

# PMSE NEWS

Polymeric Materials: Science and Engineering Division of the American Chemical Society  
**FALL 2002 - ELECTION ISSUE**

## PMSE TECHNICAL PROGRAM HIGHLIGHTS - BOSTON, AUGUST 2002

At the 224<sup>th</sup> ACS national meeting (August 18-22, 2002) in Boston, MA, PMSE will sponsor or co-sponsor twelve symposia in frontier areas of polymer science and engineering. At this meeting, the Division's General Papers/New Concepts in Polymeric Materials symposium, organized by Jay Dias, will feature four oral sessions focusing on "Nanomaterials and Structures", "Biomaterials: Synthesis, Application, Concerns", "Structure and Performance" and "New Concepts in Polymerization". As usual, we will hold a joint poster session with the Polymer Division at this meeting.

Professor J. Edward Glass (North Dakota State U.), Rose Ryntz (Visteon Corp.), and Raymond Fernando (Air Products and Chemicals, Inc.) have organized a symposium entitled "Application Rheology of Dispersed Systems". This is the first symposium organized jointly between ACS (PMSE/POLY) and the FSCT (Federation of Societies for Coating Technology). This symposium will cover the coatings and cosmetic areas in three sessions. The first session will provide plenary lectures on the concepts and components that influence the rheology of disperse systems. In the second session the importance of electrostatic forces and of associative polymers on disperse systems rheology will be discussed. The third session will include a plenary lecture on surfactant rheology and cosmetic applications and will emphasize polymer clay interactions.

Geoffrey Coates (Cornell U.) and Robert Waymouth (Stanford U.) will lead a symposium entitled "Control of Polymer Stereochemistry". The aim of this symposium is to discuss the most recent advances in discrete catalysts for stereoselective polymerization. Heterogeneous catalysis will not be addressed in this symposium. Presentations will focus on the polymerization of a range of monomers, including alkenes, lactones, epoxides, and active alkenes such as acrylates.

John Thomaidis (National Starch and Chemical Co.) has organized the ICI Student Award Symposium. Graduate students will present papers in this session, and the best paper will be the winner of the 2002 ICI Student Award.

Alistair Westwood (ExxonMobil Chemical Co.) will lead a symposium on "Imaging and Spectroscopic Techniques for

Polymer Systems." The symposium aims to provide a broad overview of the wide range of imaging and spectroscopic techniques available for the characterization of polymer microstructures through invited talks by leading experts in various fields as well as contributed papers on a range of spectroscopic imaging applications. Invited talks will be given in the following areas, electron tomography of nanocomposites, scanning transmission X-ray microscopy (STXM), IR imaging, energy-filtered TEM, scanning probe techniques (SPM), spectroscopic imaging using near-field scanning optical microscopy (NSOM), NMR imaging and application of In-situ TEM techniques.

There will also be a workshop entitled "New Imaging Technologies for Polymers" that is associated with the symposium on Imaging of Polymers organized by the PMSE Division. This workshop will cover infrared, Raman, fluorescence, X-ray, and AFM imaging of polymers. While lectures given by experts in the field will provide theoretical foundations for all techniques, hands-on experiments will allow participants to fully understand advantages and limitations of each technique. Participants are encouraged to bring their problems/questions/specimens to the workshop.

Ted Provder (Eastern Michigan U.) and John Texter (Strider Research Corp.) have organized "Particle Size Assessment and Characterization". This symposium takes place on Sunday, August 18 and consists of 19 papers. The symposium topics include particle size and particle size distribution measurement, instrumentation and interpretation of results and application of the information to various particle systems. Techniques covered include capillary hydrodynamic chromatography, thermal field flow fractionation, packed column hydrodynamic chromatography, analytical ultracentrifugation, dynamic light scattering, laser light scattering, acoustic attenuation spectroscopy, and time of flight methods. Moreover, there will be a focus on characterizing the stability of emulsions and dispersions by electrophoretic fingerprinting, light scattering methods, electrokinetic sonic amplitude measurements and acoustic attenuation spectroscopy.

Additionally, ACS is planning a two-day course on "Modern Methods of Particle Size Assessment and Characterization", on the preceding Friday and Saturday, August 16-17.

*(continued on page 2)*

# BOSTON, continued

Qinghuang Lin (IBM), Raymond Pearson (Lehigh U.) and Jeffrey Hedrick (IBM) will lead a symposium entitled "Polymers for Micro- and Nano- Electronics." The symposium will present recent breakthroughs and significant advances in patterning, insulating and packaging materials for micro- and nano-electronics including polymers for 90nm and 65nm generations of devices. This symposium will also highlight nanometer-scale transistors as small as 1nm using self assembled organic monolayers.

PMSE will host an exciting set of symposia related to medical and biomedical applications of polymers. Anuj Bellare (Harvard Medical School) and Lisa Pruitt (U. of California, Berkeley) have organized "Polymers in Orthopaedics." This symposium highlights studies associated with polymers used in several orthopaedic applications. A few examples include the structure and properties of polyethylene and poly(methyl methacrylate) based bone cement used in total joint replacement prostheses, electrospun resorbable polymeric nanofibers for cartilage and bone tissue engineering, biodegradable polymers such as poly(lactic acid) as resorbable bone screws, protein and organic-ceramic nanocomposite biomaterials for coating and fixation of orthopaedic implants and hydroxyapatite filled polypropylene fumarate for bone grafts and mandibular reconstruction.

Yu-Chin Lai (Bausch & Lomb, Inc.) and S.W. Shalaby are co-chairing a symposium on "Shelf Life of Polymers in

Medical Devices." It addresses issues related to the stability of ophthalmic products, stability of radiation-sterilized medical devices, novel approaches for low-dose radiation sterilization, and new test methods for evaluating the stability of cyanoacrylate tissue adhesives.

Jay Künzler (Bausch & Lomb, Inc.) is leading the symposium on "Synthetic Polymers in Ophthalmology." This symposium will present state-of-the-art papers on advances in the application of synthetic polymers to ophthalmology.

The Roy W. Tess Award in Coatings is being presented to Mohamed S. El-Aasser just prior to his concluding address at a symposium organized in his honor. This symposium subtitled "Emulsion and Miniemulsion Polymers" comprises two half-day sessions containing 14 invited presentations being made by prominent members of the polymer colloids community. The symposium is organized by E. David Sudol (Lehigh U.), Do Lee (Dow Chemical Co.), and David Bassett.

Warrant Ford (Oklahoma State U.) will chair the symposium for the Unilever Award for Outstanding Graduate Research in Polymer Science and Engineering. This year, the award will go to Kristi Kiick, a leading investigator at the interface of materials and biology.

Please join us in Boston for another outstanding PMSE program!



## PMSE NEWS TEAM

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# PROGRAM FOR BOSTON • AUGUST 18 - 22, 2002

**Application Rheology of Dispersed Systems.** (Cosponsored FSCT and POLY). J. Edward Glass, ND State Univ., Dept. of Polymers & Coatings, Fargo ND 58105, (701) 231-7128, FAX (701) 231-8439, [e\\_glass@ndsu.nodak.edu](mailto:e_glass@ndsu.nodak.edu); Rose Ryntz, Visteon Corporation, 401 Southfield Rd., P.O. Box 6231, Dearborn, MI 48121, (313) 755-6164, FAX (313) 755-0601, [rryntz@visteon.com](mailto:rryntz@visteon.com); Raymond Fernando, Air Products and Chemicals, Inc., 7201 Hamilton Blvd., Allentown, PA 18195, (610) 481-2602, FAX (610) 481-7923, [fernanh@apci.com](mailto:fernanh@apci.com).

**Biomacromolecules.** (Cosponsored MACR; MACR is primary sponsor). Timothy E. Long, Dept. of Chem., VA Polytechnic Inst. and State Univ., Davidson Hall (0212), Blacksburg, VA 24061-0212, (540)231-2480, FAX: 540-231-8517; [telong@vt.edu](mailto:telong@vt.edu).

**Control of Polymer Stereochemistry Using Single-Site Catalysts.** Geoffrey W. Coates, Baker Lab., Dept. of Chem. & Chem. Biology, Cornell Univ., Ithaca, NY 14853-1301, (607) 255-5447, FAX (607) 255-4137, [gc39@cornell.edu](mailto:gc39@cornell.edu); Robert M. Waymouth, Stanford Univ., Dept. of Chem., S G MUDD, Rm. 191, Stanford, CA 94305-5080, (650) 723-4515, FAX (650) 725-0259, [waymouth@leland.stanford.edu](mailto:waymouth@leland.stanford.edu).

**Imaging and Spectroscopic Techniques for Polymer Systems.** Alistair Westwood, ExxonMobil Chemical Co., Baytown Polymer Ctr., 5200 Bayway Dr., Baytown, TX 77520, (281) 834-5741, FAX (281) 834-1792, [alistair.d.westwood@exxonmobil.com](mailto:alistair.d.westwood@exxonmobil.com).

**Particle Size Assessment and Characterization.** (Cosponsored COLL). Theodore Provder, Polymers & Coatings Consultants, 26567 Bayfair Dr., Olmsted Falls, OH 44138, (440) 235-3680, FAX (440) 235-3512, [tprovder@worldnet.att.net](mailto:tprovder@worldnet.att.net); John Texter, Strider Res. Corp., 265 Clover St., Rochester, NY 14610 (716) 288-5913, FAX (716) 482-7795, [texter@striderresearch.com](mailto:texter@striderresearch.com).

**Polymers for Micro- and Nano-Electronics: From Synthesis to Applications.** Qinghuang Lin, IBM T. J. Watson Res. Ctr., P.O. Box 218, Rt. 134, MS 6-250, Yorktown Heights, NY 10598, (914) 945-2366, FAX (914) 945-2141, [qhlin@us.ibm.com](mailto:qhlin@us.ibm.com); Raymond A. Pearson, Dept. of Mats. Sci. & Engg., Lehigh Univ., 5 East Packer Ave., Bethlehem, PA 18015, (610) 758-3857, FAX (610) 758-4244, [rp02@lehigh.edu](mailto:rp02@lehigh.edu); Jeffrey C. Hedrick, IBM T. J. Watson Res. Ctr., P.O. Box 218, Rt. 34, Yorktown Heights, NY 10598, (914) 945-1563, FAX (914) 945-4033, [jhedrick@us.ibm.com](mailto:jhedrick@us.ibm.com).

**Polymers in Orthopaedics.** Anuj Bellare, Harvard Medical School, MRB 108, BWH, 75 Francis St, Boston, MA 02115, (617) 732-5864, FAX (617) 732-6705, [abellare@rics.bwh.harvard.edu](mailto:abellare@rics.bwh.harvard.edu); Lisa

A. Pruitt, 5134 Etcheverry Hall, Univ. of California at Berkeley, Berkeley, CA 94720, OFFICE (510) 642-2595, LAB: (510) 643-3095, FAX (510) 643-5599, [lpruitt@newton.berkeley.edu](mailto:lpruitt@newton.berkeley.edu).

**Polymers in Photonics and Displays: Synthesis, Processing, and Devices.** (Cosponsored Optical Society of America, POLY; POLY is primary). C. Allan Guymon, Dept. of Polymer Sci., Univ. of Southern MS, Southern Station 10076, Hattiesburg, MS 39406; Alex K-Y. Jen, Dept. of Mats. Sci. & Engg., Univ. of WA, Roberts Hall, Box 352120, Seattle, WA 98195-2120; Dick J. Broer, Philips Research Laboratories, Eindhoven Univ. of Tech., Holstlaan 4, 5656 AA Eindhoven, Netherlands.

**Shelf-Life of Polymers in Medical Devices.** Yu-Chin Lai, Bausch & Lomb, Inc., 1400 N. Goodman St., Rochester, NY 14692-0450, (716) 338-8711, FAX (716) 338-5304, [ylai@bausch.com](mailto:ylai@bausch.com); W. Shalaby, Poly-Med Inc. 6309 Hgwy. 187, Anderson, SC 29265, (864) 646-8544, FAX (864) 646-8547, [shalaby@poly-med.com](mailto:shalaby@poly-med.com).

**Synthetic Polymers in Ophthalmology.** Jay Künzler, Bausch & Lomb, 1400 N. Goodman St., Rochester, NY 14609, (716) 338-5286, FAX (716) 338-5304, [jkunzler@bausch.com](mailto:jkunzler@bausch.com); Miguel F. Refojo, Schepens Eye Res. Inst., Harvard Medical School, 20 Staniford St., Boston, MA 02114, (617) 912-7435, FAX (617) 912-0101, [mrefojo@vision.eri.harvard.edu](mailto:mrefojo@vision.eri.harvard.edu).

**General Papers/New Concepts in Polymeric Materials.** A. Jay Dias, ExxonMobil Chem. Co., Baytown Polymer Ctr., 5200 Bayway Dr., Baytown, TX 77520-5200, (281) 834-5199, FAX (281) 834-2678, [jay.dias@exxonmobil.com](mailto:jay.dias@exxonmobil.com).

**ICI Student Award Symposium.** John S. Thomaidis, National Starch and Chemical Co., 10 FINDERNE AVE., BRIDGEWATER, NJ 08807, (908) 685-5064, FAX (908) 685-7400, [john.s.thomaidis@nstarch.com](mailto:john.s.thomaidis@nstarch.com).

**Tess Award Symposium in Honor of Mohamed El-Aasser.** E. David Sudol, Lehigh Univ., Emulsion Polymers Inst., 111 Research Dr., Bethlehem, PA 18015, (610) 758-5580, FAX (610) 758-5880, [eds2@lehigh.edu](mailto:eds2@lehigh.edu); Do Ik Lee, The Dow Chemical Co., 1604 Bldg., Midland, MI 48674, (989) 636-2460, FAX (989) 638-6356, [dilee@dow.com](mailto:dilee@dow.com); David R. Bassett, 100 Woodburn Dr., Swannanoa, NC 28778, (828) 686-5055 [bassettdaver@aol.com](mailto:bassettdaver@aol.com).

**Unilever Award for Outstanding Graduate Research in Polymer Science and Engineering.** (Cosponsored POLY). Warren T. Ford, Dept. of Chem., OK State Univ., Stillwater, OK 74078, (405) 744-5946, FAX (405) 744-6007.

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# Symposia For Future National Meetings

## **NEW ORLEANS – March 23-27, 2003**

**Abstracts and PMSE preprints must be submitted electronically through ACS OASYS (Online Abstract Submittal). Follow instructions given at <http://www.acs.org/meetings/>. Preprints must be submitted electronically through OASYS as word processing or PDF files in conjunction with abstract submittal; approved templates for preprints may be downloaded at <http://membership.acs.org/P/PMSE/meetings/template.html>. For further information, see the published PMSE "Instructions for Authors" and home page, <http://membership.acs.org/P/PMSE/>. Deadline for submittal of abstracts and preprints is tentatively scheduled for November 15, 2002.**

**Applications of Scanning Probe Microscopy to Polymers.** James D. Batteas, Dept. of Chem., CUNY-College of Staten Island, 2800 Victory Blvd., Staten Island, NY 10314, (718) 982-4075, (718) 982-3910, [batteas@postbox.csi.cuny.edu](mailto:batteas@postbox.csi.cuny.edu); Gilbert C. Walker, Dept. of Chem., Univ. of Pittsburgh, Chevron Science Ctr., 219 Parkman Ave., Pittsburgh, PA 15260, (412) 383-9650, FAX (412) 383-9646, [gilbertw+@pitt.edu](mailto:gilbertw+@pitt.edu).

**Functional Polymers.** Jean M. J. Frechet, Dept. of Chem., Univ. of CA – Berkeley, Berkeley, CA 94720-1460, (510) 643-3077, FAX (510) 643-3079, [frechet@cchem.berkeley.edu](mailto:frechet@cchem.berkeley.edu).

**Gene-Based Medicine: Delivery and Diagnostics.** Steven M. Dinh, Emisphere Technologies, Inc., 765 Old Saw Mill River Rd., Tarrytown, NY 10591; (914) 785-4756, FAX (914) 593-8291, [sdinh@emisphere.com](mailto:sdinh@emisphere.com); John D. DeNuzzio, Becton Dickinson Technologies, 21 David Dr., Research Triangle Park, NC 27709-2016, (919) 313-6127, [john.d.denuzzio@bd.com](mailto:john.d.denuzzio@bd.com).

**In-Situ Characterization of Polymerization Processes.** Julie Jessop, Dept. of Chem. & Biochem. Engg., Univ. of IA, 125 Chemistry Bldg. Iowa City, IA 42242, (319) 335-0681, (319) 335-1415, [julie-jessop@uiowa.edu](mailto:julie-jessop@uiowa.edu).

**MALDI and ESI Mass Spectrometry Techniques for Polymers.** Mark E. Bier, Ctr. For Molecular Analysis, Dept. of Chem., Carnegie Mellon Univ., 4400 Fifth Ave., Pittsburgh, PA 15213, (412) 268-3540, FAX (412) 268-6897, [mbier@andrew.cmu.edu](mailto:mbier@andrew.cmu.edu); Robert P. Lattimer, Noveon, Inc., 9911 Brecksville Rd., Brecksville, OH 44141, (216) 447-5369, FAX (216) 447-5575, [bob.lattimer@noveoninc.com](mailto:bob.lattimer@noveoninc.com).

**Polymer Brushes: From Synthesis to Functional Microstructures.** Rigoberto C. Advincula, Dept. of Chem., Univ. of AL at Birmingham, Chem. Bldg., 901 14<sup>th</sup> St., South Birmingham, AL 35294-1240, (205) 934-8286, (205) 934-2543, [gobet@uab.edu](mailto:gobet@uab.edu); Jurgen Ruhe, Chem & Physics of Interfaces, Inst. for Microsystem Technology (IMTEK), Univ. of Freiburg, George-Köhler-Allee 103; 79110 Freiburg; Germany, +49 (0)7 61 / 2 03-7161, +49 (0)7 61 / 2 03-7162, [ruehe@imtek.uni-freiburg.de](mailto:ruehe@imtek.uni-freiburg.de).

**Polymer Surfaces and Interfaces.** (Cosponsored COLL). Bryan Chapman, ExxonMobil Chemical Co., Baytown Polymers Ctr., 5200 Bayway Dr., Baytown, TX 77520, (281) 834-0216, FAX (281) 834-1793, [bryan.r.chapman@exxon.com](mailto:bryan.r.chapman@exxon.com); Paul L. Valint, Dept. of Chem., Univ. at Buffalo, State Univ. of NY, Buffalo, NY 14260, (716) 645-6800, FAX (716) 645-6963, [plvjr@aol.com](mailto:plvjr@aol.com).

**Cooperative Research Award.** Brian C. Benicewicz, Rensselaer Polytechnic Inst., NYS Center for Polymer Synthesis, Cogswell Laboratory,

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**General Papers/New Concepts in Polymeric Materials.** A. Jay Dias, ExxonMobil Chem. Co., Baytown Polymer Ctr., 5200 Bayway Dr., Baytown, TX 77520-5200, (281) 834-5199, FAX (281) 834-2678, [jay.dias@exxonmobil.com](mailto:jay.dias@exxonmobil.com).

## **NEW YORK – September 7-11, 2003**

**Deadline for submittal of abstracts and preprints is tentatively scheduled for April 21, 2003.**

**Advances in Epoxide and Polyurethane Coatings.** Mark D. Soucek, Dept. of Polymer Engg. Univ. of Akron, Akron, OH 44325-3909, (330) 972-2583, FAX (330) 972-2339, [mSoucek@uakron.edu](mailto:mSoucek@uakron.edu).

**Assembly and Applications of Soft Interfaces.** S. Michael Kilbey, Dept. of Chemical Engineering, Clemson University, Clemson, SC 29634-0909, (864) 656-5423, FAX (864) 656-0784, [mike.kilbey@ces.clemson.edu](mailto:mike.kilbey@ces.clemson.edu); Igor Luzinov, 263 Serrine Hall, School of Mats Sci. and Engg., Clemson Univ., Clemson, SC 29634-0971, (864) 656-5958, FAX (864) 656-5973, [luzinov@clemson.edu](mailto:luzinov@clemson.edu).

**Ethylene Elastomers and Plastomers.** Sudhin Datta, ExxonMobil Chem. Co., Baytown Polymer Ctr., 5200 Bayway Dr., Baytown, TX 77520, (281) 834-5092, FAX (281) 834-2863, [sudhin.datta@exxon.com](mailto:sudhin.datta@exxon.com).

**Nanostructured Liquid Crystal Materials and Applications.** L. C. Chien, Chemical Physics Program and Liquid Crystal Institute, Kent State Univ., Kent, OH 44242, (330) 672-3827, FAX (330) 672-2796, [lcchien@lci.kent.edu](mailto:lcchien@lci.kent.edu); Timothy J. Bunning, Air Force Research Lab, MLPJ, 3005 P. St., Ste. 1, WPAFB, OH 45433, (937) 255-3808, x3167, FAX (937) 255-1128, [timothy.bunning@afrl.af.mil](mailto:timothy.bunning@afrl.af.mil).

**Polymers as Additives.** Donald N. Schulz, ExxonMobil Res. & Engg. Co., Rt. 22 E., Annandale, NJ 08801, (908) 730-2526, FAX (908) 730-2536, [donald.n.schulz@exxonmobil.com](mailto:donald.n.schulz@exxonmobil.com); Abhimanyu O. Patil, ExxonMobil Res. & Engg. Co., Rt. 22 E., Annandale, NJ 08801, (908) 730-2639, FAX (908) 730-2536, [abhimanyu.o.patil@exxonmobil.com](mailto:abhimanyu.o.patil@exxonmobil.com).

**Polymer Applications in the Personal Care and Pharmaceutical Industries.** Zahid Amjad, RNA Corp., 13740 S. Chatham St., Blue Island, IL 60406, (708) 597-7777, ext. 121, FAX (708) 497-8151, [zahid@rnacorporation.com](mailto:zahid@rnacorporation.com).

**Polymeric Drug Delivery: Science and Application.** Sonke Svenson, The Dow Chemical Co., 1712 Bldg., Midland, MI 48674, (878) 636-0974, (878) 636-6558, [ssvenson@dow.com](mailto:ssvenson@dow.com).

**Smart Nano-Assemblies.** Yuri M. Lvov, Inst. of Inst. of Micro-manufacturing, P.O. Box 10137, LA Tech. Univ., Ruston, LA 71272, (318) 257-5144, FAX (318) 257-5144, [ylvov@coes.latech.edu](mailto:ylvov@coes.latech.edu); Fotios Papadimitrakopoulos, Inst. of Mats. Sci., U-36, Univ. of CT, Storrs, CT 06269-3136, (860) 486-3447, FAX (860) 486-4745, [papadim@mail.ims.uconn.edu](mailto:papadim@mail.ims.uconn.edu).

**Tess Award Symposium.** David R. Bauer, Ford Motor Co., MD-3182, SRL, P.O. Box 2053, Dearborn, MI 48197, (313) 594-1756, (313) 323-1129, [dbauer3@ford.com](mailto:dbauer3@ford.com).

**ICI Student Award Symposium.** John Thomaidis, National Starch and Chemical Co., 10 FINDERNE AVE., BRIDGEWATER, NJ 08807, (908) 685-5064, FAX (908) 685-7400, [john.s.thomaidis@nstarch.com](mailto:john.s.thomaidis@nstarch.com).

**General Papers/New Concepts in Polymeric Materials**

*See page 7 for dates and locations of meetings in 2004-2007.*

# A Look At Orlando!



Charles Carraher celebrates his *PMSE Distinguished Service Award* with Larry Charbonneau



Peggy Cebe receiving her *Past Chair Award* for the 2001 year from Larry Charbonneau



Brian Benicewicz presenting the *Cooperative Research Award* to **Benny Freeman** and **Ingo Pinnau** for their work with polymer-based membranes



Yu-Chin Lai presenting the *2001 Doolittle Award* to **M. Sawamoto** (left) for the Spring Meeting and **G. C. Sarti** (right) for the fall meeting

# Candidates for Election to the PMSE Executive Committee

## Candidates for Councilor

### Charles Carraher, Jr.

BS 1963 Sterling College; PhD 1967 University of Missouri, Kansas City.

Charles Carraher is Professor of Chemistry at Florida Atlantic University, Associate Director of the Florida Center for Environmental Studies, and Director of the Environmental Chemistry Secretariat. He previously was Dean of the College of Science at FAU, Chair of the Science Division at the University of South Dakota, and Chair of the Department of Chemistry at Wright State University. He has been given many awards and recognitions including being named a Fellow in the American Institute of Chemists, received the Outstanding Scientists and Engineering Award from the Engineers and Scientist Affiliate Societies Council in 1984, was named as the outstanding Chemist in southeast USA by the American Chemical Society in 1992 and given a Distinguished Service Award for his work in science education in 1994 and the Saltarilli Sigma Xi Award for research in 1992. He has worked as a science adviser for Sen. McGovern, served as a reader for the national science 2000 committee, served on a national testing committee, served on the Governor's task-force committee for the Sustainability of South Florida, and headed up one of the national test committees. He is a member of the national Committee on Professional Training.

In 2000 he was awarded the title of Fellow by the American Chemical Society Division of Polymeric Materials: Science and Engineering, PMSE, being one of 16 members recognized in the first class of those so recognized. In 2002 he received the Distinguished Service Award from the ACS:PMSE.

He is recognized as one of the founders of the general area of organometallic polymers. His research has led to the synthesis of over 70 new families of polymers as well as new methods for their characterization and synthesis. He has chaired numerous national and international committees. He is a founder and cochair of PolyEd which works with K-Post-graduate education through a number of groups. PolyEd has worked to develop the science education page of USA Today; recognize outstanding high school teachers of science on a national basis; publish PEN a science newsletter that goes to all the Universities and Colleges in the USA and Canada; and works with industry in developing short courses and other educational aids. He is also one of the founders of IPEC which is an inter-societal organization focusing on K-12 education. This past year IPEC influenced over 500,000 students. Both PolyEd and IPEC are supported by PMSE and PC. He serves on the Executive Board for Divisions of Polymeric Materials: Science and Engineering and Polymer Chemistry and the editorial board of numerous journals. Currently he is associate editor of the Journal of Polymer Materials and a contributing editor of Polymer News.

Research areas include high strength materials, geomembranes, use of coupled mass spectroscopy in the identification of materials including a coupled thermoanalysis and mass spectrometry instrument that recently become commercially available, biomedical and bioactive materials

(for the treatment of yeast infections, cancers, juvenile diabetes, Parkinson's disease, new bacterial strains, etc.), heavy metal contamination of natural waters, solid waste management, renewable resources, high energy radiation (laser) containment and enhancement, plant growth hormones for better food production, thermally stable materials, and high temperature superconductors. He is holder of a number of basic patents including the initial chemical synthesis of nucleic acids. He has also been involved in work related to the restoration of the Everglades. He has chaired or cochaired over 30 international symposia.

He chaired the first committee to create a national standardized examination in polymer chemistry and the first committee that evaluated the presence of polymer chemistry in the undergraduate curriculum.

He is author or coauthor of about 40 books, and over 750 articles in a number of broad areas. In addition to his professional writing, he writes in many diverse areas including learning styles, management and ISO, risk management and assessment, toxicology, human genome, and chaos. Currently he is involved in educational innovations such as BONDing activities as additional/alternative supportive activities involving learning chemistry.

He coauthored with Clara Craver the book Applied Polymer Science 21<sup>st</sup> Century that was part of the 75<sup>th</sup> celebration of PMSE. He is also the author of the most widely introductory polymer text book Polymer Chemistry that will shortly be in its 6<sup>th</sup> edition.

### Clara Craver

As I write this message asking for your vote for me as Councilor for the next two years, it came to my attention that this is the 20<sup>th</sup> year that I have served as Councilor. When that opportunity first arose I was a past chairman of the Division and had been appointed to the ACS Board and Council Committee on Budget and Finance, where I served for nine years. Also I was an invited member of a small ad hoc group serving the ACS office of Meetings and Expositions with goals of making ACS meetings more user-friendly and of helping the technical divisions in their role as communicators of advances in chemical science. This job continues as assistance I provide at headquarters for each national meeting. There have been many task force and other committee appointments and elections, including terms on Meetings and Expositions, and council-elected committees of Nominations and Elections, and a recent election to Committee on Committees. I want the opportunity to continue these services and believe that my familiarity with ACS governance permits me to help guide policies of ACS, particularly in areas of special importance to Divisions.

### Ray A. Dickie

I am pleased to have been named as a candidate in the present election for PMSE officers. It would be an honor and a privilege to represent PMSE on the ACS Council and its committees.

I am a graduate of the University of North Dakota (B.S.Chem) and the University of Wisconsin (Ph.D., physical chemistry). After

*(continued on page 8)*

## ICI Student Award

The 2001 ICI Student Award in Applied Polymer Science was presented to Dr. Brian E. Priore at the PMSE Division Awards Luncheon on Monday, April 8, 2002 by Dr. David Bott of ICI. This Award, sponsored by ICI and administered through the Joint Polymer Education Committee of the ACS Divisions of Polymeric Materials: Science and Engineering (PMSE) and Polymer Chemistry (POLY), is given annually for the best paper presented by a graduate student either currently in graduate school or not more than one year past graduation at the ICI Student Award Symposium as part of the PMSE program at the Fall ACS Meeting.

Brian graduated with a Ph.D. from Carnegie Mellon University in May 2001 where his advisor was Professor Lynn M. Walker. The title of his paper, which was presented at the Fall 2001 ACS National Meeting in Chicago, Illinois, was *Coalescence Analysis of Immiscible Polymer Blends via Droplet Break-up Technique*. Brian is currently working for DuPont Performance Coatings.



David Bott presenting Brian Priore the ICI Award in Orlando

## FORD TRAVEL GRANT TO BE AWARDED IN BOSTON

The winner of the Ford Travel Grant for the upcoming Boston ACS meeting is Ms. Andrea M. Kasko from the University of Akron. She is a Ph.D. student in the Polymer Science Program, and her advisor is Professor Coleen Pugh. The title of the work she will present in Boston is "Effect of Molecular Architecture on the Miscibility and Solution Properties of Poly[11-(4'-cyanophenyl-4"-phenoxy)undecyl acrylate]s prepared by ATRP.

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| <b>ANAHEIM</b>       | <b>March 28-April 1, 2004</b>        |
| <b>PHILADELPHIA</b>  | <b>August 22-26, 2004</b>            |
| <b>SAN DIEGO</b>     | <b>March 13-17, 2005</b>             |
| <b>WASHINGTON</b>    | <b>August 28 - September 2, 2005</b> |
| <b>ATLANTA</b>       | <b>March 26 - 31, 2006</b>           |
| <b>SAN FRANCISCO</b> | <b>September 10-15, 2006</b>         |
| <b>CHICAGO</b>       | <b>March 25 - 30, 2007</b>           |
| <b>BOSTON</b>        | <b>August 19-24, 2007</b>            |

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## Election Candidates, continued

a post-doctoral research at Glasgow University and Stanford Research Institute (now SRI International), I joined the Ford Motor Company Scientific Research Laboratories. During my career at Ford, my research centered on automotive paints and adhesives and related areas of polymer science. I am author or co-author of 100+ technical papers and 40+ U.S. Patents. My research awards include the Roy W. Tess Award in Coatings from PMSE, the Midgley Award and the Distinguished Service Award of the ACS Detroit Local Section, and the Mattiello Award of the Federation of Societies of Coatings Technologies. I recently retired from Ford Motor Company and relocated from Michigan to North Carolina.

PMSE has been my principal ACS home for many years. Among other activities, I have served PMSE as Secretary, Vice-Chair, and Chair, and as General Secretary of the Macromolecular Secretariat representing PMSE. I was honored to be included in the first class of PMSE Fellows. In other ACS activities, I have served as Councilor for the Detroit ACS Local Section. As Councilor, I was appointed to the ACS Council Committee on Constitution and Bylaws and later was elected to the Committee on Committees. In other current professional activities, I am Editor of *Journal of Coatings Technology* (a publication of the Federation of Societies for Coatings Technology) and have recently completed my term as President of the Adhesion Society.

### David J. Lohse

David J. Lohse received B.S. degrees in both Physics and Computer Science from Michigan State University in 1974, and a Ph. D. in Materials Science from the University of Illinois in 1978. He then spent two years at the National Bureau of Standards in Gaithersburg, MD under an NSF-NRC Fellowship, working on the theory of polymer solutions. Since then he has worked for Exxon Mobil Corporation, first in the Long Range Polymer Research Group of Exxon Chemical Co., and since 1987 in what are now the Corporate Strategic Research Labs of ExxonMobil Research & Engineering Co. in Annandale, NJ. His current research focuses on the thermodynamics of mixing polymer blends, neutron scattering from polymers, the use of block and graft copolymers to enhance blend compatibility, the control of rheology by molecular architecture, and the application of such knowledge to develop improved polymer products. His research has resulted in over 75 publications (including a book on *"Polymeric Compatibilizers"* written in 1996 with Sudhin Datta of ExxonMobil Chemical Co.) and more than a dozen patents. He has also served the PMSE division in several capacities. Among these are Program Chair from 1991-94, Secretary in 1995, Chair in 1998, and chair of the new Fellows Committee since 1999. He was elected a Fellow of the American Physical Society in 2000.

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### Candidates for Member at Large

#### Rigoberto Advincula

Dr. Rigoberto Advincula or "Gobet" is currently Assistant Professor at the Department of Chemistry, University of Alabama at Birmingham. He is also adjunct with the Materials Eng. and Biomedical Eng. Departments at UAB and Faculty

with the Tri-campus materials program. His research interests are in the area of organic and polymer ultrathin films, conjugated polymers, surface initiated polymerization, chemistry at interfaces, and macromolecular assemblies. Prior to joining UAB he spent Post-doctoral fellowships at the Max-Planck Institute for Polymer (MPI-P) Research in Mainz and Stanford University. He has received several awards including an Alexander von Humboldt fellowship, NSF-CAREER award, Phi-Beta Kappa, and VBL visiting professor at Tokyo University (TUAT) (1998), and Avh visiting professor at MPI-P-in Mainz, Germany (1999). To date he has had a total of 119 publications (more than half peer reviewed), 154 presentations, and has served as peer reviewer for several ACS journals including *Macromolecules*, *Chemistry of Materials*, *Langmuir*, and *JACS*. He is also a regular proposal reviewer for NSF, ACS-PRF and DoD proposals. He is currently mentoring 8 Ph.D. students and has mentored 15 undergraduates, 9 high school students, 7 foreign visitors, and 8 Post-doctoral scholars. He has also been invited as speaker and symposium leader to a number of conferences sponsored by ACS and Materials Research Society (MRS) and Gordon Conference. He is a member of the ACS (Poly and PMSE divisions), MRS, Alexander von Humboldt Association of America, AAAS, AAS, and American Vacuum Society (AVS). He has been actively involved with the ACS and other organizations in particular in leadership positions including: President of Alabama ACS local section (2001) and Chair-elect (1999) and National Chemistry week coordinator (2001), ACS sponsored Alabama Project SEED mentor for minority students (since 1998), Chemistry committee chairman, Alabama Academy of Sciences (AAS). Other outreach activities include, giving talks to local high school students (Shelby county schools), judging local science fairs, and participation with AIST (alliance of Alabama outreach programs), and volunteer for NSF 50<sup>th</sup> Anniversary project. He has been a member of PMSE for almost 10 years and is currently co-organizing a Symposium on Polymer Brushes in 2003 National ACS meeting, New Orleans. Another PMSE Symposium is under consideration for Anaheim, 2004 on Polyelectrolytes and Particle Multilayer Assemblies. He would like to make practical contributions to PMSE goals, activities, and service.

#### Zhenan Bao

Dr. Zhenan Bao is a Distinguished Member of Technical Staff in Bell Laboratories of Lucent Technologies (Murray Hill, New Jersey). She attended undergraduate study at Nanjing University (1987-1990), China and the University of Illinois at Chicago (1990-1991). She received her Ph.D. degree in chemistry from the University of Chicago in 1995, where she investigated palladiumcatalyzed reactions for the synthesis of functional conjugated polymers and their applications as electro-optical materials. She then joined Bell Laboratories as a member of technical staff. She has been a Distinguished Member of Technical Staff since 2001. Her current research interests include rational design and synthesis of organic and polymeric semiconductors, nonlithographical patterning, and self-assembled molecular structures and micro-objects. Dr. Zhenan Bao has authored more than 70 refereed publications, given more than 70 invited talks and lectures, and held seven



## Team Innovation Award

Zhenan Bao and John Rogers (Bell Laboratories, Lucent Technologies), Ananth Dodabalapur (formerly from Bell Labs and now at the University of Texas, Austin), Karl Amundson (E-Ink Corporation) and Paul Drzaic (now at Alien Corporation) are the recipients of this year's ACS Award for Team Innovation, sponsored by The Corporation Associates. This joint Lucent / E-Ink interdisciplinary team of research chemists, chemical and process engineers and device physicists were the leaders of a larger group responsible for the fabrication of the world's first flexible electronic paper prototype. They successfully took inventions relating to the design of electronic ink and organic semiconductor materials from research concept through device demonstration and prototype electronic paper implementation in the remarkably short time of one year. The innovation of a 25 square inch, 256 pixel display driven by an active matrix of transistors built on a flexible plastic substrate using low-cost fabrication techniques was announced to the public on November 20, 2000.



Ananth Dodabalapur, Karl Amundson, Paul Drzaic, John Rogers, and Zhenan Bao

The development of a light-weight, flexible, paper-like medium has been the "holy grail" of many groups of scientists and engineers in this increasingly digital world. While our lives have been revolutionized by the ready availability of computer technology, we are still largely bound to paper, a technology that is over 2000 years old. The specifications that any electronic alternative must meet are impressive: it must be cheap, flexible, light-weight, portable, offer good contrast and reflectivity, be capable of being read from wide-viewing angles, and use little or no power. The electronic paper technology developed here will enable almost limitless opportunities in products ranging from collapsible displays for hand-held devices and laptop computers, to signs and posters, and reprogrammable, paper-back like books made of thin, flexible sheets of an electronic medium.

The key challenge related to development of the electronic paper prototype was to innovate the necessary materials chemistries, processes and fabrication methodologies. Coupling of the bistable, electrophoretic display medium developed and commercialized by E-Ink of Cambridge, Massachusetts with the Bell Labs plastic transistor device technology provided a viable solution. The use of low-cost printing methods to fabricate the "all-plastic," reflective, "paper-like" display was an additional imperative.

Working as a team this group defined the device architecture, and identified materials and fabrication solutions that represent the best compromise of properties for desired device performance. A year later a fully working, defect-free prototype was unveiled and undoubtedly, we will soon see the development of new products enabled by "electronic paper."

## Election Candidates, continued

issued US patents (24 pending). She has organized various polymer materials symposia. She served as symposium organizers for the American Chemical Society meeting (Spring 2000), the Material Research Society conferences (Fall 1999, Spring 2000, Fall 2001) and the European Material Research Society conference (1999, 2000). She is the program chair for the Material Research Society conference (Spring 2002). She also serves as Member-At-Large for the Polymer Materials Science and Engineering division of the American Chemical Society. She is on the international advisory board for the journal of Advance Functional Materials. Dr. Zhenan Bao has been a Guest Editor for MRS Bulletin, Synthetic Metals, and MRS symposium proceedings. Dr. Zhenan Bao is a recipient of the Beilby Metal and Prize 2002 from the Royal Society of Chemistry, the American Chemical Society Team Innovation Award 2001, R&D 100 Award 2001, and "Best of Best" (Top Three) R&D 100 Award 2001. She has also been selected by the American Chemical Society Women Chemists Committee as one of the twelve "Outstanding Young Woman Scientist who is expected to make a substantial impact in chemistry during the coming century".

### Timothy J. Bunning

Timothy J. Bunning is a Senior Materials Research Engineer in the Hardened Materials Branch of the Materials and Manufacturing Directorate, Air Force Research Laboratory, Wright-Patterson Air Force Base. After receiving his Ph.D. in Chemical Engineering in 1992 from the University of Connecticut, he spent a short postdoctoral stint at Cornell (w/ C. Ober) before coming to the base first as a contractor and currently as a government employee. His current research interests center around advanced organic-based photonic materials and components, specifically passive and dynamic diffractive structures formed using complex holographic photopolymerization techniques, development of polymer photonic structures using PECVD, the structure development of polymer/liquid crystal composites, and liquid crystalline materials and technologies. He is the author or co-author of 100+ publications, several book chapters, and 10 patents (issued or pending), has co-organized numerous technical symposia, and was recently awarded the John H. Dillon Medal from the Division of Polymer Physics, American Physical

*(continued on page 10)*

## ***Election Candidates, continued***

Society. He is currently the project leader for a diverse internal and external R&D effort that is developing new responsive materials and approaches for integration in optical sensing, laser beam control, and filtering applications. He has been a member of ACS for numerous years and recently joined the PMSE Technical Programming Committee.

### **E. Bryan Coughlin**

E. Bryan Coughlin is an Assistant Professor of Polymer Science and Engineering at the University of Massachusetts Amherst. His research interests are in the area of synthetic polymer chemistry. His research group focuses on using organo-transition metal catalysts for the construction of macromolecules with novel architectures. A native of Colorado, he received a B.A. from Grinnell College in 1988 and a Ph.D. from the California Institute of Technology in 1993. Following nearly 6 years in the Central Research and Development laboratories of the DuPont Company he joined the UMass Polymer Science faculty in September of 1999.

**Personal Statement:** If elected as a Member-at-Large I look forward to serving the interests of all PMSE Division members. In particular, I would like to encourage younger ACS members to join the division. I have seen first hand how membership in the division is of great benefit when beginning your professional career.

### **Mark DeMeuse**

Mark DeMeuse obtained a B.S. in chemistry from Carroll College in Waukesha, Wisconsin and both an M.S. and PhD in chemistry from Illinois Institute of Technology in Chicago. Upon completion of his PhD, he accepted a joint postdoctoral assignment with University of Massachusetts and Celanese Research Company working in the area of liquid crystal polymers. This postdoctoral assignment lead to a permanent staff position with Celanese for 3 years. Mark, then, joined EniChem America, eventually becoming Senior Scientist and Project Leader of a microwave processing project. Currently, he is a Research Scientist at Applied Extrusion Technologies in the area of new product development. Dr. DeMeuse has published approximately 50 papers and is the holder of 10 U.S. patents.

### **Paula T. Hammond**

Paula Hammond earned her B.S. in Chemical Engineering from the Massachusetts Institute of Technology in 1984, her M.S. degree from Georgia Institute of Technology in 1988, and her Ph.D. in Chemical Engineering in 1993 from the Massachusetts Institute of Technology. In 1994, Dr. Hammond was awarded the NSF Postdoctoral Fellowship in Chemistry while performing postdoctoral research in the Harvard University Chemistry Dept as a member of the Whitesides group. In 2000, Professor Hammond was awarded the Junior Bose Faculty Award, and the GenCorp Signature University Award. She has also received the NSF Career Award, 1997, the EPA Early Career Award, 1996, the DuPont Young Faculty Award, 1996-99, and 3M Innovation Fund Award, and is on the Advisory Board of Advanced Materials and Chemistry of Materials. Her general areas of interest include electrical and optical properties of

polymers and nano to microscale fabrication using directed and self-assembly of polymers.

Prof. Hammond's research and educational program emphasizes the use of molecular aspects in the study and development of new materials and processes. Its basis is the molecular design and synthesis of self-assembling polymeric systems, and the understanding and use of secondary interactions to guide their assembly at surfaces as well as in the bulk state. There are two primary areas of research in the group. The first area involves the use of polymer-surface interactions as a guide to the assembly of single and multicomponent micron and submicron scale structures on a broad range of surfaces as a means of microfabrication. Applications range from organic electro-optical functional devices to biologically active functional surfaces and sensors. The second area approaches nanoscale self-assembly through the design of functionalized block copolymers; focused investigations include liquid crystalline block copolymers for electro-mechanical and electro-optical applications, and dendritic-linear block copolymers as nano-encapsulants or hosts for delivery and membrane applications. Dr. Hammond has been active in the ACS as a member-at-large in the PMSE Division, and as a member of the Ford Travel Grant Committee. She also serves as the Programming Chair for Polymers for the AIChE, and a Fall Meeting Chair for the MRS.

### **Julie L. P. Jessop**

Dr. Julie L. P. Jessop is an Assistant Professor of Chemical and Biochemical Engineering at the University of Iowa. She received her B.S. in 1994 and her Ph.D. in 1999, both in Chemical Engineering from Michigan State University. Dr. Jessop's research interests include ring-opening photopolymerizations, dental composites, microlithographic photoresists, and spectroscopic characterization of polymers. She has received several awards, including a National Science Foundation CAREER award (2002), a Michigan State University Excellence-in-Teaching Award (1999) and a National Science Foundation Graduate Fellowship (1996-99). She served on the technical conference review committee for RadTech 2002 and is co-chairing technical sessions at national meetings of the ACS and AIChE. She welcomes this opportunity to become more active in PMSE and to contribute her enthusiasm to the mission of the division.

### **Dr. Qinghuang Lin**

Dr. Qinghuang Lin is presently a member of the Dielectric and Exploratory Materials Group at IBM Thomas J. Watson Research Center. Previously he was the Technical Assistant to the Director of Silicon Technology at IBM Thomas J. Watson Research Center. Dr. Lin received his Ph.D. degree from the University of Michigan—Ann Arbor in 1994 and his MS and BE degrees from Tsinghua University, China. Prior to joining IBM, he was a postdoctoral fellow with Professor C. Grant Willson at the University of Texas at Austin. His research interests center on organic materials for micro- and nano-electronics, lithography, and silicon technology. Dr. Lin holds 9 US patents and has authored and co-authored approximately 50 papers on polymeric materials for advanced technologies.

## Election Candidates, continued

In addition, he is the lead author of a successful multi-million-dollar DARPA proposal on polymers for high-resolution lithography. Dr. Lin is a recipient of the IBM Research Division Accomplishment Award 2001 for the development and implementation of a 248nm bilayer photoresist technology. He has also received several IBM Invention Achievement Awards. He is a member of two engineering honor societies: Tau Beta Pi and Alpha Sigma Mu. Dr. Lin is a co-organizer of the ACS Symposium on Polymers for Micro- and Nanoelectronics, 2002. He was the Technical Vice Chairman of the 12<sup>th</sup> International Conference on Photopolymers, 2000. Additionally, he served on several organizing committees of conferences on photopolymers, photoresists, and lithography. Currently Dr. Lin serves on the PMSE Electronic Preprint Committee. He also serves as the PMSE webmaster, responsible for the redesign and the maintenance of the PMSE website. He has been a member of the ACS since 1992 and looks forward to a more active role in PMSE as a Member-at-Large.

### Anil Mahapatro

Anil Mahapatro is currently a doctoral candidate in Materials Chemistry, Department of Chemistry at Polytechnic University, Brooklyn, New York. He received his masters in Polymer Science and Technology from the University of Manchester Institute of Science and Technology (UMIST), Manchester, UK in 1997. His research has involved synthesis of biomaterials by enzyme catalysis and process modeling of cross linked polyethylene foams. He has a total of 7 publications to his credit. He has also worked as a technical service representative for SMZS Chemicals (1995-1996). Professionally, he has been a member of ACS and division members of PMSE and POLY since the past 4 years. He is currently serving on the POLY Public Relations committee and is an active volunteer for the North Jersey Young Chemist Committee (YCC).

### Debra Tindall

Debra Tindall is currently a research chemist at Eastman Chemical Company in Kingsport, TN. Debra earned a B.S. degree in chemistry from Furman University in 1994, then a Ph.D. in organic chemistry from the University of Florida in 1999. Her graduate work, under the direction of Professor Ken Wagener, involved using acyclic diene metathesis (ADMET) chemistry to make copolymers containing polyether or polyisobutylene segments coupled with polycarbonate, polyester, or polyurethane functionalized segments. At Eastman, Debra works in the cellulose esters research labs where she is exploring new applications for this class of polymers in areas such as performance plastics and films, natural fiber-based composites, and controlled release applications. Debra has been a member of the American Chemical Society since 1993 and is a member of POLY and PMSE technical divisions. She is currently secretary of the Northeast TN/Southwest VA local ACS section and serves on the PMSE News editorial team. She enjoys helping with local National Chemistry Week activities such as developing new demos and helping with *Chemistry for 4<sup>th</sup> Graders Day*.

### Marek W. Urban

Marek W. Urban is professor of polymer science and director of National Science Foundation Industry/University Cooperative Research Center in Coatings at the University of Southern Mississippi. His research interests include molecular level understanding of surfaces and interfaces of polymeric films and coatings and spectroscopic methods of analysis of polymeric materials. The primary focus is to understand molecular processes leading to film formation, adhesion, and surface/interfacial processes. During his career he published over 300 research papers, wrote 3 books, edited 7 books with American Chemical Society, and is an editor of the book series entitled *Polymer Surfaces and Interfaces*. He also chaired and organized 7 symposia for the PMSE Division. He is a recipient of several awards. From 1987-91 he was a recipient of the 3M Company Award for Young Investigators and in 1989 he received the Megger's Award for the best paper published in the *Applied Spectroscopy* journal. In 1996, he received the Alcoa Research Foundation Award for the outstanding contributions to multi-dimensional spectroscopy of polymers and films. In 1999, he received the technical Focus Speaker and the Roon Foundation Awards from the Federation of Societies for Coatings Technologies. In 2000, he received the Distinguished Alumni Award.

### Dean Webster

Dean Webster is currently Professor in the Department of Polymers and Coatings at North Dakota State University. He received a B.S. in Chemistry in 1979 and a Ph.D. in Materials Engineering Science in 1984, both from Virginia Tech. He then joined the Sherwin-Williams Company where he was involved in resin development for industrial coatings as well as long-range research in new resins and crosslinking chemistry. While in Chicago, he helped develop the Coatings Technology program at DePaul University and taught a course in coatings resin technology. In 1993, he moved to Eastman Chemical Company where he led project teams in the areas of applications development for new monomers, new chemistry for coatings systems, and polymer development for coatings. He joined the Polymers and Coatings Department at NDSU in the fall of 2001. His research interests include synthesis of high performance polymers, polymerization reactions, new crosslinking chemistry, quantitative structure-property relationships, combinatorial and high throughput experimentation and use of renewable resources in coatings. He currently serves on the editorial board of *Progress in Organic Coatings* and the Professional Development Committee of the Federation of Societies for Coatings Technology.

***Don't forget to vote!***





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