

BOSTON (Sept. 18-22, 2002)
Program Meeting Chair: [Chris Bowman](#)

Polymers in Photonics and Displays: Synthesis, Processing, and Devices (8 oral sessions) (cosponsored with the Optical Society of America)

C. Allan Guymon, Department of Polymer Science, University of Southern Mississippi, Southern Station 10076, Hattiesburg, MS 39406, allan.guymon@usm.edu, Phone: 601-266-4870 (Fax: 601-266-5504); Dirk J. Broer, Philips Research Laboratories, The Netherlands, dick.broer@philips.com, Phone: 31-40-27-42746 (Fax: 31-40-27-43350); Timothy J. Bunning, Air Force Research Laboratory, timothy.bunning@afrl.af.mil, Phone: 937-255-3808 x-3158 (Fax: 937-255-1128)

Nonlinear Dynamics in Polymeric Systems (Cosponsored with PHYS) (6 sessions)

John A. Pojman, Dept. of Chemistry and Biochemistry, U of Southern Mississippi, Hattiesburg, MS 39406-5043, john@pojman.com, Phone: 601-266-5035 (Fax: 601-266-6075); Qui Tran-Cong-Miyata, Dept of Polymer Science & Engineering, Kyoto Inst. of Technology, Matsugasaki Sakyoku, Kyoto 606 Japan, qui@ipc.kit.ac.jp, Phone: +81-75-724-7862 (Fax: N/A)

5th International Biorelated Polymers Symposium

Ray Ottenbrite, Department of Chemistry, Virginia Commonwealth U, Richmond, VA 23284, ottenbri@saturn.vcu.edu, Phone: 804-828-7513 (Fax: 804-367-8599); Samuel Zalipsky, ALZA Corporation, 1010 Joaquin Rd., Mountain View, CA 94039-7210, SamuelZ@SEQUUS.com, Phone: 650-962-4000 (Fax: 650-617-3080)

Directed Self Assembly: Molecular Engineering of Polymers

C. K. Ober, Materials Science & Engineering, Cornell University, 327 Bard Hall, Ithaca, NY 14853-1501, cober@msc.cornell.edu, Phone: 607-255-8417 (Fax: 607-255-6575); U. B. Wiesner, Materials Science & Engineering, Cornell University, 329 Bard Hall, Ithaca, NY 14853-1501, ubw1@cornell.edu, Phone: 607-255-3487 (Fax: 607-255-2365)

Green Polymer Chemistry (4 sessions)

Tom McCarthy, Polymer Science & Engineering, Univ. of Massachusetts, Amherst, MA 01003, tmccarthy@polysci.umass.edu, Phone: 413-577-1512 (Fax: 413-577-1510); James Watkins, Dept. of Chemical Engineering, Univ. of Massachusetts, Amherst, MA 01003-3110, watkins@ecs.umass.edu, Phone: 413-545-2569 (Fax: 413-545-1647)

Advances in Controlled Radical Polymerization (8 sessions)

Krzysztof Matyjaszewski, Department of Chemistry, Carnegie-Mellon Univ., 4400 Fifth Ave., Pittsburgh, PA 15213, km3b+@andrew.cmu.edu, Phone: 412-268-3209 (Fax: 412-268-6897)

General Papers (4 oral sessions)

Dana Garcia, Analytical Research, Atofina Chemicals Inc, 900 First Avenue, King of Prussia, PA 19406, dana.garcia@atofina.com, Phone: 610-878-6731 (Fax: 610-878-6196)

Industrial Sponsors Symposium

POLY DIVISION PROGRAM

This program is NOT final until published by ACS.

POLY

DIVISION OF POLYMER CHEMISTRY

Final Program, 224th ACS National Meeting, Boston, MA, August 18-22, 2002

C. N. Bowman, *Program Chair*

OTHER SYMPOSIA OF INTEREST:

Control of Polymer Stereochemistry Using Single-Site Catalysts (see *Division of Polymeric Materials: Science and Engineering*, Mon, Tue, page X)

ICI Student Award Symposium (see *Division of Polymeric Materials: Science and Engineering*, Sun, page X)

Polymers for Micro- and Nano-Electronics -- From Synthesis to Applications (see *Division of Polymeric Materials: Science and Engineering*, Sun, Mon, Tue, page X)

Polymers in Orthopaedics (see *Division of Polymeric Materials: Science and Engineering*, Tue, page X)

2002 Fall Meeting

Synthetic Polymers in Ophthalmology (see *Division of Polymeric Materials: Science and Engineering*, Wed, page X)

Biopolymer Engineering (see *Biotechnology Secretariat*, Sun, page X)

Enzymes in Organic and Polymer Chemistry (see *Biotechnology Secretariat*, Tue, page X)

Nanoscience and Nanotechnology (see *Division of Colloid and Surface Chemistry*, Sun, Mon, Tue, Wed, Thu, page X)

Structure, Properties and Applications of Microemulsions (see *Division of Colloid and Surface Chemistry*, Tue, Wed, page X)

Biomacromolecules (see *Macromolecular Secretariat*, Sun, page X)

Photonic Multiscale Materials and Devices (see *Materials Chemistry Secretariat*, Sun, Mon, Tue, page X)

SOCIAL EVENT:

Reception: Mon

Social Hour: Sun, Tue

SUNDAY MORNING

Section A

Westin Copley Plaza -- America South

Advances in Controlled Radical Polymerization

Fundamentals

H. Fischer and T. Fukuda, *Presiding*

K. Matyjaszewski, *Organizer*

8:30 – 1. Introduction: Towards well-defined polymeric nanostructures by better understanding of the mechanisms of controlled/living radical polymerization. **K. Matyjaszewski**

9:00 – 2. Kinetic Foundations of Living and Controlled Nitroxide Mediated and Atom Transfer Radical Polymerizations - A Tutorial Introduction. **H. Fischer**

9:45 – 3. Mechanisms and kinetics of living radical polymerization: Absolute comparison of theory and experiment. **T. Fukuda**, C. Yoshikawa, Y. Kwak, A. Goto, Y. Tsujii

10:30 – Intermission.

10:45 – 4. Overview of Small Radical Kinetics and Mechanisms. **M. Newcomb**

11:30 – 5. Cascade radical reactions in organic synthesis: An overview. **D. P. Curran**

Section B

Westin Copley Plaza -- America Center

General Papers

Polymer Synthesis B

W. R. Dichtel, *Presiding*

D. Garcia and C. A. Guymon, *Organizer*

8:30 – 6. Development of a functional dendritic monomer and application to sophisticated light harvesting systems. **W. R. Dichtel**, S. Hecht, J. M. J. Fréchet

8:50 – 7. Synthesis and characterization of poly(pyridinium salt)s with organic counterions exhibiting light-emitting properties. **P. K. Bhowmik**, H. Han, J. J. Cebe, I. K. Nedeltchev

9:10 – 8. A versatile reagent for thermosting of cis-butadiene rubber: hexane 1,6-bis (N-chloro methanesulfonamide) **N. Bicak**, B. F. Senkal

9:30 – 9. Synthesis and characterization of low melting, oligomeric phthalonitrile monomers for aerospace and ship applications **D. D. Dominguez**, T. M. Keller

9:50 – 10. Synthesis and characterization of sulfonated poly(arylene sulfide sulfone) copolymers as candidates for proton exchange membranes. **K. B. Wiles**, V. A. Bhanu, F. Wang, J. E. McGrath

10:10 – 11. Porous interpenetrating polymer networks and organic - inorganic hybrids synthesized in high internal phase emulsions. **M. S. Silverstein**, H. Tai, A. Sergienko

10:30 – 12. Synthesis & biological, physical, & adhesive properties of epoxy sucroses **N. D. Sachinvala**, D. L. Winsor, L. A. White, M. H. Litt

10:50 – 13. Synthesis of hyperbranched polysaccharide by thermally induced cationic polymerization of 1,6-anhydro sugar **T. Satoh**, H. Ishihara, T. Maeda, H. Kaga, T. Kakuchi

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11:10 – 14. Synthesis and properties of calix[4]arene-containing poly(phenyleneethynylene)s. **J. H. Wosnick**, T. M. Swager

11:30 – 15. Synthesis of novel activated ester surfmers for use in preparation of latexes for bioconjugation. M. Herold, H. Brunner, **G. E. M. Tovar**

11:50 – 16. Preparation of cyclohexa-2,5-diene carboxylates as potential stabilizers for vinylidene chloride polymers B. A. Howell, **H. Wu**

12:10 – 17. Synthesis, characterization and properties of polycarbonate containing diphenolic acid R. Zhang, **J. A. Moore**

Section C

Westin Copley Plaza -- Essex South

Directed Self Assembly: Molecular Engineering of Polymers

Molecular Design for Self-Assembly

C. K. Ober, *Presiding*

C. K. Ober and U. B. Wiesner, *Organizer*

8:30 – Introductory Remarks.

8:35 – 18. Functional materials by self-assembly of thiophene containing block copolymers. D. M. Vriezema, A. E. Rowan, **R. J. M. Nolte**

9:00 – 19. 4-Mercaptostyrene polymers and block copolymers through trimethylsilylethyl protected monomers. **S. K. Pollack**, C. M. Whitaker

9:25 – 20. Synthesis of nanostructured organic/inorganic hybrid materials using controlled/living radical polymerization: Spherical brushes, core-shell colloids and block copolymer brushes J. Pyun, S. Jia, T. Kowalewski, D. A. Savin, G. D. Patterson, T. Liu, **K. Matyjaszewski**

9:50 – 21. Self-Assembled Poly(phenylene) Containing Macromolecules Via the Controlled Anionic Polymerization of 1,3-Cyclohexadiene **D. T. Williamson**, T. E. Glass, T. E. Long

10:15 – Intermission.

10:25 – 22. Self-assembling dendrons as biological mimics to investigate the origins of order and chirality. **V. Percec**, A. E. Dulcey, Y. Miura, U. Edlund, M. Glodde, T. K. Bera, J. G. Rudick, V. S. K. Balagurusamy, S. D. Hudson, P. A. Heiney

10:50 – 23. Tuning supramolecular ring-opening polymerization by conformational design. **A. T. ten Cate**, R. P. Sijbesma, E. W. Meijer

11:15 – 24. A New Family of Supramolecular Polymer Metal Complexes Utilizing Terpyridine-Based Initiators. M. Heller, **U. S. Schubert**

11:40 – 25. Synthesis and Characterization of Novel Multiple-Hydrogen Bonded Macromolecules via a Michael Reaction. **K. Yamauchi**, T. E. Long

Section D

Westin Copley Plaza -- America North

Polymers in Photonics and Displays: Synthesis, Processing, and Devices (Cosponsored by the Optical Society of America)

LEDs and Polymer Waveguides

Cosponsored with Division of Polymeric Materials: Science and Engineering

R. Heflin and R. A. Norwood, *Organizer, Presiding*

C. A. Guymon, A. K. Jen, T. J. Bunning, J. P. Armistead, and D. J. Broer, *Organizer*

8:30 – 26. Synthesis of Metallodielectric Core-Shell Colloidal Particles. **H. Bao**, S. Foulger, G. Chumanov

8:55 – 27. Phase-matched Noncentrosymmetric Structures Induced by Nonresonant All Optical Poling in Polymeric Waveguide. **N. Tsutsumi**, C. Odane

9:20 – 28. Novel linear and dendritic perfluorocyclobutane (PFCB)-containing polymers for low loss optical waveguide devices. **H. Ma**, S. Wong, J. Luo, S. H. Kang, **A. K. - Jen**, R. Barto, C. W. Frank

9:45 – 29. Novel Optical Polymers and Planar Lightwave Circuits. **C. C. Xu**, F. Wang, I. Pottebaum, D. Pant, L. Eldada

10:15 – Intermission.

10:35 – 30. High performance phosphorescent polymer LEDs. **Y. Yang**, F. Chen, M. Thompson, J. Kido

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11:05 – 31. Near-infrared organic light emitting diodes. **K. S. Schanze**

11:30 – 32. Modification of indium-tin-oxide-hole transport layer interfaces via *in situ* formation of cross-linked organosiloxane layers. High quantum efficiency/luminance organic light-emitting diodes **Q. Huang**, J. Cui, T. J. Marks

Organic Methodologies in the Selective Synthesis of Small Molecules and Materials

Design of Functional Polymers and Materials

Cosponsored with Division of Organic Chemistry

R. Waymouth, *Organizer, Presiding*

S. T. Nguyen, D. L. Gin, S. L. Buchwald, and T. M. Swager, *Organizer*

Biomacromolecules

Cosponsored with Macromolecular Secretariat

R. Y. Ofoli, *Organizer*

SUNDAY AFTERNOON

Section A

Westin Copley Plaza -- America South

Advances in Controlled Radical Polymerization

Atom Transfer Radical Polymerization. Mechanisms I

B. Klumperman and D. A. Shipp, *Presiding*

K. Matyjaszewski, *Organizer*

1:30 – 33. Contribution of homolytic bond strength computations in controlled radical polymerization: the case of molybdenum. **R. Poli**

2:00 – 34. Transition metal-catalyzed living radical polymerization: Latest advances. **M. Kamigaito**, T. Ando, M. Sawamoto

2:30 – 35. Controlled Radical Polymerisation Catalysed by Ruthenium Complexes. Variations on Ru-Cp# S. Delfosse, B. Guillaume, A. Richel, **A. Demonceau**, A. F. Noels, O. Tutusaus, R. Nuñez, C. Viñas, F. Teixidor, J. Baran

3:00 – 36. Determining radical-radical termination rate coefficients from atom transfer radical polymerization. **D. A. Shipp**, X. Yu

3:30 – 37. The Effect of Initiation on Atom Transfer Radical Copolymerization. **B. Klumperman**, G. Chambard

4:00 – 38. Radical observation and diffusion-controlled deactivation in atom-transfer radical polymerization. A. R. Wang, **S. Zhu**

4:30 – 39. Copper(I) Mediated Living Radical Polymerization of Methacrylates (ATRP) — Mechanistic Aspects. **D. M. Haddleton**, J. Lad, S. Harrisson

5:00 – 40. Towards mechanistic understanding of transition metal catalyzed atom transfer radical processes. K. Matyjaszewski, **T. Pintauer**

Section B

Westin Copley Plaza -- America Center

General Papers

Polymer Synthesis A

T. J. Smith, *Presiding*

D. Garcia, *Organizer*

1:30 – 41. Copolymerization of functionalized norbornenes and the comparison of reactivity ratios using various palladium catalysts. **C. Andes**, L. Fischetti, A. D. Hennis, A. Sen

1:50 – 42. Determination of rate constants in the carbocationic polymerization of isobutylene: The effect of solvent polarity and temperature. **L. Sipos**, R. Faust

2:10 – 43. Determination of reactor equations for bulk copolymerization of styrene and maleic anhydride. **R. Wang**, Z. Shi, Z. Chen, Y. Xia, Z. Zhang, P. Wang

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- 2:30 – 44.** Living cationic polymerizations utilizing an automated synthesizer. R. Hoogenboom, M. W. M. Fijten, **U. S. Schubert**
- 2:50 – 45.** Ab initio cationic polymerization of vinyl ethers. **S. Rimmer**, W. Lang, P. Sarker
- 3:10 – 46.** Anionic synthesis of amine-functionalized polybutadienes and their hydrogenated analogs. **R. P. Quirk**, T. Cheong, T. Yoo, J. A. Schwindeman, T. Brockman
- 3:30 – 47.** Novel approach towards the synthesis of polyynes. X. Zhang, **M. Srivastava**, A. Lei, A. Sen, C. Andes
- 3:50 – 48.** Polysiloxane oligomers and networks containing pendent carboxylic acids. **J. K. Hoyt**, R. Ragheb, M. Vadala, L. A. Harris, K. Wilson, J. S. Riffle
- 4:10 – 49.** Supra molecular associative polymerization: A novel strategy for stereo-controlled polymerization. **H. Kuwahara**, B. M. Novak
- 4:30 – 50.** The synthesis and chemistry of N-vinyl-3-ethylidene-2-pyrrolidone. **S. Y. Tseng**, P. Wolf, M. Tallon, M. Miller
- 4:50 – 51.** Synthesis and characterization of poly(pyridinium salt)s with organic counterions exhibiting thermotropic liquid-crystalline properties. **P. K. Bhowmik**, H. Han, J. J. Cebe, I. K. Nedeltchev
- 5:10 – 52.** Ring opening of 2-ethyl-2-hydroxymethyl oxetane under basic conditions. **T. J. Smith**, L. J. Mathias

Section C

Westin Copley Plaza -- Essex South

Directed Self Assembly: Molecular Engineering of Polymers

Polymers under External Stimuli

H. W. Spiess, *Presiding*

C. K. Ober and U. B. Wiesner, *Organizer*

- 1:30 – 53.** Functional Materials Based on Aligned Assemblies of Comb-Shaped Polymeric Supramolecules. **O. T. Ikkala**, G. ten Brinke
- 1:55 – 54.** Electroactive nanometer wires. **L. Yu, H. Wang**
- 2:20 – 55.** Self assembly of luminescent rhenium containing diblock copolymers into nanosized micelles. **W. K. Chan**, S. Hou, K. Y. Man
- 2:45 – 56.** Directed Self-Assembly of Thiophene Bolaform Amphiphiles and Dendrimers for Electro-optical Applications. **R. C. Advincula**, C. Xia, J. Locklin, X. Fan
- 3:10 – Intermission.**
- 3:20 – 57.** Directing Self-Assembly of Polymers with Electric Fields. **T. P. Russell**, Z. Lin, T. Kerle, K. A. Leach, Y. Lin, E. Shaeffer, U. Steiner
- 3:45 – 58.** Photo-induced micelles and nanocrystals formation in Pyridine doped with Poly(4-vinyl pyridine). **E. Vaganova**, S. Yitzchaik
- 4:10 – 59.** Macroscopic alignment of concentrated block copolymer solutions in electric fields. **G. Krausch**, A. Böker, H. Elbs, H. Hänsel, A. Knoll, S. Ludwigs, H. Zettl, V. Urban, V. Abetz, A. H. E. Müller
- 4:35 – 60.** Azobenzene-containing polyelectrolytes for light-control of self-assembled layers and structures. **C. Barrett**, N. Ahmad, A. Choucair, A. Eisenberg, L. Norman

Section D

Westin Copley Plaza -- America North

Polymers in Photonics and Displays: Synthesis, Processing, and Devices (Cosponsored by the Optical Society of America)

Photonic Devices

Cosponsored with Division of Polymeric Materials: Science and Engineering

C. A. Guymon and J. P. Armistead, *Organizer, Presiding*

A. K. Jen, T. J. Bunning, D. J. Broer, R. Heflin, and R. A. Norwood, *Organizer*

- 1:30 – 61.** Nonlithographic printing techniques and their applications in organic photonics and photovoltaics. **G. E. Jabbour**, Y. Yoshioka, S. E. shaheen, N. peyghambarian, P. calvert
- 2:00 – 62.** Two-photon induced modulation of optical properties in polymers for photonic applications. **K. D. Belfield**, Y. Liu, K. J. Schafer, F. E. Hernandez

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2:25 – 63. Perfluorocyclobutyl copolymers for microphotonics: Thermo-optics, electro-optics, rare earth doping, and micromolding **D. W. Smith Jr.**, S. Chen, J. Jin, C. M. Topping, J. Ballato, S. Foulger, G. Nordin, J. Cardenes

2:50 – 64. Improved Polymer-Fullerene Interface in Photovoltaic Devices by Thermally-Controlled Interdiffusion. **M. Drees**, K. Premaratne, J. R. Heflin, R. M. Davis, D. Marciu, M. Miller

3:15 – Intermission.

3:35 – 65. Electrochromic composites and devices from layer-by-layer polymer films. **D. M. DeLongchamp**, P. T. Hammond

4:00 – 66. Electrochromic Devices Fabricated from Ionically Self-Assembled Thin Films of Conjugated Polymers and Polymer Electrolytes. **J. R. Heflin**, J. Janik, D. Marciu, M. Miller, H. Wang, H. W. Gibson, R. M. Davis

4:25 – 67. Organic Bistable Devices and Their Applications. **S. Pyo**, L. Ma, J. Liu, Q. Xu, Y. Yang

Unilever Award for Outstanding Graduate Research in Polymer Science and Engineering Honoring Kristi Kiick - Young Investigators at the Interface of Materials and Biology

Cosponsored with Division of Polymeric Materials: Science and Engineering

D. Tirrell, *Presiding*

W. T. Ford, *Organizer*

Organic Methodologies in the Selective Synthesis of Small Molecules and Materials

Novel Organic Molecules for Device Fabrication and Miniaturization

Cosponsored with Division of Organic Chemistry

T. M. Swager, *Organizer, Presiding*

S. T. Nguyen, D. L. Gin, S. L. Buchwald, and R. M. Waymouth, *Organizer*

SUNDAY EVENING

Section A

Marriott Copley Plaza -- University Hall

General Papers

Polymer Synthesis

D. Garcia, *Organizer*

6:00 - 8:00

68. Atomic force microscopy studies on nanostructures of PE-*b*-EPR prepared with FI Catalyst. **S. S. Ono**, T. Matsugi, O. Matsuoka, S. Kojoh, T. Fujita, N. Kashiwa, S. Yamamoto

69. Esterase Mimics of Poly(propylene imine) Dendrimers. A. K. Holley, D. He, R. Morgan, **M. Chai**

70. Functionalization of syndiotactic polystyrene(s-PS) by borane comonomer approach. **J. Dong**, T. Chung

71. Synthesis and characterization of epoxy resin-dithiocarbamate complex with Cu (ϕ₀). Y. Meng, J. Zhang, K. Sha, **J. Wang**, J. Sun

72. Synthesis and characterization of the fluorinated polyurethanes. **H. Li**, J. Sun, H. Zhang, M. Wu, J. Wang, F. Qiu

73. Synthesis of biphenyl methacrylate(BPMA) monomers. C. Liu, **H. Na**, Z. Wu

74. Synthesis of chloromethylphenyltriethoxysilane organo-silica nanoparticles. **R. M. Ottenbrite**, J. S. Wall, B. Hu, J. Siddiqui

75. Synthesis of copolyamides containing octadecanedioic acid. **C. Bennett**, L. J. Mathias

76. A new soluble conducting polymer. **I. T. Kim**, S. W. Lee, T. H. Kwak, J. Y. Lee, R. L. Elsenbaumer, H. S. Park

77. Synthesis of dianionic 1,10-phenanthroline ligands and polymer-supported dications: A strategy for the creation of chiral pockets through ion-pairing **D. A. Schorzman**, M. E. Wright

78. Synthesis of end-functionalised oligo(vinyl ether)s *via* alkylation of silyl enol ethers in an *ab initio* cationic polymerisation. **P. K. Sarker**, **S. Rimmer**

79. Synthesis and polymerization of a novel crown ether: bis(5-carboxy-1,3-phenylene)-14-crown-4 **H. Wang**, C. P. Chng, H. W. Gibson, A. L. Rheingold

80. Synthesis of fluoroalkylsiloxane copolymers by Pt-catalyzed hydrosilylation polymerization. **M. A. Grunlan**, J. M. Mabry, W. P. Weber

81. Synthesis of functionalizable polymers via ROMP. **H. S. Bazzi**, J. Bouffard, H. F. Sleiman
82. Synthesis of functionalized styrene-butadiene copolymers with well-defined structures by means of living anionic polymerization. **M. Hayashi**, S. Mabe, K. Inagaki, Y. Nakatsuji, A. Imai
83. Synthesis of hydroxy terminated poly(vinyl acetate) by chain transfer to solvent. **S. Collins**, S. Rimmer
84. Synthesis of hyperbranched polyether: anionic ring-opening polymerization of 3-ethyl-3-(hydroxymethyl)oxetane using tert-butoxide as an initiator. **H. Kudo**, T. Nishikubo
85. Synthesis of novel mixed-substituent poly(n-propylphosphazenes). **J. R. Klaehn**, T. A. Luther
86. Synthesis of polyisobutylenes with ionizable endgroups. **D. Machl**, M. J. Kunz, W. H. Binder
87. Synthesis of polymers and block copolymers containing bioactive dicarboximide groups by living ring-opening metathesis polymerization. **J. Dalphond**, H. S. Bazzi, K. Kahrim, H. F. Sleiman
88. Synthesis of thermoplastic elastomer based on polystyrene polydimethylsiloxane block copolymers. G. David, J. Robin, **P. Lacroix-Desmazes**
89. Synthesis of threo-disyndiotactic poly(alkyl sorbate)s by "alternating turning over polymerization (ATOP)". A. Takasu, **M. Ishii**, Y. Inai, T. Hirabayashi
90. Template synthesis and self-assembly of nano polymer rods. **S. I. Moon**, T. J. McCarthy
91. The synthesis and characterization of oligomers containing thio band. Z. Gao, C. Chen, H. Mao, Y. Yu, X. Liu, Z. Wei, Z. Wu, H. Xie, **W. Zhang**
92. The synthesis and characterization of superbranched PAEKS. J. Mu, **Z. Jiang**, Y. Wang, H. Na, Z. Wu
93. The synthesis and thermal curing of aryl-ethynyl terminated coPOSS imide oligomers: New inorganic/organic hybrid resins. **D. A. Schorzman**, M. E. Wright, F. J. Feher, R. Jin
94. The synthesis of a novel liner PEBEKK oligomer ended with hydrogen. X. Li, **H. Na**, J. Cao, C. Zhang, Z. Wu
95. The synthesis of a novel PEBEKK oligomer ended with hydroxy. **X. Li**, **H. Na**, J. Cao, C. Zhang, Z. Wu
96. Three dimensional arrangement of sugar residues along helical polypeptide backbones: Synthesis of new type of periodic glycopeptides by polymerization of glycosylated tripeptides. .. Takasu, **S. Horikoshi**, T. Houjyou, Y. Inai, T. Hirabayashi
97. Synthesis and characterization of rigid cyclic oligomer containing thioether moiety. H. Cao, X. Liu, T. Ben, C. Chen, Z. Gao, **W. Zhang**
98. Synthesis and characterization of silsesquioxanes formed by the hydrolytic condensation of MPMS. **L. Hu**, Y. Sun, S. Zhao, Z. Liu
99. Synthesis and characterization of trialkoxysilyl-functional acrylate oligomers. S. Sarkar, **R. F. Storey**
100. Synthesis and characterization of well-defined monodisperse fluorene oligomers. **J. Jo**, D. Y. Yoon, G. Wegner, S. Hoeger
101. Synthesis and copolymerization of ring-substituted ethyl 2-cyano-3-phenyl-2-propenoates with styrene. **G. B. Kharas**, H. A. Barbarawi, N. D. Beavers, M. Borovilos, J. Carney, E. Cygan, C. A. Diener, A. A. Fox, J. Gibson, K. M. McClelland, S. Mills, N. Tuzik, J. Yedlinski, K. Watson
102. Synthesis and investigation of polymer electrolytes derived from polyphosphates. **Z. Jin**, B. L. Lucht, K. M. Abraham, R. Rodriguez, J. DiCarlo
103. Synthesis and Properties of block copolymers and random copolymers of PEEK-PEEKK. Q. Liu, Y. Zhang, D. Wang, S. Qin, Z. Jiang, **Z. Wu**
104. Synthesis and properties of BMI modified novolak resin /silica nanocomposites. **G. Lu**, Y. Huang, Y. Yan, T. Zhao, Y. Yu
105. Synthesis and properties of cholesterol-containing poly(phenylacetylenes). L. M. Lai, J. W. Y. Lam, J. Chen, H. Peng, K. K. L. Cheuk, **B. Z. Tang**
106. Synthesis and properties of polyaryleneetherketone (PEK)-co-polybenzobisthiazole (PBZT)-co-polyaryleneetherketone (PEK) ABA triblock copolymers. **J. Baek**, S. B. Juhl, C. B. Lyons, B. L. Farmer, **L. Tan**
107. Synthesis and the electrochemical property of 4-amino-3',5'-diphenyl-biphenyl and 4-amino-3',5'-di(methyl-phenoxide)-biphenyl Y. Yu, L. chen, H. Mao, Z. Gao, C. Wang, Y. Wei, Z. Wu, **W. Zhang**
108. Synthesis of Alq3-containing polymers using ring-opening metathesis polymerization. **A. Meyers**, M. Weck
109. Synthesis of alternating copolyesters of oxetanes with cyclic carboxylic anhydrides using quaternary onium salts. **T. Nishikubo**, A. Kameyama, H. Kudo
110. Synthesis of amine-capped aniline pentamer. L. Chen, Y. Yu, H. Mao, C. Wang, **W. Zhang**, Y. Zhou
111. Synthesis and characterization of diglycidyl ether epoxy resin containing sulfonate and biphenyl groups. C. Zhang, **H. Na**, J. Mu, J. Cao, X. Li, Z. Jiang, Z. Wu

- 112.** Synthesis and characterization of ionic thermotropic liquid-crystalline polyester. **P. K. Bhowmik**, H. Han, J. J. Cebe, I. K. Nedeltchev
- 113.** Synthesis and characterization of macrocyclic poly[4-(N,N-dimethylamino)styrene] **R. Chen**, T. E. Hogen-Esch
- 114.** Synthesis and characterization of new highly organosoluble polyimides bearing a noncoplanar twisted biphenyl unit containing bulky substituents. H. Kim, K. Lee, **Y. Kim**, S. O. Jung, **S. Kwon**
- 115.** Synthesis and characterization of novel aromatic cyclic oligoimides. F. Xingzhong, **Y. Zhenghua**, **G. Lianxun**, **D. Mengxian**
- 116.** Synthesis and characterization of novel rigid macrocyclic oligomer (RCO) containing carboxyl groups. X. Wang, C. Chen, T. Ben, H. Cao, X. Liu, X. Zhao, **W. Zhang**
- 117.** Synthesis and characterization of polyaryleneetherketone phosphine oxides incorporating cycloaliphatic units for space thermal control coatings. **M. J. Dalton**, W. A. Feld, J. A. Johnson, N. C. Thiesing, C. A. Cerbus, N. Venkatasubramanian, T. D. Dang
- 118.** Synthesis and characterization of polystyrene/montmorillonite nanocomposite by emulsion polymerization followed by electrostatic stabilization. **S. H. Lee**, W. J. Brittain
- 119.** Fluorinated polyester prepared from substituted hydroquinone and terephthalyl chloride. W. Hu, J. Zhou, Y. Jin, B. Liu, **Z. Jiang**, Z. Wu
- 120.** From small organic entities to metallo-supramolecular polymers. S. Schmatloch, **U. S. Schubert**
- 121.** Functionalized narrow molecular weight distribution hyperbranched poly(arylene ether phosphine oxide)s. **E. Fossum**, D. P. Bernal
- 122.** Homogeneous synthesis and characterization of sulfonated poly(arylene ether sulfone)s via chlorosulfonic acid. **W. Harrison**, K. O'Connor, N. Y. Arnett, J. E. McGrath
- 123.** Investigation of the oxidative coupling polymerization of 3-alkylthiophenes with iron(III) chloride. **Y. Wang**, B. L. Lucht, W. B. Euler
- 124.** Norbornene polymerization catalyzed by bis(4-tert-butylaminopent-3-en-2-ono)nickel(II) activated with methylaluminumoxane X. Luo, J. Zhang, **Q. Wu**
- 125.** Novel method for polystyrene reaction at low temperature (7). **K. Saïdo**, Y. Kodera, H. Taguchi, K. Tomono, Y. Ishihara, T. Kuroki
- 126.** Novel photoluminescent materials based on 3,4-ethylenedioxythiophene R. V. Gregory, **M. F. Pepitone**, **S. S. Hardaker**
- 127.** Novel processible poly(methylsilsequioxane) copolymers for low dielectric applications. **H. W. Ro**, K. Char, S. Chu, M. Y. Jin, W. C. Kim, J. Lee, S. K. Min, H. Rhee, D. Y. Yoo, D. Y. Yoon
- 128.** Novel side chain liquid crystalline polymers having thermally reversible urea bonds. **S. H. Seo**, J. Y. Chang
- 129.** Novel soluble polyacetylenes bearing a triphenylamine moiety as a pendant prepared with a Rh complex catalyst. **A. Miyasaka**, M. Nakamura, T. Sone, M. Tabata
- 130.** Platinum- and rhodium-catalyzed reactions of 1,2-bis(dimethylsilyl)benzene with 1,3-diethynyl- and 1,3-divinyltetramethyldisiloxane C. L. Kepler, **M. L. Hill**
- 131.** Poly(1-phenyl-1-alkynes) bearing a-naphthoxy moieties: Synthesis and spacer effect on its blue luminescence. J. W. Y. Lam, Z. L. Xie, J. Chen, Y. P. Dong, C. F. Qiu, M. Wong, H. S. Kwok, **B. Tang**
- 132.** Polymerization and copolymerization of 2,5-dichloro-3-(2-thiophenecarbonyl)thiophene by nickel(0)-catalyzed coupling **E. C. Hagberg**, V. V. Sheares
- 133.** Polymerization of 4-cyanophenylacetylene using rhodium catalysis. **C. G. Densmore**, P. G. Rasmussen
- 134.** Preparation of hyperbranched polycarbosilanes from new AB_n monomers containing thiophene and furan. D. Y. Son, **C. Rim**
- 135.** Preparation of monodispersed poly(styrene-methyl methacrylate-acrylic acid) latexes. **G. Tu**, C. Kan, Y. Li, D. Liu
- 136.** Preparation of poly(propylene oxide) with double metal cyanide catalysts. Y. Lu, **J. Tu**, H. Jin, L. Cai, R. Wang
- 137.** Synthesis and biodegradability of poly(ethylene-co-vinyl alcohol)-g-poly(ϵ -caprolactone). E. Park, M. Kim, I. Chin, **J. Yoon**
- 138.** Synthesis and characterization of novel thermotropic poly(aryl ether ketone) containing bulky side group. Y. Yang, B. Liu, D. Wang, W. Hu, **Z. Jiang**
- 139.** Synthesis and characterization of a monomer for liquid crystalline polymers. C. Liu, **H. Na**, Z. Dong, Z. Wu
- 140.** Synthesis and characterization of a novel polyarylester ketone. Z. Liang, **H. Na**, W. Jiang, Z. Wu, Z. Jiang

141. Synthesis and characterization of adamantane-containing cardo poly(enaminonitriles). **D. W. Han**, C. M. Thompson, J. A. Moore
142. Synthesis and characterization of aromatic macrocyclic oligomers containing two or three p-chlorophenyl substituents. W. Yang, G. Dang, X. Zhao, C. Chen, **W. Zhang**, Z. Wu
143. A new photoluminescent conjugated poly(1-dodecyl-3,4-ethylenedioxy-2,5-pyrrolylene) **I. T. Kim**, S. W. Lee, J. Y. Lee, S. Y. Kim, C. M. Lee, H. E. Jung
144. A new synthesis method of liquid crystalline polyester oligomer with biphenyl group. C. Liu, **H. Na**, Z. Wu
145. Ambient temperature anionic polymerization of methylmethacrylate by using alkylolithium/dimethylsulfoxide initiator system. **T. Nugay**, N. Nugay, R. Jérôme, P. Teyssie
146. Anionic living polymerization of n-hexylisocyanate from sodium benzanilide as a novel initiator. **J. Ahn**, J. Lee
147. Aromatization of poly(1,3-cyclohexadiene-co-styrene): A novel route to soluble poly(phenylene-co-styrene) copolymers **D. T. Williamson**, T. D. Buchanon, T. Long
148. Chemoselective anionic ring-opening polymerization of cyclotetrasiloxanes. **C. J. Teng**, W. P. Weber
149. Enzyme-catalyzed lactone polymerizations: end-group functionalization. **A. Kulshrestha**, J. Libishowski, A. Duda, S. Penczek, R. A. Gross
150. Fluorinated poly(aryl ether ketone) and poly(aryl ether). B. Liu, T. Li, W. Hu, J. Tang, **Z. Jiang**, Z. Wu, W. Xie, D. Zhang

Section B

Marriott Copley Plaza -- University Hall

General Papers

Polymer Characterization

D. Garcia, *Organizer*

6:00 - 8:00

151. UV-radiation curable polyisobutylene polymers. **S. Hadjikyriacou**, R. Faust, T. Suzuki, M. Bahadur
152. Blue emission from poly(11-[[[4'-heptyloxy-4-biphenyl]carbonyl]oxy]-1-undecyne). Z. L. Xie, J. W. Y. Lam, J. Chen, C. F. Qiu, M. Wong, H. S. Kwok, **B. Z. Tang**
153. Characterization of polyelectrolyte multilayers on colloidal silica. **R. N. Smith**, C. J. Barrett, L. Reven
154. Generation of 2,4,6-tri(bromoxanilino)-1,3,5-triazines as efficient flame retardants for polymeric materials B. A. Howell, **H. Wu**
155. A study of thermal degradation behavior of polyamide 6/clay nanocomposites. **K. P. Pramoda**, T. X. Liu, Z. H. Liu, C. B. He, H. Sue
156. Bismuth titanate nanoparticle dispersed polyacrylate smart material. **W. Su**, J. Lee, R. Ho
157. DLS studies of coil-globule transition of PMMA: Recent evidence for a two-stage kinetics. **B. M. Baysal**, F. E. Karasz
158. Dye-labeled soluble polymer-supported catalysts. **C. Li**, D. E. Bergbreiter, P. L. Osburn, R. Hughes
159. Small angle x-ray scattering study of PET/Vectra blends. **G. Georgiev**, N. Gilfoy, P. Cebe
160. Effects of SBS on PP/NR blends (part II - study of rheological characteristics). **W. P. M. Abeysekera**, X. Li, S. Tang, Z. Han
161. Nano-encapsulation of photochromic compounds using diblock copolymer. **Y. J. Kim**, S. Jeong, S. K. Lee, H. S. Yang, Y. T. Kim, M. Lee, B. Choi, C. Lee, H. Cha, Y. Bae, K. Lee, J. Lee
162. Syndiotactic polystyrene-layered silicate nanocomposites by in-situ polymerization with half sandwich-metalocene/silicate catalysts. **D. Malaba**, Y. Xu, W. J. Brittain
163. Partitioning of polymers into pores at critical adsorption point. **Y. Wang**, Y. Gong
164. Preparation of porous PDMS membranes by polymer blend phase separation mechanism. **K. R. Jaggari**, B. Z. Newby
165. Properties of foaming water-swallowable EPDM rubber. X. Sun, Q. Shi, **G. Zhang**
166. Sequence distribution and crystallization characteristics of polyethylene/trimethylene terephthalate copolyesters. **M. Chen**, H. Wang, C. Ko
167. Study of segmental encounters of a hydrophobically modified water soluble polymer using fluorescence. **S. Kanagalingam**, J. Spartalis, T. Cao, J. Duhamel
168. Thermal behavior of fluorinated poly(aryl ether ketone)s. Y. Jin, B. Liu, X. Sun, Z. Wu, **Z. Jiang**
169. Thermal characterization of high molecular weight leucoemeraldine base polyaniline. **P. C. Ramamurthy**, A. K. Tewary, S. S. Hardaker, R. V. Gregory

- 170.** Thermal degradation of polyphenylacetylene and polypentadeuterophenylacetylene. **J. G. Rudick**, V. Percec, W. Buchowicz, P. Nombel, G. Han, M. Obata
- 171.** Thermal oxidation products of nylon 6 determined by MALDI-TOF mass spectrometry. **G. Montaudo**, C. Puglisi, F. Samperi, D. Chionna
- 172.** Thermally annealed solid state polymerization of 2,3-dicyano-5,7-dimethyl-6H-1,4-diazepine **J. M. Njus**, I. Kim, D. J. Sandman
- 173.** Thermally controlled aggregation of poly(phenylenethynylene)-poly(N-isopropylacrylamide) block copolymer. **K. Kuroda**, T. M. Swager
- 174.** Treatment of PEEK under supercritical ethanol. H. Wang, X. Liu, L. Chen, **Z. Wu**, Y. Zhou
- 175.** Vibrational absorption and circular dichroism of chiral rigid cyclic oligomers containing 1,1'-Bi-2-naphthyl moiety H. Cao, C. Chen, T. Ben, X. Wang, X. Liu, **W. Zhang**
- 176.** XPS study of fluorine-containing poly(aryl ethers). X. Rao, B. Liu, L. Zhang, W. Hu, Y. Jin, Z. Jiang, **Z. Wu**
- 177.** Spectroscopic studies of stretched and compressed syndiotactic polystyrene films. **K. Song**, H. Lim
- 178.** Study of clay mineral "support-activator" in metallocene catalyst. T. Takahashi, **H. Nakano**, H. Uchino, T. Tayano, T. Sugano
- 179.** Study of double melting behavior of PEEK by ADSC. W. Hu, B. Liu, X. Ma, C. Chen, **Z. Jiang**, W. Zhang, Z. Wu
- 180.** Study of surface order in polyfluorene films from NEXAFS experiments. **Y. Jung**, T. Cho, J. Luning, C. W. Frank, H. -. Nothofer, U. Scherf, D. Y. Yoon
- 181.** Study on calcium carbonate reinforced PEEK. B. Zhou, C. Yu, X. Ji, Z. Jiang, **Z. Wu**
- 182.** Study on crystalline behavior of doped parent aniline terramer by HREM. L. Chen, Y. Yu, H. Mao, C. Wang, **W. Zhang**, Y. Zhou
- 183.** Study on crystallization of controllable crosslinking poly (aryl ether ketone)s. X. Liu, C. Chen, T. Ben, H. Zhou, H. Cao, Z. Gao, Y. Yu, Z. Wei, Z. Wu, **W. Zhang**
- 184.** Study on pH sensitive polyurethane membranes. **Y. Dai**, **L. Tang**, D. Qi V
- 185.** Applications of Raman chemical imaging to polymeric systems. **D. Garcia**, M. P. Nelson, P. J. Treado
- 186.** Surface modification of polyvinyl alcohol for improved biocompatibility. **M. Kozlov**, T. J. McCarthy
- 187.** Preparation and characterization of nanofiltration membranes fabricated from poly(amidesulfonamide)s and application in water-oil separation. **W. H. Chan**, S. C. Tsao
- 188.** Preparation and characterization of novel polyimide nanocomposite thin film. **Z. Bai**, M. Y. Chen, S. C. Tan
- 189.** Preparation of Cotton/Clay Nanocomposites. **L. A. White**, N. R. Bertoniere
- 190.** Preparation of polymer-clay nanocomposites, and their studies by multinuclear solid-state NMR **S. Hou**, T. J. Bonagamba, F. L. Beyer, K. Schmidt-Rohr
- 191.** Properties of PET containing epoxy-functionalized polyhedral oligomeric silsesquioxane. **K. Yoon**, M. B. Polk, S. Kumar, B. G. Min, D. A. Schiraldi
- 192.** Relationship between deformation and dynamic viscoelasticity in glassy polymers. **Y. Kozono**, Y. Miyamoto
- 193.** Rheological analysis of melt intercalated polymer / organoclay nanocomposites. S. T. Lim, C. H. Lee, **H. J. Choi**, M. S. Jhon
- 194.** Rheological evidence and thermal property of controllable crosslinking poly (aryl ether ketone)s. X. Liu, C. Chen, T. Ben, H. Cao, Z. Gao, Y. Yu, Z. Wei, H. Xie, Z. Wu, **W. Zhang**, Y. Wei
- 195.** Room temperature crosslinkable polyisobutylenes. **S. Hadjikyriacou**, R. Faust
- 196.** Self-assembled heterocycle-based films. Layer-by-layer fabrication of highly transparent superlattices **A. Facchetti**, A. Abbotto, L. Beverina, M. E. van der Boom, T. J. Marks, G. A. Pagani
- 197.** Self-doped triblock copolymer electrolytes for rechargeable lithium batteries. **S. Ryu**, P. E. Trapa, A. M. Mayes
- 198.** Silicone magnetic dispersions using carboxylic acid-functionalized poly(dimethylsiloxane)-b-poly(2-ethyl-2-oxazoline) stabilizers. **K. S. Wilson**, M. Rutnakornpituk, L. A. Harris, J. K. Hoyt, J. S. Riffle
- 199.** Smart hyperbranched polymers for the purification of biomolecules. **S. R. Carter**, S. Rimmer
- 200.** Spectroscopic investigation of the microenvironment within biodendrimers. **M. T. Morgan**, C. E. Immoos, L. A. Degoricija, M. A. Carnahan, S. Lee, M. W. Grinstaff
- 201.** Partially imidized polyamic acid salt polymers and polyimide membranes. **Y. Ding**, B. Bikson, J. K. Nelson, J. T. Macheras

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- 202.** PET-based polymers containing hydroquinone ether linkages: Thermal characteristics and oxygen barrier properties. **G. S. Andrade**, D. M. Collard, D. A. Schiraldi, Y. Hu, E. Baer, A. Hiltner
- 203.** Photostabilizing effects of wood treated with acid anhydrides. **H. Chang**, S. Chang
- 204.** Poly(D, L-L-lactide) based ternary blends **H. Shin**, E. Park, J. Yoon, I. Chin
- 205.** Poly(ethylene glycol) immobilized on SiO₂: A study on surface properties at controlled coverages. **E. Cataltarla**, T. J. McCarthy
- 206.** Poly-p-(alkyl benzoates) and poly-p-(fluoro-alkyl benzoates): Solubility interactions in supercritical fluids. M. E. Wright, **K. M. Lott**, M. A. McHugh, Z. Shen
- 207.** Polyesteramides as barrier plastics. **M. R. Hibbs**, J. Holtzclaw, D. M. Collard, R. Y. F. Liu, A. Hiltner, E. Baer, D. A. Schiraldi
- 208.** Polymer-layered silicate nanocomposites by suspension and emulsion polymerizations: PVC-MMT nanocomposites. **Y. Xu**, D. Malaba, X. Huang, C. Aguilar-Solis, W. J. Brittain
- 209.** Polystyrene nanocomposite using a masterbatch prepared by polymerization in clay-dispersed water. **M. B. Ko**, J. Jeong, J. Y. Jho, K. Yang
- 210.** Hybrid organic-inorganic co(ò) metal-macromolecule complex produced via a sol-gel approach. **Y. Meng**, K. Sha, J. Wang
- 211.** Hyperbranched polyphenylenes containing biphenyl moieties: synthesis, light emission, and optical limiting H. Peng, J. W. Y. Lam, J. Chen, Y. Zheng, J. Luo, K. Xu, **B. Z. Tang**
- 212.** Influence of the anion of the supporting electrolyte on the formation and the electrochemical properties of poly (3,4-ethylenedioxythiophene) films **T. El Moustafid**, R. V. Gregory, K. R. Brenneeman, P. M. Lessner
- 213.** Integrally skinned membrane preparation by medium energy ion beam modification of the perfluorosulfonate ionomer Nafion®. **Z. A. Fekete**, E. Wilusz, F. E. Karasz
- 214.** Intrinsic UV reflection and fluorescence studies for water sorption in polycarbonate, polyurethane and poly (ethylene terephthalate) films **M. S. Kim**, C. S. P. Sung
- 215.** Lattice Monte Carlo simulations for the structure of precursors in polymer liquids. **C. Shew**, B. Chauhan, Y. Chen
- 216.** Macromolecular architecture via Coupling: Synthesis of a manacle-like nano-structure dimer containing two nanoscale rigid macrocycles. G. Dang, W. Yang, X. Zhao, C. Chen, F. Li, **W. Zhang**, Z. Wu
- 217.** Main-chain viologen polymers with triflimide counterion exhibiting lyotropic liquid-crystalline properties in room-temperature ionic liquids. **P. K. Bhowmik**, H. Han, J. J. Cebe, I. K. Nedeltchev
- 218.** MALDI MS characterization of covalent cationized polyethylene. **S. Lin-Gibson**, L. Brunner, D. L. VanderHart, B. J. Bauer, B. M. Fanconi, C. M. Guttman, W. E. Wallace
- 219.** Measurement of diffusion coefficients for water transport through poly(styrene-b-isobutylene-b-styrene) based materials by ATR-IR spectroscopy. **D. Mountz**, R. Storey, K. Mauritz
- 220.** Measuring the modulus of polymer films by strain-induced buckling instabilities. **C. M. Stafford**, C. Harrison, A. Karim, E. J. Amis
- 221.** Mechanisms of thermal oxidation of poly(bisphenol A carbonate). **G. Montaudo**, S. Carroccio, C. Puglisi
- 222.** Microcellular foaming of amorphous high-T_g polymer using carbon dioxide. D. Wang, Y. Jin, **Z. Jiang**, Z. Wu
- 223.** Model telechelic associative polymers: Effect of molecular weight of α,ω -pyrene-end-labeled polydimethylsiloxane on association, gelation, and impact of nanoscale confinement **B. A. Jones**, S. D. Kim, L. Guinn, J. M. Torkelson
- 224.** Nanostructured organic/inorganic materials based on sol-gel processes in sulfonated poly[styrene-co-(ethylene-butylene)-co-styrene] (SEBS) block copolymers. R. I. Blackwell, **K. A. Mauritz**
- 225.** NMR as a probe of pH dependant clustering in hydrophobically modified poly(methacrylic acid). **M. M. Green**, M. Lee, S. K. Pearsall, H. Morawetz
- 226.** Novel fluorescence techniques for characterizing the glass transition temperature and relaxation dynamics of nanoscopically confined polymers. **C. J. Ellison**, J. M. Torkelson
- 227.** Novel high performance polymers derived from aromatic and aliphatic spirodilactam diphenol. H. Zhou, **S. Venumbaka**, J. W. Fitch III, P. E. Cassidy
- 228.** Nylon degradation studies: humidity and aging. - *Abstract Text not Available* R. Bernstein, **D. K. Derzon**, K. T. Gillen
- 229.** Design of PMMA scaffolds to probe local environmental effects in host-guest binding. **K. Das**, J. Penelle, V. M. Rotello
- 230.** DSC and WAXD study of two oligo(ether biphenyl ether ketone)s. J. Cao, **H. Na**, X. Li, C. Zhang, Z. Wu

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- 231.** Dynamic mechanical analysis of poly(acrylic acid) crosslinked with a high imino-content melamine. **M. G. Jones**, M. T. Benson
- 232.** Effect of p-functional groups on the activity of aniline derivants. H. Mao, Y. Yu, L. chen, Z. Gao, C. Wang, Z. Wu, **W. Zhang**
- 233.** Effects of molecular models on the chain conformation of an electroactive poly(vinylidene fluoride) molecule. **Y. Chen**, C. Shew
- 234.** Effects of temperature and heat transfer fluids on the degradation of thick tubular HDPE pipe. **S. O. Han**, D. W. Lee, S. K. Woo
- 235.** Electrochemical dip-pen nanolithography of aniline and pyrrole. **S. F. Filocamo**, **C. E. Immoos**, B. W. Maynor, S. Lee, J. Liu, M. W. Grinstaff
- 236.** Electrostrictive response of dielectric anisotropic networks obtained by in situ photopolymerization of mesogenic reactive systems. **C. Huang**, Q. M. Zhang
- 237.** Enhanced thermal stability of poly(dimethylsiloxane) by one percent chemical modification with benzophenone. **J. M. Mabry**, W. P. Weber
- 238.** Fabrication and characterization of nano-walled micro-tubes. **D. Tuncel**, J. R. Matthews, H. L. Anderson
- 239.** Facile procedure of the formation of covalent-attached microsphere aggregates from self-assembly of diazoresin on the microspheres. X. Chen, Z. Chen, K. Zhang, L. Zhang, **B. Yang**
- 240.** Free radical cage formation in photoinitiator labeled poly(methacrylic acid): ESR and Grafting. **M. M. Green**, A. Maliakal, S. Yang, M. Lee, S. K. Pearsall, N. J. Turro
- 241.** Gamma to alpha crystal transition in nylon-6/clay nanocomposite on annealing and drawing. **K. Yoon**, S. Kumar, **M. B. Polk**, B. G. Min, **D. A. Schiraldi**
- 242.** Gas permeation characteristics of four fluorinated polymers. **M. L. Stone**, C. J. Orme, F. F. Stewart, M. T. Benson, E. S. Peterson
- 243.** Gas separation by thin film Diels-Alder polyphenylenes. D. A. Loy, **C. H. Fujimoto**, D. R. Wheeler, G. M. Jamison, C. J. Cornelius
- 244.** χ Parameter for compressible P(S-b-I) diblock copolymer melts. **J. Cho**
- 245.** A density functional study on the insertion mechanism for ethylene-styrene copolymerization with constrained geometry catalysts. **S. H. Yang**, W. H. Jo, S. K. Noh
- 246.** A new class of the solid polymer electrolyte: synthesis and ionic conductivity of novel polysiloxane containing allyl cyanide groups. **D. H. Suh**, G. S. Song, **I. J. Lee**, **W. S. Lee**
- 247.** Aging of 6F-PEEK studied by alternating differential scanning calorimetry. W. Hu, B. Liu, X. Ma, T. Li, C. Chen, **Z. Jiang**, Z. Wu
- 248.** Ambient-temperature thermotropic liquid-crystalline viologens. **P. K. Bhowmik**, H. Han, J. J. Cebe, I. K. Nedeltchev
- 249.** Array of nanoparticles in PAN nanofiber. **C. Wang**, Y. Hong, Q. Yang, T. Yunus, Z. Li, N. Guo, Y. Zhao, W. Liu, X. Hao, Q. Fei, Y. Wei
- 250.** Capillary electrophoresis of ionenes in water-methanol media. **A. Popov**, D. A. Hoagland
- 251.** Carboxylated polythiophenes for biosensor applications. **Y. Kim**, L. A. Samuelson, J. Kumar
- 252.** Chain conformation and dynamics of polypropylene/acrylic acid copolymer films. **V. Nasreddine**, L. Reven
- 253.** Characterization of sulfated ZrO₂/SiO₂ superacid nano-catalyst prepared by a sol-gel process. **C. Wang**, N. Guo, Y. Zhang, Y. Zhao, S. Lin, S. Feng, B. Zhou, Y. Wei
- 254.** Chemical oxidation and electrochemical oxidation on acetylamino-capped polyaniline pentamer. Y. Yu, L. chen, H. Mao, X. Zhao, C. Wang, Z. Wu, **W. Zhang**
- 255.** Cocrystallization behavior of poly(*m*-methylene 2,6-naphthalate-co-1,4-cyclohexanediyldimethylene 2,6-naphthalate) copolymers **Y. G. Jeong**, W. H. Jo, S. C. Lee
- 256.** Complexation of silver ion with carbonyl oxygen in poly(*n*-butyl methacrylate) and facilitated transport. **K. J. Lee**, J. Y. Jho, S. H. Joo, Y. S. Kang
- 257.** Conductivity measurement of a polymer thin-film by surface plasmon resonance. **K. Koh**, **J. Kim**, Y. Hur
- 258.** Correlation between polymer structures and gas transport properties in modified polycarbonates. **J. A. Lee**, K. J. Lee, I. Jang, J. Jeong, J. Y. Jho
- 259.** Crosslinkable fluorine-containing poly(aryl ether). W. Hu, X. Ma, B. Liu, D. Wang, C. Chen, **Z. Jiang**, W. Zhang, Z. Wu

MONDAY MORNING

2002 Fall Meeting

Section A

Westin Copley Plaza -- America South

Advances in Controlled Radical Polymerization

Atom Transfer Radical Polymerization. Mechanisms II

A. B. Padias and U. S. Schubert, *Presiding*

K. Matyjaszewski, *Organizer*

8:30 – 260. Screening and application of ATRP catalysts utilizing an automated synthesizer. H. Zhang, R. Hoogenboom, M. W. M. Fijten, **U. S. Schubert**

9:00 – 261. Synthesis, characterization and use of ATRP bifunctional initiator with trichloromethyl end-groups L. Toman, M. Janata, J. Spevacek, B. Masar, **P. Vlcek**, P. Policka

9:30 – 262. Controlled Radical Polymerization of Bicyclobutanes and Cyclobutenes. X. Chen, **A. B. Padias**, H. K. Hall Jr.

10:00 – 263. Synthesis, characterization and application of polymeric photoinitiators prepared by atom transfer radical polymerization and ring-opening polymerization **Y. Yagci**, M. Degirmenci, I. Cianga, G. Hizal

10:30 – 264. Asymmetric Controlled/Living Radical Polymerization: Enantiomer-Selective Cyclopolymerization Of *rac*-2,4-Pentanedyl Dimethacrylate **T. Kakuchi**, M. Tsuji

10:50 – 265. Polymers and Block Copolymers of Fluorostyrenes by ATRP. **S. Hvilsted**

11:10 – 266. New protected monomers for ATRP synthesis of acrylic acid and methacrylic acid copolymers. M. M. Jones, **S. K. Pollack**

11:30 – 267. New Catalyst System of Atom Transfer Radical Polymerization. **D. Yan**, S. Zhu

Section B

Westin Copley Plaza -- America Center

General Papers

Polymer Characterization A

M. Boruta, *Presiding*

D. Garcia, *Organizer*

8:30 – 268. Analogous sorption phenomena in plasma and conventionally polymerized microsensor films. C. Zhang, J. Wyatt, **D. H. Weinkauf**

8:50 – 269. Solution properties of 1,3-cyclohexadiene polymers **K. Hong**, P. Guenoun, J. Lal, J. W. Mays

9:10 – 270. Surface modification of thiol-ene UV curable formulations. **M. Sangermano**, R. Bongiovanni, G. Malucelli, N. Rehnberg, A. Harden, A. Priola

9:30 – 271. Application of UV copper vapour laser technology to PET substrates. **P. J. Brown**

9:50 – 272. Designing the molecular composition of the melt processable acrylonitrile copolymer carbon fiber precursors. **V. A. Bhanu**, K. B. Wiles, M. Bortner, T. E. Glass, D. Godshall, D. G. Baird, G. L. Wilkes, J. E. McGrath

10:10 – 273. PVC nanocomposites via emulsion and suspension polymerization. **C. Aguilar-Solis**, Y. Xu, W. J. Brittain

10:30 – 274. Proton-conducting polymers derived from poly(p-phenylene)s. **H. Ghassemi**, J. E. McGrath

10:50 – 275. Quantitative spectrophotometric methods for waterfastness measurement. **J. Shi**, J. O. Stoffer, T. Schuman

11:10 – 276. Infrared and Raman Spectra of Polymers — Progress in Computer-Assisted Identification and Classification. **M. Boruta**, J. Chalmers

11:30 – 277. Two-Stage electroactuation of partially neutralized hydrogels. **I. A. Rousseau**, P. T. Mather

11:50 – 278. Phase separation in lipid-polymer conjugates : synthesis and domain formation. M. Einzmann, **W. H. Binder**

12:10 – 279. Effect of ultrasonic energy on particle size distribution of emulsion copolymerization of MMA-BA. **M. A. Bahattab**, J. O. Stoffer, D. Forciniti

Section C

Westin Copley Plaza -- Essex South

Directed Self Assembly: Molecular Engineering of Polymers

Directing Self-assembly in and from Solution

2002 Fall Meeting

S. Yang, *Presiding*

C. K. Ober and U. B. Wiesner, *Organizer*

8:30 – 280. Ordered structures formed by ABC triblock copolymers in a selective solvent. N. P. Shusharina, S. Balijepalli, H. J. M. Gruenbauer, **P. Alexandridis**

8:55 – 281. Influence of ionic strength on build-up of multilayer thin films using spin self-assembly. **C. J. Lefaux**, J. A. Zimmerlin, P. T. Mather

9:20 – 282. Inkjet printing of self-assembling polymers. **P. Calvert**, Y. Yoshioka, G. E. Jabbour

9:45 – 283. Engineered Nano Objects from Reactive and Liquid Crystalline Rod-Coil Diblock Copolymers. **J. Park**, E. L. Thomas

10:10 – Intermission.

10:35 – 284. Investigation of the effect of architecture on the micellization of hetero three arm star block copolymers. **J. P. Yun**, R. Faust, L. Szilagy, S. Keki, M. Zsuga

11:00 – 285. Metallo-supramolecular aqueous micelles. J. Gohy, B. G. G. Lohmeijer, **U. S. Schubert**

11:25 – 286. Micelle formation of perfluorinated triblock copolymers in water. **K. Busse**, H. Hussain, H. Budde, S. Höring, J. Kressler

11:50 – 287. Tuning self-assembly in hybrid inorganic-organic Polyhedral Oligomeric Silsesquioxane (POSS) polyolefin copolymers. **E. B. Coughlin**

Section D

Westin Copley Plaza -- America North

Polymers in Photonics and Displays: Synthesis, Processing, and Devices (Cosponsored by the Optical Society of America)

Conjugated Polymers

Cosponsored with Division of Polymeric Materials: Science and Engineering

A. K. Jen and J. P. Armistead, *Organizer, Presiding*

C. A. Guymon, D. J. Broer, T. J. Bunning, R. Heflin, and R. A. Norwood, *Organizer*

8:30 – 288. Excitation spectrum for ultrafast photogeneration of charged solitons in polyacetylene. P. Miranda, D. Moses, Y. W. Park, **A. J. Heeger**

9:00 – 289. Conjugated polymer network ultrathin films by electropolymerization of precursor polymers: design, characterization, and devices **R. Advincula**, C. Xia, S. Deng, K. Onishi, P. Taranekar, A. Baba, W. Knoll

9:25 – 290. Charge transport in linear perylene-3,4-dicarboximide polymers: A comparison between covalent and self-assembly strategies **M. R. Wasielewski**, M. J. Fuller

9:55 – 291. Characterization of fully-conjugated diblock cooligomers. **H. Wang**, M. Ng, L. Yu

10:20 – Intermission.

10:40 – 292. Highly conjugated porphyrin-based chromophore systems with unusual electrooptic properties. H. T. Uyeda, Y. Zhang, K. Clays, A. Persoons, **M. J. Therien**

11:10 – 293. Materials for nanolayered polymeric optical limiters. S. R. Carlo, J. S. Shirk, **S. R. Flom**, R. G. S. Pong, A. Ranade, H. Tai, E. Baer, A. Hiltner

11:35 – 294. Novel synthesis of electron-deficient PPV and its application for photorefractive materials. **W. You**, L. Wang, L. Yu

Women at the Forefront of Chemistry

Cosponsored with Presidential Event

L. Dulany, *Organizer, Presiding*

J. A. Erickson, *Organizer*

MONDAY AFTERNOON

Section A

Westin Copley Plaza -- America South

Advances in Controlled Radical Polymerization

Atom Transfer Radical Polymerization. New Materials I

Y. Gnanou and P. Dubois, *Presiding*

2002 Fall Meeting

K. Matyjaszewski, *Organizer*

- 1:30 – 295.** Synthesis of Asymmetric Stars and Miktoarm Star Polymers by Atom Transfer Radical Polymerization. B. Lepoittevin, R. Matmour, R. Francis, D. Taton, **Y. Gnanou**
2:00 – 296. Well-defined (co)polymers by atom transfer radical polymerization. **K. Matyjaszewski**
2:30 – 297. Novel Block Ionomers. Z. Fang, **J. P. Kennedy**
3:00 – 298. Controlled synthesis of amphiphilic poly(methacrylate)-g-[poly(ester)-g-poly(ether)] graft terpolymers. I. Ydens, P. Degée, J. Libiszowski, A. Duda, S. Penczek, **P. Dubois**
3:30 – 299. Enzymatic ring opening polymerization (ROP) and atom transfer radical polymerization (ATRP) from a bifunctional initiator. **A. Heise**, J. Peeters, U. Meyer, G. van Gemert, A. R. A. Palmans
4:00 – 300. well-defined bio-related polymer structures, prepared by ATRP **J. C. M. van Hest**, H. Spijker, L. Ayres, J. Opsteen, M. Vos, H. Adams
4:30 – 301. Endfunctional polymers by quasilinging free radical polymerizations and new polymer structures therefrom. **B. Iván**, T. Fónagy, T. Erdey-Grúz, G. Holló-Szabó, M. Szesztay, U. Schulze, J. Pionteck
5:00 – 302. Novel nanostructured sp² carbon materials through self-assembly of well-defined block copolymers. **T. Kowalewski**

Section B

Westin Copley Plaza -- America Center

5th International Biorelated Polymers

Biorelated Hydrogel Systems

M. Akashi and H. Ghandehari, *Presiding*

R. M. Ottenbrite and S. Zalipsky, *Organizer*

1:30 – Introductory Remarks.

1:35 – 303. Bioinspired inorganic-polymer hybrids: Rapid deswelling hydrogel system inspired by contact-sensitive plant. **M. Akashi**, K. Wakita, T. Serizawa

1:55 – 304. Synthesis and properties of amphiphilic immunoisolatory membranes. **I. S. Isayeva**, A. N. Gent, J. P. Kennedy

2:15 – 305. Interaction of fibroblasts with fibronectin- and RGD-modified polyacrylamide hydrogels. **P. Rajagopalan**, W. A. Marganski, M. Dembo, J. Y. Wong

2:35 – 306. Hydrogels Composed of Itaconates and Acrylates Having Pyrrolidinonyl. **H. Pan**, S. Yu, W. Li, F. Li

2:55 – 307. Osmotic and small-angle neutron scattering measurements on polyelectrolyte hydrogels swollen in physiological salt solutions. **F. Horkay**, P. J. Basser, A. Hecht, E. Geissler

3:15 – Intermission.

3:30 – 308. Genetic engineering of silk-elastinlike protein polymers for drug delivery. **H. Ghandehari**, J. Cappello, A. Nagarsekar, A. Dinerman, S. Hoag, Z. Megeed

3:50 – 309. Bioactive Composite Hydrogels for Clinical Biosensors and Controlled Drug Release. S. Brahim, D. Narinesingh, **A. Guiseppi-Elie**

4:10 – 310. Equilibrium swelling and drying kinetics of Pluronic hydrogel films. **P. Alexandridis**, Z. Gu

4:30 – 311. Synthetic polymers containing bile acid derivatives. **X. X. Zhu**, D. Avoce, V. Deslauriers, M. Nichifor, Z. Song, H. Y. Liu, A. Benhebouh, S. Guoin

Section C

Westin Copley Plaza -- Essex South

Directed Self Assembly: Molecular Engineering of Polymers

Engineering Nanostructures in the Bulk

M. Hillmyer, *Presiding*

C. K. Ober and U. B. Wiesner, *Organizer*

1:30 – 312. Mining Complex Morphologies in ABC Triblock Copolymer Parameter Space. **F. S. Bates**, T. S. Bailey, E. W. Cochran, C. Hardey, T. Epps

1:55 – 313. Designing for supramolecular assembly in new architecturally nonsymmetric diblock copolymers. **P. T. Hammond**

2002 Fall Meeting

- 2:20 – 314.** Crystallization behavior of end blocks in ABC triblock copolymers. H. Schmalz, A. Knoll, A. J. Müller, **V. Abetz**
- 2:45 – 315.** Reactive block copolymers as nanoporous material precursors. **M. A. Hillmyer**
- 3:10** – Intermission.
- 3:25 – 316.** Self assembly of polymers from advanced solid state NMR and EPR spectroscopy. **H. W. Spiess**
- 3:50 – 317.** Supramolecular polymers by chain extension of polar telechelics. **R. P. Sijbesma**, B. J. B. Folmer, E. W. Meijer
- 4:15 – 318.** Self-assembly of polystyrene-*block*-poly(2-vinylpyridine)-*block*-poly(*tert*-butyl methacrylate) (SVT) triblock copolymers in bulk and in thin films. **G. Krausch**, S. Ludwigs, A. Böker, V. Abetz, A. H. E. Müller
- 4:40 – 319.** Hierarchically structured self-adaptive surfaces. **M. Motornov**, S. Minko, K. Grundke, M. Nitschke, M. Stamm

Section D

Westin Copley Plaza -- America North

Polymers in Photonics and Displays: Synthesis, Processing, and Devices (Cosponsored by the Optical Society of America)

Polymer/Liquid Crystal Systems

Cosponsored with Division of Polymeric Materials: Science and Engineering

C. A. Guymon and T. J. Bunning, *Organizer, Presiding*

A. K. Jen, D. J. Broer, R. Heflin, R. A. Norwood, and J. P. Armistead, *Organizer*

- 1:30 – 320.** Spatially resonated excitation of a dichroic photoinitiator to form a deformed-helix cholesteric network. **D. J. Broer**, G. N. Mol, J. A. M. M. van Haaren, J. Lub, N. Huck
- 2:00 – 321.** Evolution of polymer nanostructure in polymer/ferroelectric liquid crystal composites. **D. T. McCormick**, C. A. Guymon
- 2:25 – 322.** Electro-optic properties of thiol-ene polymer stabilized ferroelectric liquid crystals. **E. R. Beckel**, N. B. Cramer, A. W. Harant, T. Davies, C. N. Bowman
- 2:50 – 323.** Polymer dispersed liquid crystals for fast electrically controlled phase retarder. J. L. West, **A. V. Glushchenko**
- 3:20** – Intermission.
- 3:40 – 324.** Liquid Crystal / Polymer Composites: From Polymer-Dispersed Liquid Crystals to Tunable Photonic Crystals. **H. - Kitzerow**, A. Hoischen, G. Mertens, L. Paelke, T. Röder, N. Stich, J. Strauß
- 4:10 – 325.** Polymer enhanced liquid crystal devices with a bend nematic structure. **S. H. Kim**, L. C. Chien
- 4:35 – 326.** Liquid Crystal Properties of a Helical Polymer that Switches Helical Sense at Predetermined Temperatures. K. Tang, B. Garetz, **M. M. Green**

Organic Methodologies in the Selective Synthesis of Small Molecules and Materials

New Methods for the Selective Synthesis of Polymers and Oligomers

Cosponsored with Division of Organic Chemistry

D. L. Gin, *Organizer, Presiding*

S. T. Nguyen, S. L. Buchwald, R. M. Waymouth, and T. M. Swager, *Organizer*

Women at the Forefront of Chemistry

Cosponsored with Presidential Event

V. Barrett, *Presiding*

L. Dulany and J. A. Erickson, *Organizer*

TUESDAY MORNING

Section A

Westin Copley Plaza -- America South

Advances in Controlled Radical Polymerization

Atom Transfer Radical Polymerization. New Materials II

K. B. Wagener and J. Kops, *Presiding*

2002 Fall Meeting

K. Matyjaszewski, *Organizer*

- 8:30 – 327.** ATRP Grafting on ADMET polyolefin backbones. **K. B. Wagener**, P. M. O'Donnell
9:00 – 328. Novel polymeric surfactants synthesized by atom transfer radical polymerization. J. H. Truelsen, N. M. L. Hansen, D. Larsen, W. Batsberg, S. P. Armes, **J. Kops**
9:30 – 329. Well-Defined Amphiphilic Diblock Copolymers of Polystyrene and Polyvinylbenzoic Acid Synthesized via ATRP and the Nanospherical Organic/Inorganic Composites Mediated Therefrom. L. Wei, Y. Chen, M. Zhu, W. Zhang, F. Du, **Z. Li**, F. Li
10:00 – 330. Copper-mediated controlled copolymerization of methyl acrylate with 1-alkenes under mild conditions. **A. Sen**, S. Elyashiv, N. Greinert, S. Liu
10:30 – 331. Synthesis of baroplastic elastomer by atrp. **M. H. Acar**, J. A. Gonzalez, A. M. Mayes
10:50 – 332. Atom transfer radical polymerization from cellulose fibers. E. Malmström, **A. Carlmark**, S. Sofia
11:10 – 333. Mechanism of capsule formation by suspension atom transfer radical polymerization. **M. M. Ali**, H. D. H. Stöver
11:30 – 334. Synthesis of ABA triblock copolymers using poly(oxyethylene) macroinitiators by ATRP. K. Ranganathan, **K. S. V. Srinivasan**

Section B

Westin Copley Plaza -- America Center

5th International Biorelated Polymers

Biorelated Polymer Systems and Applications

E. Chiellini and R. Advincula, *Presiding*

R. M. Ottenbrite and S. Zalipsky, *Organizer*

- 8:30** – Introductory Remarks.
8:35 – 335. Novel tricontinuous membranes for immunoisolation. P. Kurian, **J. P. Kennedy**
8:55 – 336. Novel dental resins from trialkoxysilanes and dental monomers by in situ formation of oligomeric silyl ethers and silsesquioxanes. **J. M. Antonucci**, B. O. Fowler, S. H. Dickens, N. D. Richards
9:15 – 337. Formation of Amylose-Polymer Inclusion Complexes by Means of Enzymatic Polymerization of Glucose 1-Phosphate Monomer in the Presence of Various Guest Synthetic Polymers. **J. Kadokawa**, H. Tagaya
9:35 – 338. Novel phase formation in polymeric biomaterials - Impact on performance. **M. Jaffe**
9:55 – 339. Studies on instantaneous release of drug compounds for microfluidic high-throughput screening applications. **J. Iyer**, S. Biondi, G. Cheng, S. Datwani, R. Vijayendran
10:15 – Intermission.
10:30 – 340. Nanodomain formation in designer hybrid proteins. O. Rathore, **D. Y. Sogah**
10:50 – 341. Structural study of microbial poly(ϵ -lysine) in the different states. **F. Horii**, K. Masuda, H. Nakamura, K. Tsujitani, H. Hirohara
11:10 – 342. Sulfonated styrene-based block copolymers as a new class of biomaterials. **D. J. Vachon**, E. Kenawy, G. E. Wnek
11:30 – 343. Dynamic wetting behavior of Hydrosilation-cured PDMS systems: A method of obtaining intrinsic contact angle data. **J. Uilk**, A. E. Mera, R. B. Fox, K. J. Wynne
11:50 – 344. Wetting behavior of a siloxane - fluorinated styrene block copolymer. **M. Bertolucci**, G. Galli, E. Chiellini, K. J. Wynne, J. Uilk

Section C

Westin Copley Plaza -- Essex South

Directed Self Assembly: Molecular Engineering of Polymers

Biological and Hybrid Materials

U. B. Wiesner, *Presiding*

C. K. Ober and U. B. Wiesner, *Organizer*

- 8:30 – 345.** Organic chemistry on cell surfaces. **C. R. Bertozzi**
8:55 – 346. Hydrogel nanoparticles compatible with phospholipid bilayer. **S. Kazakov**, M. Kaholek, K. Levon
9:20 – 347. Molecular Engineering of Protein Assembly on Surfaces. **D. A. Tirrell**

2002 Fall Meeting

9:45 – 348. Toposomes: Peptide functionalized polymerized liposomes. **D. W. P. M. Löwik**, J. C. M. van Hest, J. G. Linhardt

10:10 – Intermission.

10:25 – 349. Self-assembly strategies for organic and hybrid nanomaterials. **S. I. Stupp**

10:50 – 350. Ordered hydrophobic organosilicates templated by block copolymers. **S. Yang**, Y. Horibe, C. Chen, P. Mirau, T. Tatry

11:15 – 351. Structure, conformation, and self-assembly of cartilage polyelectrolyte macromolecules studied via atomic force microscopy L. J. Ng, A. Plaas, A. J. Grodzinsky, **C. Ortiz**

11:40 – 352. Systematic Study on the Self-Assembly of Rod-Coil Diblock Copolymers based on alpha-helical peptides. **S. Lecommandoux**, J. Babin, **F. Chécot**, H. Klok

Section D

Westin Copley Plaza -- America North

Polymers in Photonics and Displays: Synthesis, Processing, and Devices (Cosponsored by the Optical Society of America)

Holographic Processing

Cosponsored with Division of Polymeric Materials: Science and Engineering

A. K. Jen and D. J. Broer, *Organizer, Presiding*

C. A. Guymon, T. J. Bunning, R. Heflin, R. A. Norwood, and J. P. Armistead, *Organizer*

8:30 – 353. Switchable photonic lattices with polymer dispersions of liquid crystals. **M. J. Escuti**, G. P. Crawford

9:00 – 354. Real-time study of the formation of anisotropic reflective H-PDLC gratings. **L. V. Natarajan**, T. J. Bunning, V. .. P. Tondiglia, R. L. Sutherland

9:25 – 355. Fabrication of photonic crystals via holographic patterning of surface modified nanoparticles. **C. K. Ullal**, R. Tripathi, T. Breiner, M. Bockstaller, A. Urbas, E. L. Thomas

9:50 – 356. Switchable photonic band gap lasing resonators from holographic polymerization. **R. Jakubiak**, R. A. Vaia, T. J. Bunning, L. V. Natarajan, V. P. Tondiglia

10:15 – Intermission.

10:35 – 357. Creating Periodic 3D Structures By Multiple-beam Interference of Visible Laser. **S. Yang**, M. Megens, P. Wiltzius, J. Aizenberg

11:00 – 358. Novel Route for Polarized Luminance: Cleaving Side Groups from Aligned Self-Organized Supramolecules. **O. T. Ikkala**, M. Knaapila, M. Torkkeli, L. Palsson, L. E. Horsburgh, K. Jokela, I. P. Dolbnya, W. Bras, R. Serimaa, G. ten Brinke, A. P. Monkman

11:25 – 359. Building micromachines out of liquids: Tuning light by a liquid microlens. **S. Yang**, P. Mach, T. krupenkin

TUESDAY AFTERNOON

Section A

Westin Copley Plaza -- America South

Advances in Controlled Radical Polymerization

ATRP. Materials and Surfaces

W. J. Brittain and T. E. Patten, *Presiding*

K. Matyjaszewski, *Organizer*

1:30 – 360. Modification of nanoparticle surfaces using atom transfer radical polymerization. **T. E. Patten**, T. von Werne, S. C. Farmer

2:00 – 361. Grafting of very dense, controlled, high molecular weight hydrophilic polymer brushes from latex by aqueous atom transfer radical polymerization **K. N. Jayachandran**, D. Goodman, D. E. Brooks

2:30 – 362. Surface-grafted polyacrylamide via atom transfer radical polymerization from the surfaces of polymer films. S. M. Husson, **N. Luo**, D. E. Hirt, D. Schwark

3:00 – 363. A Strategy to Prepare a Well-Defined Anemone-Shaped Polymer Brush by Successively Employing Reversible Addition-Fragmentation Chain Transfer and Atom Transfer Radical Polymerizations. M. Zhu, L. Wei, W. Zhang, F. Du, Z. Li, **F. Li**

2002 Fall Meeting

- 3:30 – 364.** Simulation of polymerization processes initiated from surfaces, particles and polymer chains **T. Pakula**, P. Minkin, K. Matyjaszewski
4:00 – 365. Synthesis and nanomorphology of multiblock polymer brushes. M. Baum, S. Boyes, A. Granville, B. Mirous, R. Sedjo, **W. J. Brittain**
4:30 – 366. Synthesis of polymeric brushes tethered to silica surfaces by controlled radical polymerization. **P. Chaumont**, J. P. Chapel, C. Devaux, E. Beyou
5:00 – 367. Surface control using polymer brushes produced by controlled radical polymerization. **L. Andruzzi**, A. Hexemer, X. Li, **C. K. Ober**, E. J. Kramer, G. Galli, E. Chiellini

Section B

Westin Copley Plaza -- America Center

2002 ACS POLY Division Industrial Sponsors Award Honoring Lloyd M. Robeson

C. D. Smith, *Organizer*

- 1:00 – 368.** Carbon Dioxide Technology Platform. **J. M. DeSimone**
1:25 – 369. Measurement of low-frequency viscoelastic properties of polymers. **M. Shaw**, E. Cua
1:50 – 370. Modification of polyesters with imide containing comonomers. **S. R. Turner**
2:15 – 371. Nanocomposites for vapor separation. **B. D. Freeman**, T. C. Merkel, I. Pinnau, Z. He, A. J. Hill, P. Meakin
2:40 – 372. Tailored functionality and topology in the design of responsive macromolecules. **T. E. Long**, K. Yamauchi, D. T. Williamson, L. Kilian, J. R. Lizotte, C. Blankenship, M. Perry, C. L. Hudelson
3:05 – 373. Solid state metathesis chemistry. **K. B. Wagener**, G. Oakley, J. Smith, S. E. Lehman Jr., W. Bobb, P. van Gerven
3:30 – 374. Thermal expansion behavior of nylon 6 nanocomposites. **D. R. Paul**, P. J. Yoon, T. D. Fornes
3:55 – 375. Polymeric electrolyte membrane (PEM) nanocomposites for fuel cells via direct polycondensation. **J. E. McGrath**, F. Wang, M. Hickner, Y. Kim, W. Harrison, T. Zawodzinski
4:20 – 376. Structure-Property Studies in Polymeric Materials. **L. M. Robeson**

Section C

Westin Copley Plaza -- Essex South

Nonlinear Dynamics in Polymeric Systems

Session I

Cosponsored with Division of Physical Chemistry

J. A. Pojman, *Organizer, Presiding*

Q. Tran-Cong, *Organizer*

- 1:30** – Introductory Remarks.
1:45 – 377. Nonlinear dynamics and polymer systems: An overview. **I. R. Epstein**
2:30 – 378. Synchronization of self-oscillation for polymer chains and the crosslinked networks. **R. Yoshida**, T. Sakai, S. Ito, T. Yamaguchi
3:00 – 379. Production of mechanical work via a pH-sensitive hydrogel coupled to a non-linear kinetic system. **C. J. Crook**, A. J. Ryan, R. A. L. Jones
3:30 – 380. A model for self-oscillating miniaturized gels. **G. Dewel**, K. Benyaich, A. De Wit, P. Borckmans
4:00 – Intermission.
4:15 – 381. Hydrogel/enzyme drug delivery oscillator. **A. P. Dhanarajan**, G. P. Misra, R. A. Siegel
4:45 – 382. Perturbation of the oscillatory Belousov-Zhabotinsky reaction with polyethylene glycol. R. Lombardo, C. Sbriziolo, **M. L. Turco Liveri**, K. Pelle, M. Wittman, Z. Noszticzus
5:15 – 383. Temporal organization of nanocrystal self-assembly directed by a chemical oscillator. **B. A. Korgel**, R. Dylla

Section D

Westin Copley Plaza -- America North

Polymers in Photonics and Displays: Synthesis, Processing, and Devices (Cosponsored by the Optical Society of America)

Dendrimers and NLO Applications

2002 Fall Meeting

Cosponsored with Division of Polymeric Materials: Science and Engineering

T. J. Bunning and R. A. Norwood, *Organizer, Presiding*

C. A. Guymon, A. K. Jen, D. J. Broer, R. Heflin, and J. P. Armistead, *Organizer*

1:30 – 384. Dendritic polymers for photonic applications. **E. Malmström**, M. Rodlert, R. Vestberg, A. Hult, M. Persson, C. Lopes, A. Eriksson, M. Lindgren

2:00 – 385. Dendrimer isolation of chromophores for photonic applications. **D. V. McGrath**

2:30 – 386. Nanoscale tailoring of dendrimers and polymers for photonic and opto-electronic applications. **A. K. Jen**, J. Luo, H. Ma, S. Liu, L. Liu, M. Haller, T. Sassa, S. H. Kang, L. R. Dalton

2:55 – Intermission.

3:15 – 387. Chromophore design strategies and experimental characterization versus limiting theory. **K. Clays**

3:40 – 388. Novel Hybrid Covalent / Ionic Self-Assembly Technique for Improved Second-Order Nonlinear Optical Films. **P. J. Neyman**, M. Guzy, S. Shah, R. M. Davis, K. E. Van Cott, H. Wang, H. W. Gibson, C. Brands, J. R. Heflin

4:05 – 389. Ionic self-assembled thin films for second order NLO applications. **M. Pomerantz**, T. A. Maldonado, T. D. Black, D. H. Johnson, L. K. Waller, G. M. Purvinis, M. R. Sudduth

4:30 – 390. Nonlinear NSOM characterization of self-assembled nonlinear optical polymer films. **H. Y. Liang**, W. L. Cao, M. J. Roberts, W. N. Herman, C. H. Lee

TUESDAY EVENING

Section A

Marriott Copley Plaza -- University Hall

Joint POLY/PMSE Poster Session

Nonlinear Dynamics in Polymeric Systems

Cosponsored with Division of Physical Chemistry

J. A. Pojman and Q. Tran-Cong, *Organizer*

6:00 - 8:00

391. Application of simultaneous non-interfering frontal polymerizations to the obtainment of Interpenetrating Polymer Networks. **A. Mariani**, S. Fiori, L. Ricco, S. Russo

392. Consolidation of manufactured objects of historical-artistic interest: frontal polymerization on porous substrates. **A. Mariani**, S. Fiori, E. Pedemonte, S. Pincin, E. Princi, S. Vicini

393. Controlled initiation of polymerization reactions using microencapsulation techniques. **B. H. McFarland**, J. A. Pojman Sr.

394. Phase separation of polymer mixtures induced by spatially periodic forcing. Q. Tran-Cong-Miyata, **S. Yoshida**, K. Ejiri, T. Norisuye

395. Synthesis of a polyurethane by frontal polymerization. **A. Mariani**, S. Fiori, L. Ricco, S. Russo

Section B

Marriott Copley Plaza -- University Hall

5th International Biorelated Polymers

R. M. Ottenbrite and S. Zalipsky, *Organizer*

6:00 - 8:00

396. Chemical modification of curdlan: Characteristic complexation with polynucleotides by control of the molecular weight. **K. Koumoto**, K. Sakurai, S. Shinkai, T. Kunitake

397. Patternable, cell-resistant surfaces prepared with H-bonded polyelectrolyte multilayers **S. Y. Yang**, J. D. Mendelsohn, M. F. Rubner

398. Pegylated poly(cyclooctene) and polyethylene. **K. Breitenkamp**, T. Emrick, J. Simeone, E. Jin

399. Synthesis of novel biodegradable copolymers using olefin metathesis. **C. P. Radano**, G. L. Baker, M. R. Smith III

400. Amino acid-functionalized polyolefins by ADMET. **K. B. Wagener**, T. E. Hopkins

401. Arabinogalactan based sponges for tissue engineering. **A. J. Domb**

402. Blends of poly(caprolactone) with both poly(vinylphenol) and its low molecular weight model, phenol: Hydrogen bond formation **S. R. Jones**, R. Y. Lochhead

- 403.** Controlled dewetting of polystyrene: a new procedure for structured polymer supported lipid bilayers. **P. Theato, R. Zentel**, H. G. Braun
- 404.** Controlled synthesis of polyvalent chitosan-peptide conjugates. **N. K. Sharma**, K. Levon
- 405.** Convergent synthesis of biodendritic-linear macromolecules from glycerol, succinic acid, and poly(ethylene glycol) K. A. Smeds, **N. R. Luman**, M. W. Grinstaff
- 406.** Determination of human serum complement activation by commercial, clinical, and chemically modified block copolymer poloxamer 188 **A. C. Hunter**, J. Szebeni, C. R. Alving, S. M. Moghimi
- 407.** Effect of polymer matrices on methacrylate conversion and mechanical strength of bioactive composites based on amorphous calcium phosphate. **J. M. Antonucci**, W. G. McDonough, D. Liu, D. Skrtic
- 408.** Electrospinning Bombyx mori silk with poly(ethylene oxide). **H. Jin**, S. Fridrikh, G. C. Rutledge, D. Kaplan
- 409.** EPR analysis of polymerization kinetics of Cortoss. **T. Duong**, S. A. Jansen, M. DiCicco, A. Chu, G. Pomrink, T. Clineff, E. Erbe, I. Nwaneshiudu
- 410.** Evaluation of the interactions of a silane agent with dental monomers by near infrared spectroscopy. **S. H. Dickens**, J. M. Antonucci, B. O. Fowler
- 411.** Explosion treatments of corn stalk fibers and their characterizations: a new look at value-added applications. A. K. Mohanty, L. T. Drzal, K. J. Ferguson, B. E. Dale, **M. Misra**, R. Schalek
- 412.** Macrophage response to perfluorocarbon emulsions mediated by polymeric fluorosurfactants. C. Peng, **J. Da, Y. Hsu**, T. E. Hogen-Esch
- 413.** Multifunctional peptides as interfacial biomaterials. **E. B. Walsh**, C. Middleton, M. J. Davis, D. J. Kenan, M. W. Grinstaff
- 414.** Mutational analysis verifies that "KNEED" sequence of fibronectin participates in cell-substrate interactions. **C. T. Brown**, Z. Weng, H. Zhang, J. Y. Wong
- 415.** Novel Ceramide Analogs are New Anti-Cancer Drugs. **E. Bieberich**, B. Hu, J. Silva, S. MacKinnon, R. K. Yu, **R. M. Ottenbrite**
- 416.** Novel polymers and hydrogels based on N-alkyl acrylamides and poly(ethyleneglycol). **D. Schmaljohann**, S. Gramm
- 417.** Novel synthetic route to a polymerizable phosphoethanolamine. **S. C. Arzberger**, D. F. O'Brien, S. W. Jeong
- 418.** Novel type amphiphilic biodegradable copolymers comprising polysuccinimide and polylactide segments: Acceleration of hydrolysis rate of PLA. **H. Shinoda**
- 419.** Oligonucleotide detection with amplifying fluorescent polymer particles. **J. H. Moon**, R. Deans, L. F. Hancock
- 420.** Peptide-modified electroactive polymers for tissue engineering applications. **E. Guterman**, S. Cheng, K. Palouian, P. Bidez, P. Lelkes, Y. Wei
- 421.** Photocrosslinkable triblock copolymers of ethylene glycol and glycerol. **W. C. Ray III**, M. W. Grinstaff
- 422.** Pluronic® F127 gels as materials for mammalian cell encapsulation. J. E. Matthew, **S. R. Bhatia**, S. C. Roberts
- 423.** Poly(N,N,N-trimethylammoniumalkyl acrylamide chloride)-based hydrogels for serum cholesterol reduction **N. S. Cameron**, A. Eisenberg, G. R. Brown
- 424.** Polymerizable High Efficient UV absorbers: Synthesis of Styrenics Having Chromophore Moieties Bridged. G. Chen, H. Pan, H. Zhang, F. Du, Z. Li, **F. Li**
- 425.** Preparation of dendronized polymers with poly(caprolactone) backbone. **S. M. Grayson**, C. C. Lee, J. M. J. Fréchet
- 426.** Protease-catalyzed synthesis of glyco-conjugate polymer. **Y. Miura**, T. Ikeda, K. Kobayashi
- 427.** Rapid photoinitiated destabilization of sterically stabilized liposomes. **T. Spratt**, D. F. O'Brien, B. Bondurant
- 428.** Rapid synthesis of highly branched polypeptides. **H. Klok**, J. Rodriguez Hernandez, M. Gatti
- 429.** Stability of a hydrophilic polymer matrix in a wet environment. **S. O. Han**, M. H. Han, R. Schalek, L. T. Drzal
- 430.** Surface morphology of high density poly(ethylene glycol) brushes grafted to poly(glycidyl methacrylate) monolayers. **B. Zdyrko**, V. Klep, I. Luginov
- 431.** Synthesis and characterization of estrone imprinted silica powders. **C. D. Ki**, C. Oh, S. G. Oh, J. Y. Chang
- 432.** Synthesis and ROMP of norbornene derivatives for the preparation of well-defined amphiphilic polymers. **M. F. Ilker**, E. B. Coughlin

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- 433.** Synthesis and wetting behavior of polyurethane block copolymers containing bromo-oxetane polyols. K. J. Wynne, **U. Makal**, J. Uilk
434. Synthesis of copolymers for biological use via living radical polymerization. **S. Monge**, D. M. Haddleton
435. Tailoring organophilic properties of layered silicates by amphiphilic copolymers of oxyalkylene- amines. **J. Lin**, T. Juang, C. Chou
436. Towards the synthesis of tailored dendrimers for specific applications. **M. A. Carnahan**, M. W. Grinstaff
437. Using dendrimers for the engineering of synthetic vaccines. **J. G. Linhardt**, D. W. P. M. Löwik, E. W. Meijer, J. C. M. van Hest

Section C

Marriott Copley Plaza -- University Hall

Advances in Controlled Radical Polymerization

Posters

R. G. Gilbert and K. Matyjaszewski, *Presiding*

K. Matyjaszewski, *Organizer*

6:00 - 8:00

- 438.** Isotactic-specific radical polymerization of methacrylamides using Lewis acids as additive. **Y. Isobe**, Y. Suito, S. Habae, **Y. Okamoto**
439. 5Å Rule for the Topochemical Polymerization of 1,3-Diene Monomers **T. Odani**, S. Nagahama, A. Matsumoto
440. Topochemical Polymerization of 1,3-Diene Monomer Using Hydrogen Bond and CH/ π Interaction **S. Nagahama**, A. Matsumoto
441. Branching and scission reactions in high temperature acrylate polymerizations. **A. N. F. Peck**, R. A. Hutchinson, M. C. Grady
442. Amphiphilic styrene-acrylic acid copolymers from free radical retrograde precipitation polymerization (FRRPP). G. T. Caneba, Y. Zhao, **Y. L. Dar**
443. Novel low temperature initiation systems for radical polymerization of methyl methacrylate. **T. Makino**, T. Tokimitsu, B. Yamada, P. B. Zetterlund, E. Tokunaga, T. Takamoto, H. Shimonaka
444. Preparation of macromonomer at high temperature by copolymerization of acrylic and methacrylic esters. **T. Harada**, P. B. Zetterlund, B. Yamada
445. Kinetic studies of styrene ATRP: A novel method of determining termination rate coefficients. D. A. Shipp, **X. Yu**
446. Polymer brushes by ATRP initiated from macroinitiator synthesized on surface. **V. Klep**, I. Luzinov
447. Atom Transfer Radical Copolymerization (ATRCp) of a monomer bearing an oxetane group. N. K. Singha, B. de Ruiter, **U. S. Schubert**
448. Iron complexes bearing diimine ligands for atom transfer radical polymerization. V. C. Gibson, **R. K. O'Reilly**, D. F. Wass
449. Syntheses of fluorinated copolymers using atom transfer radical polymerization (ATRP). **B. S. Shemper**, L. J. Mathias
450. N-Halo compounds nitrogen centered radicals, their chemistry and application in the living radical polymerization of MMA V. Percec, **C. Grigoras**
451. TERMINI: A universal method for the synthesis of hyperbranched and dendritic macromolecules from conventional monomers via living radical polymerization. V. Percec, **B. Barboiu**, T. K. Bera, C. Grigoras
452. On the mechanism of metal-catalyzed living radical polymerization of vinyl chloride. V. Percec, A. V. Popov, **O. Weichold**
453. Radical polymerisation of methyl methacrylate catalysed by palladium(II) complexes containing chelating o-carboranyldiphosphine ligands. A. Richel, S. Delfosse, **A. Demonceau**, A. F. Noels, S. Paavola, R. Kivekäs, C. Viñas, F. Teixidor
454. Controlled radical polymerization of vinyl acetate and synthesis of block copolymer with methyl acrylate. **T. Ando**, M. Kamigaito, M. Sawamoto
455. Controlled/living free-radical polymerization of sterically hindered acrylic monomers under high pressure. **J. Rzyayev**, G. Pound, S. F. Alfred, J. Penelle
456. Cuprous N, N-Diethyldithiocarbamate Catalyzed Reverse Atom Transfer Radical Polymerization of Methyl Methacrylate P. Li, **K. Qiu**

457. The "Living"/Controlled Radical Polymerization of methyl methacrylate Initiated by Butyl Chlorides in the presence of $\text{FeCl}_2 \cdot 4\text{H}_2\text{O} \cdot \text{PPh}_3$ **Y. Dong**, M. Tang, Y. Fan
458. BULK ATOM TRANSFER RADICAL POLYMERIZATION OF GLYCIDYL METHACRYLATE AT AMBIENT TEMPERATURE CATALYSED BY N-(n-PROPYL)-2-PYRIDYLMETHANIMINE COPPER (I) COMPLEXES. **K. Ranganathan**, K. S. V. Srinivasan
459. Synthesis of amphiphilic polymers by copper mediated living radical polymerization using novel hydrophobic initiators. **F. Lecolley**, S. Monge, D. M. Haddleton
460. An immobilized/soluble hybrid catalyst systems for atom transfer radical polymerization. **S. C. Hong**, K. Matyjaszewski
461. Application of immobilized/soluble hybrid catalysts in atom transfer radical polymerization (ATRP): Preparation of polymers with various compositions, topologies and functionalities **Y. Inoue**, S. C. Hong, J. Lutz, D. Neugebauer, C. Strissel, K. Matyjaszewski
462. Nitrogen-based tetradentate ligands in ATRP: Structure-activity relationships. **J. Gromada**, K. Matyjaszewski
463. Estimation of deactivation rate constants in ATRP by measurement of the initial degree of polymerization. **J. Gromada**, K. Matyjaszewski
464. Simultaneous reverse and normal initiation processes in ATRP: Solvent effect and chain extension. **J. Gromada**, B. M. Cooper, K. Matyjaszewski
465. Atom transfer radical polymerization of 2-hydroxyethyl methacrylate and 2-(N,N-dimethylamino)ethyl methacrylate in aqueous homogeneous media: Synthesis and mechanistic studies **N. V. Tsarevsky**, T. Pintauer, E. Glogowski, K. Matyjaszewski
466. Atom transfer radical polymerization of ionic monomers in aqueous solution: Mechanistic studies and synthesis. **N. V. Tsarevsky**, T. Pintauer, K. Matyjaszewski
467. Preparation of polymers with disulfide and thiol groups by atom transfer radical polymerization. **N. V. Tsarevsky**, K. Matyjaszewski
468. Synthesis of block copolymers of acrylonitrile and n-butyl acrylate by atom transfer radical polymerization. Morphological studies by atomic force microscopy **N. V. Tsarevsky**, S. Jia, C. Tang, T. Kowalewski, K. Matyjaszewski
469. Synthesis of block copolymers with SAN segments by atom transfer radical polymerization. **N. V. Tsarevsky**, T. Sarbu, B. Göbelt, L. G. Hahn, K. Matyjaszewski
470. Iron and Copper Mediated ATRP of Methyl Methacrylate in the Presence of Ionic Liquids. **T. Sarbu**, K. Matyjaszewski
471. Polystyrene with Designed Molecular Weight Distribution by ATRP. **T. Sarbu**, J. Ell, K. Matyjaszewski
472. ATRP of Styrene in Toluene-Water Mixtures. **T. Sarbu**, T. Pintauer, B. McKenzie, K. Matyjaszewski
473. Determination of the equilibrium constant for bromide dissociation from ATRP active Cu(II) complexes and its effect on the overall catalyst activity. **T. Pintauer**, B. McKenzie, K. Matyjaszewski
474. Extended X-ray Absorption Fine Structure Study of Cu(I) and Cu(II) complexes in atom transfer radical polymerization. **T. Pintauer**, U. Reinöhl, M. Feth, H. Bertagnolli, K. Matyjaszewski
475. Synthesis, characterization and polymerization activity in ATRP of $[\text{Cu}(\text{PMDETA})(\text{pi-CH}_2\text{CH}(\text{COOCH}_3))] [\text{BPh}_4]$ **T. Pintauer**, N. V. Tsarevsky, G. Kickelbick, K. Matyjaszewski
476. Identical reactivities of radicals in metal catalyzed atom transfer processes and in conventional free radical addition reactions. **T. Pintauer**, P. Zhou, K. Matyjaszewski
477. Determination of activation rate parameters of model systems in atom transfer radical polymerization. **A. K. Nanda**, G. Anantchenko, K. Matyjaszewski
478. Synthesis of well-defined alternating copolymers of acrylic monomers and styrene by RAFT polymerization in the presence of Lewis acids. **B. Kirci**, **J. Lutz**, A. Güner, K. Matyjaszewski
479. 600 MHz ^1H NMR study of chain-end functionality in atom transfer radical polymerization. **J. Lutz**, K. Matyjaszewski
480. Synthesis of graft terpolymers poly(alkyl methacrylate)-g-poly(D-lactic acid)/poly(dimethyl siloxane) using the grafting through method in atom transfer radical polymerization. **J. Lutz**, K. Matyjaszewski
481. Development of functionalized organomodified polysiloxanes and their use as novel macroinitiators in atom transfer radical polymerization (ATRP). **C. Strissel**, O. Nuyken, K. Matyjaszewski
482. Synthesis of Block, Statistical, and Gradient Copolymers Containing Octadecyl Side Chains by Atom Transfer Radical Polymerization **S. Qin**, J. Pyun, J. Saget, S. Jia, T. Kowalewski, **K. Matyjaszewski**

- 483.** Densely Grafted Molecular Brushes with High Molecular Weight Backbone by ATRP and RAFT Techniques. **S. Qin**, H. G. Borner, **K. Matyjaszewski**, S. S. Sheiko
- 484.** Brush polymers with methacrylate side chains synthesized via ATRP. **D. Neugebauer**, K. Matyjaszewski, S. Sheiko, M. da Silva
- 485.** Incorporation of PEO macromonomers into molecular brushes via ATRP. **D. Neugebauer**, K. Matyjaszewski
- 486.** Random and block copolymers by atom transfer radical polymerization of N,N-dimethylacrylamide **D. Neugebauer**, K. Matyjaszewski
- 487.** Synthesis and characterization of biocompatible poly(lactide-b-OEGMA). **T. Liu**, G. L. Baker
- 488.** Aqueous atrp grafting of acrylamides from latex surfaces: Molecular weight control by a non-classical mechanism. **K. N. Jayachandran**, D. E. Brooks
- 489.** Dendrimer-like polymers and copolymers by atom transfer radical polymerization. B. Lepoittevin, R. Matmour, R. Francis, D. Taton, **Y. Gnanou**
- 490.** Synthesis of double hydrophilic block copolymers with star-like structures based on pol(ethylene oxide) and poly(acrylic acid). S. Hou, D. Taton, **Y. Gnanou**, E. Chaikof
- 491.** Coupling of w-alkoxyamine polymers with the aid of a-methyl styrene. C. Chevalier, O. Guerret, **Y. Gnanou**
- 492.** Synthesis of functionalized polymers by ATRP and their use for the preparation of core-shell polyurethane latexes. **H. Cramail**, E. Cloutet, P. Chambon, B. Radhakrishnan
- 493.** BLOCK COPOLYMERS WITH pH-RESPONSIVE POLY(SODIUM 4-VINYLBENZOATE) SYNTHESIZED BY ATOM TRANSFER RADICAL POLYMERIZATION. J. Kops, **J. H. Truelsen**, M. Lei, S. P. Armes
- 494.** Synthesis and characterization of star shape copolymers containing 4-arm PEG core and hyperbranched PS via ATRP. **C. G. Cho**, S. An
- 495.** Synthesis of aluminum oxide/polymer composites by atom transfer radical polymerization. **B. Gu**, A. Sen
- 496.** Synthesis of PS-b-PC-b-PS and PC-g-PS from Polycarbonate Macroinitiators by Atom Transfer Radical Polymerization. **Z. Fu**, D. Shen, Y. Shi, W. Yang
- 497.** Polyelectrolyte-grafted silica particles prepared by surface-initiated atom transfer radical polymerization. **X. Chen**, C. Perruchot, S. P. Armes
- 498.** Synthesis of polymer-silicate nanocomposites by atom transfer radical polymerization. D. A. Shipp, S. D. Argoti, **S. Reeder**, H. Zhao
- 499.** Decomposition rate of a surface bound peroxyester. R. A. Sedjo, **B. K. Mirous**, J. Carmany, W. J. Brittain
- 500.** Effect of initiator anchoring group on polymer brush formation. A. M. Granville, **S. G. Boyes**, B. K. Mirous, W. J. Brittain
- 501.** Synthesis and characterization of semifluorinated polymer brushes. S. G. Boyes, **A. M. Granville**, W. J. Brittain
- 502.** Use of JandaJel™ resin supported ligands for copper removal in atom transfer radical polymerization. **M. E. Honigfort**, W. J. Brittain
- 503.** A Novel Dinitroxide Mediating Agent for Stable Free Radical Polymerization. **S. C. Anderson**, T. E. Long, J. R. Lizotte
- 504.** Synthesis of end-functionalized polymer with cyclodextrin based on TEMPO-mediated radical polymerization. **A. Narumi**, Y. Miura, T. Satoh, H. Kaga, T. Kakuchi
- 505.** Functionalized AFM tip by living Polystyrene brushes. **C. Devaux**, J. P. Chapel
- 506.** Synthesis of orthogonally protected narrowly distributed block copolymers of hydroxystyrene. B. Voit, A. Leuteritz, **M. Messerschmidt**, W. D. Habicher, T. Krause, M. Yin
- 507. Synthesis of fluorinated block copolymers by nitroxide-mediated radical polymerization for supercritical carbon dioxide applications.** **P. Lacroix-Desmazes**, B. Boutevin, D. K. Taylor, J. M. DeSimone
- 508.** Comparative study of a series of nitroxides and alkoxyamines in controlled/"living" radical polymerization. **J. Lutz**, P. Lacroix-Desmazes, B. Boutevin, C. Le Mercier, D. Gimes, D. Bertin, P. Tordo
- 509.** Influence of nitroxyl radical structure on controlled radical homo- and copolymerization of different vinyl monomers: experimental and quantitative investigation. **D. F. Grishin**, E. V. Kolyakina, M. V. Pavlovskay, L. L. Semionycheva, A. G. Razuvaev
- 510.** Comb-shaped polymers via chain-growth controlled radical polymerization of omega-styryl and omega-methacryloyloxy polystyrene macromonomers-. **P. J. Lutz**, D. Colombani, F. Audioiun, M. Arotçarena
- 511.** A Novel Route to Blend Compatibilization: Reactive Processing of Mixtures Containing Polymers Made via Nitroxide-Mediated Controlled Radical Polymerization. **M. K. Gray**, M. I. Kinsinger, J. M. Torkelson

- 512.** High Molecular Weight Polymers Produced by Nitroxide-Mediated Controlled Radical Polymerization. **M. K. Gray**, S. T. Nguyen, H. Zhou, J. M. Torkelson
- 513.** Controlled free radical emulsion polymerization of poly(styrene-*b*-sodium 4-styrenesulfonate) latexes. **L. Wang**, W. Chuang, W. Chiu, K. Cheng
- 514.** Effect of chain transfer to polymer in nitroxide-mediated controlled free-radical polymerization of *n*-butyl acrylate. **B. Charleux**, C. Farcet, J. Bellenev
- 515.** New nitroxide for living/controlled radical polymerization of styrene at 60 °C. **E. Drockenmuller, J. Catala**
- 516.** Kinetic studies of free radical polymerization of styrene with O-Ethyl Xanthates: account for multimodal distribution. C. Brochon, **J. Catala**
- 517.** Nanostructured materials by nitroxide mediated radical polymerization. **D. Bertin**, F. Chauvin, P. Tordo, O. Guerret, P. Gérard, B. Vuillemin, L. Leibler, A. V. Ruzette
- 518.** Characteristics of SG1-based alkoxyamines used in NMP. P. Tordo, **D. Bertin**, D. Gignes, S. Marque, C. Le Mercier, S. Acerbis
- 519.** New RAFT agent for living radical polymerization. P. Tordo, D. Gignes, S. Marque, **D. Bertin**, O. Guerret
- 520.** Kinetic study on the rate retardation in radical polymerization of styrene with addition-fragmentation chain transfer. **A. Goto**, Y. Kwak, Y. Tsujii, T. Fukuda
- 521.** Synthesis of well-defined water-soluble (co)polymers for the stabilization of gold nanoparticles. **B. S. Sumerlin**, M. S. Donovan, Y. Mitsukami, A. B. Lowe, C. L. McCormick
- 522.** New dithioesters for the RAFT polymerization of acrylamido monomers. **D. B. Thomas**, P. Hennaux, B. Sumerlin, A. Convertine, C. L. McCormick
- 523.** Controlled synthesis of self-cross-linkable polymers for nano architecture. **Y. Tsujii**, Y. Hirose, M. Ejaz, T. Fukuda, M. Ishidoya
- 524.** Reversible addition-fragmentation chain transfer polymerization initiated with ultraviolet and gamma radiation: A comparison. T. P. Davis, E. Rizzardo, L. Barner, C. Barner-Kowollik, **J. F. Quinn**
- 525.** Storing free radicals using the reversible addition fragmentation chain transfer (RAFT) process. C. Barner-Kowollik, **P. Vana**, T. P. Davis
- 526.** Controlled radical copolymerization of maleic anhydride and substituted styrenes by reversible addition-fragmentation chain transfer (RAFT) polymerization. D. Barr, **M. C. Davies**, J. V. Dawkins, D. J. Hourston

Section D

Marriott Copley Plaza -- University Hall

Directed Self Assembly: Molecular Engineering of Polymers

C. K. Ober and U. B. Wiesner, *Organizer*

6:00 - 8:00

- 527.** Molecular level materials engineering using oligopeptide models. **R. Valluzzi**, D. L. Kaplan, P. Cebe, T. Haas, R. Guertin
- 528.** Molecular imprinting with small molecules: Effects on polymerization and imprinted properties. **E. Oral**, N. A. Peppas
- 529.** Polymer-on-polymer stamping on micro- and nano-scales. **S. R. Gourdin**, P. T. Hammond, S. Coe, V. Bulovic
- 530.** Synthesis, characterization, and resin spinning of segmented polyurethanes with copolymerized hard segments **G. S. Pollock**, M. S. Ko, N. Kojic, L. T. James-Korley, G. H. McKinley, P. T. Hammond
- 531.** Poly(isoprene-*b*-ethylene oxide)-aluminosilicate ternary morphology diagram. **C. B. W. Garcia**, R. Ulrich, U. Wiesner
- 532.** Synthesis of poly(isobutylene)-*b*-poly(ϵ -caprolactone) copolymer. **J. C. Cho**, M. S. Kim, R. Faust
- 533.** A universal strategy to cylindrical supramolecular dendrimers self-organized in high charge carrier mobility materials. V. Percec, **M. Glodde**, T. K. Bera, Y. Miura, I. Shiyanovskaya, K. D. Singer, V. S. K. Balagurusamy, P. A. Heiney
- 534.** Adsorption kinetics of multilayer films made from weakly charged polyelectrolytes. **O. Mermut**, C. J. Barrett
- 535.** Controlled assembly of a microgel from multifunctional molecules:fractal structure and stability. **Z. Gu**, R. Cao, B. Armitage, G. D. Patterson

536. Copolymers containing metal binding ligands for use in supramolecular materials: Toward metal induced reversible networks. **K. J. Calzia**, G. N. Tew
537. Diaminotriazine Terminated Polyetherketones. **M. J. Kunz**, D. Machl, W. H. Binder
538. Evolution of polyelectrolyte/surfactant complexes in dilute solution. **R. G. Nause**, D. A. Hoagland, H. H. Strey
539. Fabrication of polystyrene nanofiber and nanotube using mesoporous silicate and aluminosilicate as templates. B. Li, G. Zhu, F. Gao, Z. Guo, C. Liu, X. Yin, C. Wang, **S. Qiu**
540. Filler dependent transition phenomena in block copolymer based nanocomposites. **A. Jain**, J. S. Gutmann, C. Garcia, Y. Zhang, M. Tate, S. Gruner, U. Wiesner
541. Formation of Branched Fractal CdS Patterns in Oligomer LB Monolayers. **T. Li**, J. Jin, Y. Zhao
542. H-aggregation and layer-by-layer self-assembly of a novel azo polyelectrolyte. **Y. Deng**, X. Tuo, **X. Wang**
543. Hierarchical self-assembly of nanoparticles using diblock copolymers. **O. Uzun**, B. L. Frankamp, V. M. Rotello
544. Inorganic-organic hyperbranched polymers designed for layer-by-layer self-assembly. **S. Peleshanko**, J. Majoral, A. Caminade, W. Knoll, **V. Tsukruk**
545. Interpolymer complex with sulfonated polyaniline. **B. Kim**, V. G. Sergeyev, N. A. Lokshin, A. B. Zezin, V. A. Kavanov, **K. Levon**
546. Investigation of Poly(Ether Ether Ketone) Crystallization at High Temperature. Z. Zhimin, N. Yaming, W. Guibin, Z. Suxia, **J. Zhenhua**
547. Luminescent, polymeric lanthanide complexes for block copolymer photonic materials **J. L. Bender**, K. W. Bothner, C. L. Fraser, M. Li, F. S. Richardson, Q. Shen, E. L. Thomas, A. Urbas
548. Mesoporous aluminosilicate-templated fabrication of poly(aryl ether ketone)s nanotube. B. Li, G. Zhu, X. Wang, F. Gao, S. Tu, C. Wang, T. Ben, **S. Qiu**, W. Zhang
549. Monodendron Substituted Poly(ethynylcarbazole)s. **J. G. Rudick**, V. Percec, M. Obata
550. Monodendron-Jacketed Polyphenylacetylenes. **J. G. Rudick**, V. Percec, M. Wagner, M. Obata, V. S. K. Balagurusamy, P. A. Heiney, S. Maganov
551. Morphological self-assembly and nanoparticle formation in PEO-PAMAM linear dendritic diblock copolymers. **K. K. Stokes**, M. A. Johnson, P. T. Hammond
552. Morphological Studies of A Semicrystalline Diblock Copolymer. **X. Wu**, S. Hong, T. P. Russell, S. P. Gido, S. Pispas, N. Hadjichristidis
553. Multisite cocatalyst for zirconocenes based on hyperbranched polysilanes. **S. Riethmüller**, C. Drohmann, A. M. Muzafarov, M. Möller, M. Schlögl, B. Rieger
554. Nanopatterned carbon films from pyrolysis of thin films of well-defined block copolymers of acrylonitrile and n-butyl acrylate. **S. Jia**, N. Tsarevsky, C. Tang, K. Matyjaszewski, T. Kowalewski
555. Nanostructured organic-inorganic hybrid thin films. **P. Du**, J. S. Gutmann, P. F. W. Simon, C. B. W. Garcia, K. Guarini, C. T. Black, U. Wiesner
556. Observation of acid-base equilibria shifts in polyelectrolyte multilayer thin films. **S. E. Burke**, C. J. Barrett
557. Phase Transition Control with Liquid Crystalline Dopant/Polyaniline Complex. **H. Ahn**, M. Anthamatten, P. Hammond, K. Levon
558. Phase transitions in solid-state polyelectrolyte-surfactant complexes. **M. J. Leonard**, H. H. Strey
559. Phenylene ethynylene polymers with amphiphilic structures. **L. Arnt**, G. N. Tew
560. Polymer-grafted lipid-based complex fluids as scaffolding for the formation of heterostructured nanoparticle arrays. **M. A. Firestone**, R. Csencsits, S. Seifert
561. Recognition—Induced Formation of Microspheres. **R. J. Thibault Jr.**, U. Drechsler, M. Gray, V. Rotello
562. Self-assembly of dendron building blocks with topochemically polymerizable periphery. **C. Kim**
563. Self-assembly of oriented polyaniline nanowires at the solid/liquid interface. **A. D. W. Carswell**, B. P. Grady, H. J. Barraza, E. A. O'Rear III
564. Shape-persistent stimuli responsive vesicles from peptide-based diblock copolymers. **F. Chécot**, **S. Lecommandoux**, Y. Gnanou, H. Klok
565. Solution Properties of Diblock Copolymers PS-b-PBLG : Rod-Coil to Coil-Coil Transition. - *Abstract Text not Available* **S. Lecommandoux**, J. S. Crespo, R. Borsali, H. Klok, V. Soldi
566. Solvophobic driven self-assembly of chiral supramolecular dendrimers. V. Percec, **A. E. Dulcey**, Y. Miura, U. Edlund, V. S. K. Balagurusamy, S. D. Hudson, H. Duan, P. A. Heiney
567. Studies into nucleobase pair controlled supramolecular polymers. S. J. Rowan, **P. Suwanmala**

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- 568.** Syntheses and self-assemblies of novel "double-brush" architectures. **C. Cheng**, N. Yang, M. H. Rafailovich, Y. Seo, K. Yoon
- 569.** Synthesis and Characterization of Amphiphilic Poly(Ethylene Oxide-Block-n-Hexyl Methacrylate) Diblock Copolymers. **S. Mahajan**, S. Renker, P. F. W. Simon, A. Jain, G. W. Coates, U. Wiesner
- 570.** Synthesis and characterization of elastomeric side-chain liquid crystal block copolymers. **L. C. McAfee**, P. T. Hammond
- 571.** Synthesis and Characterization of Poly(ethylene oxide)s Containing Decyl Groups, Oligo(ethylene oxide)s, Decyl-Oligo(ethylene oxide) Amphiphiles in the Side Chain and Their Liquid Crystalline Properties **J. Kim**, J. Moon, S. Cha, J. Lee
- 572.** Synthesis and characterization of poly(styrene-*block*-methyl methacrylate) containing a nitrobenzyl alcohol derivative as photocleavable junction point. **J. T. Goldbach**, T. P. Russell, J. Penelle
- 573.** Synthesis and morphology of branched polyethylene-like polyesters derived from long-chain aliphatic diols. **M. G. Menges**, K. Schmidt-Rohr, J. Penelle
- 574.** Synthesis, characterization, and resin spinning of silk-like thermoplastic polyurethanes and polyesters **L. T. James-Korley**, **G. S. Pollock**, N. Kojic, M. S. Ko, P. T. Hammond, G. H. McKinley
- 575.** The assembly properties of modified aliphatic hyperbranched polymer. **T. Qiu**, L. Tang, Y. Li, X. Tuo, X. Wang, D. Liu
- 576.** Thermal Characterization of Poly(Aryl Ether Ketone) Copolymers Containing 1,5-Naphthalene Moieties N. Yaming, W. Guibin, N. Zhihong, Y. Yanhua, **J. Zhenhua**
- 577.** Thermal Crosslinking Characterization of Poly(Aryl Ether Ketone) Copolymers Containing 1,5-Naphthalene Moieties N. Yaming, N. Zhihong, W. Guibin, Y. Yanhua, **J. Zhenhua**
- 578.** Towards Dynamic Ionic-Channel Like Supramolecular Membranes. V. Percec, **M. R. Imam**, M. N. Holerca, G. Ungar, W. Pao, P. A. Heiney
- 579.** Triblock copolymers for complexation of metallic nanoparticles. **L. A. Miinea**, **L. B. Sessions**, D. S. Glueck, R. B. Grubbs
- 580.** Unique combinations of macromolecular topology and functionality. **C. L. Hudelson**, K. Yamauchi, T. E. Long
- 581.** Variable Temperature Solid State NMR Studies of Conformation Change and Order-Disorder Transition of Poly(3-Alkylthiophene). **M. Guo**

Section E

Marriott Copley Plaza -- University Hall

Green Polymer Chemistry

T. J. McCarthy and J. J. Watkins, *Organizer*

6:00 - 8:00

- 582.** A solvent-free process for preparing conductive elastomeric foams by an in situ polymerization of pyrrole. **R. A. Weiss**, C. Erkey, D. Cohen, S. L. Shenoy
- 583.** Accurate and easy evaluation of aerobic microbial-degradability of biodegradable plastics under controlled soil. **S. Uematsu**, A. Murakami, K. Hiyoshi, Y. Tsukamoto, H. Saida, M. Tsuji, A. Hoshino
- 584.** Aqueous cationic polymerization of p-methoxystyrene using phenylphosphonic acids. **A. D. Scheuer**, R. F. Storey
- 585.** Basal Spacing Expansion of Iodonium Intercalated Montmorillonite by Butene Cleavage Bubbling of tert-Butyl Methacrylate Copolymer. **R. Lee**, **J. Lin**, S. Lin
- 586.** Blends of ABS and montmorillonite for recyclable computer housings. **H. A. Stretz**, R. Li, P. E. Cassidy, D. R. Paul
- 587.** Electrochemical synthesis and characterization of conducting polypyrrole films in supercritical carbon dioxide. **R. N. Badlani**, **J. L. Mayer**, P. E. Anderson, P. A. Mabrouk
- 588.** Functionalized Polyphenolics for photonic applications: Synthesis and Characterization. **V. Kumar**, V. S. Parmar, L. A. Samuelson, J. Kumar, A. L. Chollis
- 589.** Investigations on a zinc glutarate catalytic system in the copolymerization of propylene oxide and carbon dioxide. **Z. Zhou**, M. H. Chisholm, D. Navarro-Llobet
- 590.** Parylene composite coatings prepared in supercritical carbon dioxide. **K. A. Wier**, T. J. McCarthy
- 591.** Preparation of conductive polymer foams and their application as chemical sensors. **Y. Wang**, R. A. Weiss, G. A. Sotzing

- 592.** Real-Time FTIR Analysis of Stannous Octoate-Catalyzed D,L-Lactide Solution Polymerizations **J. M. Messman**, R. F. Storey
- 593.** Removable adhesives based upon reversible Diels-Alder adducts. **J. H. Aubert**
- 594.** Study of the single-crystal X-ray structure of an asymmetric macrocyclic oligomer. G. Dang, W. Yang, X. Zhao, C. Chen, C. Wang, **W. Zhang, Y. Wei**, Z. Wu
- 595.** Sugar mediated polymerization and cyclotetramerization of dicyanoalkenes and arenes. **I. Kim**, D. J. Sandman
- 596.** Supercritical CO₂ post-plasticization morphologies of PVDF and PVDF-copolymer. K. J. Wynne, S. L. Shenoy, **T. Fujiwara**
- 597.** Synthesis and characterization of polycarotenoids consisting of astaxanthin via condensation polymerization. **Y. Song**, J. S. Josue, C. Bialy, M. Spangle, H. A. Frank, G. A. Sotzing
- 598.** Synthesis of a Photoactive Azopolymer complexed with Genomic DNA. **R. Nagarajan**, S. Yang, S. Roy, J. Kumar, S. K. Tripathy, F. F. Bruno, L. A. Samuelson
- 599.** Synthesis of Polyaniline on Multi-walled Carbon Nanotubes. **F. F. Bruno**, L. A. Samuelson, S. Roy, R. Nagarajan, J. Kumar, D. Ziegler, M. Sennett

Section F

Marriott Copley Plaza -- University Hall

Polymers in Photonics and Displays: Synthesis, Processing, and Devices (Cosponsored by the Optical Society of America)

Cosponsored with Optical Society of America, and Division of Polymeric Materials: Science and Engineering

C. A. Guymon, A. K. Jen, T. J. Bunning, D. J. Broer, R. Heflin, R. A. Norwood, and J. P. Armistead, *Organizer*

6:00 - 8:00

- 600.** A NOVEL BRIGHT BLUE ELECTROLUMINESCENT POLYMER: Poly[(9,10-bis(diphenylanthracenevinylene)-1-(9_i⁻-9_i⁻-dihexyl 2_i⁻-fluorenyl)-2-(2-methoxy-(5-(2_i⁻-ethylhexyloxy)-1,4-phenyl))] **H. Jeong**, S. Jeong, J. Heo, H. Lee, **Y. Kim, S. Kwon**
- 601.** Aqueous phase polymerization of thieno[3,4-b]thiophene **B. Lee**, G. A. Sotzing
- 602.** Arylethynyl-derivatized porphyrin chromophores featuring potent electron donors and acceptors for nonlinear optical applications. **T. Zhang**, M. J. Therien
- 603.** Biocatalytic synthesis of a Ruthenium complex based macrodye for dye-sensitized photovoltaics applications. **R. Mosurkal**, S. Roy, J. Kumar, L. A. Samuelson
- 604.** Color-variable, fast response light-emitting electrochemical cells based on ionic conductive poly(phenylene vinylene) derivatives **C. Huang**, G. Huang, J. Guo, W. Huang, E. T. Kang, C. Yang
- 605.** EFFICIENT LIGHT HARVESTING POLYTHIOPHENES FOR NANOCRYSTALLINE TiO₂ PHOTOVOLTAIC CELLS. **Y. Kim**, L. A. Samuelson, J. Walker, J. Kumar
- 606.** High T_g Photorefractive Material Containing Multifunctional Chromophore. **J. Sohn**, J. Hwang, S. Y. Park, S. Lee
- 607.** Improved performance from an organic electroluminescent device containing rare earth complexes. **G. D. Phelan**, B. Carlson, L. R. Dalton, X. Jiang, A. K. - Y. Jen
- 608.** Inverse Opals Based on Photonic Bandgap Composites. **Y. Ying**, S. Foulger, D. W. Smith Jr.
- 609.** Ion transport behavior of polymers and copolymers containing thieno[3,4-b]thiophene **V. Seshadri**, K. Lee, G. A. Sotzing
- 610.** New Poly(p-phenylenevinylene) Derivative containing bulky Spirobifluorenyl Group. **Y. Kim**, D. Shin, G. Kwak, D. Joo, H. You, **S. Kwon**
- 611.** Non-lithographic patterning of TiO₂ by using molecular templates. **H. Tokuhisa**, P. T. Hammond
- 612.** Novel pressure/oxygen sensing coatings based upon iridium complexes and fluorinated polymers. **B. Carlson**, G. Khalil, M. Gouterman, L. Dalton
- 613.** Novel technique for measuring the thermo-optic coefficient of thin polymer films. **E. E. Gürel**, J. S. Rodgers, L. T. Seals III, F. R. Williams, G. E. Williams, G. T. Warren, Q. L. Williams
- 614.** Optical waveguides from amorphous chiral binaphthyl films. **Y. Kim**, W. L. Cao, J. Goldhar, C. H. Lee, W. N. Herman
- 615.** Patterning block copolymer solutions using micromolding. **T. Deng**, S. Ha, E. L. Thomas
- 616.** Selective bonding of fluorescent molecules on gold surfaces. **S. Riethmüller**, A. Mourran, M. Möller, S. A. Levi, D. N. Reinhoudt, M. Goncalves, O. Marti
- 617.** Synthesis and characterization of novel ladder polymer containing diphenylanthracene. **S. Zheng**, J. Shi

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- 618.** Synthesis and characterization of polyurethane-based photo-alignment layer material for lcd. H. Yu, H. Jiang, Y. Lian, X. Wang, **D. Liu**
- 619.** Synthesis and Electroluminescent Properties of New Poly(p-phenylenevinylene) Derivative containing (2, 2—diphenyl-vinyl)phenyl group **S. Kwon**, D. Shin, **Y. Kim**, J. Kim, D. Joo, H. You, D. Choi
- 620.** Synthesis and Nonlinear Optical Properties of Side Chain Liquid Crystalline Polymers with 4-Nitrozobenzene. **G. Fan**, E. Zhou
- 621.** Synthesis and Properties of Silole-containing Poly(1-alkyne) and Poly(1-phenyl-1-alkyne). J. Chen, J. W. Y. Lam, Z. Xie, H. Peng, **B. Z. Tang**
- 622.** Synthesis of polydibenzofulvene having stacked pi-electron systems, a new potential polymer for photonics and electronics **T. Nakano**, T. Yade, H. Ishizawa, O. Nakagawa, Y. Okamoto
- 623.** Toward the use of poly(thieno[3,4-b]thiophene) in optoelectronic devices **K. Lee**, G. A. Sotzing
- 624.** Two-photon photochromism of a fulgide-containing polymer for holographic recording. **K. D. Belfield**, Y. Liu, F. E. Hernandez

WEDNESDAY MORNING

Section A

Westin Copley Plaza -- America South

Advances in Controlled Radical Polymerization

Nitroxide Mediated Polymerization. New Nitroxides and Mechanisms

M. K. Georges and D. B. Priddy, *Presiding*

K. Matyjaszewski, *Organizer*

- 8:30 – 625.** Stable Free Radical Polymerization Process - Initiation Mechanisms With Benzoyl Peroxide and Various Nitroxides. **M. K. Georges**, G. Hamer, A. R. Szkurhan, A. Kazemedah, J. Li
- 9:00 – 626.** Low molecular weight alkoxyamines : models to predict the fate of nitroxide mediated polymerizations. **P. Tordo**, S. Marque, F. Chauvin, D. Gimes, D. Bertin
- 9:30 – 627.** Boroxyl-based Living Free Radical Initiators. **T. C. Chung**, H. Han, G. Xu
- 10:00 – 628.** New concepts for controlled radical polymerization: The DPE-System. **O. Nuyken**, P. C. Wieland, Y. Heischkel, B. Raether
- 10:30 – 629.** Novel high performance nitroxides for controlled low temperature radical polymerization. **T. Hintermann**, A. Kramer, P. Nesvadba, J. Fink
- 10:50 – 630.** Butyl acrylate polymerization mediated by a PROXYL nitroxide. **N. R. Cameron**, A. J. Reid
- 11:10 – 631.** Determination of alkoxyamine concentration in nitroxyl-mediated styrene polymerization products. **J. S. Parent**, M. E. Scott, R. A. Whitney, M. F. Cunningham
- 11:30 – 632.** Controlled metal-free radical polymerization of alkyl methacrylates in the presence of new radical scavengers. **D. White**, M. P. Makowski
- 11:50 – 633.** In-situ formation of nitroxyl radicals from NaNO₂: A way to industrially applicable controlled radical polymerization. **C. Detrembleur**, R. Jérôme
- 12:10 – 634.** Organotellurium compounds as novel initiators for controlled/living radical polymerizations. **S. Yamago**, K. Iida, J. Yoshida

Section B

Westin Copley Plaza -- America Center

5th International Biorelated Polymers

Tissue Engineering and Biodegradable Polymers

J. Y. Wong and T. Ouchi, *Presiding*

R. M. Ottenbrite and S. Zalipsky, *Organizer*

8:30 – Introductory Remarks.

8:35 – 635. Design of Lactide-Based Copolymers for Biomaterials. **T. Ouchi**, Y. Ohya

8:55 – 636. Ionomer Network Derived from Polycaprolactone and Itaconic Anhydride. **M. Ramos**, S. D. Bell, S. J. Huang

9:15 – 637. "Biodegradable and biocompatible PVP-based materials: Synthesis and biological evaluation". **E. Ranucci**, F. Chiellini

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9:35 – 638. Bioerodible polymers and responsive hydrogels for tissue engineering and biomedical devices. **H. R. Allcock**, W. R. Laredo, J. Bender, A. Ambrosio

9:55 – 639. In vitro degradation characteristics of a new class of biodegradable poly(ester-carbonates). R. F. Storey, **B. D. Mullen**, C. N. Tang

10:15 – Intermission.

10:30 – 640. Bioengineered polymeric substrata to probe cell behavior during vascular remodeling. **J. Y. Wong**

10:50 – 641. Nonwoven nanofiber membranes of poly(lactide) and poly(glycolide-co-lactide) via electrospinning and applications for anti-adhesions. **X. Zong**, D. Fang, K. Kim, S. Ran, B. S. Hsiao, B. Chu, C. Brathwaite, S. Li, E. Chen

11:10 – 642. Polymeric vehicles for potential nerve regeneration therapies. **K. G. Marra**, R. Waddell, K. Collins, J. S. Doctor

11:30 – 643. Surface science, wetting behavior, and water contamination effects: Relevance to biocompatibility **K. J. Wynne**, J. Uilk, M. Bertolucci, U. Makal

11:50 – 644. Coupling GPC and modeling to investigate kinetic chain lengths in multivinyl photopolymerized degradable networks. **T. M. Lovestead**, J. A. Burdick, C. N. Bowman, K. S. Anseth

Section C

Westin Copley Plaza -- Essex South

Nonlinear Dynamics in Polymeric Systems

Cosponsored with Division of Physical Chemistry

M. L. Turco Liveri, *Presiding*

Q. Tran-Cong-Miyata and J. A. Pojman, *Organizer*

8:30 – Introductory Remarks.

8:35 – 645. Recent Developments in Frontal Polymerization. **A. Mariani**, S. Fiori, E. Pedemonte, S. Pincin, L. Ricco, S. Russo

9:05 – 646. Convective instabilities in frontal polymerization. J. A. Pojman Sr., **V. Volpert**

9:35 – 647. "Cold" ignition of combustion-like waves of cryo-polymerization and other reactions in solids. **V. Barelko**, A. Pumir, I. Barkolov

10:05 – 648. Weakly nonlinear stability analysis of self-propagating polymerization fronts. **L. K. Gross**, V. A. Volpert

10:35 – Intermission.

10:50 – 649. Evolution of isothermal polymerization fronts via laser line deflection and predictive modeling. **L. L. Lewis**, C. A. DeBisschop, J. A. Pojman, V. A. Volpert

11:20 – 650. Spontaneous generation of hot and reacted region to form propagating front in a reaction system of free-radical polymerization of methyl methacrylate. **K. Asakura**, A. Ikumo, H. Harasawa, S. Osanai, E. Nihei

11:50 – 651. Spherically-propagating frontal polymerization. **D. I. Fortenberry**, J. A. Pojman Sr.

12:10 – 652. Frontal polymerization: A novel technique to synthesize hydrogels. **R. P. Washington**, O. Steinbock

Section D

Westin Copley Plaza -- America North

Green Polymer Chemistry

T. McCarthy and J. J. Watkins, *Organizer*

8:30 – 653. Surface-mediated polymer foaming in supercritical carbon dioxide. S. Siripurapu, S. A. Khan, J. M. DeSimone, **R. J. Spontak**

8:50 – 654. Styrene-methacrylate copolymerizations in the presence of supercritical CO₂ - Continuous experiments and modeling. **S. Beuermann**, M. Buback, M. Jürgens, M. Gadermann

9:10 – 655. Synthetic and Mechanistic Studies on Biocatalytic Reactions Generating Novel Amphiphilic Polymers. R. Kumar, N. A. Shakil, M. H. Chen, V. S. Parmar, L. A. Samuelson, J. Kumar, **A. C. Watterson**

9:30 – 656. Comparison of kinetics for solution polymerization of PMMA in green ionic liquid solvents versus traditional volatile solvents. **C. S. Brazel**, M. G. Benton

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- 9:50 – 657.** Pulsed laser polymerization of methyl methacrylate in ionic liquids. **S. Harrison**, S. Mackenzie, D. M. Haddleton
- 10:10 – 658.** Positive-tone resist for supercritical CO₂ processing. **V. Q. Pham**, G. L. Weibel, P. T. Nguyen, R. J. Ferris, C. K. Ober
- 10:30 – 659.** Plasticization and melting behavior of PVDF and PVDF copolymers in supercritical carbon dioxide. **S. L. Shenoy**, T. Fujiwara, K. J. Wynne
- 10:50 – 660.** Supercritical and liquid CO₂: polymer swelling and effects on melting behavior. **K. J. Wynne**, S. L. Shenoy, T. Fujiwara, S. Irie, D. Woerdeman, R. Sebra, A. Garach, M. A. McHugh
- 11:10 – 661.** Synthesis of poly(vinylidene fluoride) in CO₂. L. M. Wojcinski II, M. Saraf, S. Gerard, G. W. Roberts, **J. M. DeSimone**
- 11:30 – 662.** Synthesis, characterization and unusual surface activity of a series of short, pendant perfluoroalkyl chain-containing poly(oxetane)s with novel architectures **R. R. Thomas**, C. M. Kausch, J. E. Leising, R. E. Medsker, V. M. Russell, A. A. Malik, A. W. Beers

Application Rheology of Dispersed Systems

Basic Concepts

Cosponsored with Federation of Societies for Coatings Technology, and Division of Polymeric Materials: Science and Engineering

R. Fernando, *Organizer, Presiding*

J. E. Glass and R. Ryntz, *Organizer*

Organic Methodologies in the Selective Synthesis of Small Molecules and Materials

Development of New Methods for Selective Organic Transformations

Cosponsored with Division of Organic Chemistry

G. W. Coates, *Presiding*

S. T. Nguyen, D. L. Gin, S. L. Buchwald, R. M. Waymouth, and T. M. Swager, *Organizer*

Chemical Science Using Synchrotron Radiation

What is synchrotron radiation and what are its major applications?

Cosponsored with Division of Analytical Chemistry

R. F. Hirsch, *Organizer*

WEDNESDAY AFTERNOON

Section A

Westin Copley Plaza -- America South

Advances in Controlled Radical Polymerization

Nitroxide Mediated Polymerization. Processes and Materials

B. Charleux and C. J. Hawker, *Presiding*

K. Matyjaszewski, *Organizer*

- 1:30 – 663.** Use of a difunctional alkoxyamine initiator in the miniemulsion polymerization of n-butyl acrylate. **B. Charleux**, C. Farcet, R. Pirri, O. Guerret
- 2:00 – 664.** Scale-up of nitroxide mediated living radical mini-emulsion polymerization. **B. Keoshkerian**, T. E. Enright
- 2:30 – 665.** Utility/Limitations of Nitroxide Mediated Polymerization for Low Cost Manufacture of Improved Styrenic Polymers. **D. B. Priddy**, B. A. Howell
- 3:00 – 666.** Nitroxide-mediated polymerization for the production of low-molecular weight acrylic resins. Y. Wang, F. Nault, M. F. Cunningham, **R. A. Hutchinson**
- 3:30 – 667.** A facile approach to architecturally defined nanoparticles via intramolecular chain collapse and living free radical procedures. E. M. Harth, B. A. Van Horn, V. Y. Lee, D. S. Germack, R. D. Miller, **C. J. Hawker**
- 4:00 – 668.** Role of nitroxide in the elaboration of new organic materials. **D. Bertin**, F. Chauvin, S. Marque, D. Gigmes, P. Tordo, O. Guerret

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4:30 – 669. Synthesis of Rod-Coil diblock copolymers Via nitroxide functionalized mesogenic rod segments. **P.**

Gopalan, X. Li, C. Ober, C. J. Hawker

4:50 – 670. Gradient Copolymers Produced via Nitroxide-Mediated Controlled Radical Polymerization. **M. K.**

Gray, H. Zhou, S. Nguyen, J. M. Torkelson

Section B

Westin Copley Plaza -- America Center

5th International Biorelated Polymers

Polymers in Drug Delivery Applications

V. P. Torchilin and M. C. Woodle, *Presiding*

R. M. Ottenbrite and S. Zalipsky, *Organizer*

1:30 – Introductory Remarks.

1:35 – 671. Polymer conjugates for gene delivery. P. Scaria, **M. C. Woodle**

1:55 – 672. Polycations for gene delivery: Problems and solutions. **A. V. Kabanov**, C. L. Gebhart, T. K. Bronich, S. V. Vinogradov

2:15 – 673. Cationic polysaccharides as vectors for gene delivery. **A. J. Domb**

2:35 – 674. Formation of PLGA nanosphere by temperature-induced phase transition in the PLGA/Pluronic mixture. **S. H. Yuk**, K. E. Lee, B. K. Kim

2:55 – 675. Drug-eluting polymer coatings for cardiac stents. **M. Calistri-Yeh**, S. Rosebrough, A. Chamberlain, W. Donish, R. Whitbourne

3:15 – Intermission.

3:30 – 676. Polymer-lipid micelles as non-targeted and targeted pharmaceutical carriers. **V. P. Torchilin**, A. N. Lukyanov, Z. Gao, L. Mazzola

3:50 – 677. Further evidence in support of spontaneous in vivo surface-modification of nanoparticles by poloxamine 908: towards generation of long circulating particulate entities. **S. M. Moghimi**, K. D. Pavey, A. C. Hunter

4:10 – 678. Intracellular uptake and trafficking of polymeric surfactants: Effect of the aggregation state. **N. Y. Rapoport**

4:30 – 679. Biocompatible Surface Functionalized Shell Crosslinked Nanoparticles for use in Biological Applications. **M. L. Becker**, M. J. Joralemon, E. E. Remsen, P. J. Endres, L. Cegelski, H. Huang, J. Schaefer, K. L. Wooley

Section C

Westin Copley Plaza -- Essex South

Nonlinear Dynamics in Polymeric Systems

Cosponsored with Division of Physical Chemistry

T. Yamaguchi, *Presiding*

J. A. Pojman and Q. Tran-Cong-Miyata, *Organizer*

1:30 – Introductory Remarks.

1:35 – 680. Preliminary models of oscillation in the fracture of rubber. **M. P. Marder**, P. Petersan, H. Swinney, R. Deegan

2:05 – 681. Cascade nucleation in polymer solutions. D. Vollmer, **J. Vollmer**, M. Cates

2:35 – 682. Structure formation in micro-confined polymeric emulsions. **K. B. Migler**, J. A. Pathak, S. D. Hudson

3:05 – 683. New understanding and remaining questions regarding the dynamics of autoacceleration (the gel effect) in free radical polymerization. B. P. Chekal, **J. M. Torkelson**

3:35 – Intermission.

3:50 – 684. Nucleation in Popcorn Polymerization of Polyvinylpyrrolidone Induced by Purified 1-Vinyl-3(E)-Ethylidenepyrrolidone (EVP). **S. Y. Tseng**, D. Pothier, M. Gaul

4:20 – 685. Pattern formation in a complex reaction system by chemo-mechanical coupling. O. Steinbock, E. Kasper, **S. C. Mueller**

4:50 – 686. Phase separation of polymer mixtures driven by temporally periodic forcing. **Q. Tran-Cong-Miyata**, S. Nishigami, T. Ito, T. Norisuye

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Section D

Westin Copley Plaza -- America North

Green Polymer Chemistry

T. McCarthy and J. J. Watkins, *Organizer*

1:30 – 687. Candida antarctica lipase B catalyzed polymerization of lactones: effect of immobilization matrix on polymerization kinetics and molecular weight. T. Nakaoki, B. Kalra, A. Kumar, **R. A. Gross**, O. Kirk, M. Christensen

1:50 – 688. Crystallization of poly(lactic acid) stereocomplexes. S. Kang, **K. Aou**, R. L. Pékrl, S. L. Hsu

2:10 – 689. Raman and light scattering analysis of poly(lactic acid) flexibility. **S. Kang**, G. Zhang, K. Aou, R. L. Pékrl, S. L. Hsu, X. Yang

2:30 – 690. Enzyme-catalyzed condensation polymerizations of linear aliphatic hydroxyl acids. **A.**

Mahapatro, A. Kumar, R. A. Gross

2:50 – 691. Interactions of model water soluble polymers with montmorillonite clay for biodegradable nanocomposite applications. **C. T. Haynes**, R. Y. Lochhead

3:10 – 692. Catalytic degradation of polystyrene into styrene with solid base catalysts supported on MCM-41. **Q. Li**, S. E. Brown, J. Zheng, L. J. Broadbelt

3:30 – 693. Intrinsically conducting polymers and green chemistry. **G. A. Sotzing**, B. Lee, N. Reyes, M. B. Smith

3:50 – 694. Quartz crystal microbalance (QCM)-based ion sensors for pollution prevention. **D. W. Howie Jr.**, D. A. Hoagland

4:10 – 695. Halogen-free FR-4 printed circuit board. **C. H. Lin**, C. S. Wang

Application Rheology of Dispersed Systems

Cosmetics and Polymer/Clay Interactions

Cosponsored with Division of Polymeric Materials: Science and Engineering

R. S. Rounds, *Presiding*

J. E. Glass, R. Ryntz, and R. Fernando, *Organizer*

Chemical Science Using Synchrotron Radiation

Synchrotron techniques and their applications

Cosponsored with Division of Analytical Chemistry

H. Blount, *Presiding*

R. F. Hirsch, *Organizer*

THURSDAY MORNING

Section A

Westin Copley Plaza -- America South

Advances in Controlled Radical Polymerization

RAFT. Mechanisms, Materials and Processes

T. P. Davis and G. Moad, *Presiding*

K. Matyjaszewski, *Organizer*

8:30 – 696. Kinetics and Mechanism of RAFT Polymerization. **G. Moad**, E. Rizzardo, S. H. Thang

9:00 – 697. Macromolecular Design via the Interchange of Xanthates (the MADIX Process): Structural Effect of MADIX Agents. **M. Destarac**, D. Taton, S. Z. Zard

9:30 – 698. New molecular architectures and microgel stars from RAFT polymerization - a facile route to macroporous membranes. **T. P. Davis**, H. T. Lord, M. R. Whittaker, J. F. Quinn, C. Barner-Kowollik, M. H. Stenzel, J. P. A. Heuts

10:00 – 699. Raft-mediated polymerization using dithioesters generated from tetrathiophosphates. A. Duréault, M. Destarac, F. Leising, R. Guerrero, Y. Gnanou, **D. Taton**

10:20 – 700. Functional polymers from novel carboxyl-terminated trithiocarbonates as highly efficient RAFT agents. **J. T. Lai**, D. Filla, R. Shea

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10:40 – 701. Vinylidene chloride copolymerization with methyl acrylate by reversible addition-fragmentation chain transfer (RAFT) process. R. Severac, **P. Lacroix-Desmazes**, B. Colomer, Y. Bastaraud, B. Boutevin

11:10 – 702. Kinetic and MALDI-TOF MS investigation of the RAFT polymerization of N-isopropylacrylamide. **A. H. E. Mueller**, C. Schilli, M. Lanzendoerfer

11:40 – 703. RAFT polymerization in homogeneous aqueous solution. **C. L. McCormick**, A. B. Lowe

12:10 – 704. RAFT in emulsion polymerization: what makes it different. **R. G. Gilbert**, S. W. Prescott, W. Smulders, M. J. Monteiro, M. J. Ballard, E. Rizzardo

Section B

Westin Copley Plaza -- America Center

5th International Biorelated Polymers

Macromolecular Bioconjugates and Natural Biopolymers

A. V. Kabanov and A. J. Domb, *Presiding*

R. M. Ottenbrite and S. Zalipsky, *Organizer*

8:30 – Introductory Remarks.

8:35 – 705. Molecular bridges between biochemistry and polymer chemistry. S. Schmatloch, C. H. Weidl, I. v. Baal, J. Pahnke, **U. S. Schubert**

8:55 – 706. Self-assembly of a polymer-protein giant amphiphile. **K. Velonia**, A. E. Rowan, R. J. M. Nolte

9:15 – 707. Controlled radical polymerization of N-isopropylacrylamide and of activated esters for the synthesis of polymer-protein and polymer-drug conjugates. **C. Schilli**, A. H. E. Mueller, S. H. Thang, E. Rizzardo, B. (K.) Chong

9:35 – 708. Polymeric precursors for preclinical development of therapeutic polymer conjugates. S. Brocchini, **N. Koseva**, E. Pedone, A. Godwin, S. Gac-Breton

9:55 – 709. Novel DNA-polysaccharide triple helix and its application to a gene carrier. **K. Sakurai**, S. Shinkai, K. Koumoto

10:15 – Intermission.

10:30 – 710. Reversible, dithiobenzyl urethane-linked polymer-protein conjugates **S. Zalipsky**, R. Kiwan, N. Mullah

10:50 – 711. Immobilization of small synthetic Thrombin inhibitors at the surface of a polymeric biomaterial. **M. Gouzy**, C. Sperling, U. Streller, K. Salchert, F. Böhme, B. Voit, C. Werner

11:10 – 712. The Influence of Synthetic Heparin and Heparin Mimetics or Analoga for Drug Design. **H. Baumann**

11:30 – 713. Ultrathin Film Strategies for DNA Assemblies and Adsorption: Substrates for Optobioelectronics, Gene Therapy, and Microarrays **R. Advincula**, M. Park, W. Blanton, X. Fan

11:50 – 714. Human hair keratins: Structural biomolecules for use in biomaterials development. **M. E. Van Dyke**

Section C

Westin Copley Plaza -- Essex South

Nonlinear Dynamics in Polymeric Systems

Cosponsored with Division of Physical Chemistry

L. K. Gross, *Presiding*

J. A. Pojman and Q. Tran-Cong-Miyata, *Organizer*

8:30 – Introductory Remarks.

8:35 – 715. Crystallization of dyes in dewetted polymer films. **O. Karthaus**, T. Imai

9:05 – 716. Nonlinear dynamics for a new micro-fabrication technology of polymer materials. **M.**

Shimomura

9:35 – 717. Dissipative structure-assisted self-assembly of metal nanoparticles in polymer matrices. **T.**

Yamaguchi

10:05 – 718. Convection in polymeric and polymerizable fluids. **E. Kumacheva**, S. Xu

10:35 – Intermission.

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10:50 – 719. Pattern formation by rim instability in dewetting polymer thin films. **Y. Asano**, H. Miyaji, Y. Miyamoto, K. Fukao

11:20 – 720. Viscous fingering of silica suspensions dispersed in polymer fluids. **M. Kawaguchi**

11:50 – 721. Effective interfacial tension in miscible polymers systems: A possible new source of instabilities. **J. A. Pojman Sr.**, N. Bessonov, R. Texier-Picard, V. Volpert, H. Wilke

Section D

Westin Copley Plaza -- America North

Green Polymer Chemistry

T. McCarthy and J. J. Watkins, *Organizer*

8:30 – 722. 'Green' multifunctional cross-linking monomers for vinyl thermal and radiation curing. **J.**

Penelle, T. Xie, S. L. Hsu, A. A. Stolov

8:50 – 723. Tailoring polymer surface structures and properties via adsorption of poly(vinyl alcohol) from aqueous solution and subsequent chemical transformations. M. Quarmyne, **W. Chen**

9:10 – 724. Surface modification of poly(p-xylylene) films. **M. Herrera-Alonso**, T. J. McCarthy

9:30 – 725. Synthesis and characterization of responsive macromolecules. **T. E. Long**, L. Kilian, K. Yamauchi, V. Sinani, C. L. Hudelson

9:50 – 726. Second-generation hydroxyphenylsulfonium salts : A new class of cationic photoinitiators. **J. Ahn**, J. V. Crivello

10:10 – 727. Synthesis of Poly(arylene ether) by Pd-catalyzed Polycondensation of Bisphenol and Bisarylhalide. **Y. Shibasaki**, M. Ueda

10:30 – 728. Reactions of Amines with Epoxidized Soybean Oil. **N. Juangvanich**, J. Stoffer

10:50 – 729. Converting waste PET into high value-added radiation curable oligomers. **D. E. Nikles**, M. S. Farahat

11:10 – 730. Polymerization of dicyanoalkenes and -arenes by unprotected sugars. **D. J. Sandman**, I. Kim, J. Njus, M. Caron

Application Rheology of Dispersed Systems

Electrostatic Stabilization and Associative Polymers

Cosponsored with Division of Polymeric Materials: Science and Engineering

R. Ryntz, *Organizer, Presiding*

J. E. Glass and R. Fernando, *Organizer*

THURSDAY AFTERNOON

Section A

Westin Copley Plaza -- America South

Advances in Controlled Radical Polymerization

Other CRPs and Conventional Radical Polymerization

M. Buback and T. Endo, *Presiding*

K. Matyjaszewski, *Organizer*

1:30 – 731. 3D-Microfluidic devices using liquid polymer precursors. **C. N. Bowman**, R. P. Sebra III, K. T. Haraldsson, N. Luo, J. B. Hutchison, K. S. Anseth

2:00 – 732. Lewis acid-catalyzed tacticity control in radical polymerization of (meth)acrylamides. **Y. Okamoto**, S. Habaue, Y. Isobe

2:30 – 733. Radical polymerization of spiro orthocarbonates bearing exomethylene groups. **T. Endo**, F. Sanda

3:00 – 734. Investigations into the termination kinetics of homo- and copolymerizations of acrylates and methacrylates using the SP-PLP technique. **M. Buback**, M. Egorov, A. Feldermann

3:30 – 735. Homopolymerization of macromonomers via various polymerization processes: A critical review with new developments. F. Peruch, J. Lahitte, F. Isel, **P. J. Lutz**

4:00 – 736. Electron spin resonance investigations of propagation and termination in the free radical polymerization of styrene from zero to the limiting conversion. **P. B. Zetterlund**, B. Yamada

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- 4:30 – 737.** Electron Paramagnetic Resonance Study of Conventional Radical Polymerizations using Radical Precursors Prepared by Atom Transfer Radical Polymerization. **A. Kajiwara**, M. Kamachi
5:00 – 738. RAFT techniques in emulsion polymerization: Rate of polymerization and radical phase transfer events. **S. W. Prescott**, M. J. Ballard, E. Rizzardo, R. G. Gilbert
5:30 – Concluding Remarks.

Section B

Westin Copley Plaza -- America Center

5th International Biorelated Polymers PEGylated Biomaterials and Applications

C. Scholz and D. H. Thompson, *Presiding*
R. M. Ottenbrite and S. Zalipsky, *Organizer*

- 1:30 –** Introductory Remarks.
1:35 – 739. Acid-triggered dePEGylation of sterically stabilized fusogenic DOPE:BVEP vesicles. J. A. Boomer, H. D. Inerowicz, J. Shin, **D. H. Thompson**
1:55 – 740. Radiation sensitive PEG-liposomes for drug delivery. **D. F. O'Brien**, K. McGovern, T. Spratt, A. Mueller
2:15 – 741. Grafting of high-density poly (ethylene glycol) brush through primary polymer monolayer. **I. Luzinov**, B. Zdyrko, V. Klep
2:35 – 742. Self-organization of block copolymers of poly(L-lactide) and poly(oxyethylene) into nano-structured bands and their network system. **T. Fujiwara**, Y. Kimura
2:55 – 743. Phospholipase D mediated synthesis of PEG-lipids for liposomal drug delivery. S. Zalipsky, **N. N. Mullah**, J. Gittelman, C. Engbers
3:15 – Intermission.
3:30 – 744. New PEG-based polymers as conjugating agents of bioactive molecules. **G. M. Bonora**, S. Drioli, M. Ballico
3:50 – 745. Natural synthetic hybrid block copolymers and their cell interactions. **C. Scholz**, J. Zanzig, J. Schmidt
4:10 – 746. Poly(ethylene glycol) block copolymers containing protein folding motifs. **H. Klok**, G. W. M. Vandermeulen, A. Rösler
4:30 – 747. Star-shaped poly(ethylene glycol monomethacrylate) and polyglycerol dendrimers as new drug delivery systems. **T. Ooya**, J. Lee, K. Park
4:50 – 748. Design and Synthesis of Amphiphilic Poly(ethylene glycol) Derivatives as Micellar Drug Delivery Systems. **L. Tian**, K. E. Uhrich

Section C

Westin Copley Plaza -- Essex South

General Papers

Polymer Characterization B

P. T. Mather, *Presiding*
D. Garcia, *Organizer*

- 1:30 – 749.** Study of the living cationic copolymerization of Styrene and *p*-methylstyrene using real-time ATR-FTIR monitoring. R. F. Storey, **S. J. Jeskey**
1:50 – 750. Solid-state ¹³C-NMR investigation of isolated di- and triblock copolymer chain conformations and dynamics. **F. E. Porbeni**, I. D. Shin, X. Shuai, J. L. White, A. E. Tonelli
2:10 – 751. Ethylene carbonate and caprolactone copolymers : One- and two dimensional NMR characterization. **S. Agarwal**, N. Naumann, X. Xie
2:30 – 752. Counterion effects on the crystallization kinetics of PVDF in Nafion®/PVDF blends. **E. P. Taylor**, R. B. Moore
2:50 – 753. Crystallization kinetics of bisphenol A polycarbonate in polycarbonate/ionomer blends. **L. Xu**, R. A. Weiss
3:10 – 754. Determination of crystallinity of polyethylene-alpha-olefin copolymers by thermal analysis: relationship of ΔH_m° and density. **F. M. Mirabella Jr.**, A. A. Bafna

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- 3:30 – 755.** Melting and crystallization behavior of metallo-supramolecular polymers studied by scanning probe microscopy techniques. D. Wouters, C. Eschbaumer, **U. S. Schubert**
- 3:50 – 756.** Miscibility enhancement of polystyrene/poly (ethylene oxide) blends by sulfonation of polystyrene. R. Guan, **J. Gupton**, R. A. Weiss, M. T. Shaw
- 4:10 – 757.** Morphology-rheology correlations for polystyrene/layered-silicate nanocomposites. **Y. Zhang**, J. Zhu, E. A. Verploegen, E. P. Giannelis, U. Wiesner
- 4:30 – 758.** Rheology and morphology of molecular composites from sulfonated rigid-rods. J. Wu, G. Kim, **P. T. Mather**, N. Venkatasubramanian, F. E. Arnold, T. D. Dang
- 4:50 – 759.** Effects of melt flow on mechanical properties of short fiber reinforced composites. **W. P. M. Abeysekera**, X. Li, Z. Han
- 5:10 – 760.** Poly(2,5-benzophenone) coil-rod-coil block copolymers and their phase separation behavior **E. C. Hagberg**, V. V. Sheares

Section D

Westin Copley Plaza -- America North

Nonlinear Dynamics in Polymeric Systems

Cosponsored with Division of Physical Chemistry

Q. Tran-Cong-Miyata, *Organizer, Presiding*

J. A. Pojman, *Organizer*

1:30 – Introductory Remarks.

1:35 – 761. Structure development from simultaneous phase separation and crystallization of metallocene polyolefin blends. **C. C. Han**, H. Wang, K. Shimizu, H. Kim, E. K. Hobbie, Z. Wang

2:05 – 762. Control of diblock copolymer morphology in thin film. Y. Tsori, **D. Andelman**

2:35 – 763. Dynamics of interface instabilities in lamellar phases. **M. Buchanan**, J. Leng, S. U. Egelhaaf, M. E. Cates

3:05 – Intermission.

3:20 – 764. Observation of growth pulsations in polymer dendritic crystallization in thin PEO/PMMA blend films. **J. F. Douglas**, V. Ferreiro, J. Warren, A. Karim

3:50 – 765. Laser-induced nanometer morphological dynamis of PMMA film studied by time-resolved interferometry. **H. Masuhara**

4:20 – 766. Hysteresis in domain size of immiscible polymer blend under shear flow and the related viscoelastic properties. **Y. Takahashi**