

1999 Spring Meeting

Division of Polymer Chemistry
National American Chemical Society Meeting

Anaheim, CA

March 21-25, 1999

Program Meeting Chair: Kathleen Havelka
Abstract/Preprint Deadline: Nov. 15, 1998

Go directly to the preliminary program below.

Advances in Production, Processing and Fundamental Knowledge Base of Polyesters and Copolyesters
Kishan Khemani, 200 S. Wilcox Dr., Eastman Chemical Co., Kingsport, TN 37762, (423) 224-0468, fax (423) 229-4558, kkhemani@eastman.com.

Milestones in Polyesters

Ron DeMartino, Hoechst Celanese, 86 Morris Ave., Summit, NJ 07901, (908) 522-7811, fax (908) 522-7663, RMD@SUMHCC1.HCC.COM; Tim Long, Eastman Chemical, Research Laboratories, Bldg. 150 B, Kingsport, TN 37662, (423) 224-0214, fax (423) 229-4558 e-mail: telong@eastman.com.

Innovations in Polymer Science Teaching

Ishrat M. Khan, Department of Chemistry, Clark Atlanta University, James P. Brawley Dr. at Fair St., SW, Atlanta, GA 30314, (404) 880-6847 fax (404) 880 6849, e-mail: ikhan@cau.edu; J. Smid, Department of Chemistry, SUNY, Syracuse, NY 13210, (315) 470-6828; J. Droske, U of Wisconsin-Stevens Point, Dept. of Chemistry, Stevens Point, WI 54481, (715) 346-3703, fax (715) 346-2640, jdroske@uwspmail.uwsp.edu.

Drug Delivery in the 21st Century

Kinam Park, School of Pharmacy, Purdue Univ. West Lafayette, IN 47907-1336, (765) 494-7759, fax (765) 496-1903, esp@omni.cc.purdue.edu; R. J. Mrsny, Genentech, Inc., 460 Point San Brune Blvd., South San Francisco, CA 94080, (415) 225-2592, fax (415) 225-1418, mrsny@genie.gene.com

Nanostructured and Nanopatterned Materials: Preparation, Characterization, and Application

Craig Hawker, IBM Almaden Research Center, 650 Harry Road, San Jose, CA 95120-6099, fax (408)927-3310, hawker@almaden.ibm.com; James Hedrick, IBM Almaden Research Center, 650 Harry Road, San Jose, CA 95120-6099, (408)927-1632, fax (408)927-3310; Karen Wooley, Dept. of Chemistry, Washington Univ., One Brookings Drive, St. Louis, MO 63130, (314)935-7136, fax (314)935-4481, klwooley@artsci.wustl.edu.

Chiral Polymers (cosponsored PMSE)

Dominic V. McGrath, Department of Chemistry, Rm 221, University of Arizona, P.O. Box 210041, Tucson, AZ 85721-0041, (520)626-4690, Fax:(520)621-8407, mcgrath@u.arizona.edu; Sam Huang, Institute of Materials Science, Univ. of Connecticut, 97 N. Eagleville, Rd., Storrs, CT 06269, (860) 486-4627, fax (860) 486-4745, shuang@mail.ims.uconn.edu.

New Commercial Polymers from Commodity Monomers

T. Newman, Engineering Thermoplastics R&D, 438 Bldg, Dow Chemical, Midland, MI 48667, (517)636-3706, newmanth@dow.com; M. Guest, Polyolefins R&D, B1470, Dow Chemical, 2310 N. Brazosport Blvd., Freeport, TX 77541-3257, (409)238-5606, fax (409)238-0488, mguest@dow.com.

C. S. Marvel Award for Creative Polymer Chemistry honoring Joseph DeSimone

Ralph F. Hirschman Award in Peptide Chemistry honoring Harold Scheraga

ACS Award in Polymer Chemistry honoring Robert Langer

Bioinspired Materials: Properties, Processing and Self-Assembly (BIOT)

Buddy D. Ratner, Dept. of Bioengineering, U of Washington, Box 351720, Seattle, WA 98195, (206) 685-1005, fax (206) 616-9763, RATNER@UWEB.ENGR.WASHINGTON.EDU; Graham Swift, Rohm & Haas Co., 727 Norristown Rd., Spring House, PA 19477, phone (215) 641-7756, fax 215-619-1642, rsiygs@rohmmaas.com

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Advanced Catalysis: New Polymer Syntheses and Modifications (PMSE)

Bruce Novak, Dept. of Polymer Science and Engineering, U. of Massachusetts, Amherst, MA 01003, (413) 545-2160, fax (413) 545-0082, novak@polysci.umass.edu; Lisa S. Boffa, Exxon Research & Engineering, Rm. LC124, Route 22 East, Annandale, NJ 08801, (908) 730-2240, fax (908) 730-2536, lsoffa@erenj.com

A Global Salute to Polymers (HIST)

For presentations by nominators of facilities included in the International Chemistry Celebration's "Global Salute to Polymers, Ned D. Heindel, Dept. of Chemistry, Lehigh U., Seeley G. Mudd Bldg., 6 E. Packer Ave., Bethlehem, PA 18015-3172, (610) 758-3464, (610) 758-3461, ndh0@Lehigh.EDU

General Papers

Preliminary Program

Note: This is the preliminary program submitted to ACS. It is not necessarily the same as the final program. Some of the special characters may not print out properly.

Preliminary Technical Program

Kathleen Havelka, Program Chair

Warren Ford, Program Chair

SUNDAY MORNING

Section A

Polymer/Light Relationships

K. S. Anseth, *Presiding*

R. B. Moore, *Organizer*

8:30 - 1. Interferometric analysis of cure kinetics in photocurable coatings. **W. T. Grubbs**, O. Dudi

8:55 - 2. Halogenated and phosphorous containing difunctional monomers for UV-curable applications. **A. G^aung^aor**, T. Y. Ynan, E. Yyldyz, ^a. ^aOzarslan, E. Ekinci, A. G^aung^aor

9:20 - 3. Thermally stable polyene-based NLO chromophore and its polymers with very high electro-optical coefficients. **C. Zhang**, A. S. Ren, F. Wang, L. R. Dalton, S-S. Lee, S. M. Garner, W. H. Steier

9:45 - 4. Investigation of new polyurethanes and incorporation of a soluble high mu-beta chromophore for electro-optic applications. **C. Zhang**, C. Wang, L. R. Dalton, G. Sun, H. Zhang, W. H. Steier

10:10 - 5. Photografted polypropylene microfiltration membrane and its separation characteristics. **L. Liang**, X. Feng, L. M. Perrung

10:35 - 6. Silvered polyimide films for space applications via a single stage synthesis. **R. E. Southward**, A. S. Warren, D. W. Thompson, A. K. St. Clair

11:00 - 7. Poly[(p-Phenyleneethynylene)-alt-(m-Phenyleneethynylene)]. **Y. Pang**, J. Li

11:25 - 8. Synthesis of 3-alkylated-1-vinyl-2-pyrrolidones and preliminary kinetic studies of their photopolymerization. **L. A. White**, S. Jonsson, C. E. Hoyle, L. Mathias

Section B

Drug Delivery in the 21st Century

Design Considerations for Oral Delivery

G. L. Amidon, *Presiding*

V. Lee, *Presiding*

K. Park, *Organizer*

R. Mersny, *Organizer*

7:50 - Introductory Remarks

8:00 - 9. Controlled-release oral delivery systems. **J. A. Fix**

8:25 - 10. Feasibility assessment and rapid development of oral controlled release prototypes. **A. G. Thombre**

8:50 - 11. Barriers and potential solutions to controlled drug delivery across mucosal tissues. **J. R. Robinson**

9:15 - 12. Strategies of oral drug delivery. **V. H. L. Lee**

9:40 - Intermission

10:00 - 13. Prodrug strategies to improve the oral absorption of peptide mimetics. **R. T. Borchardt**, G. Camenisch, E. Hugger, B. Wang, W. Wang, D. C. Sane, G. L. Wheeler, C-P. Cheng

10:25 - 14. Designing prodrugs for the HPEPT1 transporter. **G. L. Amidon**

10:50 - 15. Safe mucosal penetration enhancers for hydrophilic drugs-A fiction? **H. E. Junginger**, M. Thanou, H. L. LeuBen, A. F. Kotzue, J. C. Verhoef

11:15 - 16. The roles of synchronous release of sodium decanoate on sulphiride intestinal absorption in the rat. **A. Rubinstein**, M. Baluom, M. Friedman

11:35 - 17. Targeting and overcoming epithelial barriers by lectins and invasins. **C. M. Lehr**

New Commercial Polymers from Commodity MonomersT. H. Newman, *Organizer, Presiding*M. M. Guest, *Organizer, Presiding***8:25** - Introductory Remarks**8:30 - 18.** Polyolefin copolymers containing p-Methylstyrene units prepared by metallocene and ziegler-natta catalysts and transformation to maleic anhydride modified polymers. **T. C. Chung**, B. Lu, H. L. Lu**9:00 - 19.** Polymerization of ethylene, styrene, and acrylic monomers using linked amido-cyclopentadienyl metal complexes. **J. Okuda**, F. Amor, T. Eberle, K. Hultzs, T. P. Spaniol**9:30 - 20.** Characterization of polypropylene in the thermoplastic elastomeric state. **Y. T. Vu**, G. S. Rajan, J. E. Mark**10:00 - 21.** Blending low-density polyethylene with metallocene-catalyzed linear low-density polyethylene to improve film properties. **M. J. Cran**, S. W. Bigger, K. V. Boys, B. Tassigiannakis, D. B. Barry**10:30 - 22.** On the surface and interfacial tension of syndiotactic and isotactic polypropylene. **T. J. Menke**, Z. Funke, J. Kressler**11:00 - 23.** Preparation of telechelic oligomers by controlled thermal degradation of polypropylenes with different stereoregularities. **T. Sawaguchi**, H. Saito, S. Yano, M. Seno**11:30 - 24.** Aqueous solution cobalt mediated catalytic chain transfer polymerization. **D. M. Haddleton**, E. J. Kelly, D. Kukulj, S. M. Morsley, A. G. Steward**SUNDAY AFTERNOON****Nanopatterned and Nanostructured Materials: Synthesis, Characterization, and Application**J. L. Hedrick, *Organizer, Presiding*J. G. Hilborn, *Presiding*C. J. Hawker, *Organizer*K. L. Wooley, *Organizer***1:30 - 25.** Hyperbranched poly (acrylic acid) grafts as substrates for synthesis of functionally elaborated surfaces. **D. E. Bergbreiter**, J. G. Franchina, G. Tao**2:00 - 26.** Self patterning in supramolecular and templated materials. **S. I. Stupp****2:20 - 27.** Structure-property relationships for nano-porous poly (methyl silsesquioxane) films with low-dielectric constants prepared via organic/inorganic polymer hybrids. **D. Y. Yoon**, C. V. Nguyen, R. B. Beyers, C. J. Hawker, J. L. Hedrick, R. L. Jaffe, R. D. Miller, J. F. Remenar, H. W. Rhee, M. F. Toney, M. Trolls^{as}**2:40 - 28.** Dendrimer-encapsulated transition-metal nanoclusters: Synthesis, characterization, and applications to catalysis. **M. Zhao**, L. Sun, R. M. Crooks**3:00 - 29.** Nanoscale patterning of self-assembled dendrimer monolayers using scanning probe lithography. **D. C. Tully**, A. R. Trimble, M. J. J. Fruechet, K. S. Wilder, C. F. Quate**3:20 - 30.** Towards organic N-type semi-conducting materials. **K. Pieterse**, J. A. J. M. Vekemans, E. W. Meijer**3:40 - 31.** Molecularly dispersed dendrimers in a polymeric matrix. **B. J. Bauer**, T. J. Prosa, D-W. Liu, C. L. Jackson, D. A. Tomalia, E. J. Amis**4:10 - 32.** Nanostructured films, coatings, molecular "sponges" and "reactors" from copolymeric amidoamine-organosilicon (pamamos) dendrimers. **P. R. Dvornic**, A. M. de Leuze-Jalloui, M. J. Owen, S. V. Perz**4:40 - 33.** Synthesis and catalytic activity of unimolecular dendritic reverse micelles. **P. Marcello**, C. J. Hawker, F. Rivera Jr., R. Bond, J. Dao, M. J. J. Fruechet**5:00 - 34.** Functional polycationic and neutral starburst dendrimers with silsesquioxane cores. **H. J. Murfee**, B. Hong**Drug Delivery in the 21st Century****Delivery Strategies**R. T. Borchardt, *Presiding*V. P. Torchilin, *Presiding*K. Park, *Organizer*R. Mersny, *Organizer***1:00 - 35.** Peptide mimetics of growth factors selected from diverse peptide libraries and stabilized for potent in vivo activity. **W. J. Dower****1:25 - 36.** De novo design and synthesis of a small globular protein forming a pore into lipid bilayers. **S. Lee**, G. Sugihara**1:50 - 37.** Natural pore forming proteins: Paneth cell cryptidins. **W. I. Lencer**, D. Merlin, A. J. Ouellete, M. E. Selsted, J. L. Madara**2:15 - 38.** Solving drug delivery problems with liposomal carriers. **T. M. Allen****2:40** - Intermission**3:00 - 39.** Protein and plasmid DNA delivery from tissue engineering matrices. **D. J. Mooney**, L. D. Shea, M. C. Peters**3:25 - 40.** Pegylation: A tool to enhance protein delivery. **W. R. Gombotz**, D. K. Pettit**3:50 - 41.** Polymeric delivery vehicles for bone growth factors. **L. Lu**, S. J. Peter, G. N. Stamatias, A. G. Mikos

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4:15 - 42. Latest advances in the understanding of active-specific immunotherapy for brain tumors. **K-Y. Ng**, Y. Liu, Q. Kong, K. O. Lillehei

4:40 - 43. Hemocompatible drug carrier composed of water-soluble phospholipid polymers. **K. Ishihara**

5:05 - 44. Preparation of blood compatible nanoparticles bearing phosphorylcholine group. **K. Ishihara**, T. Konno, K. Kurita, Y. Iwasaki, N. Nakabayashi

Section C

New Commercial Polymers from Commodity Monomers

T. H. Newman, *Organizer, Presiding*

M. M. Guest, *Organizer, Presiding*

1:30 - 45. PS-PC-PS Synthesis using tandem radical-step growth polymerization. **D. Knauss**, I. Li, Y. Gong, B. Howell, D. B. Priddy

2:00 - 46. Alkene polymerization by cationic monocyclopentadienyltitanium catalysts containing the weakly coordinating anion [B(Cú6Fú5)ú4]. **M. C. Baird**, S. W. Ewart, M. J. Sarsfield, E. F. Williams

2:30 - 47. Syndiotactic polystyrene polymerization results with phenethyltetramethylcyclopentadienyltitanium trimethoxide. **T. H. Newman**, K. K. Borodychuk

3:00 - 48. Milestones in the optimization of syndiotactic polystyrene. **M. Gepr^aags**, G. McKee, J. R. W^aunsch

3:30 - 49. Characterization of blends of syndiotactic polystyrene with olefin homo- and co-polymers. **L. Abis**, L. Abbondanza, R. Braglia, L. Facchinetti, G. Giannotta, G. Marra, R. Pµo

4:00 - 50. Modification of syndiotactic polystyrene. **J. Kressler**, R. Thomann

SUNDAY EVENING

Section A

Poster Session: Polymer Synthesis

R. B. Moore, *Organizer, Presiding*

7:00—9:00

51. - End group control of molecular weight in karstedt catalyzed hydrosilation copolymerizations of Å ò-dienes and 1,3-dihydridotetramethyldisiloxane. **J. R. Sargent**, W. P. Weber, D. P. Loker, K. B. Loker

52. - Synthesis of copoly[1,8-thioxanthen-9-onylene/3,3,5,5-tetramethyl-4-oxa-3,5-disila-1-7-heptylene] by acid catalysed siloxane equilibration polymerization of 1,8-bis[3,3,5,5-pentamethyl-4-oxa-3,5-disilapentyl]thioxanthen-9-one. **S. K. Gupta**, W. P. Weber

53. - RU catalyzed hydrosilation of polymerization of dimethylsiloxyaryl ketones and aldehydes. **J. K. Paulasaari**, W. P. Weber

54. - Preparation and properties of poly(N-arylacetylenedicarboximide). **D. Huang**, S. J. Sargeant, L. R. Dalton, W. P. Weber, D. P. Loker, K. B. Loker

55. - RU-catalyzed hydrosilation copolymerization of aromatic alpha, omega-diketones with alpha, omega-dihydro-oligodimethylsiloxanes. Dependence of glass transition temperature on number of siloxane units. **J. M. Mabry**, J. K. Paulasaari, W. P. Weber, D. P. Loker, K. B. Loker

56. - Ruthenium catalyzed copolymerization of 1,4-bis(5'-acetyl-2'-thienyl)benzene and 1,3-divinyltetremethyldisiloxane. **D. Huang**, W. P. Weber, D. P. Loker, K. B. Loker

57. - Toward the synthesis of block copolymers capable of H-bond-mediated self-assemble. **J. Pan**, M. Chen, M. He, L. R. Dalton, T. E. Hogen-Esch

58. - Phosphor ylide-mediated polymerization of methylmethacrylate at elevated temperatures. **W. N. Warner**, T. E. Hogen-Esch, D. K. Dimov, S. Juengling, V. Warzelhan

59. - Cationic polymerization of cyclic ethers initiated by nafion. **S. J. L. Carlotti**, T. E. Hogen-Esch

60. - Synthesis of poly (alkylene phosphonates)S polymers via the transesterification of dimethyl phosphate with diols. **P. C. Bharara**, H. Byrd, B. Farmer, D. B. Boroughs, G. M. Gary

61. - Synthesis of a novel organometallic polymer containing fischer-type aminocarbenes in the main chain. **R. Nomura**, K. Watanabe, T. Masuda

62. - Polymerization behavior of spiro orthocarbonates having epoxy groups-neighbor effect on the ring-opening polymerization. **T. Takasaki**, T. Endo, F. Sanda

63. - Molecular composites polyazomethine/nylon-6 via in situ polymerization. **Z. Bai**, R. Jin, F. W. Harris

64. - Preparation of trifluorovinylkether-terminated fluorosilicone oligomers. **J. Rizzo**, F. W. Harris, H. Meng

65. - Synthesis and characterization of polyesters containing multiple alkyl side chains. **H. Wang**, Z. Shen, S. Z. D. Cheng, F. W. Harris

66. - Synthesis of ultra high molecular weight polycarbonate from uniform macrocyclics. **J. Sugiyama**, M. Goyal, M. Asai, M. Ueda, K. Takeuchi

67. - One-pot synthesis of polyamide dendrimers. **Y. Yamakawa**, M. Ueda, K. Takeuchi, M. Asai

68. - Synthesis of head-to-tail poly(3-hexylthiophene) by oxidative coupling polymerization of 3-hexylthiophene with ferric chloride (III). **S. Amou**, O. Haba, M. Ueda, K. Takeuchi, M. Asai

69. - Polymerization of polar vinyl monomers with cobalt complexes. **K. Tsuchihara**, A. Miyazawa, Y. Suzuki, M. Asai, Y. Fukui, H. Ozaki, M. Kawabe, T. Kase, M. Murata, K. Soga

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70. - Modeling and experimental studies of the solid state polymerization of polycarbonate facilitated by supercritical carbon dioxide. **M. D. Goodner**, S. M. Gross, J. M. DeSimone, G. W. Roberts, D. J. Kiserow
71. - Polymerization of hexafluoroisopropylidene containing acrylate monomers in supercritical carbon dioxide. **H. J. Martinez**, J. W. Green, M. T. Blanda, P. E. Cassidy, J. W. Fitch
72. - Cyclopolymerization of congested monomer containing alpha-(substituted methyl)acryloyl group. **B. Yamada**
73. - Polyaniline and benzidine: Oligoaniline containing A benzidine unit. **Y. Zhou**, J. Gao, W. J. Zhang, Y. Youhai, K. Li, C. Wang, Z. W. Wu, Y. Ji, A. G. MacDiarmid
74. - The effect of end groups of the UV/VIS spectroscopic properties of oligoanilines. **Y. Zhou**, J. Gao, W. J. Zhang, K. Li, Y. Ji, A. G. MacDiarmid
75. - Modified pseudo-high-dilution technique for synthesizing phenyl-capped oligoanilines. **Y. Zhou**, J. Gao, W. J. Zhang, K. Li, Y. Ji, Y. Zhou, A. G. MacDiarmid
76. - Living polymerization of 1,3-butadiene catalyzed by some cyclopentadienyltitanium trichloride with mao. **A. Miyazawa**, T. Kase, K. Soga
77. - Synthesis of well-defined and-functionalized poly (styrene)S with mono-and disaccharides by controlled radical polymerization using tempo-based initiators having glucose and maltose residues. **N. Sugimoto**, T. Kakuchi
78. - Synthesis of well-defined poly (succinimide) by acid-catalyzed polycondensation of L-aspartic acid in the presence of cyclic anhydride. **A. Kusuno**, M. Shibata, T. Kakuchi, T. Nakato
79. - Novel copolymers of halogen ring-substituted 2-phenyl-1,1-dicyanoethenes and styrene. **G. B. Kharas**, J. W. Karras, V. K. Michna, K. Grajzer, K. A. Karins, E. P. Rothaker
80. - Preparation and characterization of polystyrene-poly (aryl ether sulfone)-polystyrene ABA triblock copolymers. **L. Zeng**, D. K. Mohanty
81. - Synthesis of poly (N-isopropylacrylamide) grafted silica and its application. **K. Suzuki**, T. Yumura, M. Mizuguchi, Y. Tanaka, M. Akashi
82. - Palladium (II)-catalyzed cyclopolymerization of 1,6-heptadiyne. **K. J. S. Harrell**, T. SonBinh, T. Nguyen
83. - Preparation of alkoxyamine initiators carrying a functional group. **Y. Miura**, H. Moto, B. Yamada
84. - Synthesis of well-defined C60 end-capped poly (ethylene oxide) stars and linear analogues. **J. L. Logan**, D. Taton, S. Angot, Y. Gnanou
85. - Synthesis & characterization of new two-photon absorbing polymers. **K. D. Belfield**, B. A. Reinhardt, L. L. Brott, O. Najjar, S. M. Pius, E. W. Van Stryland
86. - Synthesis of substituted bis (alkenyl) silanes for use in admet polymerizations. **A. C. Church**, J. H. Pawlow, K. B. Wagener
87. - New polymerization systems for the controlled/living polymerization of bicyclic acetals: The cationic ring-opening polymerization of 6,8-dioxabicyclo[3.2.1] octane. **L. F. Torres**, T. E. Patten
88. - Synthesis of liquid crystalline star materials bearing mesogens derived from cinnamic acid. **S. M. Ruder**, J. A. Alsobrook, S. D. Allen
89. - Synthesis of polyamine dendrimers with alternating amine and ether generations. **Y. Pan**, W. T. Ford
90. - Preparation of cyclic polyester oligomers and ultra-low VOC polyester coating. **Z. Liu**, H. G. Paris, C. L. Liotta, C. A. Eckert
91. - Synthesis and characterization of novel aromatic polyimides from 4,4'-BIS(P-aminophenoxy methyl)-1-cyclohexene. **H. Yagci Acar**, C. Ostrowski, L. Mathias
92. - Star-branched PIB/poly (p-t-BU-styrene) block copolymers from a novel epoxide initiator. **L. B. Brister**, J. E. Puskas, E. Tzaras
93. - Ring-opening polymerization of cyclic (aryl ether ketone) containing 1,3-BIS (4'-fluorobenzoyl)benzene II. **C. H. Chen**, H. W. Zhou, Z. H. Jiang, Z. W. Wu, W. J. Zhang, Y. F. Chen
94. - Synthesis and characterization of soluble and degree and degree of crosslinking controllable poly (aryl ether ketone)S. **H. Li**, C. H. Chen, H. W. Zhou, Z. W. Wu, W. J. Zhang
95. - Preparation of aqueous polyurethane anionmer dispersion (PUAD) and polymerization of methyl methacrylate in the presence of PUAD. **J. Liu**, X. Ren, D. Tian, D. Liu
96. - Castor acrylated monomer in vinyl-acrylic latexes. **E. H. Brister**, S. F. Thames, O. W. Smith
97. - Surface modification of some inorganic oxide particles with silane coupling agent. **R. N. Ottenbrite**, J. Lin, J. A. Siddiqui
98. - Effect of solvents on monomer reactivity in non-equilibrium copoly-codensation of aromatic copolyamide. **D. Liu**, X. Wang, X. Lu, Q. Zhou

Section B

Poster Session: Polymer Characterization

R. B. Moore, *Organizer, Presiding*

7:00—9:00

99. - Photoluminescence of copoly (methylene/7-methyl-3-phenyl-1, 1-indenylene). **W. P. Weber**, T. M. Londergan, C. J. Teng, D. P. Loker, K. B. Loker
100. - A novel trilinear high .. NLO chromophore for polymeric electro-optic material with enhanced thermal stability. **C. Zhang**, A. S. Ren, L. R. Dalton

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- 101.** - Novel block copolymer containing NLO chromophore. **M. Chen**, J. Pan, M. He, T. Hoegen-Esch, L. R. Dalton
- 102.** - A trifunctionalized high MU-beta chromophore and its 3D polyurethane network with enhanced NLO alignment stability towards electro-optic device application. **A. S. Ren**, M. Chen, M. S. Lee, M. He, L. R. Dalton, H. Zhang, G. Sun, S. M. Garner, W. H. Steier
- 103.** - Epoxy thermosetting NLO material. **M. Chen**, A. S. Ren, J. F. Wang, M. S. Lee, H. Zhang, G. Sun, W. H. Steier
- 104.** - Polyacrylamides having pendent perfluorooctyl groups, effects of temperature, shear and the presence of beta-cyclodextrin. **T. E. Hogen-Esch**, S. Tomczak
- 105.** - Study of hydrophobic interaction of vinyl pyridium type of polysoad in aqueous solution. **Y. J. Yang**, L. Yang
- 106.** - Self-assembly of metal coordination polymers. **H. Byrd**, C. E. Holloway, J. Pogue
- 107.** - Thermal behaviour of blends of syndiotactic polystyrene and zinc sulfonated polystyrene ionomers. **H. Li**, J. Shen, W. Yang
- 108.** - Studies of morphology and crystallization of polyamide-1010/polystyrene blends compatibilized by zinc sulfonated polystyrene ionomers. **H. Li**, Z. Li
- 109.** - Effect of inomer on the morphology and impact properties of blends of polyamide-1010 and butyl rubber. **H. Li**, Y. Wang, Z. Li
- 110.** - Effect of the macromolecular chain structure of a soluble pyridinium-type polymer on antibacterial activity. **G. Li**, W. Yang, J. Shen
- 111.** - Bactericidal ability of a soluble pyridinium-type polymer under different conditions. **G. Li**, W. Yang, J. Shen
- 112.** - Tensile properties of melt blends of sulfonated polystyrene ionomers with polystyrene. **W. Yang**, G. Li, H. Li, J. Shen
- 113.** - Molecular dynamics in polymers: Role of torsional potential in the PE crystallization process simulation. **V. Dhenin**, V. Lazzeri, B. Waegell, R. B. Moore
- 114.** - The effects of the space environment on polyetherimide films. **R. L. Kiefer**, R. A. Orwoll, J. E. Harrison, V. M. Ronesi, S. A. Thibeault
- 115.** - Polymer aggregates prepared by polystyrene-block-poly(4-vinylpyridine) functionalized with rhenium(I) complex. **W. K. Chan**, S. Hou
- 116.** - Model peptide/poly (ethylene oxide) macromolecular complexes: Preparation and characterization. **I. M. Khan**, K. P. Pemawansa, L. J. Oritz, A. F. Mingotaud, A. Soum
- 117.** - Structure-property relationships of BIS (ethylenedioxythienyl naphthalene) systems. **B. Sankaran**, L-S. Tan
- 118.** - Guest-host interactions in organic dye-doped matrix polymers. **N. Venkatasubramanian**, D. S. Nagvekar, G. E. Price, R. A. Vaia, L-S. Tan, F. E. Arnold
- 119.** - Towards enhanced conductivity in supramolecular structures: A computational study. **S. Satyanarayana**, D. S. Marynick, R. L. Eisenbaumer
- 120.** - Sensor and actuator properties of conducting polymers composed of non-planar conjugated monomers. **M. J. Marsella**, R. J. Reid, H. Li
- 121.** - High pressure EPR studies of the influence of carbon dioxide on polymer dynamics. **W. C. Bunyard**, E. J. Harbron, J. M. DeSimone, M. D. E. Forbes
- 122.** - Preparation, mechanical properties and morphology of the composites of Poly (ether sulfone) reinforced with potassium titanate whisker. **G. B. Wang**, Z. H. Jiang, C. Yu, R. T. Ma, W. Wu
- 123.** - A novel polymorphism behavior of cyclic aryl ether ketone containing 1, 3-BIS (4'-fluorobenzoyl) benzene I. **C. H. Chen**, H. W. Zhou, Z. H. Jiang, Z. W. Wu, W. J. Zhang
- 124.** - Synthesis and thermal properties of poly (arylether ketone)S containing dibenzoylbiphenyl moieties copolymer. **H. W. Zhou**, C. H. Chen, Y. B. Zhen, Z. H. Jiang, W. J. Zhang, Z. W. Wu
- 125.** - Melting behavior of poly (aryl ether ketone)S containing dibenzoylbiphenyl moities copolymer. **H. W. Zhou**, C. H. Chen, Y. B. Zhen, Z. H. Jiang, W. J. Zhang, Z. W. Wu
- 126.** - Chemical kinetic studies of new thermal resistant polymeric materials. **A. R. Khan**
- 127.** - Electrochemical access to network silicon and germanium polymers. **K. Huang**, L. A. Vermeulen
- 128.** - Polyethylenimine-surfactants interactions and its role in the design of adhesion promotion between poly (ethylene terephthalate) and surlyn® in composite film structures. **J. A. Siddiqui**, E. L. Mason, C. Chappell
- 129.** - Grafting of rhodamine B dye on silica gel particles. **R. N. Ottenbrite**, J. Lin, J. A. Siddiqui
- 130.** - Real-time mid-IR monitoring of epoxi-initiated living isobutylene polymerizations. **A. J. Michel**, L. B. Brister, J. E. Puskas
- 131.** - Polymer-bitumen blends. **A. H. Fawcett**, A. McNally, G. McNally
- 132.** - Cycle number within nets, sol molecules, micronets, and at the gel point. **A. H. Fawcett**, C. R. Hetherington, F. V. McBride, R. A. W. Mee

MONDAY MORNING

Section A

Nanopatterned and Nanostructured Materials: Synthesis, Characterization, and Application

J. R^auhe, *Presiding*

D. E. Bergbreiter, *Presiding*

C. J. Hawker, *Organizer*

J. L. Hedrick, *Organizer*

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K. L. Wooley, *Organizer*

8:30 - 133. Supramolecular metal coordination arrays: Towards thin films via self-assembly technique. **U. S. Schubert**, C. Eschbaumer, Q. An, T. Salditt

9:00 - 134. Synthesis and characterization of micropatternable low surface energy block copolymers. **C. K. Ober**, S. Yang, J. Wang, K. Ogino, N. Sundararajan, R. Allen

9:30 - 135. Self-assembly and guest-host properties of dendrimers. **E. W. Meijer**, M. W. P. L Baars, C. Elissen-Rompan, J. W. Weener, A. W. Bosman

10:00 - 136. Pattern generation in molecularly thin polymer films. **J. R^auhe**, M. Schimmel, O. Prucker

10:30 - 137. Graft polymerization of styrene on mica. Formation and behavior of molecular droplets and thin films. **R. A. Shelden**, U. Velten, T. Samuele, W. R. Caseri, R. Hermann, M. M^auller, U. W. Suter

11:00 - 138. A simple lithographic approach for preparing patterned, micron-scale corrals for controlling cell growth. **P. Ghosh**, M. L. Amirpour, W. M. Lackowski, M. V. Pishko, R. M. Crooks

11:20 - 139. Using liquid crystals as probes of nanostructured organic surfaces. **N. L. Abbott**, R. R. Shah, V. K. Gupta, J. J. Skaife

11:50 - 140. Ordering and nanoscale self-assembly of thin films of mesogenic block copolymers. **P. T. Hammond**, M. Anthamatten, J-S. Wu

Section B

Drug Delivery in the 21st Century

Drug Targeting

C. M. Lehr, *Presiding*

R. Mrsny, *Organizer, Presiding*

K. Park, *Organizer*

8:00 - 141. Polymer therapeutics into the 21st century. **R. Duncan**

8:25 - 142. A reactive polymeric micelle as drug vehicle for active targeting. **Y. Nagasaki**, K. Kataoka

8:50 - 143. Fentanyl-loaded PLGA microspheres for local anesthesia. **H. B. Lee**, G. Khang, J. C. Cho, J. M. Rhee, J. S. Lee

9:15 - 144. Targeted gene delivery via the folate receptor. **R. J. Lee**, W. Guo

9:40 - Intermission

10:00 - 145. Targeting therapeutic molecules to cell organelles. **G. A. Keller**

10:25 - 146. Cytosolic delivery of macromolecules. **K. D. Lee**, M. Mandel, I. Lee, G. M. Larson

10:50 - 147. Molecular targeting of nuclear transcriptional regulators. **Y. Rojanasakul**, Q. Luo, J. Ye

11:15 - 148. Cell specific targeting of drugs and genes with glycosylated liposomes. **M. Hashida**, M. Nishikawa, F. Yamashita, Y. Takakura

11:40 - 149. In vivo gene transfer by targeted non-viral gene delivery. **S. M. Sullivan**, K. Anwer, P. Szymanski, G. Kao, Q. Xiang, B. Shelvin

Section C

ACS Award in Polymer Chemistry honoring Robert Langer

Synthesis and Characterization of Polymers for Biomaterials and Drug Delivery Carriers

K. S. Anseth, *Organizer, Presiding*

A. G. Mikos, *Organizer*

N. A. Peppas, *Organizer*

8:30 - 150. Heparin: structure and biological activities. **R. J. Linhardt**, N. S. Gunay, C. Thanawiroon

9:00 - 151. Heparin mimic amino acid based macromolecules. **A. J. Domb**, A. Bentolila, R. Ishai-Michaeli, I. Vlodavsky

9:30 - 152. Biologic activity of RHBMP-2 following release from PLGA microspheres. **M. J. Yaszemski**, J. B. Oldham, B. D. Porter, E. Hefferan, B. L. Currier, A. G. Mikos

10:00 - 153. The alchemy of double and triple-walled microspheres. **E. Mathiowitz**, J. Jacob, K. Leach, Y. Jong, B. Hertzog, N. Rahman, J. Godbee, T. Mottl, S. Takahasi, C. Wheeler, R. Lim, K. Noh, M. Dyrud

10:30 - 154. Polymer prodrugs with pharmaceutically active degradation products. **K. E. Uhrich**, L. Erdmann, T. Twardowski, B. Macedo

11:00 - 155. Calcium responsive drug delivery systems based on polysaccharides. **J. Kost**, R. Goldbart

11:30 - 156. Development of poly(propylene fumarate-co-ethylene glycol): An injectable, biodegradable cardiovascular implant. **L. J. Suggs**, M. J. Yaszemski, A. G. Mikos

MONDAY AFTERNOON

Section A

Nanopatterned and Nanostructured Materials: Synthesis, Characterization, and Application

P. T. Hammond, *Presiding*

N. L. Abbott, *Presiding*

C. J. Hawker, *Organizer*

J. L. Hedrick, *Organizer*

K. L. Wooley, *Organizer*

2:00 - 157. Assembling metal ions on the nanometer scale using polymerizable lyotropic liquid crystals. **D. L. Gin**, D. H. Gray, E. Juang, H. Deng, K. B. Schwartz

1999 Spring Meeting

- 2:30 - 158.** Applications of ring-opened poly (ferrocenes) in the preparation of magnetic nanostructures and semiconducting nanowires. **I. Manners**, R. MacLachlan, R. Resendes, J. Massey, K. N. Power, H. Dorn, F. Jaekle, G. A. Ozin, M. A. Winnik
- 3:00 - 159.** Cylindrical, dendritic nano-objects. **D. A. Schlueter**, I. Neubert, B. Karakaya, Z. Bo
- 3:30 - 160.** Molecularly engineered surfactants for CO₂. **J. M. DeSimone**, D. Betts, T. Johnson, J. McClain, S. Wells, M. Rubinstein, D. Londono, R. Triolo, G. Wignall
- 4:00 - 161.** Chemistry controlling nanoscale pattern formation by deep UV photolithography. **F. A. Houle**, W. Hinsberg, M. Morrison, M. Sanchez, C. Wallraff, C. Larson, J. Hoffnagle
- 4:30 - 162.** The effect of polymer architecture on the aqueous base development of photoresists. **G. G. Barclay**, M. A. King, Z. Mao, C. Szmanda, D. Benoit, E. Malmstrom, H. Ito, C. J. Hawker
- 5:00 - 163.** Polymer chemistry considerations in the design of robust 193NM photoresists. **R. D. Allen**, H. Ito, T. I. Wallow, J. Opitz, R. A. DiPietro, D. C. Hofer, R. Sooriyakumaran, R. Varanasi, S. Jayaraman, R. Vicari
- 5:30 - 164.** Nanostructured block copolymers containing biodegradable segments. **M. A. Hillmyer**, S. C. Schmidt, S. L. Marohn

Section B

Drug Delivery in the 21st Century

Modulated Drug Delivery

R. Duncan, *Presiding*

K. Kataoka, *Presiding*

R. Mersny, *Organizer*

K. Park, *Organizer*

- 1:25 - 165.** On-off regulation of insulin-release by totally synthetic polymer gels responding to external glucose concentration. **K. Kataoka**, H. Miyazaki, M. Bunya, T. Okano, Y. Sakurai
- 1:50 - 166.** Glucose monitoring via reverse iontophoresis. **R. O. Potts**, J. A. Tamada, R. T. Kurnik, M. J. Tierney, Y. Jayalakshmi
- 2:15 - 167.** Application of pH/temperature-sensitive polymers for controlled drug release devices. **S. H. Yuk**, S. H. Cho, J. K. Seo, J. H. Lee
- 2:40 - 168.** Controlled drug and biomolecule release from electroactive host polymer systems. **J. R. Reynolds**, H. Ly, F. Selampinar
- 3:05 - Intermission**
- 3:25 - 169.** Supramolecular-structured polymers for drug delivery. **N. Yui**, T. Ooya
- 3:50 - 170.** Functionalized liposomes for use in drug delivery: pH dependent fusion and lysis of phosphatidylcholine vesicles by poly(2-ethylacrylic acid). **J. G. Linhardt**, D. A. Tirrell
- 4:15 - 171.** A novel composite membrane for temperature responsive permeation. **X. Y. Wu**, F. Yam
- 4:40 - 172.** Oral delivery of macromolecular drugs. **A. Leone-Bay**
- 5:00 - 173.** The effect of adhesive antioxidant enzymes on experimental colitis in the rat. **A. Rubinstein**, S. Blau, P. Bass, R. Kohen

Section C

ACS Award in Polymer Chemistry honoring Robert Langer

Synthesis and Characterization of Polymers for Biomaterials and Drug Delivery Carriers

K. S. Anseth, *Organizer*

A. G. Mikos, *Organizer, Presiding*

N. A. Peppas, *Organizer*

- 1:30 - 174.** Orthopaedic biomaterials based on photocrosslinkable multifunctional monomers. **K. S. Anseth**, A. K. Burkoth
- 2:00 - 175.** Biodegradable hydrogels for controlled cell and drug delivery. **K. H. Bouhadir**, J. A. Rowley, G. M. Kruger, K. Y. Lee, D. J. Mooney
- 2:30 - 176.** Biodegradable poly(phosphoester)s. **K. W. Leong**, H. Q. Mao, I. Shipanova-Kadiyala, M. Haller, S. Q. Liu, W. P. Li
- 3:00 - 177.** The control of surface properties of biodegradable polymers. **A. M. Goepferich**, A. E. Lucke, J. K. Tessmar
- 3:30 - 178.** The use of combinatorial approaches in the design of new biomaterials. **J. Kohn**, S. Brocchini, K. James, V. Tangpasuthadol
- 4:00 - Introductory Remarks**
- 4:10 - 179.** Polymer chemistry in the biomedical science: Advances in drug delivery and tissue engineering. **R. Langer**
- TUESDAY MORNING

Section A

Nanopatterned and Nanostructured Materials: Synthesis, Characterization, and Application

G. Klarner, *Presiding*

G. G. Barclay, *Presiding*

C. J. Hawker, *Organizer*

J. L. Hedrick, *Organizer*

K. L. Wooley, *Organizer*

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- 8:30 - 180.** The versatile design and synthesis of dendrimer-like star polymers. **M. Trollsås**, B. Atthoff, H. Claesson, J. Pople, J. L. Hedrick, A. P. Gast
- 9:00 - 181.** Photo-induced alignment of polymer ultrathin films fabricated by alternate self-assembly solution adsorption of polyelectrolytes and small azo dye chromophores. **F. Kaneko**, A. Baba, R. Advincula, E. Fells, N. Jones, J. Guzman
- 9:20 - 182.** A cross-linkable polymer langmuir-blodgett film for high resolution patterning. **A. Aoki**, N. Masakazu, H. Moriyama, T. Miyashita
- 9:40 - 183.** Polymer composites with silica nanospheres. **A. J. Waddon**, Z. S. Petrovic, I. Javni
- 10:00 - 184.** Responsive supramolecular polymer complexes with hierarchical self-organization. **O. Ikkala**, J. Ruokolainen, G. T. Brinke
- 10:30 - 185.** Protein-polymer conjugates: Synthesis and function of simple nanobiotechnological devices. **S. C. Lee**, R. Parthsarthy, K. Botwin
- 11:00 - 186.** Controlling permeability and stability of ultrathin layers polyelectrolyte films. **M. Bruening**, J. J. Harris, P. M. DeRose
- 11:20 - 187.** Star-like amphiphilic block copolymers - models for unimolecular micelles and nanoreactors. **A. Heise**, R. D. Miller, J. L. Hedrick, M. Trollsås, F. W. Curtis, J. G. Hilborn
- 11:40 - 188.** Hollow nanospheres from polyisoprene-block-poly (2-cinnamoyl ethyl methacrylate)-block-poly(tert-butyl acrylate). **S. Stewart**, L. Guojun

Section B

Drug Delivery in the 21st Century

Delivery Vehicles and Design Considerations

T. M. Allen, *Presiding*
D. A. Edwards, *Presiding*
M. R. Prausnitz, *Presiding*
R. Mersny, *Organizer*
K. Park, *Organizer*

- 8:00 - 189.** The role of plasma lipoproteins as novel carriers of water-insoluble compounds: Biological and physiological consequences. **K. M. Wasan**, M. Ramaswamy, A. Kennedy, K. Peteherych, W. Wong
- 8:25 - 190.** Polymeric micelles for delivery of poorly soluble drugs. **V. P. Torchilin**, V. Weissig
- 8:50 - 191.** Solubility considerations and design of controlled release dosage forms. **G. M. Venkatesh**
- 9:15 - 192.** Self-emulsifying drug delivery systems in the 21st century: Challenges and opportunities. **P. P. Constantinides**
- 9:40 - Intermission**
- 10:00 - 193.** AERXTM: Synthesis of technologies to provide therapeutic benefits via pulmonary drug delivery. **I. Gonda**, D. Cipolla, S. Farr, E. Johansson, P. Lloyd, J. Okikawa, F. Okumu, R. Patel, R. Rubsamen, S. Ruskewicz, J. Schuster
- 10:25 - 194.** Protein delivery to the lungs with large porous particle dry powders. **D. A. Edwards**, J. Hrkach, J. Schmitke, D. Berkovitz, D. Yancey, R. Niven
- 10:50 - 195.** Pulmonary drug delivery of aerosols formed from CO₂-assisted nebulization. **R. E. Sievers**, S. P. Sellers, P. D. Milewski, K. D. Kusek, P. G. Kluetz, B. A. Miles, B. M. Hyberston
- 11:15 - 196.** Biophysical methods for transdermal delivery of small drugs and macromolecules. **M. R. Prausnitz**
- 11:40 - 197.** Supersonic powder injection for transdermal and transmucosal delivery of drugs and vaccines. **S. J. Prestrelski**, T. L. Burkoth

Section C

Ralph F. Hirschman Award in Peptide Chemistry honoring Harold Scheraga

M. Goodman, *Organizer*
P. E. Wright, *Organizer, Presiding*

8:25 - Introductory Remarks

8:30 - 198. New methods for the prediction of protein structure and function from sequence. **J. Skolnick**, J. Fetrow, A. R. Oritz, A. Kolinski

9:10 - 199. Dynamics and function of prion proteins. **H. J. Dyson**

9:50 - 200. Biophysical studies of peptides and peptidomimetics. **M. Goodman**

10:30 - 201. Collagen-like triple-helical peptides. **B. M. Brodsky**

11:10 - 202. Theoretical and experimental studies of peptide conformation. **H. A. Scheraga**

Section D

C. S. Marvel Award for Creative Polymer Chemistry honoring Joseph DeSimone

E. T. Samulski, *Organizer, Presiding*

8:15 - 203. Poly (arylene phosphine oxide) derivatives and blends. **J. E. McGrath**

8:45 - 204. Supercritical fluids: processing in the 21st century. **V. Krukonis**

9:15 - 205. Fluorocarbons dissolved in supercritical carbon dioxide; NMR evidence for specific solute-solvent interactions. **E. T. Samulski**, A. Dardin

9:45 - 206. Mechanistic studies of olefin polymerizations by well-defined Δ -Diimine Ni(II) and Pd(II) complexes. **M. Brookhart**, L. Huff, D. Tempel, S. Svejda

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10:15 - 207. Coatings from liquid and supercritical carbon dioxide. **R. G. Carbonell**, F. E. Henon, E. N. Hoggan, J. J. Novick, J. M. DeSimone, J. L. Kendall, W. C. Bunyard

10:45 - 208. New functionalized materials based on substituted butadienes. **V. V. Sheares**, Y. Li, T. K. Emmick, C. D. Martin, Y. Jing, M. Beery

11:15 - 209. Micell Technologies: From the university laboratory to the marketplace. **T. J. Romack**, J. McClain

11:45 - 210. The CO₂ Technology platform directed towards step-growth polymerizations. **J. M. DeSimone**
TUESDAY AFTERNOON

Section A

Nanopatterned and Nanostructured Materials: Synthesis, Characterization, and Application

D. L. Gin, *Presiding*

M. Trolls^{as}, *Presiding*

C. J. Hawker, *Organizer*

J. L. Hedrick, *Organizer*

K. L. Wooley, *Organizer*

2:00 - 211. Structural ordering of core crosslinked nanoparticles and architecture of polymeric superstructures. **K. Ishizu**

2:30 - 212. Synthesis of nanosized (CS)N-G-poly(E-caprolactone). **J. G. Hilborn**, G. Carrot, J. Plummer, S. Scholz, H. Hoffman, J. L. Hedrick, M. Trolls^{as}

3:00 - 213. Redox determination of amphiphilic and hydrophobic guest locations in amphiphilic nanoparticles. **J. Schaefer**, H. Huang, K. L. Wooley

3:30 - 214. A study of the solution properties of dendrimer-like star polymers. **A. P. Gast**, J. Pople, M. Trolls^{as}, H. Claesson, J. L. Hedrick

4:00 - 215. Templated hollow nanospheres. **H. Huang**, K. L. Wooley, E. E. Remsen, T. Kowalewski

4:30 - 216. Small angle neutron scattering of inverse micelles. **D. J. Kiserow**, K. S. Freeman, N. Beck Tan, S. F. Trevino, L. B. McGown

5:00 - 217. Multilayer ultrathin film assembly strategies using alternate adsorption of polyelectrolytes and dyes: Applications in PLED and LC display devices. **R. Advincula**, D. Roitman, W. Knoll, A. Baba, F. Kaneko, C. Frank, M. Planck, F. Kaneko

5:20 - 218. Combinatorial polymer chemistry. **G. Klaerner**, M. Petro, H-T. Chang, R. B. Nielsen, A. L. Safir

5:40 - 219. A polymer-oil layer network. **X. Wang**

Section B

Drug Delivery in the 21st Century

Polymeric Drug Delivery Vehicles

A. Rubinstein, *Presiding*

E. Schacht, *Presiding*

R. Mersny, *Organizer*

K. Park, *Organizer*

1:25 - 220. Polymeric prodrugs of antibiotics with improved efficiency. **E. Schacht**, E. E. Roseeuw, D. Dormurado, G. L. Marchal, B. Vrooman

1:50 - 221. The characterization of P(PEGMA-co-PEGDMA) for use in coating the tract of a transjugular intrahepatic portosystemic shunt. **W. Leobandung**, G. McLennan, N. Patel, K. P. Moresco, N. A. Peppas

2:15 - 222. New crystalline hydroxypolycarbonates for drug delivery and other biomaterial applications. **E. J. Vadenberg**, D. Tian

2:40 - 223. Crosslinked gelatines for biomedical application. **E. Schacht**, B. Vandenbulcke, B. Bogdanov, J. P. Draye, J. V. Heddegem

3:05 - Intermission

3:25 - 224. Structural and morphological characteristics of carriers based on poly(acrylic acid). **P. Bures**, N. A. Peppas

3:50 - 225. Controlled drug release from poloxamer formulations: Diffusion vs erosion. **L. Yang**, S. Talukdar, P. Alexandridis

4:15 - 226. Mass transport in ordered microstructures formed by block copolymers: Ramifications for controlled release applications. **L. Yang**, P. Alexandridis

4:40 - 227. State of insulin encapsulated by polyalkylcyanoacrylate nanoparticles. **C. X. Zheng**, M. X. Duan, Z. C. Yue, J. H. Guo, H. Ma

Section C

Ralph F. Hirschman Award in Peptide Chemistry honoring Harold Scheraga

M. Goodman, *Organizer, Presiding*

P. E. Wright, *Organizer*

1:55 - Introductory Remarks

2:00 - 228. De Novo proteins from rationally designed combinatorial libraries. **M. H. Hecht**

2:40 - 229. Structure and dynamics of unfolded proteins and protein folding intermediates. **P. E. Wright**

3:20 - 230. Caged compounds for kinetic investigations of protein-mediated reactions in the microsecond time domain. **G. P. Hess**, B. K. Carpenter

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4:00 - 231. Integrated tools for sequence/structure/function analysis. **B. Honig**

4:40 - 232. Protein NMR and the human proteome project. **G. T. Montelione**

TUESDAY EVENING

Section A

Poster Session: Nanopatterned and Nanostructured Materials: Synthesis, Characterization, and Application

C. J. Hawker, *Organizer, Presiding*

J. L. Hedrick, *Organizer, Presiding*

K. L. Wooley, *Organizer, Presiding*

7:00—9:00

233. - A light scattering study of surfactants in CO₂. **S. Wells**, E. Buhler, A. Dobrynin, J. M. DeSimone, M. Rubinstein

234. - Synthesis and characterization of model fluorinated block copolymers. **Y. Ren**, M. A. Hillmyer, T. Lodge

235. - Functionalized nanospheres from polystyrene-blockpoly(2-cinnamoyl ethyl methacrylate)-block-poly(tert-butyl acrylate). **R. S. Underhill**, S. Stewart, G. Liu

236. - Chromophore centric alignment via radical ion pair clusters. **S. Sun**, R. Rakhimov, D. Jones, R. Heidi, A. Fider, B. Booker, H. Ries

237. - Model studies into the aqueous base dissolution behavior of styrene copolymers containing carboxylic acid groups dissociated from the polymer backbone. **M. A. King**, A. Kwoka, R. F. Sinta, T. G. Adams, Z. Mao, G. G. Barclay

238. - Temperature-dependent localization of cyclodextrins threaded onto a poly(ethylene glycol)-poly(propylene glycol) triblock-copolymer in a polypropylene. **T. Ooya**, H. Fujita, N. Yui

239. - Programming a silver nanocrystal to recognise and selectively bind a molecular substrate in solution. **S. M.**

Fullham, D. A. Fitzmaurice

240. - Programmed assembly of gold nanocrystals in aqueous solution. **S. A. Connolly**, D. A. Fitzmaurice

241. - New photopatternable, self-organizing materials for tailored surfaces. **T. Hayakawa**, J. Wang, N. Sundararajan, M. Xiang, C. K. Ober, M. Ueda, X. Li, B. Glusen, C. K. Ober

242. - Adsorption properties of polyelectrolytes in ultrathin multilayer assemblies: Investigations using the quartz crystal microbalance (QCM) technique. **A. Baba**, F. Kaneko

243. - Mesophase structures of comb-like polymers of mixed side chains. **X. Wang**

244. - Single chain based cylindrical and spherical molecular containers via ring opening metathesis polymerization of dendritic 7-oxanorbornenes. **M. N. Holerca**, V. Percec, M. Moller, S. A. Prokhorova

245. - Preparation of porous polyimides from self-assembled graft copolymers. **E. Y. Lebedeva**, K. R. Carter, B. S. Kesler

246. - Nanostructured hybrid organic/inorganic materials. Silsesquioxane modified plastics. **T. S. Haddad**, R. Stapelton, H. G. Jeon, P. T. Mather, J. D. Lichtenham, S. Phillips

247. - Novel strategies for the preparation of patterned polymer brushes using surface-initiated polymerization. C. J. Hawker, **D. Benoit**, M. Husemann, J. L. Hedrick, N. L. Abbott, R. R. Shah, D. Mecerreyes

248. - Fabrication of silver wires on patterned polymethylene films on a gold surface. **Y. T. Tao**, K. Pandian

Section B

Poster Session: Drug Delivery in the 21st Century

R. Mersny, *Organizer, Presiding*

K. Park, *Organizer, Presiding*

7:00—9:00

249. - Photoinduced destabilization of sterically stabilized liposomes. **B. Bondurant**, D. F. O'Brien

250. - Ionically cross-linked polyphosphazene microspheres. **A. K. Andrianov**, J. Chen, S. S. Sule

251. - Hypoglycemic effect of insulin in oil preparation (IOP) by oral administration. **M. X. Duan**, J. H. Guo, H. Ma, Y. Zou, C. X. Zheng

252. - Polysaccharide as a drug containing polymer. **K-Y. Lee**, S. Na, Y-E. Kim

253. - Synthesis and characterization of thermoreversible protein-conjugating functional copolymers of poly (NIDAM-co-NAS). **K-D. Fan**, H. Uludag

254. - pH-dependent swelling of nano-sized poly (methacrylic acid-g-ethylene glycol) gels. **H. Ichikawa**, N. A. Peppas

255. - Lipid-heme vesicles and hemoglobin vesicles as dioxygen infusion. **T. Komatsu**, S. Takeoka, H. Sakai, E. Tsuchida

256. - Human serum albumin-heme hybrid as dioxygen infusion. **T. Komatsu**, E. Tsuchida

257. - Development of semisolid preparations for topical delivery of epidermal growth factor. **L. R. Lorenzo**, O. G. Pulpeiro

Section C

Poster Session: Chiral Polymers

Cosponsored with Division of Polymeric Materials: Science & Engineering

D. V. McGrath, *Organizer, Presiding*

S. J. Huang, *Organizer, Presiding*

M. Roby, *Organizer, Presiding*

7:00—9:00

258. - Poly (Isocyanopeptides): A new class of helical polypeptides. **J. J. L. M Cornelissen**, W. S. Graswinckel, N. A. J. M. Sommerdijk, R. J. M. Nolte

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259. - Oligosaccharide synthesis on a soluble hyperbranched polymer. **A. B. Kantchev**, J. R. Parquette
260. - Synthesis of "bent" dendrimeric wedges based on 2,3-dihydroxybenzyl alcohol. **J. G. Weintraub**, J. R. Parquette
261. - Template effect of chiral cycloalkanediols on the asymmetric cyclopolymerization of bis(4-vinyl benzoate)s with styrene. **A. Narumi**, T. Ishibashi, K. Yokota, T. Kakuchi, H. Kaga
262. - Asymmetric induction mechanism in cyclopolymerization of bis(4-vinylbenzoate) monomer with styrene. **M. Obata**, K. Kamino, K. Yokota, T. Kakuchi
263. - Synthesis and properties of optically active polymethoxyalkynes: I. synthesis and characterization. **Q. Sun**, B. Z. Tang
264. - Synthesis and properties of optically active polymethoxyalkynes: II. Thermal and chiroptical properties. **Q. Sun**, B. Z. Tang
265. - Synthesis and optical properties of optically active polyamides derived from optically active spiro[3.3]heptane-2,6-dicarboxylic acid. **H. Tang**, H. Miura, I. Imae, Y. Kawakami

Section D

Poster Session: Innovations in Polymer Science Teaching

I. M. Khan, *Organizer, Presiding*

J. Smid, *Organizer*

J. P. Droske, *Organizer*

7:00—9:00

266. - Poly(vinyl chloride) - A material whose utility is determined by plasticizers and additives - An experiment for undergraduates. **C. L. Kepler**, W. P. Weber

Section E

Poster Session: Milestones in Polyesters

T. E. Long, *Organizer, Presiding*

R. DeMartino, *Organizer, Presiding*

7:00—9:00

267. - Rheological characterization of biodegradable aliphatic polyesters. **H. J. Choi**, S. H. Park, J. Kim, T. K. Shin

Section F

Poster Session: Recent Advances in Polyesters

K. Khemani, *Organizer, Presiding*

7:00—9:00

268. - Diels-Alder reactions of poly (ethylene terephthalate-co-2, 6-anthracene dicarboxylate) with maleimides. **M. Vargas**, J. R. Jones, D. Collard, C. L. Liotta, D. A. Schiraldi
269. - Thermosetting of hydroxyl-substituted poly (ethylene terephthalate) copolymers. **R. M. Kriegel**, D. Collard, C. L. Liotta, D. A. Schiraldi
270. - Photocrosslinking of poly (ethylene terephthalate-co-2,6-anthracenedi-carboxylate). **D. Collard**, J. R. Jones, C. L. Liotta, D. A. Schiraldi

WEDNESDAY MORNING

Section A

Polymer Characterization

R. B. Moore, *Organizer*

A. Kaannurpatti, *Presiding*

- 8:30 - 271. Intelligent switch prepared by composite crosslinked polyisopropylacrylamide-sponge gels. **L. Liang**, X. Feng, L. M. Perrung
8:55 - 272. Block copolymers with double helical supramolecular segments. **U. S. Schubert**, C. D. Eisenbach
9:20 - 273. Translational and rotational diffusion of probe molecules in polymer films near T_g: Effect of hydrogen bonding. **D. B. Hall**, K. E. Hamilton, J. M. Torkelson
9:45 - 274. Surface modification of polystyrene studied by IR-visible sum frequency spectroscopy. **D. Zhang**, S. Dougal, M. S. Yeganeh
10:10 - 275. Metal-polymer composites in supercritical fluid carbon dioxide. **T. J. McCarthy**, P. Rajagopalan
10:35 - 276. Investigations of the interaction of sulfur-quinone polyurethanes with iron. **D. E. Nikles**, A. B. Helms, S. C. Street, G. W. Warren, D. Yang
11:00 - 277. A novel thermo-reversible rubber. **A. H. Fawcett**, E. McGonigle, M. Hohn, E. Russell
11:25 - 278. Tacticity, crystallinity and layer spacings in poly(1-olefin sulfone)s. **A. H. Fawcett**, J. Callan, J. Callan, K. Malcolm, K. Blackwood, R. W. Date, G. McCaffery, N. Spassky

Section B

Chiral Polymers

Natural Polymers and Derivatives

Cosponsored with Division of Polymeric Materials: Science & Engineering

D. V. McGrath, *Organizer, Presiding*

S. J. Huang, *Organizer*

M. Roby, *Organizer, Presiding*

1999 Spring Meeting

- 9:00 - 279.** Carbamate derivatives of polysaccharides as potential chiral stationary phases for enantioseparation by HPLC. **Y. Okamoto**, E. Yashima, C. Yamamoto
9:40 - 280. Chirality studies of carbohydrate-based oligomeric materials: What does circular dichroism mean? **J. Gervay**, K. D. McReynolds, O. Oehrlé-Steele, T. Q. Gregar
10:10 - 281. Chiral separation of amino acids based on a new chiral recognition polymer. **H. Guo**, V. Egan, C. M. Knobler, R. B. Kanar
10:30 - Intermission
10:40 - 282. Chemical synthesis of isotactic poly(3-hydroxyalkanoates). **L. A. Schechtman**, J. J. Kemper
11:10 - 283. Chirality and fibrous protein macromolecular assembly. **D. Kaplan**, R. Valluzzi
11:40 - 284. Biodiversity of pseudomonas bacteria as a tool in the macromolecular synthesis of polyesters with controlled architectures. **P. Guerin**, D. Mallarde, V. Langlois, O. Bouvet

Section C

Milestones in Polyesters

T. E. Long, *Organizer*

R. DeMartino, *Organizer*

J. E. McGrath, *Presiding*

- 8:30 - 285.** Polymer chemistry: From soft drink bottles to polymeric liquid crystals. **T. E. Long**, J. R. Bradley
9:00 - 286. Titanate-catalyzed ring-operated polymerization of cyclic phthalate ester oligomers. **D. J. Brunelle**, J. Serth-Guzzo
9:30 - 287. Thermosetting and photosetting cholesteric copolyesters. **H. R. Kricheldorf**, T. Krawinkel, M. Berghahn, J. Stumpe
10:00 - 288. Poly (trimethylene terphthalate) - An old fiber for the 21st Century. **S. M. Beshouri**, H. S. Brown, H. H. Chuah, K. Dangayach, C. C. Hwo
10:30 - 289. Advances in the commercialization of poly (lactic acid). **M. Hartmann**
11:00 - 290. Copolyesters of poly (1, 4-cyclohexanedimethylene terephthalate) with isophthalic acid and 2,6-naphthalene dicarboxylic acid. **D. C. Hoffman**, T. J. Pecorini
11:30 - 291. Liquid crystalline polyesters - manipulating the mesophase. **M. Jaffe**
WEDNESDAY AFTERNOON

Section A

Polymer Synthesis

R. B. Moore, *Organizer*

A. Scranton, *Presiding*

- 1:30 - 292.** Functionalized liposomes for use in drug delivery: pH dependent fusion and lysis of phosphatidylcholine vesicles by poly (2-ethylacrylic acid). **J. G. Linhardt**, D. A. Tirrell
1:55 - 293. Study of monomer reactivity in non-equilibrium copolycondensation of aromatic copolyamides. **D. Liu**, L. Li, X. Lu, Q. Zhou, X. Wang
2:20 - 294. Cationic ring-opening polymerization of mono and bifunctional spiro orthoesters containing ester groups and depolymerization of the obtained polymers. **F. Sanda**, T. Endo, K. Yoshida
2:45 - 295. The behaviour of ortho quinone methide in the condensation of phenol formaldehyde resins. **K. Lenghaus**, G. Qiao, D. H. Solomon
3:10 - 296. Synthesis of poly (pyridinium salts) containing long chain alkyl substituents. **G. B. Wayton**, F. W. Harris
3:35 - 297. Isomers and isomerization processes in poly-anilines. **A. G. MacDiarmid**, Y. Zhou, J. Feng, G. T. Furst, A. M. Shedlow
4:00 - 298. A novel polyimide with remarkable thermal stability and unique electrical property. **F. Wudl**, D. Chen, P. Duong, B. Dunn
4:25 - 299. CAM Acrylic latex film formation. **C. L. King**, O. W. Smith, S. F. Thames

Section B

Chiral Polymers

Supramolecular and Conjugated Polymers

Cosponsored with Division of Polymeric Materials: Science & Engineering

D. V. McGrath, *Organizer*

S. J. Huang, *Organizer*

M. Roby, *Organizer*

E. Peeters, *Presiding*

Y. Tor, *Presiding*

- 1:30 - 300.** Chiral supramolecular polymers based on multiple hydrogen bonding. L. Brunsveld, J. H. K. K Hirschberg, A. R. A. Palmans, J. A. J. M Vekemans, **E. W. Meijer**
2:10 - 301. Chiral metal-containing polymers. **Y. Tor**, E. C. Glazer
2:40 - 302. Design and synthesis of a stereoregular and optically active polycarbosiloxane. **Y. Li**, Y. Kawakami
3:00 - Intermission

1999 Spring Meeting

- 3:10 - 303.** Helical superstructures from low molecular weight and polymeric building blocks. **R. J. M. Nolte**, R. J. H. Hafkamp, N. A. J. M. Sommerdijk, M. C. Feiters
- 3:50 - 304.** Optical activity of chiral pi-conjugated oligomers and polymers. **E. Peeters**, R. A. J. Janssen, S. C. J. Meskers, E. W. Meijer
- 4:10 - 305.** Synthesis and properties of poly[(-)-menthyl propiolate] and its analogues as a new class of helical polyacetylenes. **T. Masuda**, H. Nakako, R. Nomura, M. Tabata
- 4:40 - 306.** UV-visible, circular dichroism, and fluorescence spectra of polythiophenes with (S)-2-methyloctyl side chains. **M. Fujiki**, H. Nakashima, R. Koe, H. Takigawa
- 5:10 - 307.** Induced helix formation of stereoregular polyphenylacetylene derivatives with optically active compounds. **E. Yashima**, K. Maeda, Y. Okamoto

Section C

Milestones in Polyesters

T. E. Long, *Organizer, Presiding*

R. DeMartino, *Organizer*

- 1:30 - 308.** Development of molecular orientation and mechanical properties in polyethylene terephthalate. **I. W. Ward**
- 2:00 - 309.** The chemistry, processing, and morphology of poly (ethylene terephthalate). **S. A. Jabarin**
- 2:30 - 310.** A new high performance liquid crystal polyester by controlling molecular structures. **T. Inoue**
- 3:00 - 311.** Conversion dependence of the structural units, the diads and the degree of branching of a hyperbranched polyester based on 4, 4'-BIS(4'-hydroxyphenyl) pentanoic acid determined by NMR spectroscopy. **D. Schmaljohann**, H. Komber, B. I. Voit
- 3:30 - 312.** Next generation commercial polyester film: "Structure-properties-process", and application differences between poly (ethylene naphthalate), and poly (ethylene terephthalate) films. **J. A. Siddiqui**, J. Carson

THURSDAY MORNING

Section A

Innovations in Polymer Science Teaching

I. M. Khan, *Organizer*

J. P. Droske, *Organizer*

J. Smid, *Organizer, Presiding*

T. E. Hogen-Esch, *Presiding*

8:25 - Introductory Remarks

8:30 - 313. Polymer science as part of the broader field of materials research. **H. R. Allcock**

9:00 - 314. Lehigh University's new distance education M.S. in polymer science and engineering. **L. H. Sperling**, M. El-Aasser

9:30 - 315. Activities of the teaching committee of the french polymer group. **M. Fontanille**

10:00 - 316. Polymer education - POLYED and IPEC. **J. P. Droske**, C. E. Carraher, A. B. Salamone, M. Zeldin, L. Mathias, R. S. Moore, D. Collard

10:20 - 317. Elucidation of the fundamentals of anionic polymerization using commercial anionic polymerization processes. **R. P. Quirk**

10:40 - 318. Five year BS/MS program in polymer science at Clark Atlanta University: Addressing the diversity issue in polymer science. **M. Webb**, C. D. Parker, I. M. Khan

11:00 - 319. A special topics graduate course in conjugated polymers. **D. J. Sandman**

11:20 - 320. Emerging-submerging chemical sensors. **S. L. Regen**, L. H. Zhang, V. Janout, A. R. Tweedie

11:40 - 321. A unified laboratory approach to teaching & research in polymer chemistry. **K. B. Wagener**, R. S. Duran, J. R. Reynolds

Section B

Chiral Polymers

Bio-Inspired Polymers

Cosponsored with Division of Polymeric Materials: Science & Engineering

D. V. McGrath, *Organizer, Presiding*

S. J. Huang, *Organizer, Presiding*

M. Roby, *Organizer*

9:00 - 322. Development of a combinatorial biology approach for the production of polyhydroxalkanoate thermoplastic. **Y. Xue**, M. D. William, D. H. Sherman

9:30 - 323. Preparation and characterization of low molecular weight poly(3-hydroxybutyrate) and their block copolymers with poly(oxyethylene). **R. H. Marchessault**, G-E. Yu

10:00 - 324. Polylactides that contain xylofuranose repeat units. **R. Gross**, M. Kunioka, H. K. Ahn

10:30 - 325. Microbial synthesis and degradation of chiral polymers. **Y. Doi**

11:00 - 326. Copolymers derived from itaconic anhydride and vinyl stearate. **J. A. Wallach**, S. J. Huang

Section C

Recent Advances in Polyesters

K. Khemani, *Organizer, Presiding*

1999 Spring Meeting

8:00 - Introductory Remarks

8:05 - 327. New functional copolyesters. **D. Collard**, S. D. Allen, M. C. Cherrier, D. M. Conner, A. G. Jones, J. R. Jones, R. M. Kriegel, C. L. Liotta, J. C. Tyson, M. Vargas, D. A. Schiraldi

8:35 - 328. Synthesis and characterization of copoly (succinic anhydride-ethylene oxide)-poly(lactide)block copolymer. **Y. Maeda**, A. Nakayama, N. Kawasaki, K. Hayashi, N. Yamamoto, S. Aiba

9:05 - 329. A study of synthesis and sequence distribution of co-poly (trimethylene naphthalate). **K-K. Liu**, S-K. Hwang, C. Yeh, T-F. Way, L-M. Tsay, L. S. Chen, L. T. Chen

9:35 - 330. Properties of poly (ethylene 2,6-naphthalate) copolyesters containing various dialcohols. **K. H. Yoon**, W. H. Jeong, H. N. Cho

10:05 - Intermission

10:20 - 331. Hydrolysis-resistant aliphatic polyesters. **H. Ni**, A. D. Skaja, P. R. Thiltgen, M. D. Soucek, W. J. Simonsick, W. Zhong

10:50 - 332. From Aliphatic polyesters to "contaminated" polyethylenes: Synthesis and solid-state characterization of potentially self-organizing polyesters. **J. Penelle**, C. L. F. T Hove, J. Schall, A. Jonas, W. Hu, K. Schmidt-Rohr, A. J. Waddon

11:20 - 333. Thermotropic LCP and PET / poly ethylene naphthalate blend. **S. H. Kim**, J. K. Park, H. N. Cho, S. M. Hong, S. S. Hwang, B. J. Jeong, H. O. Yoo

THURSDAY AFTERNOON

Section A

Innovations in Polymer Science Teaching

T. E. Weston, *Presiding*

S. W. Bigger, *Presiding*

I. M. Khan, *Organizer*

J. Smid, *Organizer*

J. P. Droske, *Organizer*

1:30 - 334. The plastics resources for educators program (PREP). **T. E. Weston**

2:00 - 335. The effects of thermal treatment on common polymers - A response to the need for educational experiments in polymer chemistry. **S. W. Bigger**, S. C. Hodgson, J. D. Orbell, J. Scheirs

2:30 - 336. An approach to polymer and liquid crystal education using interactive molecular simulations to teach complex concepts and applications. **J. L. Koenig**, W. Gordon

3:00 - 337. Virtual instruments for polymer science and engineering. **I. R. Harrison**

3:30 - 338. Fundamentals of polymer science a CD-ROM and on-line material. **P. C. Painter**, M. M. Coleman

4:00 - 339. A polymer extrusion line simulator. **K. M. Cantor**

4:20 - 340. Incorporating applied polymer science experiments in an undergraduate chemistry curriculum. **K. W. McLaughlin**

4:40 - 341. Can we teach polymer synthesis (more) effectively using a retrosynthetic approach? **J. Penelle**

Section B

Chiral Polymers

Chiroptical Properties and Catalysis

Cosponsored with Division of Polymeric Materials: Science & Engineering

D. V. McGrath, *Organizer, Presiding*

S. J. Huang, *Organizer*

M. Roby, *Organizer, Presiding*

1:30 - 342. Polymeric glasses with chiral optical properties: A simple motion probe with a variable length scale. **M. M. Green**, J-W. Park

2:00 - 343. Manipulation of reflection colors of cholesteric polymers. **M. Brehmer**, J. Lub, P. Van de Witte

2:30 - 344. Azobenzene modified polymers containing chiral binaphthyl linkages: Tuning chiroptical behavior with light and heat. **G. D. Jaycox**, G. J. Everlof

3:00 - 345. Synthesis and properties of chiral, amphiphilic dendrimers. **J. R. Parquette**, M. J. Laifersweiler, J. L. Chaumette

3:30 - Intermission

3:40 - 346. Control of chirality and helicity in synthetic polymers. **D. Y. Sogah**, S. Zheng

4:10 - 347. Synthesis of polylactide using zinc beta-diiminato complexes. **G. W. Coates**, M. Cheng, T. M. Ovitt, P. D. Hustad

4:40 - 348. Chirality induction in cyclocopolymerization: Relationship between asymmetric induction and chiral template structure. **T. Kakuchi**, K. Yokota

5:10 - 349. Chiral polymers in asymmetric catalysis: An optically active polybinaphthyl-Ti(IV) catalyst for an asymmetric alkyl addition to aldehydes. H-B. Yu, X-F. Zheng, Q-S. Hu, **L. Pu**

Section C

Recent Advances in Polyesters

K. Khemani, *Organizer*

D. Collard, *Presiding*

1999 Spring Meeting

1:05 - 350. The relationship between the mesogenic structure and curing behavior of aromatic ester type liquid crystalline epoxy resins. **J. Y. Lee**, J. Jang, S. S. Hwang, K. U. Kim, S. M. Hong, J. A. Kim

1:35 - 351. Synthesis, characterization and properties of co-polyetheresters based on poly (ethylene terephthalate-co-ethylene-4,4'-biphenyldicarboxylate) and poly(tetramethylene oxide). **C. Schröder**, I. Vulic

2:05 - 352. A Novel Approach to Studying PET Degradation. **K. Khemani**

2:35 - 353. Elucidation of crystalline structure in poly (ethylene terephthalate) by external reflection infrared spectroscopy. **K. C. Cole**, A. Ajji, E. Pellerin

3:05 - Intermission

3:20 - 354. The studies of fibers based on poly (ethylene terephthalate)-poly (caprolactone) block copolymer. **W. Tang**, F. Mares, S. Murthy

3:50 - 355. Pyrene and anthracene diacids as fluorescent brightening comonomers for polyesters. **D. M. Conner**, D. Collard, C. L. Liotta, D. A. Schiraldi

4:20 - 356. Modelling of the solid state postcondensation behaviour of polybutylene terephthalate based (co) polyesters. **G. Bonte**, M. Kevenaar