578. Control of *Ulva* zoospore settlement on silicone substrates via microtopographic cues. **L. H. Wilson**, M. L. Carman, A. W. Feinberg, J. F. Schumacher, M. E. Callow, A. B. Brennan

3:00 - 579. Modeling wetting of engineered topographies on silicone elastomers for predicting bioadhesion. **M. L. Carman**, J. F. Schumacher, A. W. Feinberg, A. B. Brennan

3:30 - Intermission.

4:00 - 580. Formation of siloxane bonds via new condensation process. **S. Rubinsztajn**, J. A. Cella

4:20 - 581. Tertiary silyloxonium ions in the ring-opening polymerization (ROP) of cyclosiloxanes - cationic ROP of octamethyltetrasiloxane-1,4-dioxane. **M. Cypryk**, J. Chojnowski, J. Kurjata

4:40 - 582. SFG studies on surface restructuring behavior of poly(dimethylsiloxane) in water. C. Chen, J. Wang, **Z. Chen**

Section C

Coast -- Plaza B

Conducting Polymers

2004 Spring meeting

Device Applications

S. Jenekhe, *Organizer*

J. P. Armistead, *Organizer, Presiding*

1:30 - 583. Interpolyelectrolyte complexes of conjugated copolymers and DNA: Fluorescent platforms for tricolor biosensors. B. Liu, **G. C. Bazan**

2:00 - 584. Electrochemical detection of biological agents. **K. Levon**, Y. Zhou

2:30 - 585. Ambipolar charge transport in air-stable polymer blend field-effect transistors. **A. Babel**, S. A. Jenekhe

2:50 - 586. Light induced creation of p-n junctions. **M. Behl**, R. Zentel, D. J. Broer

3:10 - Intermission.

3:30 - 587. Solid-state electroluminescent devices from ruthenium complexes. **G. G. Malliaras**

4:00 - 588. Luminescence from host-guest conjugated polymers. **S. Holdcroft**, G. Vamvounis

4:30 - 589. Effect of solvent on the collapse and orientation of conjugated polymer chains. **P. Kumar**, A. Mehta, M. D. Dadmun, R. M. Dickson, M. D. Barnes

4:50 - 590. Recent advances in contact molding for the nanoscopic patterning of conducting polymers. **E. C. Hagberg**, K. R. Carter

5:10 - 591. Electrochromic polymers for patterned devices. **A. A. Argun**, M. Berard, P. Aubert, J. R. Reynolds

Section D

Coast -- Plaza C

Polymers and Materials for Anti-terrorism and Homeland Defense

Chemical

C. L. Hill, B. R. Hart, and J. G. Reynolds, *Organizers, Presiding*

1:30 - Introductory Remarks.

1:40 - 592. Luminescent inorganic polymer sensors for vapor phase and aqueous detection of TNT and other nitroaromatics. **W. C. Trogler**

2:05 - 593. Synthetic and spectroscopic characterization of molecularly imprinted polymer phosphonate sensors. G. Murray, **G. E. Southard**

2:30 - 594. New method for attachment of biomolecules to porous silicon: Platform for enzyme-based chemical detection. **B. R. Hart**, S. E. Létant, S. R. Kane, M. Z. Hadi, S. J. Shields, J. G. Reynolds

2:55 - Intermission.

3:10 - 595. Phospholipid based catalytic nanocapsules. **G. E. Lawson**, Y. Lee, A. Singh

3:35 - 596. Design of hydrogen bond acidic polycarbosilanes for chemical sensor applications. **E. J. Houser**, D. L. Simonson, J. L. Stepnowski, S. K. Ross, S. V. Stepnowski, R. A. McGill

4:00 - 597. Chemical detection for homeland security using polyaniline nanofibers. **B. H. Weiller**, S. Virji, J. Huang, R. B. Kaner

Section E

2004 Spring meeting

Coast -- Garden A

Ionic Liquids In Polymer Systems

Synthesis

R. D. Rogers and C. S. Brazel, *Organizers, Presiding*

1:30 - Introductory Remarks.

1:35 - 598. Radical polymerizations of styrene and methyl methacrylate in various room temperature ionic liquids (RTILs). H. Zhang, K. Hong, **J. W. Mays**

2:15 - 599. Living polymerization in ionic liquids. **D. R. MacFarlane**, R. Vijayaraghavan

2:45 - 600. Coordination polymerization of alkenes in ionic liquid solvents. **K. H. Shaughnessy**, S. J. P'Pool, M. A. Klingshirn, R. D. Rogers

3:15 - Intermission.

3:30 - 601. Mechanistic studies of the polymerization and transesterification with imidazole based carbenes. **S. Csihony**, G. W. Nyce, A. Sentman, R. M. Waymouth, J. L. Hedrick

4:00 - 602. Polymer synthesis in ionic liquids: Toward a green industry. **C. Guerrero-Sanchez**, U. S. Schubert

4:30 - 603. Free radical polymerization of methacrylates in ionic liquids. **V. Strehmel**, H. Kraudelt, H. Wetzel, E. Görnitz, A. Laschewsky

THURSDAY MORNING

Section A

Coast -- Plaza A

Ionic Liquids In Polymer Systems

Advanced Applications

C. S. Brazel and R. D. Rogers, *Organizers, Presiding*

8:30 - 604. Cross-linked polymers in ionic liquids: Ionic liquids as porogens. **N. Winterton**, A. I. Cooper, P. Sedden, K. Scott

9:15 - 605. Synthesis and characterization of imidazole functionalized polynorbornene derivatives for high temperature fuel cells. **R. D. Gilbertson**, G. D. Long, Y. S. Kim, B. S. Pivovar, W. H. Smith, M. E. Stoll, D. A. Wroblewski, E. B. Orler

9:45 - 606. Leaching and migration resistance of phosphonium-based ionic liquids as PVC plasticizers: Comparative study of traditional phthalate and citrate plasticizers with ionic liquids. H. W. Shoff, M. Rahman, **C. S. Brazel**

10:15 - Intermission.

10:30 - 607. Applying ionic liquid solvent characteristics for controlled processing of polymer materials. **J. D. Holbrey**, J. Chen, M. B. Turner, R. P. Swatloski, S. K. Spear, R. D. Rogers

11:00 - 608. Silver (I) –carbene complexes/ionic liquids: Novel N- heterocyclic carbene delivery agents for living polymerization. **A. Sentman**, S. Csihony, G. W. Nyce, R. M. Waymouth, J. L. Hedrick

11:30 - 609. Effectiveness of phosphonium, ammonium, and imidazolium-based ionic liquids as plasticizers for poly(vinyl chloride): thermal and ultraviolet stability. **M. Rahman**, C. S. Brazel

Coast -- Plaza D

Silicones and Silicone-Modified Materials

M. J. Owen, S. D. Smith, J. J. Fitzgerald, and S. J. Clarson, *Organizers*

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

8:30 - 610. Polyhedral oligomeric silsesquioxanes: An overview. **J. G. Matisons**, D. Uhrig, D. J. Clarke, K. Constantopoulos, E. Markovic, S. R. Clarke

9:00 - 611. Transparent nanocomposites of polyhedral oligomeric silsesquioxanes (POSS). **D. Schiraldi**, A. F. Abu-Ali, S. Iyer, A. Detweiler

9:30 - 612. Langmuir-Blodgett films of POSS derivatives. **A. R. Esker**, B. A. Vastine, J. Deng, M. K. Ferguson, J. R. Morris, S. K. Satija, B. D. Viers

10:00 - 613. Synthesis and characterization of polyhedral oligomeric silsesquioxane-polystyrene copolymers. **A. Lee**

10:20 - 614. Synthesis of styryl- and propylmethacrylate-silsesquioxane particles via the hydrolytic sol-gel route. **A. Arkhireeva**, J. N. Hay

10:40 - Intermission.

11:00 - 615. Fluorinated polyhedral oligomeric silsesquioxanes. **J. M. Mabry**, A. Vij, B. D. Viers, R. L. Blanski, R. I. Gonzalez, C. Schlaefer

11:20 - 616. Nanocomposites of liquid crystalline polyhedral oligomeric silsesquioxane particles and liquid crystalline polymers. **A. P. Somlai**, S. Iyer, D. A. Schiraldi

11:40 - 617. Unique interfacial morphologies and rheological properties of trisilanocyclohexyl-POSS. **J. Deng**, C. E. Farmer-Creely, B. D. Viers, J. Anseth, G. G. Fuller, A. R. Esker

12:00 - 618. Phage display and organosilicon chemistry. **A. Codina**, A. R. Bassindale, P. G. Taylor, C. J. Murray

12:20 - 619. Toward water soluble nanocomposite materials. **E. Markovic**, D. J. Clarke, K. Constantopoulos, D. Uhrig, S. R. Clarke, J. G. Matisons, G. Simon

Coast -- Plaza B

Conducting Polymers

Control of Structure and Properties

J. P. Armistead and S. Jenekhe, *Organizers*

S. H. Tolbert, *Presiding*

8:30 - 620. Architectural control of electroactive polymers. Z. I. Niazimbetova, H. Y. Christian, Y. J. Bhandari, F. L. Beyer, S. Vaidyanathan, **M. E. Galvin**

9:00 - 621. Stacked conjugated oligomers as models for conjugated polymers. **D. M. Collard**, L. Li, G. Brizius, K. Knoblock, F. Salhi

9:20 - 622. Chemical synthesis of polyaniline/gold composite using tetrachloroaurate. **D. W. Hatchett**, J. M. Kinyanjui, M. Josowicz, A. Smith

9:40 - 623. Polymerization of N-phenylhydroylamine: A novel non-oxidative route to the family of polyanilines. **F. L. Klavetter**

2004 Spring meeting

10:00 - 624. Solid state synthesis of the conducting polymer polyaniline. **J. H. Acquaye**, J. A. Moore, J. Huang, R. B. Kaner

10:20 - Intermission.

10:40 - 625. Control of conducting polymer properties with electric fields. **A. J. Epstein**

11:10 - 626. Structure of organic-acid doped polyaniline by solid-state NMR. **M. P. Espe**, T. L. Young, J. Cross

11:30 - 627. Enhanced conductivity of PEDOT-PSS blended with non-conductive polymers and single-walled carbon nanotubes. **B. Harrison**, D. Rickard, W. Liu, M. Guthold, R. Czerw, D. Carroll

11:50 - 628. Latex-based, single-walled nanotube composites: Processing and electrical conductivity. **J. C. Grunlan**, M. V. Bannon, A. R. Mehrabi

Section D

Coast -- Plaza C

Polymers and Materials for Anti-terrorism and Homeland Defense

Decontamination and Protection

C. L. Hill, B. R. Hart, and J. G. Reynolds, *Organizers, Presiding*

8:30 - Introductory Remarks.

8:40 - 629. Multifunctional nanomaterials for catalytic decontamination and detection. **C. L. Hill**, W. A. Neiwert, N. M. Okun, T. M. Anderson, M. D. Ritorto, J. W. Han

9:05 - 630. Development of self-cetoxifying fabrics for CB protective clothing. **H. Schreuder-Gibson**, J. E. Walker, W. G. Yeomans, D. H. Ball

9:30 - 631. Selectively permeable membranes for lightweight chemical biological (CB) protective clothing. **E. Wilusz**, Q. Truong

9:55 - Intermission.

10:10 - 632. Facially amphiphilic polymers with potent antimicrobial activity. **G. N. Tew**

10:35 - 633. Multi-functional protective gear for emergency first responders: Combining thermal with chemical/biological protection. M. F. Ilker, **E. B. Coughlin**

11:00 - 634. Advanced materials for detection of neutrons from potential illicit nuclear materials. **S. Dai**, H. Im, M. D. Pawel, S. Saengerksdub

THURSDAY AFTERNOON

Section A

Coast -- Plaza A

Ionic Liquids In Polymer Systems

Composite and Electrolyte Materials

C. S. Brazel and R. D. Rogers, *Organizers, Presiding*

1:30 - 635. Ion gels prepared by in-situ radical polymerization of vinyl monomers in ionic liquids and their characterization as new polymer electrolytes. **M. Watanabe**

2004 Spring meeting

2:15 - 636. Characterization of polyaniline/ionic liquid composites using NMR. **S. Ghosh**, A. G. Fadeev, I. Norris, B. R. Mattes, M. P. Espe

2:45 - 637. Novel soft materials composed of ionic liquids and single-walled carbon nanotubes. **T. Fukushima**, T. Aida

3:15 - Intermission.

3:30 - 638. Synthesis, characterization, and applications of ionic liquid-poly(ethylene) glycol gel matrices. **M. A. Klingshirn**, S. K. Spear, R. Subramanian, J. D. Holbrey, R. D. Rogers

4:00 - 639. Novel solid polymer electrolytes composed of zwitterionic liquids and polymerized ionic liquids. **H. Ohno**, S. Washiro, M. Yoshizawa

4:30 - 640. Application of trialkylimidazolium liquids and salts to the preparation of polymer-layered silicate nanocomposites and polymer-carbon nanotube nanocomposites. **D. M. Fox**, S. Bellayer, W. Awad, J. W. Gilman, R. D. Davis, P. H. Maupin, H. C. De Long, P. C. Trulove

Section B

Coast -- Park D

Silicones and Silicone-Modified Materials

M. J. Owen, S. D. Smith, S. J. Clarson, and J. J. Fitzgerald, *Organizers*

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

1:30 - 641. Plasma/corona treatment of silicones. **M. J. Owen**

2:00 - 642. Plasma polymerization of hexamethyldisiloxane. **S. J. Clarson**, J. A. Hagen, E. M. Johnson, M. D. Schulte, D. B. Zeik, J. G. Grote, T. J. Bunning

2:30 - 643. pH Dependence of sulfidosilane synthesis via phase transfer catalysis. **M. Backer**, C. Buesing, J. Gohndrone, W. Maki, T. J. Rivard, H. Yue

2:50 - 644. Synthesis and characterization of modified silicon gel with hydrophilic polymer brushes from ATRP. H. Li, H. Zhang, X. Jin, Y. Jiang, P. Ai, **J. Wang**

3:10 - 645. New fluorescent organic-inorganic hybrids based on TEOS and DCN. **A. Martinez-Richa**, M. Trejo-Duran, R. Vera-Graziano, V. Castaño

3:30 - 646. Role of self supported metallic particles in Si-H bond activation by coinage metal complexes. **J. B. Baruah**, A. Purakayshtha

3:50 - 647. The modification of expandable polystyrene with alpha-methylstyrene and various types of siloxanes. **N. Uyanik**, I. Taskiran, G. Sunal, E. Erbay

Section C

Coast -- Plaza B

General Papers

D. Garcia, *Organizer*

N. Vasanthan, *Presiding*

1:30 - 648. Investigation of conjugated polycarbazole networks by electropolymerization of poly(N-vinylcarbazole) and comonomer. **A. Baba**, J. Luebben, W. Knoll, K. Onishi, R. Advincula

1:50 - 649. X-ray photon correlation spectroscopy study of polystyrene-*block*-polyisoprene copolymer. **T. J. Shin**, S. Dierker

2004 Spring meeting

2:10 - 650. Lewis acid-base complexation of polyamide 66 as a means to control hydrogen bonding to form high strength fibers and films. **N. Vasanthan**, R. Kotek, D. Jung, D. Salem, A. Tonelli, I. D. Shin

2:30 - 651. Application of ¹⁵N labeling for an oxidative degradation study of a plasticized poly(ester urethane). **D. A. Wroblewski**, D. A. Langlois, E. B. Orler, D. M. Dattelbaum, J. H. Small

2:50 - 652. Isoconversional approach to evaluating the Hoffman-Lauritzen parameters (U^* and K_g) from DSC data on nonisothermal melt crystallization. **S. Vyazovkin**, N. Sbirrazzuoli

3:10 - 653. LCST behavior of N-isopropylacrylamide grafted onto polypropylene films. J. Guerrero, **D. Franco**, E. Bucio, G. Burillo

3:30 - 654. Computational simulation for dynamical deformation of amorphous poly(ethylene terephthalate) by uniaxial elongation. **H. Taiko**, C. Tahir, D. Kawakami, W. A. Goddard III

3:50 - 655. 2D arrays of latex spheres on HOPG from Langmuir-Blodgett nanolithography with SDS as spreading agent: The role of the surfactant in forming a well-ordered, stable monolayer. **M. Marquez**, B. P. Grady, A. D. W. Carswell

4:10 - 656. Regioregular arene-thiophene vs. perfluoroarene-thiophene oligomeric semiconductors. **M. Yoon**, A. Facchetti, T. J. Marks

4:30 - 657. Thermally stable spiro polymers. **H. Bulbul Sonmez**, F. Wudl

4:50 - 658. Durable flame retardant finishing system based on a hydroxy-functional organophosphorus oligomer and the mixture of DMDHEU and melamine-formaldehyde resin. **W. Wu**, C. Q. Yang

Section D

Coast -- Plaza C

Polymers and Materials for Anti-terrorism and Homeland Defense

Biological and Polymer Processes

J. G. Reynolds, B. R. Hart, and C. L. Hill, *Organizers, Presiding*

1:30 - Introductory Remarks.

1:40 - 659. Design and synthesis of dendritic tethers for the immobilization of antibodies for the detection of Class A bioterror pathogens. **C. W. Spangler**, B. D. Spangler, E. S. Tarter, Z. Suo

2:05 - 660. Fabrication of nanoporous oligonucleotide microarray for pathogen detection and identification. C. Ruengruglikit, H. Kim, R. D. Miller, **Q. Huang**

2:30 - 661. Polymeric insulating post electrodeless dielectrophoresis (EDEP) for the monitoring of water-borne pathogens. **B. A. Simmons**, B. Lapizco-Encinas, G. J. Fiechtner, E. B. Cummings, Y. Fintschenko, R. Shediach, J. Hachman, J. M. Chames

2:55 - Intermission.

3:10 - 662. Liquid crystalline triblock copolymer actuators: 1. Syntheses of difunctional polysiloxane microinitiators. **H. Yu**, K. G. Reed, A. J. Moment, P. T. Hammond

3:35 - 663. Atom transfer radical polymerization of tert-butyl acrylate using poly(styrene-*b*-isobutylene-*b*-styrene) macroinitiators. **A. D. Scheuer**, R. F. Storey

4:00 - 664. Design of selective gas permeable membrane using supercritical fluids. **T. Koga**, A. Reinstein, M. Bronner, M. Rafailovich, J. Sokolov, B. Chu

4:25 - Concluding Remarks.