

PMSE NEWS

Polymeric Materials: Science and Engineering Division of the American Chemical Society

SPRING 2003



Words From Our Chair, Paul Valint

It is an honor and my pleasure to serve you as Chair of PMSE for 2003. In some fifteen years of service to the Division, I have witnessed many changes in PMSE due in large part to the fact that we are living in an era of fast moving change.

We owe thanks to my predecessors, Chris Ober, Peggy Cebe and Larry Charbonneau, for their inspiration and guidance through the major change of format for PMSE Preprints from paper to CD-ROM. Larry, Past Chair, will continue to serve PMSE as Chair of the Nominations Committee. Our gratitude goes out to the Electronic Preprints Committee, headed by Peggy Cebe, for their stewardship of the paper to paperless change. Their work continues on improvements to the format, and any suggestions from members and users would be appreciated.

The membership of the PMSE Programming Committee changed in 2002 and will again change in 2003 with another new member to be brought on board. While on the subject of the Program Committee, you are invited to submit suggestions to the Committee for symposium topics for future meetings covering the next five years. I feel that this involvement by the membership is critically important now because of the changes that are occurring in polymer science, technology and industry. Presently, the key areas of interest seem to center on polymers in biomedical applications such as biosensors, implantables for tissue regeneration and drug delivery. Novel approaches to surface modification for applications in films, coatings and adhesives are also in the foreground. This is especially significant to this Division because our roots are in coating technology. The PMSE members involved in these and other new and evolving polymer technologies need to become active in the Division activities and symposium

(continued on page 11)

Words From Our Past Chair, Larry Charbonneau

Dear PMSE Members,

It has been my pleasure to serve you as PMSE Chair during 2002. I shall always be grateful for the many new friends I made during my time as a PMSE Officer, and I look forward to serving the Division in any way that I can in the future. I wish to thank and acknowledge my employer, DuPont Central Research and Development, for the support I was given during my time as a PMSE Officer.

Last year I wrote about potential savings that we believe PMSE would realize from the transition of paper Preprints to CD-ROM based Preprints. Our Treasurer, Ron DeMartino, reported at our Fall ACS Meeting in Boston that the Division had saved over \$77,000 in 2002 by switching to CD-ROM format. This savings occurred during a year in which meeting attendance was down because of travel restrictions imposed by many of our employers. Our savings and investments also fared well in 2002 because of the excellent job of our Investment Chair, John Lupinski. John has invested the monies that support our four PMSE Awards very conservatively and as a consequence our Award investment accounts remain in good shape.

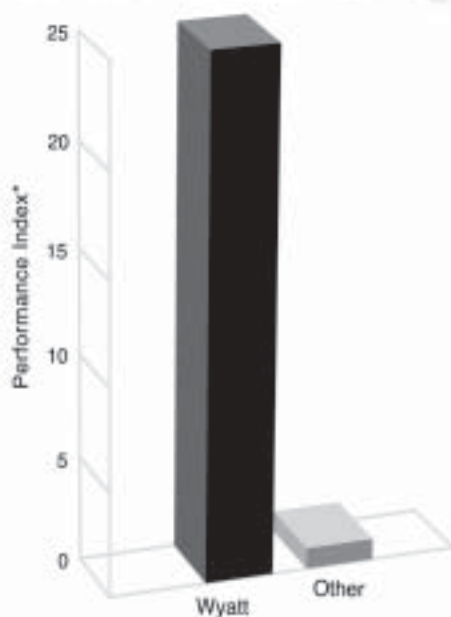
I wish to thank my fellow Officers for their help and support during 2002. My predecessor, Peggy Cebe was very generous with her time and was a great help to me and the other Officers. Our Councilors, Clara Craver, Mike Jaffe and Ted Provder also helped the Officers, and Ted Provder in particular spent a lot of time with the Officers and served as our liaison to the ACS Division Activities Committee.

And finally I thank you the PMSE Members who supported the Division with your dues, and participation at meetings as contributors and attendees.

Larry Charbonneau



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PMSE Technical Program Highlights for New Orleans

At the 225th ACS national meeting (Sunday, March 23 through Thursday, March 27, 2003) in New Orleans, LA, PMSE will sponsor or co-sponsor fourteen symposia in frontier areas of polymer science and engineering. All of the technical sessions described in detail below (unless otherwise noted below) will be on the 1st floor of the Hilton Riverside. The location of four of the cosponsored sessions, mentioned in the last paragraph of this article, was not available at the time this was written.

The **General Papers** session will be held on Sunday morning, beginning at 8:30 am, in Grand Salon A3 with Dr. L.L. Lewis (Millsaps) and Professor A.B. Padmaperuma (University of Southern California) presiding. **Sci-Mix** will be held from 8-10 pm on Monday evening in the Convention Center, Hall G, and the joint **PMSE/POLY poster session** will be from 6-8 pm on Tuesday evening in Hall G of the Convention Center. This poster session will feature nearly 100 posters on all aspects of polymer science and technology.

In Grand Salon B7, beginning Sunday morning at 8 am, a symposium on **Synthesis, Characterization, and Application of Multiphase and Composite Materials** begins with a session on *Fibers and Tubes*. This symposium is organized by A.J. Dias (ExxonMobil Chemical Company). Professor M.A. Sharaf (Helwan University) and Dr. P.R.L. Malenfant (General Electric Global Research Center) preside over the first session. Speakers in this first session focus on a variety of topics involving nanotubes, nanofibers, nanowires, etc. This symposium continues on Sunday afternoon at 1 pm with Dr. C. Huang (New Jersey Institute of Technology) and Dr. A. Alizadeh (General Electric Global Research Center) presiding. It will have a session entitled *Block Copolymers* beginning Monday morning at 8 am with Professor R.B. Grubbs (Dartmouth College) and Professor S. Sun (Norfolk State University) presiding.

A symposium entitled **New Concepts in Biomaterials: Synthesis, Application, Concerns**, organized by A. J. Dias. This symposium begins on Sunday morning at 8am in the Grand Salon A4. The opening session focuses on *Bioinspired Materials and Composites*. Dr. L. Tsou (Bausch & Lomb, Inc.) and J.G. Hilborn (Uppsala University) will preside over this session. On Sunday afternoon, the symposium continues, beginning at 1 pm, with Dr. A.K. Andrianov (Parallel Solutions) and Professor M.A. Biesalski (University of Freiburg) presiding. There will be another session in this symposium, focusing on *Controlled Release*, beginning at 1:30 pm on Monday with Professors T. Clark, Jr. (Truman State University) and S.D. Minteer (Saint Louis University) presiding.

On Sunday morning at 9 am in the Grand Salon A6, Professor M.E. Bier (Carnegie Mellon University) and Dr. R.P. Lattimer (Noveon, Inc.) will be a symposium entitled **MALDI and ESI Mass Spectrometry Techniques for Polymers**. The first session is entitled *Chromatography-MS* and will feature two introductory presentations by the symposium organizers followed by 5 technical presentations highlighting the use of this technique in a variety of applications. This symposium is cosponsored by the Division of Analytical Chemistry. This symposium continues on Sunday afternoon (beginning at 1:30 pm), Monday morning (beginning at 9 am), Monday afternoon (beginning at 1:30 pm).

On Sunday afternoon, the **Cooperative Research Award Symposium** will be held in honor of Dr. Craig Hawker and Professor Tom Russell. This symposium begins at 1 pm in Grand Salon A3, and it is organized by Dr. S.R. Turner (Eastman Chemical Co.), Professor J.M.J. Fréchet (UC, Berkeley) and Professor K.L. Wooley (Washington University). This session features presentations from the award winners and covers a broad range of topics in polymer synthesis, morphology control, and nanotechnology.

On Monday morning beginning at 8:30 am, the Division will host the **Chemistry of Materials Award Symposium** in Honor of Larry Dalton in Grand Salon A3. This symposium is organized by A.K. Jen (University of Washington) and will focus on *Optoelectronics: From Nanostructured Materials to Devices*. S. Creager (Clemson University) will preside over the first session. This symposium will continue on Monday afternoon, beginning at 1:30 pm with K.P. Fivizzani (Nalco Chemical Co.) presiding.

Monday morning also marks the beginning of the symposium on **Application of Scanning Probe Microscopy to Polymers: Near-Field Microscopy Studies of Polymeric Materials**, which starts at 9 am in Grand Salon B7. Professor D.A. Higgins (Kansas State University) will preside, and Professor J.D. Batteas (CUNY-College of Staten Island) and Professor G.C. Walker (University of Pittsburgh) are the symposium organizers. This symposium continues on Monday afternoon, beginning at 1:30 pm, with Dr. S.J. Stranick (NIST) presiding. Another session of this symposium, *Single-Chain Studies of Polymers and Biopolymers*, will be held on Tuesday morning, beginning at 9 am, with B.B. Akhremitchev (Duke University) presiding. On Tuesday afternoon beginning at 1:30 pm, Professor G.C. Walker (University of Pittsburgh) will preside over a session focusing on *Single Chain Studies of Polymers and Biopolymers*. On Wednesday morning at 9 am, this symposium continues with a session on *Mechanical Properties of Polymer Surfaces*. This session continues on Wednesday afternoon at 1:30 pm, and R.W. Carpick (University of Wisconsin - Madison) will preside. Thursday morning at 9 am, there will be a session entitled *Polymer Surface Characterization by Scanned Probes*, and V. Galiatsatos (Equistar Chemicals) will preside. This session is continued Thursday afternoon beginning at 1:30 pm with C.A. Michaels (NIST) presiding.

On Tuesday morning, a symposium entitled **In Situ Characterization of Polymerization Processes**, cosponsored with POLY, will begin at 9 am in Grand Salon A3. It is organized by Professor J.L.P. Jessop (University of Iowa). This symposium continues on Tuesday afternoon beginning at 1:30 pm, and Dr. J.W. Stansbury (University of Colorado Health Sciences Center) will preside. On Wednesday morning beginning at 9 am, Professor Jessop will preside over the continuation of this symposium.

Tuesday morning also marks the beginning of the symposium **Gene-Based Medicine: Delivery and Diagnostics**, which starts at 9 am in the Grand Salon A6. This symposium is organized by Dr. J. DeNuzzio (Becton Dickinson Technologies) and Dr. S.M. Dinh (Emisphere Technologies, Inc.).

(continued on page 11)

Symposia For Future National Meetings

NEW YORK - September 7-11, 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 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.

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; 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.

Polyolefin Elastomers. Sudhin Datta, ExxonMobil Chem. Co., Baytown Polymer Ctr., 5200 Bayway Dr., Baytown, TX 77520, (281) 834-5092, FAX (281) 834-2863, sudhin.datta@exxonmobil.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@ci.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.

Polymers as Additives. 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; Margaret M. Wu, ExxonMobil Res. & Engg. Co., Rt. 22 E., Annandale, NJ 08801 (908) 730-2157, FAX (908) 730-3314

margaret.m.wu@exxonmobil.com; Thomas S. Coolbaugh, ExxonMobil Res. & Engg. Co., Rt. 22 E., Annandale, NJ 08801, (908) 730-3233, FAX (908) 730-2536, thomas.s.coolbaugh@exxonmobil.com.

Polymeric Drug Delivery: Science and Application. Sonke Svenson, The Dow Chemical Co., 1712 Bldg., Midland, MI 48674, (989) 636-0974, Fax (989) 636-6558, 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; 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.

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

ICI Student Award Symposium. Thomas Hahn, National Starch & Chem. Co., 10 FINDERNE AVE., BRIDGEWATER, NJ 08807, (908) 685-5672, FAX (908) 685-7037, tom.hahn@nstarch.com.

General Papers/New Concepts in Polymeric Materials. Benny Freeman, Univ. of Texas at Austin, Dept. of Chem. Engg., 10100 Burnet Rd., Bldg. 133, Austin, TX 78758, (512) 232-2803, FAX (512) 232-2807, freeman@che.utexas.edu.

ANAHEIM - March 28-April 1, 2004

Functional Polymer Thin Films for Switching, Sensing and Adaptive Applications. Manfred Stamm, Institut für Polymerforschung Dresden, Hohe Strasse 6, 01069 Dresden, Germany, +49 351 4658 224, stamm@ipfdd.de; Curt Frank, Dept. of Chem. Engg., Stauffer III, 381 North-South Mall, Stanford Univ., Stanford, CA 94305-502, (650) 723-4573, curt@chemeng.stanford.edu; Sergey Minko, Institut für Polymerforschung Dresden, Hohe Strasse 6, 01069 Dresden, Germany, +49 351 4658 271, minko@ipfdd.de.

Interface of Polymers and Biomimetics. Morley Stone, Rajesh Naik, Lawrence Brott, AFRL/MLPJ, Building 651, 3005 P St., Wright-Patterson Air Force Base, OH 45433-7702, (937) 255-3808 x3180, (937) 255-1128, morley.stone@afrl.af.mil; Rajesh Naik, Air Force Research Laboratory, MLPJ, Bldg. 651, 3005 P St., Wright-Patterson, AFB, OH 45433-7702, (937) 255-

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Dr. Kristi Kiick Receives Unilever Award for Outstanding Graduate Research in Polymer Chemistry

The recipient of the 2002 Unilever Award for Outstanding Graduate Research is Dr. Kristi L. Kiick, who received her doctorate in May 2001 from the University of Massachusetts, Amherst, under the tutelage of Professor David A. Tirrell, now of the California Institute of Technology, Chemistry and Chemical Engineering. Kiick directed her research to the preparation of proteins using non-natural amino acids, with functional groups different from those of the natural amino acids. She manipulated the activity of a single enzyme in the bacterial host to prepare engineered proteins with novel chemical and physical properties. Her investigations focused on replacing the amino acid methionine with methionine analogues that carry chemical groups that are unusual in biology, such as alkenes, alkynes, and azides. Engineering *E. coli* to produce extra copies of methionyl-tRNA synthetase - the enzyme that controls the fidelity of methionine incorporation into proteins - allowed methionine to be replaced by six different methionine analogues normally rejected by the bacterial host. This simple modification to the bacterial host also increased the yields of protein obtained during protein expression. These investigations confirm the critical role of MetRS in controlling analogue incorporation and suggest new strategies for incorporating non-natural amino acids into proteins to create novel classes of protein-based materials. The Unilever Award, which was presented at the Boston, MA, meeting of the American Chemical Society (Aug. 18-22) consists of a \$2,000 prize, a plaque and travel expenses. This award, administered by the Polymer Education Committee of the Polymer Chemistry and Polymeric Materials Science and Engineering Divisions, was established in 1991 and is sponsored by Unilever, a global manufacturer of consumer products, foods and specialty chemicals. The award recognizes and encourages outstanding graduate research in the design, synthesis and physical chemistry of polymers.



Dr. Kristi Kiick receiving the 2002 Unilever Award for Outstanding Graduate Research in Polymer Science and Engineering from K. P. Ananth

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2003 PMSE Fellows

The following division members have been chosen as PMSE Fellows in the nomination and selection process which was completed in November of 2002:

Guy C. Berry

Frank E. Karasz

Moshe Narkis

Dennis G. Peiffer

Virgil Percec

Kenneth B. Wagener

They will be inducted as the fourth class of PMSE Fellows during the Awards Lunch at the New Orleans ACS Meeting on Monday, March 24th, 2003. PMSE is pleased to welcome this distinguished group of polymer scientists and engineers to the ranks of fellows. Here is a short description of each of them.

Guy C. Berry, University Professor of Chemistry and Polymer Science of Carnegie Mellon University, has research interests in the physical chemistry and physics of polymers and their solutions. His research has included rheology and light scattering on dilute and moderately concentrated solutions of flexible and semiflexible chain polymers, including liquid crystalline polymers, with over 200 publications. Berry joined the Mellon Institute in 1960 on receiving a Ph.D. degree from the University of Michigan, became a Senior Fellow in 1965, and a member of the faculty of Carnegie Mellon University on its formation in 1966. He became a Professor in 1973, a University Professor in 2001, and has held several Administrative posts at CMU. His awards include the Bingham Award of the Society of Rheology, the Pittsburgh Award of the Pittsburgh Section of the ACS and a Fellowship in the American Physical Society. He is a co-editor of *Progress in Polymer Science*, has been a co-editor of the *Journal of Polymer Science: Polymer Physics*, and has served on the editorial boards of a number of journals.



Frank E. Karasz received his bachelor's degree in Chemistry from Imperial College, University of London, and his doctorate in Physical Chemistry from the University of Washington, Seattle. The University of London awarded him a D.Sc. in 1972. Professor Karasz has been at the University of Massachusetts since 1967, holding the rank of

Distinguished University Professor since 1986 and Silvio O. Conte Distinguished Professor of Polymer Science since 1992. He also served as Co-Director of the National Science Foundation-funded Materials Research Laboratory there from 1973 to 1985. Karasz has served on many committees, review and editorial boards, *etc.*, and has received a number of international and national awards. These include the Mettler Award in Thermal Analysis (1972), the High Polymer Physics Prize (co-recipient) of the American Physical Society (1984), the Research Award of the Society of Plastics Engineers (1985), and the Herman F. Mark Medal of the Austrian Research Institute (2002). He was elected to the National Academy of Engineering in 1991 and is a member of three foreign engineering academies. Karasz has been active in many research areas in the physical chemistry of polymers and has received numerous research grants from government and private sources. He has authored or co-authored over five hundred and thirty scientific publications and several patents.

Moshe Narkis is Professor of Chemical Engineering at the Technion - Israel Institute of Technology. He is the recipient of the SPE Research Award (2001, Society of Plastics Engineers) and Paul J. Flory Polymer Research Prize (2002, POLYCHAR Conferences). Since 1992 he is holder of Technion's prestigious General Yaacov Dori Chair of Engineering. He has published 270 scientific articles, graduated 65 M. S. and Ph.D. students and edited a book entitled "*Polymer Powder Technology*" in 1995. He was President of the Israel Polymer and Plastics Society and elected Honorary Member of this Society in 1999. He was editor-in-chief of two international journals and member of the advisory board of several other journals, including *Polymer Engineering and Science*, *Polymer Composites* and *Polymers for Advanced Technologies*. Dr. Narkis was a postdoctoral research associate at Princeton University, associate professor at Washington Uni-



versity, and visiting professor at the University of Connecticut. He has been heavily active in industrial consulting and developed new technologies that have been commercialized. His fields of interest include electrically conductive plastics, physical and reactive polymer blending, emulsion polymerization techniques, composite materials, cross-linking of saturated polyolefins, polymeric nanocomposites, and electrically conductive sensors of liquids and vapors.



Dennis G. Peiffer is currently a senior scientist in the Corporate Strategic Research Laboratory of the ExxonMobil Research and Engineering Company in Clinton, New Jersey. He received his Ph.D. in Polymer Science and Engineering from the University of Massachusetts in Amherst, MA in 1976 under the direction of Professor Richard S. Stein.

After working with Dr. Lawrence E. Nielsen in the research laboratories of Monsanto Corporation focused on developing high strength polymers and composites, he joined Exxon Research and Engineering Company's Corporate Research Laboratory in 1978. He has 100 U. S. patents and over 125 publications in numerous areas of polymer science. These include oil and water-soluble copolymers, functional copolymers, associating polymers, polymer membranes, complex fluids for oil and gas drilling, enhanced oil recovery, polymer composites, nanocomposites and blends, polymer - asphalt blends, lubrication additives, filler - polymer interactions, polymer interface structure and dynamics, and highly air-impermeable elastomeric materials. He has received numerous internal awards for his work. He has collaborated with scientists from many institutions around the world, including the State University of New York at Stony Brook, Imperial College, Indian Institute of Technology, and the National Institute of Standards and Technology.

Virgil Percec was born and educated in Romania (Ph.D. in 1976). He defected from his native country in 1981 and after short postdoctoral appointments at the University of Freiburg in Germany (with H.-J. Cantow) and University of Akron (with J. P. Kennedy), in the summer of 1982 he joined the Department of Macromolecular



Science of Case Western Reserve University as Assistant Professor. In 1986 he became Professor and in 1993 he was appointed Leonard Case Jr. Professor. Since 1999 he has been the P. Roy Vagelos Professor of Chemistry at the University of Pennsylvania. He is the author of over 520 refereed publications, 30 patents, and over 700 invited lectures. His research interests include the development of novel synthetic methods, the design, synthesis, and structural analysis of complex molecular, macromolecular, and supramolecular systems and the elaboration of new concepts at the interface between organic, macromolecular, and supramolecular chemistry by using Nature as a model. He is the recipient of numerous awards including Foreign Member of the Romanian Academy (1993), Humboldt Research Award for Senior U.S. Scientists (1997), and Polymer Award from Netherlands (2002). Percec serves on the editorial boards of 16 international journals and since 1996 he has been the Editor of *Journal of Polymer Science: Polymer Chemistry*.



Ken Wagener is the George B. Butler Professor of Polymer Chemistry in the Department of Chemistry at the University of Florida. He also serves as the Director of the Center for Macromolecular Science & Engineering there. His B. S. in Chemistry (in 1968) is from Clemson University, and his Ph.D. in Chemistry (in 1973) is

from the University of Florida. After 11 years in Asheville, NC as a research chemist with Akzo Nobel (then known as American Enka) and evening teaching at UNC/Asheville, he returned to full time academics in 1984. His research group is best known for its creation of the ADMET polymerization reaction. Ken is a recipient of numerous forms of teaching and research recognition. These include a Japan Society for the Promotion of Science Invitation Fellowship (2002), the Teacher/Scholar Award at the University of Florida (2000), induction into the Clemson University Academy for Engineers and Scientists (2000), and the Southern Chemist Award (1996).

The fellows program has worked well to recognize outstanding division members, and PMSE will be continuing it in the future. Nominations of candidates to be considered for induction at the Spring 2004 ACS meeting should be sent to the chair of the PMSE Fellows Committee by October 15, 2003 at the following address: David J. Lohse, ExxonMobil Research & Engineering Company, Route 22 East, Annandale, New Jersey 08801, Phone: (908) 730-2541, Fax: (908) 730-2536, e-mail: david.j.lohse@exxonmobil.com. Instructions for the nomination process can be found on the PMSE website, in the PMSE Newsletter, and in the PMSE Preprints.

2002 ICI Student Award

Dr. Jinsang Kim is the winner of the 2002 ICI Student Award in Applied Polymer Science. Jinsang is a recent graduate of the Massachusetts Institute of Technology, where his advisor was Professor Timothy M. Swager. The title of his paper, which was presented at the recent Fall ACS Meeting in Boston, was *Funneling Fluorescence Energy via Vectorial Energy Transfer Within Conjugated Polymer Thin Films*.

The Award, which is sponsored by ICI and 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 at the ICI Student Award Symposium as part of the PMSE program at the Fall ACS Meeting. It consists of \$750 and a plaque, and it will be presented to Dr. Kim at the PMSE Division Awards Luncheon at the Spring 2003 ACS Meeting in New Orleans.

The other finalists who presented papers at the Award Symposium were: Deanna L. Gomochak (The University of Akron), J. Brian Hutchison (University of Colorado), Ashok J. Maliakal (Columbia University), Sankar Ramaswamy (University of Massachusetts, Amherst), and Sagar S. Rane (The University of Akron).



*Finalists for the 2002 ICI Student Award before the award symposium in Boston with John Thomaides, ICI Symposium Organizer. Back row: John Thomaides, Sankar Ramaswamy, Brian Hutchison, Sagar Rane
Front row: Ashok Maliakal, Jinsang Kim, Deanna Gomochak.*

Boston ACS Travel Grant Awarded to A.M. Kasko



Ms. Andrea M. Kasko, a fourth-year Ph.D. student in the Polymer Science program at the University of Akron, is the recipient of the PMSE Division's Fall 2002 Ford Travel Grant. This competitive award is sponsored by the Ford Motor Company and provides travel assistance to graduate student women and underrepresented

minorities to present research at national ACS meetings.

Ms. Kasko's presentation at the recent Boston ACS meeting focused on the synthesis, solution properties, and thermotropic behavior of side-chain liquid crystalline polyacrylates with linear, star, and comb architectures. Ms. Kasko's research advisor at Akron is Prof. Coleen Pugh.

TENTATIVE LOCATIONS/DATES OF FUTURE NATIONAL MEETINGS

SAN DIEGO	March 13-17, 2005
WASHINGTON	August 28 - September 2, 2005
ATLANTA	March 26 - 31, 2006
SAN FRANCISCO	September 10-15, 2006
CHICAGO	March 25 - 30, 2007
BOSTON	August 19-24, 2007

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Mohamad El-Aasser Named Winner of Roy W. Tess Award in Coatings

Dr. Mohamed S. El-Aasser, dean of the P.C. Rossin College of Engineering and Applied Science at Lehigh University, received the Roy W. Tess Award in Coatings for 2002. Dr. El-Aasser has contributed to a wide range of topics related to polymers, colloids and coatings. His vigorous research program in these fields has been sustained for 30 years and has resulted in more than 300 publications, 380 presentations and lectures, nine patents, and six edited books. He is particularly noted for his distinguished research in the areas of polymer latexes and emulsion polymerization. In the field of polymer latexes, Dr. El-Aasser pioneered the development of mini-emulsions, stable oil/water emulsions with average droplet diameters of less than 500 nm. In the general field of emulsion polymerization, Dr. El-Aasser has contributed significant developments to mechanistic understanding. He has pursued a well organized and focused research program addressing several controversial issues: 1) relative contributions of different nucleation mechanisms (Micelles, droplets, and homogeneous), 2) the fate of radicals in persulfate initiated emulsion polymerization, 3) the mechanism and rate determining step of radical entry into monomer-swollen micelles, droplets, or particles, 4) particle nucleation using oil-soluble initiators, and 5) the role of aggregation in particle formation and growth. Dr. El-Aasser has pioneered the use of reaction calorimetry to obtain reliable kinetic data, which coupled with analysis of polymerization products has led to significant breakthroughs in understanding of emulsion polymerization. Dr. El-Aasser earned B.Sc. and M.S. degrees at Alexandria University in Egypt and a Ph.D. at McGill University in Canada. He joined the Chemical Engineering faculty at Lehigh University in 1974 after serving as a post-doctoral scientist in the University's Center for Surface and Coating Research and was promoted to a full professor in the Department of Chemical Engineering in 1982. He is a former chairman of that department, founder and former director of Lehigh's NSF/IUCRC Polymer Interfaces Center, and former director of the university's Center for Polymer Science and Engineering. Dr. El-Aasser has directed the research of 55 Ph. D. students and 53 M.S. students, as well as numerous post-doctoral fellows and undergraduates. He has also served on 114 dissertation committees.



Mohammed El-Aasser (Lehigh University) receives the 2002 Tess Award from PMSE chairman Larry Charbonneau

Dr. Theodore Provder Receives 2003 PMSE Distinguished Service Award

The recipient of the 2003 ACS Division of Polymeric Materials: Science and Engineering (PMSE) Distinguished Service Award is Dr. Theodore Provder, Director of the Coatings Research Institute in the College of Technology at Eastern Michigan University.

Dr. Provder currently serves as a PMSE Councilor and as a member of the ACS Divisional Activities Committee; his previous



positions have included PMSE Membership Chair, Treasurer, Vice-Chair, Chair, and Alternate Councilor. He has also served as an Associate, ACS Committee on Patents and Related Matters, and served for nine years as Treasurer of the PMSE / POLY Joint Polymer Education Committee (PolyEd). Dr. Provder previously was recognized in 1989 with the PMSE's Roy W. Tess Award in Coatings and in 2000 as a member of the first class of PMSE Fellows. In addition to his organizational service, Dr. Provder has edited 17 volumes in the ACS Symposium and Advances Series, and has organized many technical symposia and workshops for PMSE in the areas of size exclusion chromatography, particle size distribution characterization, polymer characterization, film formation, computer applications in applied polymer science, and multi-dimensional polymer spectroscopy.

The PMSE Distinguished Service Award, which consists of a travel allowance and a plaque, will be presented at the New Orleans ACS meeting of the American Chemical Society (March 23-28, 2003). This award was established in 1992 and recognizes outstanding contributions to the long-term welfare of the Division.

Symposia for Future National Meetings, continued

3808 x3270, FAX (937) 255-1128, rajesh.naik@wpafb.af.mil; M; Lawrence L. Brott, Air Force Research Laboratory, MLPJ, Bldg. 651, 3005 P St., Wright-Patterson, AFB, OH 45433-7702, (937) 255-3808 x3174, FAX (937) 255-1128, lawrence.brott@wpafb.af.mil.

Polymers in Nanoelectronics. Qinghuang Lin, IBM T. J. Watson Research Ctr., P.O. Box 218, Rt. 134, MS 6-250, Yorktown Heights, NY 10598, (914) 945-2366, (914) 945-2141, qhlin@us.ibm.com.

Nanocomposite Fibers. David Schiraldi, Case Western Reserve Univ., Dept. of Macromolecular Sci. & Engg., 2100 Albert Rd., Cleveland, OH 44106 (216)368-4243, das44@po.cwru.edu; Satish Kumar, School of Textile & Fiber Engg., Georgia Inst. of Tech., Atlanta, GA 30332 (404) 894-7550, satish.kumar@tfe.gatech.edu.

Polyelectrolyte, Colloidal and Nanoparticle Assemblies in Ultrathin Films. Rigoberto C. Advincula, Univ. of AL at Birmingham, Dept. of Chem., 901 14th St., Birmingham, AL 35294-1240, (205) 934-8286, gobet@vab.edu.

Response-Driven Polymeric Films and Coatings. Marek W. Urban, Univ. of Southern MS., School of Polymers and High Performance Materials, Dept. of Polymer Sci., P.O. Box 10076, Hattiesburg, MS 39406 (601) 266-6868, marek.urban@usm.edu.

Combinatorial Approaches to Materials. Cher H. Davis, NIST Combinatorial Methods Center, 100 Bureau Drive, STOP 8542, Gaithersburg, MD 20899-8542, (301) 975-6488, Fax: (301) 975-4924, cher.davis@nist.gov; Alamgir Karim, NIST, 100 Bureau Dr., Stop 8542, Gaithersburg, MD 20899-8542, (301) 975-6488, alamgir.karim@nist.gov; Radislav A. Potyrailo, Combinatorial Chemistry Lab., GE Global Res. Ctr., P.O. Box 8, Schenectady, NY 12301, (518) 387-7370, FAX (518) 387-5604, potyrailo@crd.ge.com; Marc D. Porter, Iowa State Univ., Dept. of Chem., 42 Spedding Hall, Ames, IA 50011, (515) 294-6433, FAX (515) 294-3254, mporter@porter1.ameslab.gov

Polymer Coated Medical Devices. Shrirang V. Ranade, Corporate R&D, Boston Scientific Corp., 1 Boston Scientific Pl., Natick, MA 01760, (508) 652-5143, FAX (508) 647-2405, ranades@bsci.com.

Cooperative Research Award. Brian C. Benicewicz, Rensselaer Polytechnic Inst., NYS Center for Polymer Synthesis, Cogswell Laboratory, Troy, NY 12180, (518) 276-2534, FAX (518) 276-6434, benice@rpi.edu.

General Papers/New Concepts in Polymeric Materials. Benny Freeman, Univ. of Texas at Austin, Dept. of Chem. Engg., 10100 Burnet Rd., Bldg. 133, Austin, TX 78758, (512) 232-2803, FAX (512) 232-2807, freeman@che.utexas.edu.

Peggy Cebe, STC-208, Tufts Univ., Physics Dept., 4 Colby St., Medford, MA 02155, (617) 627-3365, FAX (617) 627-3744, peggy.cebe@tufts.edu.

Functional Polymers And Dendrimers: From Synthesis To Applications. Jean M.J. Fréchet, University of California, Department of Chemistry, Berkeley, CA 94720-1460, 510-643-3077, Fax: 510-643-3079, frechet@cchem.berkeley.edu; Virgil Percec, Department of Chemistry, University of Pennsylvania, 231 South 34th Street, Philadelphia, PA 19104-6323, 215-573-5527, Fax: 215-573-7888 percec@sas.upenn.edu.

Film Formation. Theodore Provder, Coatings Research Inst., Eastern Michigan Univ., 430 W. Forest Ave., Ypsilanti, MI 48197, (734) 487-2203, FAX (734) 483-0085, ted.provder@emich.edu or tprovder@att.net

Fire and Polymers. Gordon Nelson, FL Inst. of Tech., College of Science & Liberal Arts, 150 W. University Blvd., Melbourne, FL 32901-6975, (407) 674-7260, FAX (407) 984-8864, nelson@fit.edu; Charles A. Wilkie, Marquette Univ., Dept. of Chem., P.O. Box 1881, Milwaukee, WI 53201-1881, (414) 288-7239, (414) 288-7066, charles.wilkie@marquette.edu

Semocrystalline Polymers. Hervé Marand, Dept. of Chem., VA Polytechnic Inst. & State Univ., Hahn Hall, Rm. 2103, Blacksburg, VA 24061-0212, (540) 231-8227, FAX (540) 231-8517, hmarand@chemserver.chem.vt.edu; Srivatsan Srinivas, Exxonmobil Chem. Co., Baytown Polymer Ctr., 5200 Bayway Dr., Baytown, TX 77520-5200, (281) 834-2932, FAX (281) 834-2316, srivatsan.srinivas@exxonmobil.com.

Emerging Frontiers in Polyolefins. (*cosponsored with POLY and SPE*). Pal Arjunan, Exxonmobil Chem. Co., Baytown Polymer Ctr., 5200 Bayway Dr., Baytown, TX 77520-5200, (281) 834-1533, FAX (281) 834-2480, pal.arjunan@exxonmobil.com.

Vibrational Spectroscopic Advances in Polymer Characterization. Clara D. Craver, Goose Creek Lake, Highway Y, P.O. Box 265, French Village, MO 63036-0265, (573) 358-2589 or (941) 485-0820, FAX (573) 358-2589 claracraver@comcast.net.

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.

ICI Student Award Symposium. Thomas Hahn, National Starch & Chem. Co., 10 FINDERNE AVE., BRIDGEWATER, NJ 08807, (908) 685-5672, FAX (908) 685-7037, tom.hahn@nstarch.com.

General Papers/New Concepts in Polymeric Materials. Ron DeMartino, 11 Mandeville Dr., Wayne, NJ 07470, (973) 696-8839, rdemart@bellatlantic.net.



Visit the PMSE website for more details on future programming:
<http://membership.acs.org/P/PMSE/meetings/>

PHILADELPHIA - August 22-26, 2004

Confinement Effects on Relaxation Properties of Polymers.

Words From Our Chair, continued from page 1

programming. The Programming Committee will meet in New Orleans and will consider suggestions for Symposia topics for future meetings.

I am writing this in my office in Western New York on a very typical, bleak and gray day in early January. This alone could make one long for a visit to a more comforting place - like New Orleans in March. Fortunately, we all have the added stimulus of an outstanding PMSE Division program at the Spring ACS Meeting in New Orleans. The Program Chair and Preprints Editor, Jay Dias, has put together a tremendous program for the New Orleans ACS Meeting based on the many interesting and timely symposia arranged for us by the Programming Committee of Timothy Bunning, Richard Roesler and Vladimir Tsukruk. The Committee also has provided excellent symposia for the New York Fall ACS Meeting.

I must also acknowledge Dave Lohse, Chair of the PMSE Fellows Committee. Dave and Don Schulz organized the PMSE Fellows Award. Under Dave's guidance the program has become an outstanding success. The PMSE Fellow award bestows honor on those members who have contributed scientifically, technically and/or through dedicated service to the Division. Another distinguished group was chosen as Fellows for 2002 and will be inducted as the fourth class of PMSE Fellows during the Awards Luncheon at the New Orleans Meeting. I urge you, as PMSE members, to attend the Awards luncheon and Reception on Monday to congratulate all the Awardees and the PMSE Fellows. The Monday evening Awards Reception is funded by contributions and is, therefore, open to all ACS members.

I hope to see all of you in New Orleans.

Paul L. Valint, Jr.
PMSE Chair

New Orleans Highlights, continued from page 3

Polymer Surfaces and Interfaces will begin on Tuesday afternoon at 1 pm in Grand Salon A6 with a session entitled *Surface Modification*. This symposium is cosponsored with the Colloid and Surface Chemistry Division and is organized by Dr. B. Chapman (ExxonMobil Chemical Company) and Professor P.L. Valint (SUNY Buffalo). On Wednesday morning beginning at 9 am, Dr. S. Ranade (Boston Scientific Corporation) will preside over the continuation of this symposium with a session entitled *Surface/Interface Characterization*. Dr. Y. Lai (Bausch & Lomb Inc.) will preside over the continuation of this session on Wednesday afternoon beginning at 1:30 pm. On Thursday morning at 8 am, this symposium will host a session entitled *Surface/Interface Properties*. The symposium continues on Thursday afternoon at 1 pm with a session focusing on biomedical applications.

Wednesday afternoon marks the beginning of the **Advances in Polymers and Polymerization** symposium, which is organized by Dr. A.J. Dias. Professors P. Anzenbacher Jr. (Bowling Green State University) and A.W. Harper (University of Southern California) will preside over the first session, which is entitled *Conjugated Systems*. This symposium will begin at 1:30 pm in Grand Salon A3. It continues Thursday morning beginning at 8 am, and Dr. D.L. Simonson and Dr. E.J. Houser, both of the Naval Research Laboratory, will preside. On Thursday afternoon, a session focusing on UV polymerization and cross-linking will be held beginning at 1 pm. Professors X. Li (University of Southern California) and Fengxiang You (University of Akron) will preside.

PMSE is also cosponsoring several other symposia with other divisions. These include **Nanotechnology and the Environment**, which is cosponsored with the Industrial and Engineering Chemistry Division, **Macromolecules to Bioparticles: Analyses with Field-Flow Fractionation and Size Exclusion Chromatography with Multiple Detection Techniques**, which are cosponsored with the Division of Analytical Chemistry, **Polymer Brushes: From Synthesis to Functional Microstructures**, cosponsored with POLY. Please join us in New Orleans for another outstanding PMSE program!

Benny D. Freeman

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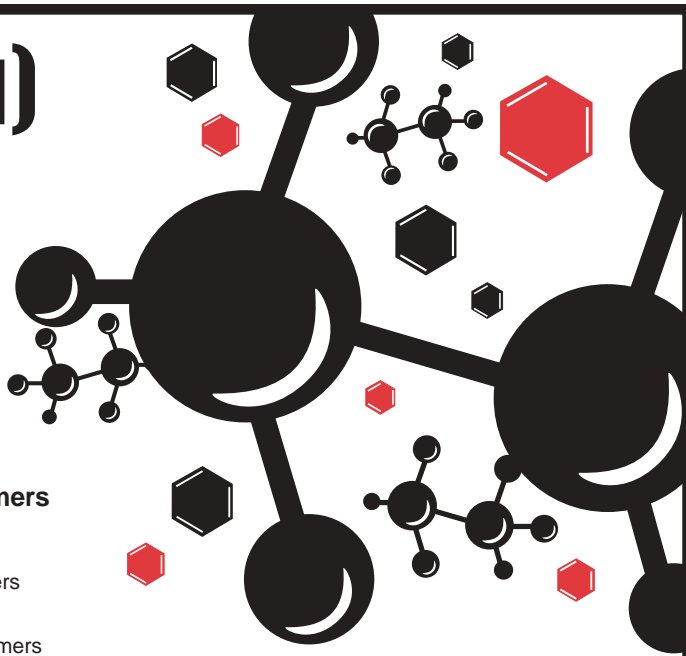
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