

2001 Fall Meeting

2001 FALL NATIONAL ACS MEETING

Chicago, IL (August 26-30, 2001)
Program Meeting Chair: [Chris Bowman](#)

Abstract/Preprint Deadline: April. 13, 2001

The preliminary detailed program is available.

Combinatorial and Highly Parallel Techniques for New Materials

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Advances in Photoinitiated Polymerization (cosponsor PMSE)

Kevin Belfield, Dept. of Chemistry, U of Central Florida, PO Box 162366, Orlando, FL 32816-2366; (407)823-1028; kbelfiel@mail.ucf.edu; James Crivello, Dept. of Chemistry, Rensselaer Polytechnic Institute, Troy, NY 12180, (518) 276-6825, fax (518) 276-4045, CRIVEJ@RPI.EDU.

Macromolecular Assemblies for Optical and Electronic Applications in Memory of Sukant Tripath (cosponsor PMSE)

J. Paul Armistead, Office of Naval Res., 800 N. Quincy St., Arlington, VA 22217-5660; (703) 696-4315, FAX (703) 696-6887, armistj@onr.navy.mil ; Anthony Guiseppi-Elie, VA Commonwealth Univ., Rm. 408/409, School of Engg., P.O. Box 843068, 601 W. Main St., Richmond, VA 23284-3068; (804) 827-7016, FAX (804) 827-7029, guiseppi@vcu.edu ; Michael F. Rubner, MIT, Dept. of Mats. Sci. & Engg., 77 Massachusetts Ave., Cambridge, MA 02139; (617) 253-4477, rubner@mit.edu ; Daniel J. Sandman, University of MA - Lowell, Dept. of Chem., 1 University Ave., Lowell, MA 01854; (978) 934-9383, FAX (978) 577-1414, daniel_sandman@uml.edu ; Kenneth Wynne, VA Commonwealth Univ., Dept. of Chem. Engg., P.O. Box 843028, 601 W. Main St., Richmond, VA 23284-3028; (804) 828-9303, FAX (804) 828-4269, kjwynne@vcu.edu.

2000 Nobel Laureates in Polymer Chemistry Symposium

Kenneth J. Wynne, Department of Chemical Engineering, Virginia Commonwealth University, 601 West Main Street, P.O. Box 843028, Richmond, VA, 23284-3028; (804) 828-9303, FAX: (804) 828-4269, kjwynne@vcu.edu

Advances in Polyurethanes

James E. McGrath, Virginia Tech University, 2108 Hahn Hall, Blacksburg, VA 24061, (540)231-5976, fax (540)231-8517, jmcgrath@vt.edu.

Tailored Synthetic Polymers As Biomaterials

T. Deming, Dept. of Chemistry, Univ. of California-Santa Barbara, Santa Barbara, CA 93106; (805)893-8474; fax (805)893-7221; tdeming@engineering.ucsb.edu; D. Tirrell, California Institute of Technology, Dept. of Chemical Engineering, 1200 E. California Blvd., Pasadena, CA 91125; (626)395-2423; tirrell@caltech.edu.

PVC and Related Polymers: Chemistry and Applications

W. Starnes, College of William & Mary, Dept. of Chemistry, P.O. Box 8795, Williamsburg, VA 23187-8795; (757)221-2552; fax (757)221-2715, whstar@wm.edu or whsstarnes@widomaker.com; D. E. Witenhafer, 6045 Glenbarr Place, Dublin, OH 43017; 614-761-8308, fax: 614-761-8298, dwit@compuserve.com.

Advances in Filler Technology

N. Singh, McKinsey and Company, 55 E. 52nd Street, New York, NY 10055, 212-446-8146, Fax (212)-644-7140, Navjot_singh@mckinsey.com; F. D. Blum, Department of Chemistry, Univ. of Missouri-Rolla, Rolla, MO 65409-0010, (573)341-4451; fblum@umr.edu.

Computer Modeling of Polymers (primary sponsor PMSE)

Sanat Kumar, Pennsylvania State Univ., Materials Science and Engineering, 316 Steidle Building, University Park, PA 16802, (814)865-3294, fax (814)865-2917, kumar@plmsc.psu.edu; Barry L. Farmer, AFRL/MLBP, 2941 P St, Suite 1, Wright-Patterson AFB, OH 45433-7750, (937)255-9209, fax (937)255-9157, farmerbl@ml.wpafb.af.mil; G. C. Rutledge,

2001 Fall Meeting

Dept. of Chemical Engineering, MIT, 25 Ames St., 66-350, Cambridge, MA -2139-4307, (617) 253-0171, RUTLEDGE@MIT.EDU.

Silsesquioxanes for Polymeric Nanocomposites

Patrick Mather, Chemical Engineering Department, University of Connecticut, 97 North Eagleville Road, U-136, Storrs, CT, 06269, (860)486-3542, fax (425)732-7593, Patrick.Mather@uconn.edu.

Macromolecular Assemblies for Optical and Electronic Applications

Kenneth J. Wynne, Department of Chemical Engineering, Virginia Commonwealth University, 601 West Main Street, P.O. Box 843028, Richmond, VA, 23284-3028, 804-828-9303, Fax: 804-828-4269, kjwynne@vcu.edu

Industrial Sponsors

General Papers

DIVISION OF POLYMER CHEMISTRY

CAUTION: Please see the [ACS website](#) for the official final program. This is only the preliminary program.

Final Program, 222nd ACS National Meeting --Chicago, Illinois-- August 26-30, 2001

C. N. Bowman, *Program Chair*

SUNDAY MORNING

Section A

Unknown Site

Unknown Room

Macromolecular Assemblies for Optical and Electronic Applications

Optical properties

Cosponsored with Division of Polymeric Materials: Science and Engineering

K. J. Wynne, J. P. Armistead, D. J. Sandman, and A. Guiseppi-Eli, *Organizer*

8:30 – 1. Rare earth-doped polymer optical waveguide amplifiers. **A. F. Garito**, R. Gao

9:00 – 2. Electroabsorption spectroscopy of higher order nonlinear susceptibilities in polymers. **J. Kumar**, K. Yang, D. Lee, D. Sandman, S. Tripathy

9:30 – 3. Chiral polymers for optical waveguides. **W. N. Herman**, G. A. Lindsay, D. Irvin, A. Guenther, A. Chafin

10:00 – 4. Multifunctional organic photorefractive materials: The past and future. **L. Yu**

10:30 – 5. Photoinduced chirality in azobenzene containing liquid crystal polymers. **P. Rochon**, A. Natansohn, Y. Wu

11:00 – 6. Optical limiting properties of indium and titanium phthalocyanines and naphthalocyanines. **M. Hanack**

11:30 – 7. Polymer optical and electronic based sensors. **J. B. Lando**

Section B

Unknown Site

Unknown Room

Advances in Filler Technology

Polymer-Filler Interfaces

N. Singh and F. D. Blum, *Organizer*

8:30 – 8. Stratification of processes near surfaces in multi-phase polyolefins. **M. W. Urban**, J. M. Stegge

9:00 – 9. Relaxation dynamics in thin films of poly(vinyl acetate) and poly(methyl methacrylate). **K. Fukao**, S. Uno, Y. Miyamoto, A. Hoshino, H. Miyaji

9:30 – 10. Pdms fumed silica mixtures: Adsorption kinetics and viscoelastic properties near percolation threshold. **J. Cohen Addad**

10:00 – 11. Polymer filler interface characteristics: Determinant elements for filled polymer properties. **B. Haidar**, K. Vuillaume, A. Vidal

2001 Fall Meeting

10:30 – Intermission.

10:50 – 12. Positron annihilation spectroscopy as a novel surface probe of polymers. **Y. C. Jean**, R. Zhang, P. Mallon, H. Chen, C. Huang, Y. Li, J. Zhang, Y. Y. Huang, T. C. Sandreczki, Y. Wu

11:20 – 13. Graduated segmental mobility in polymer layers on silica. **F. D. Blum**, C. E. Porter, W. Lin

11:50 – 14. Dynamics of poly(vinyl acetate)-d₃ on silica. **R. D. O'Connor**, G. Xu, F. D. Blum

12:20 – 15. Investigation of two new fillers: Carbon coated silica and layered silicates for elastomer reinforcement. **D. J. Kohls**, G. Beaucage, S. E. Pratsinis, H. Kammler, G. Heinrich

Section C

Unknown Site

Unknown Room

Tailored Synthetic Polymers as Biomaterials

morning session

T. Deming and D. Tirrell, *Organizer*

8:30 – 16. Interaction of dispersed copolymer networks with oppositely charged amphiphilic molecules. **T. K. Bronich**, S. V. Vinogradov, A. V. Kabanov

8:55 – 17. Preparation of tritrypticin block copolymer bio-conjugates by fluorinated nitroxide mediated radical polymerization on solid support. **M. L. Becker**, J. Liu, K. L. Wooley

9:20 – 18. Synthesis of poly(ethylene glycol)-b-peptide diblock copolymers: Toward stimuli-sensitive self-assembled materials. **H. Klok**, G. W. M. Vandermeulen

9:45 – Intermission.

10:00 – 19. Degradation kinetics influence ECM production of photoencapsulated chondrocytes in PEG-based hydrogels. S. J. Bryant, K. L. Durand, **K. S. Anseth**

10:25 – 20. Physical hydrogels from short diblock polypeptide amphiphiles in dilute solution. **A. Nowak**, V. Breedveld, D. J. Pochan, T. J. Deming

10:50 – 21. Synthesis and characterization of elastin-mimetic block copolymers. **V. P. Conticello**, E. R. Wright, R. A. McMillan, A. Cooper, R. P. Apkarian

11:15 – 22. Synthesis and characterization of novel tricontinuous membranes consisting of hydrophilic/lipophilic/oxyphilic domains. P. Kurian, **J. P. Kennedy**

Three-Dimensional Silicon-Oxygen Cages: Materials for the 21st Century

Cosponsored with Division of Physical Chemistry

See Page X

SUNDAY AFTERNOON

Section A

Unknown Site

Unknown Room

Macromolecular Assemblies for Optical and Electronic Applications

Optical properties

K. J. Wynne, J. P. Armistead, D. J. Sandman, and A. Guiseppi-Eli, *Organizer*

1:30 – 23. Polymer architectures for sensory and photonic applications. **T. M. Swager**

2:00 – 24. Nanoscale self-assembly in highly conductive block-copolymers containing regioregular polythiophenes. **R. D. McCullough**

2:30 – 25. Detection of DNA hybridization using conductive polymer layers. **A. Guiseppi-Eli**

3:00 – 26. Electrochemical detection of nucleic acids on SAMs-constructed arrays. **G. F. Blackburn**, C. J. Yu, H. Yowanto, C. Tao, B. Terbrueggen

3:30 – 27. Morphology and micro-structure effects on the optical and electronic properties of conjugated polymeric films. **R. V. Gregory**, V. Vardeny, R. J. Samuels

4:00 – 28. Synthesis of starburst hexadecylaniline derivative of C₆₀ and its elastic submicroparticles. **L. Y. Chiang**

4:30 – 29. Oligonucleotide directed assembly of materials. S. M. Waybright, C. J. Murphy, **U. H. F. Bunz**

2001 Fall Meeting

4:50 – 30. Comparative study of chemically and enzymatically synthesized polyaniline by solid state NMR. S. K. Sahoo, R. Nagarajan, L. Samuelson, J. Kumar, **A. L. Cholli**

5:10 – 31. Novel templated polyphenol for ionic conductivity. **F. F. Bruno**, R. Nagarajan, S. K. Tripathy, J. Kumar, L. A. Samuelson

Section B

Unknown Site

Unknown Room

General Papers

Nanostructure in Polymeric Systems

A. Guymon, *Organizer*

A. Guymon, *Presiding*

1:30 – 32. Effect of molecular architecture on the thermotropic behavior of poly[11-(4'-cyanophenyl-4"-phenoxy)undecyloxy acrylate]s prepared via ATRP. **A. M. Kasko**, S. R. Grunwald, C. Pugh

1:50 – 33. Cyclodextrin-based polymers: Nanomaterials with built-in scavenging capabilities. **S. K. Young**, P. L. Vадja, E. Napadensky

2:10 – 34. Hyperbranched polymers based on diphenolic acid. Q. Hua, T. Tannahill, **J. A. Moore**

2:30 – 35. Nanostructured ultrathin films of water-soluble electroactive sexithiophene derivatives prepared using the layer-by-layer self-assembly approach. **J. Locklin**, J. H. Youk, C. Xia, R. C. Advincula

2:50 – 36. Polymer nanostructure formation in a smectic liquid crystal. **D. T. McCormick**, R. Chavers, C. A. Guymon

3:10 – 37. Nanopixelation of organic light-emitting diodes via nanosphere lithography. **J. G. C. Veinot**, H. Yan, J. Cui, T. J. Marks

3:30 – 38. Formation of a host nanostructure for ferroelectric liquid crystals using thiol-ene polymers. **N. B. Cramer**, A. W. Harant, E. Beckel, T. Davies, C. N. Bowman

3:50 – 39. Signature of nanoscale dynamic heterogeneity in polymers near the glass transition: Non-gaussian displacement distribution from single-molecule probe diffusion studies. **J. C. Quirin**, A. P. Bartko, R. M. Dickson, J. M. Torkelson

4:10 – 40. Nylon/graphite nanocomposites. **F. M. Uhl**, C. A. Wilkie

4:30 – 41. Surface initiated photopolymerization from gold. **D. J. Dyer**, T. Zhao, J. Green

4:50 – 42. Self-assembling nanostructures of silicate galleries consisting of poly(oxyalkylene)amines. **J. Lin**, R. Wang, I. Cheng

5:10 – 43. Micelle structure and fluorophilic character of fluorine-containing amphiphilic block copolymer. **K.**

Matsumoto, H. Mazaki, H. Matsuoka, H. Yamaoka

Section C

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Unknown Room

Tailored Synthetic Polymers as Biomaterials

afternoon session

T. Deming and D. Tirrell, *Organizer*

1:30 – 44. Acrylic-based copolymers for oral insulin delivery systems. **A. C. Foss**, N. A. Peppas

1:55 – 45. Ultrasound-stimulated molecular "on-off switch" for insulin delivery. **B. D. Ratner**, C. Kwok, P. Mourad, L. A. Crum

2:20 – 46. Electrostatic self-assembly of biopolymer systems. **G. C. L. Wong**

2:45 – Intermission.

3:10 – 47. Synthetic polymers for the binding of fat in the intestinal tract. **T. H. Jozefiak**, W. H. Mandeville, S. R. Holmes-Farley, C. Arbeeny, C. C. Huval, R. Sacchiero, D. Concagh, K. Yang, C. Maloney

3:35 – 48. Modified biomedical poly(urethane) block copolymers: Nanocomposites and polyisobutylene comb polymers. **J. Runt**, D. M. Weisberg, R. Xu, J. T. Garrett, E. Manias, A. Benesi, B. Gordon, A. J. Snyder, G. Rosenberg

4:00 – 49. Photocrosslinkable polymers for biomedical applications. **M. W. Grinstaff**, M. A. Carnahan, P. S. Fleming, D. L. Hatchell, N. R. Luman, M. T. Morgan, S. Patel, W. C. Ray, A. Pfister-Serres, K. A. Smeds, K. L. Touw, E. B. Walsh

4:25 – 50. Block copolymer microspheres containing intricate nanometer-sized segregation patterns. **G. Liu**, Z. Lu, F. Liu

Section D

Unknown Site

Unknown Room

Unilever Award Symposium

2001 Fall Meeting

Cosponsored with Division of Polymeric Materials: Science and Engineering
W. T. Ford, Organizer, Presiding

- 1:30 – 51.** Advanced polymeric materials technologies for electronics applications. **E. Reichmanis**
2:05 – 52. Approaches to nanostructures for advanced microelectronics using well-defined polymeric materials. **C. J. Hawker**, A. W. Bosman, E. Harth, T. P. Russell, B. van Horn, J. M. J. Fréchet
2:40 – 53. Biomolecular recognition and control of nano magnetic and semiconductor materials. **A. Belcher**, C. Flynn, S. Whaley, C. Mao, E. Gooch
3:15 – 54. Opportunities for photopatterning in nanotechnology. **C. K. Ober**
3:50 – Award Presentation: K. P. Ananth
3:55 – 55. Molecular templating of nanoporous organosilicates by tailoring the microphase separation of triblock copolymers. **S. Yang**

Three-Dimensional Silicon-Oxygen Cages: Materials for the 21st Century

II

Cosponsored with Division of Physical Chemistry
See Page X

SUNDAY EVENING

Unknown Site

Unknown Room

Division of Polymer Chemistry General Papers Poster Session

Synthesis

C. A. Guymon, *Organizer*

5:30 - 7:30

Posters on Polymer Characterization.

- 56.** Helical poly(2-methoxystyrene) with a memory for chirality. **K. Gordon**, S. Negi, I. M. Khan
57. Electroluminescence and photoluminescence of poly(m-phenylenevinylene)-alt-(p-phenylenevinylene) light emitting copolymers. **E. E. Gurel**, Y. Pang, F. E. Karasz
58. Layer by layer self-assembly of polythiophene. **L. Zhai**, R. McCullough
59. Observing the aggregation of a novel amphiphilic polymer in solution using ¹H-NMR relaxation times (T₁). A. C. Watterson, **M. Chen**
60. Optimizing conductivity in polyelectrolytes: Simulations and synthesis. **J. F. Snyder**, M. A. Ratner, D. F. Shriver
61. Study on the helical conformation of poly(phenylpropionic esters). J. W. Y. Lam, Y. Dong, K. K. L. Cheuk, **B. Z. Tang**
62. Behavior of HAS-derived nitroxides in thermally degraded poly(acrylonitrile-butadiene-styrene) based on ESR imaging and FTIR. S. Schlick, **M. V. Motyakin**
63. Biospinning: Evaporation of water by drawing. **T. Tanaka**, J. Magoshi, Y. Magoshi, S. Inoue, M. Kobayashi, H. Tsuda, S. Nakamura
64. Thermal properties of rigid rod epoxies cured with diaminodiphenylsulfone and dicyandiamide. **W. Su**, H. Huang, W. Pan
65. Applications of water soluble cobalt (II) porphyrin in controlled radical polymerizations of acrylates in aqueous media. **Y. Li**, L. Basicckes, B. B. Wayland
66. Blown oil ceramer coatings for corrosion protection. **G. Teng**, J. Li, L. He, M. D. Soucek
67. Study on colorless photosensitive polyimides for high aperture ratio TFT-LCD. **M. H. Yi**, E. Y. Chung, K. Choi, K. Kim, G. Kim
68. Chitosan as polycation in electrostatic assemblies of conjugated polymers. **M. Kim**, C. Sung, D. J. Sandman
69. Chain transfer to SCLC polymer in free-radical polymerizations of methyl acrylate. C. Pugh, **G. Fan**, J. Leiston, Y. Pae
70. Bonded thermosensitive poly(N-isopropylacrylamide) hydrogels on cellulose supports. **J. Xie**, Y. Hsieh
71. Comparison of analytical methods for characterization of the thermochromic transition of poly(3-alkylthiophene)s. C. Beildeck, **B. L. Lucht**, W. B. Euler
72. Conformation and orientation of polymers in good solvents under external electric fields. **Y. Chen**, C. Shew
73. Crystal structure of mixed n-paraffin solid solutions. **K. Song**

2001 Fall Meeting

74. Cure kinetics of UV-curable adhesives. **Q. Wang**, P. Zhu, Z. Li
75. Curing of epoxy and glucose maleic acid ester vinyl copolymer. **S. O. Han**, B. Defoort, L. T. Drzal
76. Effect of α -methyl-naphthalene as a compatibilizing agent on the mechanical properties of the fiber spun from the coal tar pitch-based thermosetting resin. **M. Ota**, H. Omiya, K. Itoh, S. Otani
77. Effect of posttreatment temperature on the formation of multihollow P(St-EA-AA) latex particles. **C. Kan**, P. Zhao, D. Liu
78. THE ENDOTHERMIC NATURE OF THE BINDING OF ANIONIC BILE SALTS TO A CATIONIC ADSORBENT. **C. K. Williams**, W. C. Galley, G. R. Brown
79. Ensemble fluorescence methods for monitoring relaxation and mobility in polymers at the nanoscale. **C. J. Ellison**, D. B. Hall, K. E. Miller, J. S. Royal, J. M. Torkelson
80. Highly emissive aggregates of 1-methyl-1,2,3,4,5-pentaphenylsilole in solvent mixtures and in polymer matrixes. Luo, Z. Xie, J. W. Y. Lam, C. Qiu, H. Kwok, X. Zhan, Y. Liu, D. Zhu, **B. Z. Tang**
81. Highly luminescent hyperbranched polyphenylenes containing fluorene moieties. **H. Peng**, Z. Xie, J. Luo, L. Cheng, K. Xu, D. Jia, H. Kwok, B. Z. Tang
82. Hydrodynamic properties of the porphyrin-core dendrimers having ester linkages. **M. J. Kim**, H. Tang, D. E. Nikles
83. Hydrogen bonding and chain helicity of amino acid-containing polyacetylenes. K. K. L. Cheuk, B. Li, J. Chen, J. W. Y. Lam, **B. Z. Tang**
84. Hydrogen bonding in cyanoimidazole monomers and polymers. **C. G. Densmore**, J. G. Meyer, N. DeHaan, P. G. Rasmussen, R. Raptis, P. Baran
85. Identification of molecular interactions in non-covalent adducts of sodium poly(α ,L-glutamate) with poly(vinylpyrrolidone) **K. P. Pemawansa**, I. M. Khan
86. Photorefractive properties of novel materials based on methine dyes. **L. Wang, M. Ng, L. Yu**
87. Induced helical poly(3-methyl-4-vinylpyridine). **B. Sannigrahi**, I. M. Khan
88. IR profiling of degradation products in poly(acrylonitrile-butadiene-styrene) exposed to UVB radiation and oxygen. S. Schlick, **J. G. Bokria**
89. Isothermal crystallization kinetics of in situ composites of poly(ether ether ketone) and a novel poly(aryl ether ketone) liquid crystalline containing fluorine. Y. Wang, G. Wang, **Z. Jiang**, Z. Wu
90. Self-organizational structures of amphiphilic poly(phenylacetylenes) with amino acid appendages. L. Bingshi, C. Kevin Ka Leung, X. Xudong, B. Chunli, **T. Benzong**
91. Low-loss fluorinated poly(arylene ether sulfide)s for optical waveguide devices. J. Kim, J. Kang, J. Kim, **J. Lee**
92. Solution properties of some new polybetains and their potential use in protein purification. **H. A. Al-Muallem**, M. I. M. Wazeer, S. A. Ali
93. Metal nanostructures on modified PEN films. B. Hu, **R. M. Ottenbrite**, J. Lin, J. Siddiqui
94. Molecular intercalate between poly(ethylene oxide) and p-bromotoluene. Y. Fang, X. Zhu, **D. Yan**
95. Monte Carlo simulations for the conformational behavior of a polymer chain in a flexible tube. A. Ajavon, **C. Shew**
96. Morphology and structure of polyamide 4 14 lamellar crystals grown from dilute solution. Y. Li, G. Zhang, **D. Yan**
97. Morphology and tensile properties of polyurethane/zinc sulfonated polystyrene ionomeric blends. W. Yang, G. Li, S. Zhu, **J. Shen**
98. Morphology of poly (acrylonitrile-butadiene-styrene) and corresponding homopolymers and dicopolymers from spin probe ESR and simulations. S. Schlick, **B. Varghese**
99. Nanoscale confinement effect on photophysics in ultrathin polydimethylsiloxane films. **S. D. Kim**, J. M. Torkelson
100. Neutron scattering investigations on fluorosilicone gels. **F. Horkay**, R. J. Uriarte, A. Hecht, E. Geissler
101. Morphology and properties of nanosize latex soap-free poly(methyl methacrylate-butyl acrylate)/polystyrene polymer. **J. Jin**, X. Zong, H. Zhang, **J. Wang**
102. Thermal decomposition processes in polybenzoxazines investigated by TGA and GC-MS. **K. Hemvichian**, H. Ishida
103. Photodynamic polymers containing azo chromophores both in main chain and side chain. Y. He, **X. Wang**, Q. Zhou
104. Thermal properties of phthalic anhydride and phenolic resin cured rigid rod epoxy resins. **W. Su**, Y. Lee, W. Pan
105. Photografting of maleic anhydride onto hydrocarbons: A model study on the grafting mechanism. **B. Pan**, K. Viswanathan, C. E. Hoyle, R. Redfean, R. B. Moore
106. Photoluminescence and electroluminescence of blue-green light emitting oxadiazole-containing polymers. **M. Zheng**, L. Ding, E. E. Gurel, P. M. Lahti, F. E. Karasz
107. Polyanthryl dendrimers: Synthesis, photochemistry, and host-guest complexation by charge transfer interactions **M. Takahashi**, H. Tomita, K. Aoshima, T. Oshikawa, M. Yamashita
108. Preparation of intrinsically conductive polymer impregnated open cell foams and their use as sensory filters. **G. A. Sotzing**, N. R. Scruggs, Y. Wang, J. Carignan, R. A. Weiss
109. Preparation of mesoporous silica film containing excited-state intramolecular proton transfer dye. **J. Seo**, **S. Kim**, M. Ogawa, **S. Y. Park**
110. Probing solvent effect on the chain conformation of PPI-2 dendrimer via NMR. M. Chai, **D. He**, **S. Carper**, D. Williamson

2001 Fall Meeting

- 111.** Products of radiation degradation of polystyrene: Calculation of energy transitions and oscillator forces. **N. N. Barashkov, V. G. Klimenko**, T. V. Sakhno, V. G. Senchishin
- 112.** Raman study on the intermolecular interactions between thermotropic liquid-crystalline oligomers: Comparison of the effect of poly(propylene oxide) and poly(ethylene oxide) coils on the intermolecular structures. **S. Yu**, H. Choi, K. H. Yu, J. M. Rhee
- 113.** Rheological behavior of silk fibroin aqueous solution: Gel-sol transition and fiber formation. **M. Kobayashi**, T. Tanaka, S. Inoue, H. Tsuda, J. Magoshi, Y. Magoshi, M. A. Becker
- 114.** Small-angle X-ray scattering study of thermoreversible Poly(vinyl chloride) gels. M. Seki, **S. Yamamoto**, Y. Aoki, K. Takagi, S. Nojima, Y. Izumi
- 115.** Smart polymeric coatings for surface decontamination: Coatings for the decontamination of mercury and lead contaminated surfaces. **H. N. Gray**, D. L. McClaugherty, A. Kippenberger
- 116.** Solid state microstructure of polylactide copolymers by atomic force microscopy. **M. Kanchanasopa**, J. Runt
- 117.** Solid-state polyelectrolyte complexes of branched poly(ethylenimine) and sodium lauryl sulfate. J. Herrman, L. B. Passe, **G. B. Kharas**, E. Bravo-Grimaldo, C. G. Bazuin, P. T. Romanowski, R. M. Schueller
- 118.** Solubility of poly(aryl ether ketone)s controlled by synthetic methods. Z. Gao, C. Chen, H. Mao, T. Ben, Z. Wu, **W. Zhang**
- 119.** Solution aggregation studies of aromatic/ionic copolymers using isomerization spectroscopy. **L. L. Norman**, C. J. Barrett
- 120.** Structural aspects of the thermochromic transition in the polydiacetylene of bis(ethylurethane) of 5,7-dodecadiyne-1,12-diol (ETCD) **D. Lee**, S. K. Sahoo, A. L. Cholli, D. J. Sandman
- 121.** Structure of DPAA/styrene gel in free radical polymerization. **D. Kim**, D. Sohn, J. Kim, S. Lee, Y. Han
- 122.** Study of the effect of nucleators on the glossiness and mechanical properties of PS/PE blends. Z. Wang, L. He, **J. Shen**
- 123.** Study on aliphatic-aromatic hyperbranched polyesters. T. Qiu, **L. Tang**, X. Zhang, X. Tuo, **D. Liu**
- 124.** Study on crosslinking mechanism for polyacrylate/polyurethane composite coating. **L. Tang**, X. Liu, D. Liu, Q. Zhou
- 125.** Study on phase transitions of polymerizable dendritic benzenecarboxylates containing diacetylenic groups. **S. J. Lee**, H. J. Cho, J. Y. Chang
- 126.** Study on relationship of monomer relative reactivity and monomer structure parameters in non-equilibrium step copolymerization. Z. Du, Q. Zhou, X. Wang, **D. Liu**
- 127.** Effect of heat treatment on thermal property and morphological structure of poly(ether ether ketone). W. Hu, B. Liu, **C. Chen**, Z. Jiang, W. Zhang, Z. Wu
- 128.** Kinetics of nylon 10 10 melt intercalation in montmorillonite. G. Zhang, Y. Li, **D. Yan**, X. Yang, E. Zhou
- 129.** Thermal properties of high refractive index epoxy resin system. **W. Su**, Y. Fu, W. Pan
- 130.** Tuning interactions between novel polyelectrolyte micelles. **S. R. Bhatia**, M. Crichton, A. Mourchid, R. K. Prud'homme, J. Lal
- 131.** Ultra-thin coatings of polyvinyl alcohol deposited on organic monolayers. **M. Kozlov**, T. J. McCarthy
Posters on Polymer Synthesis.
- 132.** Butylene-bridged disiloxacyclopentanes, liquid precursors for non-shrinking polycarbosiloxanes **P. P. Chen**, K. Rahimian, D. Loy
- 133.** Carbohydrate functionalized polythiophenes as biosensors. **K. L. Zaiger**, L. Zhai, R. D. McCullough
- 134.** Convenient reaction protocol to covalently bonded organic/inorganic hybrids. Y. Wei, B. Xu, M. Lu, C. F. Cheung, **Z. Peng**
- 135.** Experimental investigation into one-step and two-step polymerization via Michael addition from primary amine. **F. He**, K. Shooshtari, H. Collier
- 136.** Gradient copolymerization of styrene and 4-acetoxystyrene via nitroxide-mediated controlled radical polymerization. **M. K. Gray**, S. T. Nguyen, H. Zhou, J. M. Torkelson
- 137.** Heterocyclic terminated bis-O-diyndarene monomers and polymers. **K. P. U. Perera**, **D. W. Smith Jr.**
- 138.** Living anionic polymerizations of well-defined sugar-containing diblock fluorocopolymer and its application in CO₂ emulsion polymerizations. **W. Ye**, **J. M. DeSimone**
- 139.** Modification of epoxy resin by amino-polycarbonate. D. Hao, **X. Tang**
- 140.** Chemical modification of copoly(dimethylsiloxane/vinylmethylsiloxane) by Ru-catalyzed addition of aromatic ketones to vinyl groups: Photochemical and electrochemical properties. **J. M. Mabry**, J. Brooks, W. P. Weber
- 141.** Copolymerization of norbornenes and functionalized norbornenes with ethene. **C. Andes**, K. Oyler, A. Sen
- 142.** Modified pseudo-high-dilution technique to synthesize parent aniline trimer. **L. Chen**, Y. Yu, H. Mao, Z. Wu, W. Zhang, Y. Ji, Y. Wei
- 143.** New metallocene catalyst having an indenyl and a fluorenyl ligand for ethylene-polar monomer copolymerization. **J. Imuta**, Y. Toda, N. Kashiwa
- 144.** Novel photoluminescent materials based on 3,4-ethylenedioxythiophene and polyphenylenevinylene **R. V. Gregory**, **P. Pitman**, **M. F. Pepitone**, **S. Hardaker**
- 145.** Controlled anionic polymerization of 3-(triethylsilyl)propyl isocyanate. J. Ahn, C. Lee, Y. Shin, **J. Lee**
- 146.** Effect of amine substituents on hydrogen bonding and network structure of polybenzoxazines. **H. Kim**, H. Ishida

2001 Fall Meeting

147. Precision synthesis of (1 \rightarrow 6)- α -D-glucopyranan by cationic ring-opening polymerization of 1,6-anhydro- β -D-glucopyranose **A. Kusuno**, M. Mori, T. Satoh, M. Miura, H. Kaga, T. Kakuchi
148. Controlled preparation of gold nanoparticles using well-defined star block copolymers. **J. H. Youk**, J. Locklin, M. Park, J. Yang, J. Mays, R. C. Advincula
149. Preparation and antibacterial activity of pyridinium-carrying polypropylene particles. G. Li, **J. Shen**
150. Controlling stereoselectivity in ROMP of monocyclic olefins catalyzed by tungsten-based systems. **V. Dragutan**, I. Dragutan, M. Dimonie
151. Self-assembling side chain azo polyelectrolytes from THF-water dipping solution. X. Tuo, Y. Deng, Y. Li, **X. Wang**
152. Study on the direct polycondensation of poly(DL-lactic acid). H. Mai, **Y. Zhao**, J. Wang
153. Syntheses of crosslinkable poly(carbosilane/siloxane)s by hydrosilation in toluene and supercritical carbon dioxide. H. Zhou, S. Venumbaka, J. Fitch, **P. Cassidy**
154. Synthesis and characterization of diglycidyl ether epoxy resin with biphenyl-4,4'-diol and epoxy chloropropane C. Zhang, **H. Na**, J. Mu, S. Liang, Z. Wu
155. Design and synthesis of high stability chromophores with a fluorine-containing polyimide for optical waveguide materials. **W. Leng**, Y. Zhou, Q. Xu, J. Liu
156. Synthesis and characterization of fire-safe polymers. **A. J. Gavrin**, E. Yoo, R. J. Farris, E. B. Coughlin
157. Dipeptide methacrylate derivatives incorporating pyroglutamic acid. **T. J. Smith**, D. A. Parrish, A. M. Cuevas, L. J. Mathias
158. Synthesis and characterization of novel soluble poly(aryl ether ketone)s. B. Liu, W. Hu, Y. Jin, **C. Chen**, Z. Jiang, W. Zhang, Z. Wu
159. Synthesis and characterization of series monomers and polymers of 2,2'-biimidazole **F. He**, K. Shooshtari, H. Collier
160. Synthesis and ionic conductivity of hyperbranched poly(glycidol). **X. Wang**
161. Synthesis and spectroscopic study of three difunctional photoelectrical model molecules. M. Sun, F. Li, Y. Meng, **J. Wang**, B. Wang
162. Synthesis and thermal crosslinking characterization of poly(ether ether ketone) copolymers containing the structure unit(20%) of 1,5'-naphthalene rings Y. Niu, **Z. Jiang**, G. Wang, Z. Wu
163. Excited-state intramolecular proton transfer in quinoline-cored dendritic molecules. **S. Kim**, D. W. Chang, **S. Y. Park**
164. Well-defined Ru-coordinated block copolymers of 2-vinylpyridine with 2-(N-carbazolyl)ethyl methacrylate. Y. Cho, C. Ihn, H. Lee, **J. Lee**
165. Approach to synthesis of molecular reinforced polymeric materials: Graft copolymerization of vinyl monomers from chloromethylated polyethersulfone via ATRP. S. Zhu, G. Xiao, **D. Yan**
166. Free radical grafting of hindered phenol antioxidants onto PE and PP and their antioxidative effect. T. H. Kim, **N. Lee**
167. Approach towards high molecular mass polymers via metal complexing oligomers. U. S. Schubert, **S. Stefan**
168. Aromatic polyimide with new photoreactive side groups and its applications in aligning liquid-crystals. S. W. Lee, S. I. Kim, **M. Ree**
169. Incorporation of phosphorus into conjugated polymers. Z. Jin, M. Escobar, **B. L. Lucht**
170. Synthesis of aromatic polyamide with small polydispersity via polycondensation. **Y. Shibasaki**, T. Araki, M. Ueda
171. Fluorocarbon-containing acrylic (co)polymers with high transparency at 157 nm. **Y. C. Bae**, C. K. Ober
172. Investigation of the effects of chain transfer agent architecture on the synthesis of near monodisperse poly(N,N-dimethylacrylamide) via RAFT **M. S. Donovan**, A. B. Lowe, C. L. McCormick
173. Synthesis of highly branched copolyether via cationic copolymerization of 3-methyl-3-oxetanemethanol with tetrahydrofuran. J. Hou, **D. Yan**
174. Fumarate based polyester for use in bioresorbable bone cement compositions. **G. B. Kharas**, G. Villasenor, J. Herrman, K. Mc Colough, L. B. Passe, A. Scola III, K. Watson, M. J. Yaszemski
175. Synthesis of poly(methylene-b-styrene) by sequential living polymerization. **X. Zhou**, K. J. Shea
176. Synthesis of poly(thieno[3,4-b]thiophene) and its electrochemical characterization G. A. Sotzing, **K. Lee**
177. Synthesis, characterization, and electrical properties of new conducting poly(1-alkyl-3,4-dimethyl-2,5-pyrrolylene) **I. T. Kim**, S. W. Lee, T. H. Kwak, J. Y. Lee, H. S. Park, R. L. Elsenbaumer
178. Fluorescent hyperbranched polyether with color effect. C. Gao, J. Hou, **D. Yan**, B. Zhang, W. Tang
179. Study of the vinyl addition polymerization of polar substituted norbornenes with late transition metal catalysts. **T. Sakai**, B. Novak
180. Anionic polymerization of methyl methacrylate by using self ligated initiators. **T. Nugay**, Z. T. Hamoudi
181. AIBN-initiated copolymerization of methyl acrylate in the presence of α -olefins. **S. Elyashiv**, A. Sen
182. Novel synthesis of main-chain chiral poly(alkyl-aryl ketone). P. Wei, **Z. Wu**
183. Bis-ortho-dinylarene polymerization as a novel route to carbon fiber and microstructures. **H. Zengin**, D. W. Smith Jr.
184. Cationic ring-opening polymerization of cyclic thionocarbonates. **F. Sanda**, X. Xu, N. Nemoto, T. Endo

2001 Fall Meeting

- 185.** C-glycoside dendrimers: Attempted preparations by alkyne coupling and from allyl-C-glycosides. **M. J. Panigot, R. Murthy, D. Broadway**, S. M. Winn, K. Tran, S. Kim
- 186.** Preparation of dendritic macromolecules containing benzoxazine moiety. **S. Choi**, H. Ishida
- 187.** Laterally attached SCLCPs designed to exhibit smectic C mesophases. C. Pugh, **M. J. Rubal**, P. Zhu
- 188.** Soluble polythiophenes: Synthesis, characterization and molecular weight studies **S. Oztemiz**, G. Beaucage, H. B. Mark Jr
- 189.** Synthesis and characterization of conjugated diblock copolymers. **H. Wang, M. Ng, L. Yu**
- 190.** Synthesis and optical properties of symmetric organic molecules and polymers. **X. Bi**, D. Wang, Z. Xu, Z. Wu
- 191.** Synthesis of methyl acrylate and α -olefin copolymer by free radical polymerization. **S. Liu**, A. Sen
- 192.** Novel aromatic polymers with 1,3-benzoxazole groups in the main chain, polyamides derived from 2-(4-carboxyphenyl)benzimidazole-5-carboxylic acid: Synthesis and characterization J. J. Ferreira, **A. E. Lozano**, J. G. de la Campa, J. de Abajo
- 193.** Oligonucleotide modified organic molecules. **B. Erdogan**, C. J. Murphy, U. H. F. Bunz
- 194.** Phosphorescent copolymer of Ir-bound 2-(4-vinylphenyl)pyridine with N-vinylcarbazole. **J. Lee**, N. Kang, Y. Cho, J. Ahn, C. Lee, J. Kim
- 195.** Polyaromatic ether/imines containing cyclopentadienyliron cations. A. S. Abd-El-Aziz, **T. H. Affi**, E. K. Todd, G. Ma
- 196.** Polymerization of vinyl monomers with indium metal and indium halides. **G. D. Mendenhall**
- 197.** Preparation of discotic liquid crystals containing stilbazole moiety. **J. H. Lee**, M. J. Han, S. H. Hwang, J. Y. Jho
- 198.** Ring opening polymerization of 2,2-divinyl-4,4,6,6-tetramethylcyclotrisiloxane: Synthesis of regular poly[2,2-bis(3',3',3'-trifluoropropyl)dimethylsilylethyl]-4,4,6,6-tetramethyltrisiloxane] by hydrosilylation of poly(2,2-divinyl-4,4,6,6-tetramethyltrisiloxane) with 3,3,3-trifluoropropyltrimethylsilane W. P. Weber, **G. Cai**
- 199.** Selective synthesis of linear polydicyclopentadiene with tungsten-based ROMP catalysts. **V. Dragutan**, I. Dragutan, M. Dimonie, M. J. Abadie, C. Couve
- 200.** Solution and solid state polymerization of 2,3-dicyano-5,7-dimethyl-6H-1,4-diazepine **I. Kim**, B. M. Foxman, J. Njus, D. J. Sandman
- 201.** Syntheses and evaluation of photopolymerized fluorinated acrylates as potential non-wettable coatings. **B. S. Shemper**, L. J. Mathias
- 202.** Synthesis and characterization of adamantane-containing polyenaminonitriles. **D. W. Han**, J. A. Moore
- 203.** Synthesis and characterization of alkyl-bithiazole-bis(3,4-ethylene-dioxythiophene) co-oligomers for potential electronic applications **J. Cao**, M. D. Curtis
- 204.** Synthesis and characterization of diglycidyl ether epoxy resin containing biphenyl. C. Zhang, **H. Na**, J. Mu, C. Liu, Z. Ge, Z. Wu
- 205.** Synthesis and characterization of ether-ketone hyperbranched polymers from mixtures of AB₂ and AB monomers. **J. Baek**, L. Tan
- 206.** Synthesis and characterization of fluorinated polyether containing biphenyl. B. Liu, W. Hu, **C. Chen**, X. Zhao, Z. Jiang, W. Zhang, Z. Wu
- 207.** Synthesis and characterization of highly blue-emitting poly(m-phenylenevinylene) derivative with different content of cis- and trans-olefins. **L. Liao**, Y. Pang
- 208.** Synthesis and characterization of nanometer scale rigid cyclic oligomer containing 3,3,3-trifluoromethyl-biphenyl moieties **T. Ben**, X. Wang, C. Chen, H. Cao, X. Liu, H. Qiu, Z. Wu, W. Zhang
- 209.** Synthesis and characterization of novel nanometer scale rigid macrocyclic oligomers. X. Wang, **T. Ben**, C. Chen, X. Liu, X. Zhao, G. Dang, H. Qiu, Z. Wu, W. Zhang
- 210.** Synthesis and characterization of novel polymers with (3,5-difluoromethyl)phenyl side group B. Liu, W. Hu, S. Zhao, **C. Chen**, Z. Jiang, W. Zhang, Z. Wu
- 211.** Synthesis and characterization of ortho-, para-polyaniline derivatives via palladium catalyzed C-N coupling **R. E. Ward**, T. Y. Meyer
- 212.** Synthesis and characterization of phenyl modified PDMS/PHMS copolymers. H. Lin, **C. Lin**, M. Yang
- 213.** Synthesis and characterization of polyisobutylene brushes on silicate substrates via carbocationic polymerization. **I. Kim**, A. P. Angelopoulos, R. Faust
- 214.** Synthesis and characterization of polyisobutylene-based semicrystalline ternary ABC linear triblock copolymers. **Y. Kwon**, M. S. Kim, R. Faust
- 215.** Synthesis and characterization of semi-fluorinated polylactide. **N. K. Abayasinghe**, D. W. Smith Jr.
- 216.** Synthesis and characterization of sulfonated polyimides for fuel cell application. **H. Kim**, M. H. Litt
- 217.** Synthesis and characterization of syndiotactic polypropylene copolymers with higher α -olefins. **S. M. Graef**, A. J.
- Van Reenen, U. M. Wahner, R. D. Sanderson, R. Brüll, H. Pasch
- 218.** Synthesis and chemical modification of poly(divinylsiloxane). **G. Cai**, W. P. Weber
- 219.** Synthesis and electrorheology of poly(p-phenylene) particle. J. W. Kim, **H. J. Choi**, C. A. Kim, M. S. Jhon

2001 Fall Meeting

220. Synthesis and liquid crystalline state polymerization of mesogenic diacetylenes with a 1,3,5-triazine core **C. J. Lee**, J. Y. Chang
221. Synthesis and luminescence of poly(1-phenyl-1-hexyne) bearing naphthylethynylphenyl moiety. Z. L. Xie, J. W. Y. Lam, C. F. Qiu, J. D. Luo, H. S. Kwok, **B. Z. Tang**
222. Synthesis and photoresponsive behavior of poly{N-isopropylacrylamide-co-2-[4-(4'-ethoxyphenylazo)phenoxy]ethyl acrylate}. X. Liu, **X. Wang**, D. Liu
223. Synthesis and polymerization of 1,1,1-tris-(4-trifluorovinylphenoxyphenyl)-2,2,2-trifluoroethane: A new low loss optical polymer **M. S. Kumar**, E. J. Nelson, S. Chen, J. Ballato, S. Foulger, D. W. Smith Jr.
224. Synthesis and polymerization of a bis(o-aminophenol)-carboxylic acid AB₂ monomer. **J. Baek**, S. R. Simko, L. Tan
225. Synthesis and properties of amphiphilic poly(phenylacetylenes). **J. Chen**, K. K. Cheuk, J. Luo, **B. Z. Tang**
226. Synthesis and properties of liquid crystalline poly(oxyethylene)s containing (n-octylsulfonyl)alkylthio or (n-octylsulfonyl)alkylsulfonyl side group. **S. Han**, S. Hong, M. Lim, J. Moon, J. Lee
227. Synthesis and properties of poly(1-phenyl-1-octynes) bearing (-)-menthol and (-)-borneol pendants. J. W. Y. Lam, Y. Dong, K. P. Mok, K. K. L. Cheuk, **B. Z. Tang**
228. Synthesis and properties of some composite organic photorefractive materials. **M. He**, R. J. Twieg, U. Gubler, D. Wright, W. E. Moerner
229. Synthesis and property measurements of novel polyimide with bis(3-aminophenyl)-4-(trifluoromethyl)phenyl phosphine oxide. K. Jeong, Y. Jo, B. Myung, **T. Yoon**
230. Synthesis and quaternization of amine-linked diacrylate monomers. **D. Avcy'**, N. Osanyan, L. J. Mathias
231. Synthesis and thin film characterization of PS-b-PMMA diblock copolymers containing a photocleavable junction point. **J. T. Goldbach**, J. Penelle, T. P. Russell
232. Synthesis of electronic and photonic polymers intertwined with DNA. **R. Nagarajan**, S. Yang, S. Roy, J. Kumar, S. Tripathy, F. F. Bruno, L. Samuelson
233. Synthesis of polyamides containing octadecanedioic acid. **C. Bennett**, R. D. Davis, L. J. Mathias
234. Synthesis of polyhydrazones by diazo coupling reaction of bisacetoacetamides with diazonium salts. **B. J. Kim**, J. Y. Chang
235. Synthesis of star-shaped polystyrene with glycoconjugated core via arm first method. **A. Narumi**, T. Satoh, H. Kaga, T. Kakuchi
236. Synthesis, design, and preparation of binaphthyl containing chiral Schiff base liquid crystal X. Zhao, M. Wang, **C. Chen**, W. Zhang
237. Synthesis, light emission, and optical limiting of hyperbranched poly[phenylene-alt-(2,5-thienylene)s] J. Luo, H. Peng, L. Cheng, **B. Z. Tang**
238. Synthesis and characterization of poly(1-hexyl-3,4-dimethyl-2,5-pyrrolylene) and its application to sensor **I. T. Kim**, S. W. Lee, T. H. Kwak, J. Y. Lee, H. S. Park, H. Nam, J. Ha
239. Synthesis and thermotropic liquid crystalline behavior of novel poly(aryl ether ketone)s. H. Li, **C. Chen**, Z. Jiang, W. Zhang, Z. Wu
240. Affection of P-functional group to the activity of aniline. H. Mao, Y. Yu, L. chen, Z. Wu, **W. Zhang**
241. Study of synthesis of parent aniline trimer. **Y. Yu**, L. Chen, H. Mao, Z. Wu, W. Zhang, Y. Ji, Y. Wei
242. Thermal cure modification of imide oligomers using new aryl-ethynyl end-caps. **D. A. Schorzman**, M. E. Wright
243. Thermally stable polymer network based on O-terphenyl. **Y. H. So**
244. Water-soluble fluorescent hyperbranched polysulfone-amine. C. Gao, **D. Yan**, B. Zhang, W. Tang

MONDAY MORNING

Section A

Unknown Site

Unknown Room

Nobel Laureates in Polymer Chemistry Symposium: A Polymer Chemistry Division- Society of Polymer Science Japan Cosponsored Symposium

Addresses from the 2000 Chemistry Nobel Laureates

K. J. Wynne and J. P. Armistead, *Organizer*

8:15 – Opening Remarks, J.P. Armistead

8:20 – Perspective, K.J. Wynne

8:30 – Special Introductory Remarks from the President of SPSJ, T. Kajima

8:35 – 245. Synthesis of conducting polymers. **H. Shirakawa**

9:35 – Intermission.

9:50 – 246. Synthetic metals: A novel role for organic polymers. **A. G. MacDiarmid**

10:50 – 247. Semiconducting and metallic polymers: The fourth generation of polymeric materials. **A. J. Heeger**

2001 Fall Meeting

Section B

Unknown Site

Unknown Room

Advances in Filler Technology

Filler Dispersion

F. D. Blum and N. Singh, *Organizer*

8:30 – 248. Modeling of organically-modified layered silicates in binary solvents. **B. L. Farmer**, R. A. Vaia, R. K. Bharadwaj

9:00 – 249. Natural fiber reinforcement of polymeric composites by reaction-induced phase separation. **S. C. Jana**, A. Prieto

9:30 – 250. Studies of polymer-filler interactions in filled systems. **A. Karim**, K. Barnes, A. Nakatani, D. Liu, J. F. Douglas, E. J. Amis

10:00 – 251. Anionic synthesis of trialkoxysilyl-functionalized polystyrenes and polybutadienes and their hydrolysis to hybrid star-branched structures. **R. P. Quirk**, K. Jiang

10:30 – Intermission.

10:50 – 252. Emulsion technique for polymer-based molecular- and nano-composites. **G. B. Rossi**, G. Beaucage, T. D. Dang, R. Vaia

11:20 – 253. Environmentally benign powder impregnation processing and role of novel water based coupling agents in natural fiber-reinforced thermoplastic composites. L. T. Drzal, A. K. Mohanty, **M. Misra**

11:50 – 254. Synthesis of hybrid nanoparticles and morphological characterization of composite ultrathin films. J. Pyun, **K. Matyjaszewski**, T. Kowalewski

Section C

Unknown Site

Unknown Room

General Papers

Synthesis/Characterization

A. Guymon, *Organizer*

T. Schuman, *Presiding*

8:30 – 255. Design, synthesis, and characterization of amphiphilic conjugated diblock co-oligomers **M. Ng**, L. Wang, B. Lin, R. Hui, A. Gopal, K. Y. C. Lee, S. Rane, Y. Liao, N. F. Scherer, L. Yu

8:50 – 256. 1-Vinyl-3-ethylidenepyrrolidone and its applications. **S. Y. Tseng**, M. A. Tallon, P. F. Wolf

9:10 – 257. Alkylthio-functionalized polymers comprising alternating phenylene and thienylene/bithienylene repeating units: The synthesis and characterization. **J. Xu**, S. C. Ng, H. S. O. Chan

9:30 – 258. Synthesis of novel modules for organometallic materials. **W. Steffen**, U. H. F. Bunz

9:50 – 259. Free radical co- and terpolymerization reactions in microemulsions. **I. Steinfatt**, G. Schmidt-Naake

10:10 – 260. Electrical and chemical modifications of Nafion membrane near surface regions. **P. Zhang**, W. M. Risen Jr.

10:30 – 261. High-response electro-optic phase modulator based on an intrinsically acentric layer-by-layer self-assembled molecular superlattice. **M. E. van der Boom**, J. E. Malinsky, Y. Zhao, S. Chang, W. Lu, S. Ho, T. J. Marks

10:50 – 262. Hyperbranched macroinitiator for atom transfer radical polymerization. **A. Carlmark**, E. Malmström

11:10 – 263. Continuous and batch polymerizations of vinylidene fluoride in dense carbon dioxide. **L. M. Wojcinski II**, M. Saraf, G. W. Roberts, J. M. DeSimone

11:30 – 264. Mechanistic aspects of regioregularity in head-to-tail coupled poly(3-alkylthiophenes). **D. W. Laird**, R. S. Loewe, P. C. Ewbank, J. Liu, L. Zhai, R. McCullough

11:50 – 265. Novel binder systems derived from poly(ethylene terephthalate) PET waste for solventless magnetic tape manufacturing II: Investigation on the mechanical properties of the methacrylated oligoesters. **M. S. Farahat**, D. E. Nikles

12:10 – 266. Effect of methyl group substitution in diamine and copolymer composition on physical properties and thermal stability of 6FDA based copolyimides. **P. S. G. Krishnan**, R. H. Vora, S. Veeramani

Polymers in Biomedical Applications

Cosponsored with Macromolecular Secretariat

See Page X

2001 Fall Meeting

Three-Dimensional Silicon-Oxygen Cages (polyhedral oligomeric silsesquioxanes, POSS): Materials for the 21st Century

I

Cosponsored with Materials Chemistry Secretariat

See Page X

MONDAY AFTERNOON

Section A

Unknown Site

Unknown Room

Nobel Laureates in Polymer Chemistry Symposium: A Polymer Chemistry Division- Society of Polymer Science Japan Cosponsored Symposium

Overviews and Current State-of-the-Art in Conducting Polymers and Related Fields

K. J. Wynne and J. P. Armistead, *Organizer*

1:00 – 267. Chemistry of conducting polymers. H. Meng, R. Helgeson, Y. Chen, **F. Wudl**

1:30 – 268. Electronic structure of conjugated oligomers and polymers: From solitons to excitons. **J. Bredas**

2:00 – 269. Polymer semiconductors: from integrated circuits, electronic papers to superconductors **Z. Bao**

2:30 – Intermission.

2:45 – 270. Design of conjugated polymers for light emitting diodes. **A. B. Holmes**, I. D. Rees, Y. Ma, R. E. Martin, C. Fischmeister, T. Sano, U. Hennecke, S. F. Lim, F. Cacialli, R. H. Friend

3:15 – 271. Light emitting diodes: Chemistry and device issues. **J. Kido**

3:45 – 272. Plastic solar cells. **N. S. Sariciftci**

4:15 – 273. Approaches to nonlithographic assembly: From polyelectrolyte multilayers to mesoscale systems. **P. T. Hammond**

Section B

Unknown Site

Unknown Room

Advances in Filler Technology

Novel Fillers

F. D. Blum and N. Singh, *Organizer*

1:30 – 274. Carbon nanotube filled polymer nanocomposites. **P. M. Ajayan**, L. S. Schadler

2:00 – 275. Conductive fillers for thermoplastic applications. **J. Amarasekera**, A. Burnell, C. Lietzau

2:30 – 276. Carbon nanofiber reinforced polymer composites. **D. G. Glasgow**, M. Lake, C. Kwag, G. G. Tibbetts

3:00 – 277. Buckytubes! New nanotechnologies from carbon **D. T. Colbert**

3:30 – Intermission.

3:45 – 278. Characterization of phenolic resin dispersions formed via in situ polymerization. **Y. Li**, J. Zhao, G. Bian, K. Tang

4:15 – 279. Graphite nanoplatelets as reinforcements for polymers. **L. T. Drzal**, H. Fukushima

4:45 – 280. Mechanical properties of modified starch filled poly(hydroxy ester ether) composites. **J. W. Lawton**, J. L. Willett

5:15 – 281. Unique additives and analyses. **D. W. Dwight**

5:45 – 282. Effects of α -Al₂O₃ on the ionic transport and conductivity properties of

poly[bis(methoxyethoxyethoxy)phosphazene] based polymer electrolytes. **Y. W. Chen-Yang**, **H. C. Chen**, F. L. Lin

Section C

Unknown Site

Unknown Room

General Papers

Polymers in Electronic Applications

A. Guymon, *Organizer*

S. K. Young, *Presiding*

2001 Fall Meeting

- 1:30 – 283.** Fluorine substituted conjugated system: Intramolecular charge transfer, emission properties, two-photon excitation, and prospective applications in polymer science **B. Strehmel**, A. M. Sarker
- 1:50 – 284.** Carbohydrate-based conducting polymers. **B. D. Martin**, C. H. Patterson, J. C. Mastrangelo, R. Aggarwal
- 2:10 – 285.** Adsorption of dye-functionalized polyelectrolytes for electro-optic multilayer thin films. **C. J. Barrett**, S. R. Isaac
- 2:30 – 286.** Novel heterocycle-based dyes for photonics: Effect of self-assembling, pyridine annulation, and medium on molecular response G. A. Pagani, T. J. Marks, A. Abbotto, L. Beverina, M. E. van der Boom, S. Bradamante, **A. Facchetti**
- 2:50 – 287.** Toward self-assembled electro- and photo-active organic nanotubes. **H. Fenniri**, P. Mathivanan, A. Ribbe, K. L. Vidale
- 3:10 – 288.** Design and synthesis of non-conjugated triarylamine dendrimers for opto-electronic applications. **K. Bronk**, S. Thayumanavan
- 3:30 – 289.** Electro-deposition and patterning ultrathin films of conjugated polymers on flat conducting surfaces: The precursor polymer and grafting approach for electro-optical applications. **R. Advincula**, C. Xia, P. Taraneekar, S. Deng
- 3:50 – 290.** Hydrogels for electronic DNA chips: Adhesion and deformation under electrodynamic stress. **T. M. Winger**, J. Krotz, T. Onofrey, J. Havens
- 4:10 – 291.** Highly emissive materials for optical displays. **N. G. Pschirer**, U. H. F. Bunz
- 4:30 – 292.** Effect of Forster energy transfer and hole-transport layer on performance of polymer light-emitting diodes. **L. Ding**, F. E. Karasz, Z. Lin, M. Zheng, L. Liao, Y. Pang
- 4:50 – 293.** Efficient consecutive assembly of large-response thin-film molecular electro-optic materials. **P. Zhu**, M. E. van der Boom, G. Evmenenko, P. Dutta, T. J. Marks
- 5:10 – 294.** Multi-dimensional polymer microstructures obtained using pattern forming states of liquid crystals as templates. **S. W. Kang**, S. Sprunt, L. Chien

TUESDAY MORNING

Section A

Unknown Site

Unknown Room

Advances in Photoinitiated Polymerization

New Free Radical Photopolymerization Chemistry

K. Belfield and J. V. Crivello, *Organizer*

- 8:30 – 295.** Photopolymerization of systems incorporating thiol-enes. **C. Hoyle**, M. Cole, M. Bachemin, B. Yoder, W. Kuang, C. Nguyen, S. Jonsson
- 9:00 – 296.** Investigation into the kinetics of thiol-ene and thiol-acrylate photopolymerizations using real-time FTIR. **N. B. Cramer**, C. N. Bowman
- 9:25 – 297.** Allyl ethers in the thiol-ene reaction. **N. Rehnberg**, A. Harden, S. Lundmark, A. Manea, L. Svensson
- 9:50 – 298.** Mechanistic aspects of donor structure in maleimide/donor photo-copolymerizations. **S. E. Jonsson**, D. Yang, V. Kalyanaraman, E. Shier, C. E. Hoyle, K. Belfield, K. Lindgren
- 10:20 – 299.** Spectroscopic investigation of three component initiator systems. **A. B. Scranton**, D. Kim, K. S. Padon
- 10:45 – 300.** Sensitized photopolymerization of acrylic systems using 2,3-substituted maleimides **C. K. Nguyen**, R. S. Smith, B. T. Cavitt, C. E. Hoyle, S. E. Jonsson, C. W. Miller, S. P. Pappas
- 11:10 – 301.** Photopolymerization of acrylates using an isopropylthioxanthone/amine/phthalimide combination to initiate polymerization. **T. B. Cavitt**, B. Phillips, C. K. Nguyen, C. E. Hoyle, S. Jonsson, K. Viswanathan
- 11:35 – 302.** Methodological investigation on the preparation of micropatterned polymer layers based on photoiniferter-mediated grafting polymerization. N. Luo, A. T. Metters, K. S. Anseth, **C. N. Bowman**

Section B

Unknown Site

Unknown Room

Advances in Filler Technology

Nanocomposites

F. D. Blum and N. Singh, *Organizer*

- 8:30 – 303.** POSSTM nanostructuredTM chemicals: True multifunctional polymer additives. **J. J. Schwab**, W. A. Reinert Sr., J. D. Lichtenhan, Y. An, S. H. Phillips, A. Lee
- 9:00 – 304.** Flame retardant properties of polycarbonate and montmorillonite clay nanocomposite blends. **H. A. Stretz**, J. H. Koo, V. M. Dimas, Y. Zhang

2001 Fall Meeting

9:30 – 305. Thermal and mechanical properties of alumina/polymethylmethacrylate (PMMA) nanocomposites: Effects of strong and weak interfaces. **B. J. Ash**, L. S. Schadler, R. W. Siegel

10:00 – 306. Viscoelasticity of polymer nanocomposites. **R. Krishnamoorti**, C. A. Mitchell, B. F. Casanueva

10:30 – Intermission.

10:45 – 307. Structure model for nylon 6/montmorillonite nanocomposites. **D. M. Lincoln**, R. A. Vaia, Z. Wang, B. S. Hsiao, R. Krishnamoorti

11:15 – 308. Organic/inorganic nanocomposite materials via polymer-in situ sol-gel processes. **K. A. Mauritz**, D. A. Mountz, S. K. Young

11:45 – 309. Nanocomposite materials prepared by surface initiated anionic polymerization from Si-gel and clay nanoparticle surfaces: Homopolymers and block-copolymers. **R. Advincula**, Q. Zhou, S. Wang, X. Fan, J. Mays, S. Pispas, G. Sakellariou, N. Hadjichristides

12:15 – 310. High temperature organic/inorganic nanocomposites from cubic silsesquioxanes. **R. M. Laine**, R. Tamaki, J. Choi, S. Kim

Section C

Unknown Site

Unknown Room

Industrial Sponsors Award

R. S. Moore and D. B. Chase, *Organizer*

8:30 – Introductory Remarks.

8:40 – 311. Temporal characteristics of polymer chain disentanglement. **A. D. English**

9:10 – 312. Fast magic-angle spinning NMR characterization of polymer interfaces in nanocomposites. **P. A. Mirau**, S. Yang

9:40 – 313. On the origin of abrasive wear of polymers. **T. A. Tervoort**, J. F. Visjager, P. Smith

10:10 – Intermission.

10:25 – 314. Dissolution and diffusion studies using FT-IR imaging. **J. L. Koenig**, B. A. Miller

10:55 – 315. Raman scattering as a probe of orientation in polymeric fibers. **D. B. Chase**, S. Frisk, J. F. Rabolt

Section D

Unknown Site

Unknown Room

Macromolecular Assemblies for Optical and Electronic Applications

Optical properties

K. J. Wynne, J. P. Armistead, D. J. Sandman, and A. Guiseppi-Eli, *Organizer*

8:30 – 316. Photophysics of semiconducting polymers. **A. J. Heeger**, D. Moses, P. Miranda

9:00 – 317. High performance organic electronic memory cells. **Y. Yang**

9:30 – 318. Optical and electronic properties of electron polymerized thiophene films. H. Ahn, **J. E. Whitten**

10:00 – 319. Effect of polymer structure on the performance of LEDs. S. Vaidyanathan, H. Dong, **M. Galvin**

10:30 – 320. Polymer electro-luminescence: Effect of micro structure and morphology. **F. E. Karasz**

11:00 – 321. Surface tension-confined microfluidics. **K. J. Wynne**, G. E. Wnek, P. Lam

11:20 – 322. Macromolecular aggregation of amphiphilic polymers. **A. C. Watterson**, K. Danprasert, M. Chen, N. Thorne, A. Diwan

11:40 – 323. Intercalation polymerization and macromolecular assembly of ethynylpyridine within layered aluminosilicate. **D. W. Kim**, A. Blumstein, H. Liu, S. Yang, J. Kumar, S. K. Tripathy

TUESDAY AFTERNOON

Section A

Unknown Site

Unknown Room

Advances in Photoinitiated Polymerization

New Photopolymerization Chemistry

K. Belfield and J. V. Crivello, *Organizer*

1:30 – 324. Two-photon induced photoinitiated polymerization. **K. D. Belfield**, J. Liu, K. J. Schafer, S. Andrasik

2:00 – 325. Mechanistic issues on two-photon polymerization. **F. Nifiatis**, R. Kannan, S. M. Kirkpartick, J. W. Baur

2001 Fall Meeting

- 2:25 – 326.** Quantum amplified isomerization: A new chemically amplified imaging system. **D. R. Robello**, J. P. Dinnocenzo, S. Farid, J. G. Gillmore, S. W. Thomas III
2:50 – 327. Harvesting the fields of inorganic and organometallic photochemistry for new photoinitiators. **C. Kotal**, Y. Yamaguchi, W. Ding, X. Li, C. T. Sanderson, I. J. Amster
3:20 – 328. Quaternary ammonium N,N-dimethyldithiocarbamates as photobase generators **M. Tsunooka**, H. Tachi, T. Yamamoto, M. Shirai
3:50 – 329. Synthesis and photochemical reaction of high performance UV curing oligomers. **T. Nishikubo**, A. Kameyama
4:20 – 330. Photopolymerization kinetics of nanostructured polymers templated by lyotropic liquid crystals. C. L. Lester, **C. A. Guymon**

Section B

Unknown Site

Unknown Room

Career Development in the Polymer Industry - Fact vs. Fiction

Cosponsored with Women Chemists Committee, and Younger Chemists Committee

R. S. Moore, *Organizer*

- 1:30** – Introductory Remarks.
1:45 – 331. Tools for chemists in the 21st century. **K. O. Havelka**
2:15 – 332. Managing your career in a changing company environment. **L. F. Charbonneau**
2:45 – 333. Polymer industrial careers: Adaptable threads? **M. W. Jordan**
3:15 – Intermission.
3:30 – 334. Opportunities and challenges of an industrial career. **H. N. Cheng**
4:00 – 335. Fun with plastics: Or how to "mold" your career. **H. S. Lackritz**
4:30 – 336. Challenges and pitfalls of a career in polymer information science. **E. S. Wilks**
5:00 – Concluding Remarks.

Section C

Unknown Site

Unknown Room

Combinatorial and Highly Parallel Techniques for New Materials

Tutorials and Integrated Approaches

J. Labadie, T. Long, and W. T. Ford, *Organizer*

J. Labadie, *Organizer, Presiding*

- 1:30 – 337.** Perspectives in combinatorial and high throughput synthesis: Small molecules to polymers. **J. Labadie**
2:10 – 338. Combinatorial polymer characterization. **D. A. Hajduk**
2:50 – 339. Combinatorial polymer science: What's new since Edison? **E. J. Amis**
3:30 – 340. High throughput synthesis and screening in specialty polymers applications. **D. Charmot**, P. Mansky, O. Kolosov, D. Benoit, G. Klaerner, M. Petro, M. Jayaraman, M. Piotti, H. T. Chang, V. Nava-Salgado
4:00 – 341. New polymers and dyes the combinatorial way. **M. Bradley**
4:30 – 342. High throughput strategies for monomer and polymer synthesis and characterization. **J. P. Lemmon**, R. J. Wroczynski, D. W. Whisenhunt Jr., W. P. Flanagan

Section D

Unknown Site

Unknown Room

Macromolecular Assemblies for Optical and Electronic Applications

Macromolecular Assemblies

K. J. Wynne, J. P. Armistead, D. J. Sandman, and A. Guiseppi-Eli, *Organizer*

- 1:30** – Introductory Remarks.
1:50 – 343. Using polyelectrolyte multilayer assemblies to control surfaces and interfaces. **M. Rubner**
2:20 – 344. 2-D colloidal arrays on surfaces using patterned polyelectrolyte multilayers. I. Lee, H. Zheng, M. Rubner, L. C. Kimerling, **P. T. Hammond**
2:50 – 345. Preparation and novel optical properties of hybridized nanocrystals of polydiacetylene. **H. Nakanishi**

2001 Fall Meeting

- 3:20 – 346.** Macromolecular assembly of conducting polymers via interpolymer complexation. **K. Levon**, S. Piankijesakul, N. Lokshin, O. Pyshkina, V. Golubev, A. Zezin, V. Sergeyev, V. A. Kabanov
- 3:50 – 347.** Non-aqueous layer-by-layer growth of diamine/cadmium selenide nanocrystal based light-emitting diodes. J. Lee, M. Mathai, F. Jain, **F. Papadimitrakopoulos**
- 4:20 – 348.** Macromolecular assemblies with nanoscale dimensions: structural and optical properties of conjugated polymers. **D. J. Sandman**
- 4:40 – 349.** Surface and bulk interactions of perfluorosulfonate ionomer membranes with polyelectrolyte solutions for fuel cell miniaturization and optical sensor applications. **A. P. Angelopoulos**
- 5:00 – 350.** Sulfonated styrene-based proton exchange membranes. **G. Wnek**
- 5:30 – 351.** Materials chemistry at the naval research laboratory. **L. J. Buckley**

TUESDAY EVENING

Unknown Site

Unknown Room

Joint POLY / PMSE Poster Session

Posters Presented on POLY Symposia Topics

Cosponsored with Division of Polymeric Materials: Science and Engineering

C. N. Bowman, *Organizer*

6:00 - 8:00

Posters Submitted for the Symposia on Three Dimensional Silicon-Oxygen Cages (Polyhedral Oligomeric Silsesquioxanes): Materials for the 21st Century, Cosponsored with Division of Inorganic Chemistry, Division of Physical Chemistry, and Materials Chemistry Secretariat

352. Residual stress behaviors in nanoscopic films of polymethylsilsesquioxane. W. Oh, **Y. Hwang**, T. J. Shin, M. Ree

353. Novel thermal plastic elastomer: Polybutadiene graft polyhedral oligomeric silsesquioxane copolymers. **L. Zheng**, R. J. Farris, E. B. Coughlin

354. Surface area and porosity engineering of alkylene-bridged methoxysilanes. **M. R. Minke**, D. A. Loy, K. J. Shea

355. Synthesis and characterization of polysilsesquioxane copolymers for low dielectric applications. **H. W. Ro**, K. Char, J. Lee, S. K. Min, H. Rhee, **D. Y. Yoon**

356. Variation of the microstructures of polyalkylsilsesquioxanes with substituent groups. **E. S. Park**, S. Park, H. Kim, J. Lee, H. W. Ro, S. Y. Yoon, **D. Y. Yoon**

Posters Submitted for the Symposia on Advances in Filler Technology.

357. Generation of electrospun fibers of nylon 6-montmorillonite. **R. A. Vaia**, H. Fong, W. Liu, C. Wang

358. Thermal analysis of ultrathin PS-r-PMMA copolymer films on silica. **B. Zhang**, F. D. Blum

359. Glass transition behavior of PMMA thin films. **M. T. Kabomo**, F. D. Blum

360. Thixotropic behavior of nitrile rubber composites containing waste rubber vulcanizates and carbon black. **N. Nugay**, Y. M. Sahin

361. Environment-friendly "green" biodegradable composites from natural fiber and cellulosic plastic. **D. Hokens**, A. K. Mohanty, M. Misra, L. T. Drzal

362. Natural fiber reinforced thermoset composites: Studies on fiber-matrix adhesion of aligned Henequen fiber Epoxy composites. **L. K. Belcher**, L. T. Drzal, M. Misra, A. K. Mohanty

363. Surlyn[®]/metal alkoxide nanocomposites formed through polymer- in situ sol-gel reactions. **P. R. Start**, K. A.

Mauritz

364. Measurement of diffusion coefficients for water transport through poly(styrene-b-isobutylene-b-styrene) ionomers by ATR-IR spectroscopy. D. A. Mountz, R. F. Storey, **K. A. Mauritz**

365. Manipulating the microstructure and rheology in polymer-organoclay composites. **M. Y. Gelfer**, C. Burger, B. S. Hsiao, B. Chu, H. H. Song, C. A. Avila-Orta, M. Si, M. Rafailovich, L. Liu, A. H. Tsou, F. Yeh

Posters Submitted for the Symposia on Advances in Photoinitiated Polymerization, Cosponsored with Division of Polymeric Materials: Science and Engineering

366. Time resolved EPR study of photoinitiation of polymerization. **I. V. Khudyakov**, M. Weber, N. J. Turro

367. Synthesis and photoinitiated cationic polymerization of fluoroalkyl propenyl ethers. **S. Shim**, J. Kim, D. H. Suh

368. Photocationic polymerization of 2-phenyloxetanes. **H. Sasaki**, H. Kato

369. Photo-curable pressure sensitive adhesives using alkyl oxetane. **H. Sasaki**

370. Preparation and application of photo-cationic curable silsesquioxane having oxetanyl group. H. Suzuki, **H. Sasaki**

371. Oxygen inhibition effect on surface properties of UV-curable acrylate coatings. **H. Cao**, E. Currie, M. Tilley, Y. J. Jean

372. Effects of microencapsulation on stability and reactivity of pyrylium salts as cationic photoinitiators. **E. Y.**

Komarova, K. Ren, D. C. Neckers

373. Vibrational overtone photopolymerization of methyl methacrylate. **T. G. Gerasimov**, D. L. Snavely

2001 Fall Meeting

- 374.** Study on photo-reaction of maleimide derivatives using Raman spectroscopy. **E. Okazaki**, A. Ito
- 375.** Novel radiation cure epoxide resins. **N. A. Nikolic**, R. A. V. Schultz
- 376.** Oxygen and radical photopolymerization in films. **V. V. Krongauz**, C. P. Chawla
- 377.** UV-curable linseed oil based ceramers. **A. H. Johnson**, L. E. Meemken, M. D. Soucek
- 378.** Photoinduced crosslinking of distyrylbenzene containing blockcopolymers for manufacture of new photoalignment layers. **V. Strehmel**, B. Stiller, B. Strehmel, A. M. Sarker, D. C. Neckers
- 379.** Real-time fluorescence for determining the relative sensitivity of reactive and non-reactive probes. **W. F. Jager**, M. Wallin, M. V. Fernandez
- 380.** Nanostructured organic-inorganic composites templated by photopolymerizable lyotropic liquid crystals. **J. H. Norton**, C. A. Guymon
- 381.** Phenothiazine photosensitizers for onium salt photoinitiated cationic polymerization. **Z. Gomurashvili**, J. V. Crivello
- 382.** Autohesion of polyethylene plates by the photo-induced grafting of methacrylamide. **K. Yamada**, **M. Hirata**
- Posters Submitted for the Symposia on Advances in Polyurethanes.
- 383.** Biocompatible waterborne polyurethane using L-lysine as extender. H. Chen, **X. Yu**
- 384.** Ionic transport mechanism in polyurethane electrolytes. **X. Wang**
- 385.** Kinetics of polyurethane networks prepared in a reactive medium. M. T. Tabka, J. Chenal, **J. Widmaier**
- 386.** Morphology and ionic conductivity of polyurethane/NaClO₄ complexes. W. Zhu, **X. Tang**
- 387.** Preparation of heparin containing polyurethane membrane. **J. M. Yang**, H. T. Lin, P. Y. Wang
- 388.** Structure-property relations of segmented blockcopolymers. **M. van der Schuur**, J. Feijen, R. J. Gaymans
- 389.** Synthesis and characterization of hyperbranched poly(ether-urethane)s. L. Hong, **X. Tang**
- 390.** Synthesis of amine-quinone polyurethanes with amine-quinone group in the backbone and acrylate group in the side chain of the polymer. **S. B. Hait**, D. E. Nikles
- 391.** Synthesis of side chain amine-quinone polyurethanes and their use to inhibit the corrosion of iron particles. **S. B. Hait**, J. Y. Huh, D. E. Nikles
- Posters Submitted for the Symposia on PVC and Related Polymers: Chemistry and Applications.
- 392.** Polymerization of vinyl chloride in supercritical carbon dioxide. G. Li, K. P. Johnston, H. Zhou, S. Venumbaka, **P. Cassidy**
- 393.** Effects of rate constant variations on the simulation of poly(vinyl chloride) reduction with tri-n-butyltin hydride. **S. K. Knudson**, W. H. Starnes
- 394.** γ -Radiation-induced graft copolymerization of N-[4-(N' substituted amino carbonyl)phenyl]maleimide onto poly(vinyl chloride)films. **A. S. Abdel-Naby**
- 395.** Internally plasticized PVC: Synthesis and characterization of poly(vinyl chloride-co-poly(ethylene-co-butyl acrylate-co-carbon monoxide)). N. Lee, **H. Jeon**, H. Kim, K. Lee
- 396.** Investigation at chain segmental level of the miscibility of poly(vinyl chloride)/poly(methyl methacrylate) blends. **Y. Mi**, C. Lau
- Posters Submitted for the Symposia on Tailored Synthetic Polymers as Biomaterials.
- 397.** Biodegradable thermoreversible hydrogel and their biomedical applications. **B. Jeong**, A. Gutowska
- 398.** Block ionomer complexes: Novel environmentally responsive materials. **S. V. Solomatin**, T. K. Bronich, V. A. Kabanov, A. Eisenberg, A. V. Kabanov
- 399.** Dendrimers as potential globular protein mimics. **S. Thayumanavan**, H. Zhao, P. Bharathi
- 400.** Fabrication and characterization of a polymeric lipid membrane on a polyelectrolyte thin film. **X. Sun**, H. Liu, K. M. Faucher, J. Feng, E. L. Chaikof
- 401.** Macroscopic and microscopic investigations of 2-hydroxyethyl methacrylate based molecularly imprinted networks. **E. Oral**, N. A. Peppas
- 402.** Microengineered surfaces for biomedical applications based on a polymeric active ester. **J. Lahann**, R. Langer
- 403.** Modified silicones for the stabilization of proteins and enzymes in emulsions: Potential vaccine delivery systems. **P. M. Zelisko**, M. A. Brook
- 404.** Molecular design and preparation of bioinspired phospholipid polymer as novel biomaterials. **K. Ishihara**, Y. Iwasaki
- 405.** More biocompatible polyurethanes via nitric oxide release. **M. M. Batchelor**, J. K. Politis, B. K. Oh, M. E. Meyerhoff
- 406.** Pluronic-polyethyleneimine conjugates for gene delivery: Cell transport and transgene expression. **C. L. Gebhart**, S. Sriadibhatla, S. Vinogradov, A. V. Kabanov
- 407.** Syntheses of aminosalicylate-based polyanhydride prodrugs: Esters, amides, and azos. K. E. Uhrich, **T. J. Anastasiou**, M. L. Beaton
- 408.** Synthesis of a polycarbonate of glycerol. **W. C. Ray III**, M. W. Grinstaff
- 409.** Synthesis of low molecular weight polyethylene particles for biomedical applications. Y. Haik, **J. Chatterjee**, C. Chen
- 410.** Vines-twinning polymerization: Amylose twines around synthetic polymers to form amylose-polymer inclusion complexes. **J. Kadokawa**, Y. Kaneko, S. Nagase, A. Nakaya, H. Tagaya
- 411.** Synthesis of adriamycin-conjugated glycol chitosan and in situ self association. **Y. J. Son**, Y. W. Cho, S. C. Lee, I. C. Kwon, H. Chung, S. Y. Jeong, C. R. Park, I. Kim, S. B. Suh

2001 Fall Meeting

412. Facile synthesis of hydroxylated dimethacrylates for use in biomedical applications. **M. D. Weir**, C. A. Khatri, J. M. Antonucci
413. Interferon- β production of fibroblast cells cultured on various protein membranes containing cell binding domain sequences. **Y. Takanashi**, T. Ohno, M. Hara, C. Tanaka, T. Asakura, A. Higuchi
414. New concept of multivalent ligands: Polyrotaxane-dipeptide conjugates as a specific inhibitor of intestinal peptide transporter PepT1. **T. Ooya**, T. Kawashima, I. Tamai, Y. Saito, Y. Sai, A. Tsuji, N. Yui
415. Novel biodegradable poly (ethylene glycol) scaffolds containing polyrotaxanes for cartilage tissue engineering. **W. K. Lee**, T. Ichi, T. Ooya, M. Katoh, T. Yamamoto, N. Yui
416. pH dependent inclusion complexation of poly(ϵ -lysine) with α -cyclodextrin. **K. M. Huh**, T. Ooya, S. Sasaki, N. Yui
417. Porous perfluoroalkyl acrylates: A potential ophthalmic biomaterial. **T. C. Hughes**, G. F. Meijs, H. Chaouk, J. G. Steele, G. Johnson
418. Ring-opening metathesis polymerization strategies to chemical and biological delivery agents. P. R. Hanson, **A. Harned**, D. A. Probst, B. A. Sheriff, K. W. C. Poon, C. Wiethoff, C. R. Middaugh
419. Supramolecular-structured hydrogel by inclusion complexation of poly(ethylene glycol) grafted dextran with α -cyclodextrin. **K. M. Huh**, T. Ooya, W. K. Lee, S. Sasaki, N. Yui
420. Synthesis and characterization of self-assembling block copolymers containing adhesive moieties. **K. Huang**, B. P. Lee, P. B. Messersmith
421. Synthesis of biodegradable polymer: Poly(sebacic anhydride-co-ethylene glycol). I. Chu, **C. Chan**
422. Thermoresponsive supramolecular morphologies from styrene-b-peptide diblock oligomers. **H. Klok**, J. F. Langenwalter, M. Achard, S. Lecommandoux
423. Enhanced production of antigen(CEA) by mammalian cells cultured on various polymeric films. **M. Hara**, S. Adachi, A. Higuchi
424. Enzymatic and non-enzymatic pathways to formation of DOPA-modified PEG hydrogels. **B. P. Lee**, J. L. Dalsin, P. B. Messersmith
425. Controlled growth of silicon dioxide from tris(trimethylsiloxy)silyl monolayer and the study of protein adsorption on the resulting model surfaces. **X. Jia**, T. J. McCarthy
426. Divergent synthesis of biodendrimers from glycerol and caproic acid. **M. T. Morgan**, M. W. Grinstaff
427. Effect of semi-IPN modification of phospholipid polymer on physical properties and biocompatibility of segmented polyurethane. **Y. Iwasaki**, N. Morimoto, K. Ishihara
428. Biologically inspired dendrimers based on glycerol and succinic acid. **M. A. Carnahan**, M. W. Grinstaff
429. Cell micropatterning substrates via two-photon-induced polymerization. **E. B. Walsh**, N. H. Grynawski, M. W. Grinstaff

Polymers in Biomedical Applications

V

Cosponsored with Macromolecular Secretariat

See Page X

WEDNESDAY MORNING

Section A

Unknown Site

Unknown Room

Advances in Photoinitiated Polymerization

Kinetics and Mechanisms of Free Radical Polymerizations

K. Belfield and J. V. Crivello, *Organizer*

- 8:30 – 430. Comprehensive discussion of the effect of photoinitiation rate on photopolymerization kinetics. K. A. Berchtold, T. M. Lovestead, **C. N. Bowman**
- 9:00 – 431. Photoinitiated crosslinking polymerization of monomer blends. **C. Decker**
- 9:30 – 432. Investigation of the effect of cure conditions on the network evolution and properties of highly crosslinked photopolymers. **H. Lu**, L. G. Lovell, C. N. Bowman
- 9:55 – 433. Effect of primary cyclization on network structure and polymerization kinetics. **J. E. Elliott**, C. N. Bowman, J. Nie
- 10:20 – 434. Kinetics of photopolymerization of neat acrylates and acrylate coatings. **I. V. Khudyakov**, M. B. Purvis, N. J. Turro

2001 Fall Meeting

10:45 – 435. Effect of pre-organization due to hydrogen bonding on the rate of photo-initiated polymerization. **J. F. G. A. Jansen**, A. A. Dias, M. Dorschu, B. Coussens

11:10 – 436. Synthesis and photochemistry of monodisperse oligomeric/polymeric photoinitiators. **Z. Liu**, M. Weber, N. J. Turro, B. O'Shaughnessy

Section B

Unknown Site

Unknown Room

Advances in Polyurethanes

J. Mcgrath, *Organizer*

S. Franyutti, *Presiding*

8:20 – Introductory Remarks.

8:30 – 437. Tutorial lecture on a review of essential polyurethane chemistry. **J. E. McGrath**

9:15 – 438. Tutorial lecture on a review of structure/property relationships in polyurethane elastomers and foams. **G. L. Wilkes**

10:00 – 439. Polyurethanes in biomedical applications. **S. Cooper**

10:45 – 440. Structure/property behavior of segmented poly(ester urethanes) containing different hard segment content. **E. B. Orlor**, D. A. Wroblewski, M. S. Campbell

11:15 – 441. Structure-property characterization of poly(urethane-urea)s fabricated with mixed soft segments of ultra-low monol poly(propylene glycol), poly(tetramethylene ether glycol), and tri(propylene glycol) **M. J. O'Sickey**, B. D. Lawrey, G. L. Wilkes

11:45 – 442. Quantification of competitive hydrogen bonding between hard and soft segments in polyurethanes: Quantum mechanical calculations and experimental results. **I. Yilgor**, E. Yilgor

Section C

Unknown Site

Unknown Room

Combinatorial and Highly Parallel Techniques for New Materials Synthesis and Surface Properties

J. Labadie, T. Long, and W. T. Ford, *Organizer*

T. E. Long, *Organizer, Presiding*

8:30 – 443. Parallel synthetic approaches for the discovery of antimicrobial polypeptides. **M. Wyrsta**, T. J. Deming

9:00 – 444. Combining statistical design of experiments with in-parallel polymerization methodologies. D. T. Williamson, **T. E. Long**

9:30 – 445. Expanding the 3-D architectural diversity of supramolecular dendrimers by functionalization of their periphery with libraries of minidendrons. **V. Percec**, M. N. Holerca, W. Cho, S. Uchida, G. Ungar, P. Heiney

10:00 – 446. Designing phase selectivity into polymer supports. **D. E. Bergbreiter**

10:30 – 447. High-throughput synthesis of nanoscale materials. **C. J. Hawker**, A. W. Bosman, J. M. J. Fréchet, E. Harth, A. Heumann, M. Ranger, G. Klaerner, D. Benoit

11:00 – 448. Characterization of surface energy effects on morphology of thin diblock copolymer films by high throughput techniques. A. P. Smith, A. Sehgal, E. J. Amis, **A. Karim**

11:30 – 449. Mechanical surface characterization: A promising procedure to screen organic coatings. **A. Krupicka**, A. Hult, G. Favaro

12:00 – 450. Combinatorial investigations of polymer adhesion. **A. J. Crosby**, A. Karim, E. J. Amis

Section D

Unknown Site

Unknown Room

PVC and Related Polymers: Chemistry and Applications Polymerization, Structural Modification

W. H. Starnes, *Organizer, Presiding*

8:30 – Introductory Remarks.

8:40 – 451. PVC, origin, growth, and future **D. Braun**

9:15 – 452. Controlled polymerization of vinyl chloride with butyllithiums and metallocene catalysts. **K. Endo**, N. Kaneda, H. Waku, M. Saitoh, N. Emori

2001 Fall Meeting

- 9:40 – 453.** Reaction of single site olefin polymerization catalysts with vinyl chloride. **R. F. Jordan**
10:05 – 454. Transition metal catalyzed polymerizations of vinyl chloride: Past and present. **H. W. Boone**, M. J. Mullins, P. S. Athey, R. V. Snelgrove
10:30 – 455. New polymers by living radical graft copolymerization initiated from the structural defects of poly(vinyl chloride) and by living radical polymerization of vinyl chloride. **V. Percec**, A. D. Asandei, F. Asgarzadeh, E. Ramirez, A. Capotto
10:55 – 456. PVC derivatives by carbocationic techniques. Z. Pi, **J. P. Kennedy**
11:20 – 457. Stereochemical microstructure dependence of physical properties of PVC: Principles and some recent correlations. **M. N. Guarrotxena**
11:45 – 458. Degradative transformations of poly(vinyl chloride) to new potentially useful products. T. Szakács, **B. Iván**, F. Pollreisz

WEDNESDAY AFTERNOON

Section A

Unknown Site

Unknown Room

Advances in Photoinitiated Polymerization

Cationic Photopolymerizations

K. Belfield and J. V. Crivello, *Organizer*

- 1:30 – 459.** Synergistic free radical effects in photoinitiated cationic polymerization. **J. V. Crivello**
2:00 – 460. Addition fragmentation agents with radical generating sites as photoinitiators for cationic polymerization. **Y. Yagci**, A. Onen
2:30 – 461. Diazonium salts as cationic photoinitiators: Radical and cationic aspects. **U. Mueller**
3:00 – 462. 2,3Dihydrofuran: A special vinyl ether **O. Nuyken**, H. Braun
3:30 – 463. Development of monomolecular, oligomeric, and polymeric photosensitizers for photoinitiated cationic polymerization **Y. Hua**, J. V. Crivello
3:55 – 464. Visible and long-wavelength photoinitiated cationic polymerization. J. V. Crivello, **M. Sangermano Sr.**
4:20 – 465. Synthesis and photoinitiated cationic polymerization of silicone-epoxy resins. **K. Y. Song**, J. V. Crivello, R. Ghoshal
4:45 – 466. Study of the photoinitiated cationic polymerization of 3,4-epoxy-1-butene **S. N. Falling**, J. V. Crivello, M. Sangermano

Section B

Unknown Site

Unknown Room

Advances in Polyurethanes

J. McGrath, *Organizer*

W. Risen and J. E. McGrath, *Presiding*

- 1:30 – 467.** Real-time, in situ monitoring of urethane-forming reactions **M. A. Thomson**, P. J. Melling
2:00 – 468. Exploring urea phase connectivity in flexible polyurethane foam formulations using lithium chloride as a probe. **A. Aneja**, G. L. Wilkes
2:30 – 469. Effect of fire retardant concentration on the thermal degradation of rigid polyurethane foams prepared with different blowing agents. **Z. Tang**, M. M. Maroto-Valer, J. M. Andrésen, J. W. Miller, M. L. Listemann, W. R. Furlan, D. Morita
3:00 – 470. Microdomain morphology and phase separation of poly(urethane urea) block copolymers. **J. T. Garrett**, C. A. Siedlecki, J. S. Lin, J. Runt
3:30 – 471. Synthesis and characterization of an alternate siloxane-urethane copolymer by three step reaction. **S. C. Ganguly**, J. G. Matison
4:00 – 472. Partitioning of a plasticizer in the domain structure of a segmented poly(ester urethane) using small angle neutron scattering. **L. I. Espada**, J. T. Mang, E. B. Orler, D. A. Wroblewski, D. A. Langlois, R. P. Hjelm
4:30 – 473. Synthesis and characterization of polyurethanes and their blends with thermally conductive aluminum nitride. **Y. S. Kim**, J. Rolland, J. E. McGrath

Section C

Unknown Site

Unknown Room

Combinatorial and Highly Parallel Techniques for New Materials

Characterization and Bulk Properties

2001 Fall Meeting

J. Labadie, T. Long, and W. T. Ford, *Organizer*

W. T. Ford, *Organizer, Presiding*

1:30 – 474. High throughput measurements of polymer and polymer solution physical properties. **P. Mansky**

2:00 – 475. High-throughput characterization of polymer microstructure and mechanical properties. **J. C. Meredith**, J. Sormana, E. J. Amis, A. Karim, A. Tona, H. Elgendy

2:30 – 476. High throughput approach to crystallization in thin films of isotactic polystyrene. **K. L. Beers**, J. F. Douglas, E. J. Amis, A. Karim

3:00 – 477. Vapor detection using arrays of conducting polymer composite chemiresistors. **N. S. Lewis**, S. Briglin, M. S. Freund, A. Hopkins

3:30 – 478. Rapid separation and detection techniques in combinatorial polymer screening. **M. Petro**, S. H. Nguyen, J. Regan, I. Galdo, B. Zhou, J. DelVecchio

4:00 – 479. Optimization and mechanism studies of polymerization reactions using automated HPLC. **T. C. Schunk**, D. R. Robello, T. A. Davis, D. Linehan, M. Bonanno

4:30 – 480. Development of high-throughput approaches to materials flammability research. **M. R. Nyden**, J. W. Gilman, R. D. Davis, R. H. Harris Jr, W. H. Awad

Section D

Unknown Site

Unknown Room

PVC and Related Polymers: Chemistry and Applications

Physical Properties, Blends

W. H. Starnes, *Organizer*

D. E. Witenhafer, *Presiding*

1:30 – Introductory Remarks.

1:35 – 481. Property enhancements of PVC. **M. Gilbert**, D. J. Hitt

2:00 – 482. PVC-clay nanocomposites preparation, thermal, and mechanical properties **D. Wang**, D. Parlow, C. A. Wilkie

2:25 – 483. Retrostructural analysis of poly(vinyl chloride) particles. **R. E. Lukas**

2:50 – 484. Local structure of PVC: An X-ray and neutron scattering study. **G. R. Mitchell**, T. Gkourmpis, Y. Chiou, W. H. Starnes, V. Zaikov

3:15 – 485. Poly(vinyl chloride) blends with conducting polymers. E. M. Pearce, **K. Pielichowski**

3:40 – 486. Compatibilization of blends containing poly(vinyl chloride) and a polyolefin elastomer by blocky chlorinated polyethylenes. **E. A. Eastwood**, M. D. Dadmun, N. Pourahmady, C. Lepilleur

4:05 – 487. Identification, quantitation, and qualification of PVC multi-functional additive systems with near-IR spectroscopy and chemometrics **D. Garcia**, F. Borden, E. Bouveresse

THURSDAY MORNING

Section A

Unknown Site

Unknown Room

Advances in Photoinitiated Polymerization

New and Emerging Applications for Photoinitiated Polymerizations

K. Belfield and J. V. Crivello, *Organizer*

8:30 – 488. Photopolymerization of silica-filled composites: encapsulants for microelectronic devices. **A. B. Scranton**, K. K. Baikerikar, V. Sipani, C. N. Coretsopoulos

9:00 – 489. Radiation curable materials designed to aid de-inking. **R. S. Davidson**, M. Andrews, D. R. Illsley

9:30 – 490. High density holographic digital data storage: A reality at last. **A. Hale**, L. Dhar, M. G. Schnoes, H. E. Katz, A. P. Olsen, M. L. Schilling, W. L. Wilson, K. Curtis, A. Hill, M. C. Tackitt

9:55 – 491. Photocurable, hydrophobic oligomers based on liquid polybutadiene **B. Yang**, B. Schaeffer

10:20 – 492. Photo-initiated cationic polymerization of a cyclo-aliphatic Epoxy. R. T. Olsson, **H. E. Bair**, V. J. Kuck, A. Hale

10:45 – 493. UV curable acrylated oligomers: Effect of structural variation on liquid and cured film properties. **A. J. Tortorello**

11:10 – 494. UV-curing of fluorinated systems: Synthesis and properties. R. Bongiovanni, G. Malucelli, **A. Priola**

11:35 – 495. Radiation curing and crosslinking of composites, adhesives, and thin films **C. A. Byrne**, A. N. Bykanov, D. L. Goodman, R. E. Singler

2001 Fall Meeting

Section B

Unknown Site

Unknown Room

PVC and Related Polymers: Chemistry and Applications

Degradation, Weathering

W. H. Starnes, *Organizer*

D. E. Witenhafer, *Presiding*

8:30 – Introductory Remarks.

8:35 – 496. Achievements and research tasks for poly(vinyl chloride) aging and stabilization: Research centers in Russia. **G. E. Zaikov**, K. S. Minsker

9:00 – 497. Prediction of pinking of PVC profiles in mild climatic conditions. **J. E. Lemaire**

9:25 – 498. Photostabilization of poly(vinyl chloride) by protective coatings. **C. Decker**

9:50 – 499. Weatherability of plastics compared to the fundamental bond strengths of the main polymer. **J. W. Summers**, E. B. Rabinovitch

10:15 – 500. Influence of atmospheric pollutants on the natural and artificial aging of rigid polyvinyl chloride. **N.**

Belhaneche-Bensemra

10:40 – 501. Fate of PVC polymer and plasticizers in landfills. **I. Mersiowsky**, M. Weller, J. Ejlertsson

11:05 – 502. Chemiluminescence study on medical PVC degradation and comparison with other techniques. **L. Woo**, S. Y. Ding, C. L. Sanford

11:30 – 503. Radiation-induced degradation of vinyl chloride/vinylidene chloride copolymers. B. A. Howell, S. I.

Ahmed, **D. E. Beyer**

Section C

Unknown Site

Unknown Room

General Papers

Synthesis

A. Guymon, *Organizer*

D. J. Dyer, *Presiding*

8:30 – 504. Free radical polymerization in room temperature ionic liquids. H. Zhang, K. Hong, **J. W. Mays**

8:50 – 505. Synthesis and subsequent hydrolysis of poly(5-cyano-2-norbornene-alt-maleic anhydride) copolymers. **A. J. Pasquale**, T. E. Long

9:10 – 506. Total synthesis and emission properties of poly[(9,9-dihexylfluorene)-co-(NN'-diphenyl-NN'-di(p-butylphenyl)-1,4-phenylenediamine) **F. Raymond**, S. S. Xiao, M. T. Nguyen

9:30 – 507. Acyclic diene metathesis depolymerization of elastomers using ruthenium catalysts. **S. W. Craig**, E. B. Coughlin

9:50 – 508. Synthesis of functional poly(arylene phosphine oxide)s. **L. A. Rusch-Salazar**, P. D. Bloom, V. V. Sheares

10:10 – 509. Copolymerization of ethylene and propylene with α -olefins. **A. J. Van Reenen**, H. Pasch, U. Wahner, R.

Brüll

10:30 – 510. Synthesis and characterization of substituted lactides: Polylactides from AB monomers. **G. L. Baker**, E. E. Paske, M. Yin

10:50 – 511. Synthesis and rheological properties of melt-spinnable carbon fiber precursors based on acrylonitrile terpolymers. **V. A. Bhanu**, K. B. Wiles, P. Rangarajan, T. E. Glass, D. Godshall, M. Sankarpandian, D. G. Baird, G. L. Wilkes, A. K. Banthia, J. E. McGrath

11:10 – 512. Synthesis and electrochemical studies of cationic organoiron dendrimers. A. S. Abd-El-Aziz, **E. K. Todd**, T. H. Afifi

11:30 – 513. Cationic ring-opening polymerization of monofunctional benzoxazine. **P. Chutayothin**, H. Ishida, S. Rowan

11:50 – 514. Synthesis and characterization of highly branched poly(ester-amine)s. C. Gao, **D. Yan**

12:10 – 515. Synthesis and properties of novel macrocycles and polymers based on restricted rotation. **Y. S. Chong**, K. D. Shimizu

THURSDAY AFTERNOON

Section A

Unknown Site

Unknown Room

2001 Fall Meeting

Advances in Photoinitiated Polymerization

New Methods for Conducting and Monitoring Photopolymerizations

K. Belfield and J. V. Crivello, *Organizer*

- 1:30 – 516.** Time-resolved photothermal techniques for the investigation of photoinitiators and radical reactions. **X. Allonas**, J. Lalevee, J. Fouassier
2:00 – 517. Relative sensitivities of reactive and non-reactive fluorescent probes. **W. F. Jager**, O. van den Berg
2:25 – 518. Application of FT-NIR spectroscopy for monitoring the kinetics of photoinitiated methacrylate/vinyl ether copolymerizations. Y. Lin, **J. W. Stansbury**
2:50 – 519. Synergistic effects of N-vinylamides in photopolymerization of simple acrylate formulations. **C. W. Miller**, K. Viswanathan, S. Jonsson, C. Nason, W. Kuang, D. Yang, B. Kess, C. Hoyle
3:10 – 520. Spinning disc reactor for photopolymerization. **K. V. K. Boodhoo**, W. A. E. Dunk, R. J. J. Jachuck
3:35 – 521. Some recent results of laser-induced polymerization of MMA and styrene. **M. S. Hussain**, S. Ahmad, M. A. Khan

Section B

Unknown Site

Unknown Room

PVC and Related Polymers: Chemistry and Applications

Thermal Degradation and Stabilization

W. H. Starnes, *Organizer, Presiding*

- 1:30** – Introductory Remarks.
1:35 – 522. HCl quantification in pyrolysis-gas chromatography studies of hydrochlorocarbon polymers. **I. W. Parsons**, R. S. Lehrle
2:00 – 523. Thermal degradation and stabilization of ethylene-chlorotrifluoroethylene-n-butylacrylate copolymer. J. A. Abusleme, **G. Camino**, C. Manzoni, S. Radice
2:25 – 524. Critical overview of PVC stabilization mechanisms in the light of recent experimental results. **B. Iván**
2:50 – 525. Mechanistic action of costabilizers for poly(vinyl chloride). **M. Edge**, H. Chaudhry, N. S. Allen
3:15 – 526. Highly basic calcium stearate compositions for rigid PVC. S. Kodali, **W. Hood**, T. Jennings, M. Fender
3:40 – 527. Phosphite ester compositions for PVC compounds. D. R. Stevenson, M. E. Harr, **M. R. Jakupca**
4:05 – 528. Stabilization of vinyl chloride/vinylidene chloride copolymers using N-substitutedmaleimides. **B. A. Howell**, J. Zhang
4:30 – 529. Heat stabilization and plasticization by "plasticizer thiols", a remarkable new class of nonmetallic additives for PVC **W. H. Starnes**, B. Du, V. G. Zaikov

Section C

Unknown Site

Unknown Room

General Papers

Characterization

A. Guymon, *Organizer*

J. L. P. Jessop, *Presiding*

- 1:30 – 530.** Direct comparison of micellization properties of amphiphilic block copolymers of ethylene oxide and butylene oxide, $(EO)_n(BO)_m$, and $(EO)_n(BO)_{2m}(EO)_n$ **G. Yu**, A. A. Krumnow
1:50 – 531. Blob model to monitor and quantitatively characterize polymer segment encounters by fluorescence. **S. Kanagalingam**, C. F. Ngan, J. Duhamel
2:10 – 532. Determination of reactivity ratios for acrylonitrile/methyl acrylate radical copolymerization via non-linear methodologies using real time FTIR. **K. B. Wiles**, V. A. Bhanu, A. J. Pasquale, T. E. Long, J. E. McGrath
2:30 – 533. Effect of monovalent-multivalent cation exchange on the thermodynamic properties of polyacrylate hydrogels. **F. Horkay**, I. Tasaki, P. J. Basser
2:50 – 534. Kinetic modeling of step homopolymerization. **C. G. J. Baker**, A. R. Khan, Y. M. Al-Roomi, R. H. Al-Roomi
3:10 – 535. Miscibility and phase study of the blends of poly(hydroxy ether of biphenol A) and poly(ϵ -caprolactone) by high resolution solid state NMR. **C. Lau**, Y. Mi
3:30 – 536. Investigating the chain-length and polymer concentration dependence of polymer and solvent self-diffusion in polymer solutions. **B. Chekal**, J. M. Torkelson

2001 Fall Meeting

3:50 – 537. Prediction of cage effects in free-radical initiators from diffusion coefficients of small molecules. **G. D. Mendenhall**

4:10 – 538. Quartz crystal microbalance: Based ion sensors. **D. W. Howie Jr.**, D. A. Hoagland

4:30 – 539. Investigation of benzoxazine initiation mechanism via cationic ring-opening. **P. Chutayothin**, H. Ishida, S. Rowan

4:50 – 540. Interactions in poly(lactic acid) and poly(hydroxy ester ether) blends studied by FTIR spectroscopy and differential scanning calorimetry. **X. Cao**, S. H. Gordon, J. L. Willett, D. J. Sessa

5:10 – 541. Gelation crystallization of semicrystalline polymers from solvents with large molar volume. **Q. Xue**, J. Chen