Spring 2012

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Visit the POLY website at



olymer



American Chemical Society

Division of Polymer Chemistry, Inc. Editors: Kathy L. Mitchem and Sarah E. Morgan



Joseph M. Mabry 2012 Chair

Chair's Address

It is a distinct honor to serve as the 2012 Chair of the ACS Division of Polymer Chemistry (POLY). I would first like to thank my predecessor, Professor Robert B. Moore, for his years of dedicated service, leaving a healthy Division poised for future growth.

As POLY seeks to remain an outstanding venue for the presentation of cutting-edge polymer-based research activities, we welcome your ideas and suggestions for new programming in areas of interest to the membership. One

of the most utilized services that POLY provides is its scientific programming at ACS national meetings. We have many exciting symposia scheduled for the fall meeting in Philadelphia, several of which fit the thematic program "Materials for Health & Medicine." I hope you will be able to join us this August.

Several topical workshops, which tend to be more focused in scope than meeting symposia, are also sponsored by the Division, with registration offered to POLY members at reduced cost. In addition to the upcoming conference on Graduate Polymer Research at Case Western Reserve University this May 21-24, we have several scheduled workshops, which will provide outstanding presentations on current topics of interest. These include Polycondensation 2012, Fluoropolymer 2012, Polyurethanes 2012, and the second installment of Silicon-Containing Polymers and Composites. Please visit the workshops website for further information (http://www.polyacs.org/7.html).

We strongly encourage you to provide input to both our Program Chairs and our Workshop Committee with your thoughts on future symposia and workshop topics. We also invite you to consider becoming involved in POLY and organizing a symposium or workshop in a cutting-edge area of research.

> The 2012 IUPAC World Polymer Congress returns to the US this June. The event will take place on the campus of Virginia Tech with 1,500-2,000 expected attendees from around the world. POLY will play a major role in helping to assure the success of this meeting. Please visit the IUPAC website for further information (http://www.cpe.vt.edu/ macro2012/).

As part of our long-range planning process, a primary goal of the POLY leadership is to be responsive to needs and desires of our membership. By providing valuable feedback to the POLY Board through surveys and meeting attendance, your comments and suggestions will guide our future activities and lead to popular changes.

As always, the POLY website remains an important resource for items of interest to POLY members. Information can be found on meetings, symposia, awards, jobs, membership, elections, and just about anything else that is POLY-related. Please visit the POLY website for further information (http://www.polyacs.org/).

Finally, I provided a few remarks in San Diego at the conclusion of the Excellence in Graduate Polymer Research symposium, where energetic young graduate students from around the world were provided the opportunity to showcase recent outstanding research. During those remarks, I highlighted the fact that a primary goal of the POLY Division is to accomplish our mission of professional service and to better serve our members. In order to do so, we must be adaptive and innovative in the methods we use to recruit and retain new volunteers with creative new ideas. In that regard, we ask that you join us as a volunteer as we continue to accomplish these goals. Your ideas will help us to evolve and progress in dynamic times. After all, this is YOUR Division.

Joe Mabry, 2012 POLY Chair



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Important Announcement Concerning Polymer Preprints

From The Division of Polymer Chemistry Executive Committee

ACS *Polymer Preprints* have a long and important history within the POLY Division and have served the Division well over the years. However, like many things, the methods by which scientific research is published have changed dramatically over the last decade. Due to the advent of electronic publication, "Preprints" are often published more slowly than peer-reviewed manuscripts. Publication in certain journals has also been disallowed due to the prepublication of data in Polymer Preprints. In addition, it takes much effort for symposium participants to write the preprints and for symposium organizers to edit them. For these and many other reasons, the POLY Executive Committee has been reviewing the value of Polymer Preprints to the Division, and serious consideration is being given to the replacement of the preprint format with a graphical abstract (a traditional abstract with one "TOC-like" figure). Because *Polymer Preprints* have been an important POLY service/benefit, the POLY Executive Committee wishes to make our members aware of the possible change and potential elimination of the preprint format. POLY members can send their comments to: preprints@polyacs.net. During the Fall ACS meeting in Philadelphia, this item will be discussed at the Annual Business Meeting, and the POLY Executive Committee will hold a vote on the issue. We thank POLY members in advance for their thoughtful consideration of this item.

Congratulation Award Recipients!



2012 AkzoNobel Award for Outstanding Graduate Research in Polymer Chemistry Garret Miyake Colorado State University Graduate



2012 Industrial Polymer Scientist Award Babu N. Gaddam 3M Company



2012 Roy W. Tess Award in Coatings Benny D. Freeman University of Texas at Austin

Symposia to recognize these awardees will be held at the 2012 Fall ACS National Meeting, Philadelphia, PA

Upcoming POLY Award Deadlines

Carl S. Marvel Creative Polymer Chemistry Award Sponsored by: Albemarle Upcoming Deadline - 7/1/12

Purpose: To recognize and encourage accomplishments and/or innovation of unusual merit in the field of basic or applied polymer science by younger scientists.

Herman F. Mark
Polymer Chemistry Award
Sponsored by: Elsevier
Upcoming Deadline - 11/1/12

Purpose: To recognize outstanding research and leadership in polymer science.

Herman F. Mark Scholars
Award
Including: Young Scholar,
Scholar, and Senior Scholar
Sponsored by: Elsevier
Upcoming Deadline - 11/1/12

Purpose: To recognize excellence in basic or applied research and leadership in polymer science.

POLY Fellows Award
Upcoming Deadline - 11/30/12
Purpose: To recognize
excellence in all ways that POLY
members advance our field of
polymer science, either through
scientific accomplishments,
service to the profession, or both.

For award instructions and additional information, please visit our web site:

http://www.polyacs.org/ then click on "AWARDS"

or contact:
Kathy Mitchem
POLY Business Office
540-231-3029

Awards Co-Chairs

Kenneth Carter
University of Massachusetts- Amherst,
Phone: 413-577-1416
E-mail: umassresearch@gmail.com

Marc A. Hillmyer University of Minnesota Phone: 612-625-7834 E-mail: hilllmyer@umn.edu

8th Excellence in Polymer Graduate Research Symposium

The eighth symposium on "Excellence in Polymer Graduate Research" took place at the national ACS meeting in San Diego, CA. The purposes of this symposium were to provide **recognition** to outstanding graduate students in polymer science and engineering, to foster **networking and exposure**, and to help develop the careers of **future leaders** in our field. We publicized this symposium via the POLY list server, POLY web page, and direct e-mail messages to over 100 departments that are active in polymer research. We requested that each department nominate one outstanding graduate student to speak on his or her original research in this special symposium. Each student should fill out an application form and have a nominating letter from the research advisor and a letter from the department head.

This year we received 31 submissions. We were very pleased with the quality of the papers and the caliber of the students. The symposium was organized into four half-day oral sessions, a poster session, and a networking social. In the oral sessions on Sunday and Monday 24 students gave talks on their papers, and in the Tuesday poster sessions 7 students presented their work. In addition, the 7 poster presentations were selected by POLY for the ACS Sci-Mix session on Monday evening, and the students were able to present their work to a large audience there as well. These oral and poster sessions went very well. Many graduate students asked questions during the talks, and it was enjoyable to see them interacting during and after the sessions.

As part of the recognition, each student received a certificate plus a cash award. Dr. Bassam Shakhashiri, the 2012 ACS President, sent a written message, which was read to the students. In addition, Dr. Joseph Mabry, the 2012 POLY Chair, attended the session and spoke to the students for 10 minutes, encouraging them to excel in their work. A reception followed. It was wonderful that many established and well-known polymer scientists came to the reception, talking and mingling with the students.

This symposium was organized by the ACS Polymer Division (POLY), and cosponsored by Presidential Event (PRES), Young Chemists Committee (YCC), Division of Professional Relations (PROF), and Society Committee on Education (SOCED). The symposium had the generous support of POLY and Industrial Advisory Board of the Polymer Division (IAB).



POLY Elections Information

The on-line POLY election was held Fall 2012 with a success of over 19% membership participation. POLY anticipates a repeat performance with our 2012 on-line election. The slate of candidates for the fall election has been selected by the nominating committee and approved by the Executive Committee and listed below for your review.

An e-mail will be sent to all voting members this fall which will contain a web site address and login instructions for the on-line election. If you do not have an e-mail address on file, a postcard with the information will be sent by mail. If you would like to update your membership address or e-mail contact information, please contact ACS membership services at 1-800-333-9511 or e-mail: services@acs.org.

Symposium Organizing Committee: H. N. Cheng (POLY Councilor)

H. N. Cheng (POLY Councilor) Christopher Ellison (POLY Member) Christine Landry-Coltrain (POLY Alternate Councilor)

Timothy E. Long (POLY Past Chair)

Participants

Brennan M. Bailey, Texas A&M University Sarah E. Brady, University of Oregon Pangkuan Chen, Rutgers University, Newark Ryan R. Cheng, University of Texas at Austin Megan Fegley, University of New York at Binghamton Bradley Forney, University of Iowa Joseph C. Furgal, University of Michigan Gregory Gibson, University of Toronto Sarah E. Grieshaber, University of Delaware Donald R. Griffin, University of California, LA Jing Hao, University of Texas at Dallas Christopher G. Hardy, University of South Carolina Sean T. Hemp, Virginia Tech Ryan M. Hensarling, University of Southern Mississippi Jeremy Intemann, Iowa State University Elizabeth G. Kelley, University of Delaware Felix Sunjoo Kim, University of Washington Jessica R. Kramer, UCLA Samuel Lahasky, Louisiana State University Ang Li, Texas A&M University Yukun Li, University at Buffalo, SUNY Jun Luo, University of California, Irvine Siddhesh N. Pawar, Virginia Tech Todd S. Sayler, University of Alabama Joshua Speros, University of Minnesota Wenxiao Sun, Central Michigan University Nagarajan M. Thoppey, North Carolina State University Mark W. Tibbitt, University of Colorado Xiaojun Wang, University of Tennessee Xinfei Yu, University of Akron Carlo Yuvienco, Polytechnic Institute of NYU

Congratulations New 2012 Officers

<u>Vice-Chair</u> Kathryn L. Beers Polymers Division, NIST

<u>Treasurer</u>
Mark Dadmun
University of Tennessee

Councilor William H. Daly Louisiana State University

Alternate Councilor
Rigoberto Advincula
Case Western Reserve University

Alternate Councilor MaryAnn Meador NASA Glenn Research Center

Alternate Councilor
Christine Landry-Coltrain
Eastman Kodak

7th Undergraduate Research in Polymer Science Symposium

The seventh annual Undergraduate Research in Polymer Science Symposium was held at the San Diego, CA, National Meeting. There were eleven oral presentations and twelve posters from students from sixteen universities across the country. Sabic Innovative Plastics and DiffuVision sponsored travel awards for the top ten preprints. The POLY Division Industrial Advisory Board sponsored best oral and best poster presentations. The program was co-sponsored by POLY, The Society Committee on Education and The University of Southern Mississippi and culminated with a joint reception with the Excellence in Graduate Research Symposium. The participants who received the Travel Award are listed at the right. Additional travel awards were sponsored by the NSF REU Site for Sustainable Composites at The University of Southern Mississippi awarded to Hannah Bygd, Luther College, Leo Falgout, GA Tech University and Timothy Kuchera, State University of New York Buffalo. The best paper award was presented to Chris Parillo, California Polytechnic State University at San Luis Obispo, and the best poster award was presented to Hannah Bygd. Luther College by Diana Gerbi of the IAB. The symposium was organized by Sarah Morgan and Sergei Nazarenko of the University of Southern Mississippi.

Session Sponsored by:

DiffuVision
Sabic Innovative Plastics
POLY Industrial Advisory Board
NSF REU Site for Sustainable Composites
University of Southern Mississippi



Congratulations 2012 Travel Award Recipients

John F. Edelbrock, Case Western Reserve University
Andria R. Fortney, Wright State University
Jason T. George, Texas A&M University
Lauren Ghelardini, College of Charleston
Sarah D. Hann, University of Delaware
Megan R. Hill, California Polytechnic State University
Meredith G. Hyatt, Meredith College
Marci Jefcoat, California State University at Sacramento
Suzanne E. Roy, California Polytechnic State University
Mitra R. Vashi, University of West Florida



(I-r) S. Morgan, Session Organizer
Best Poster Awardee: H. Bygd, Luther College
D. Gerbi, IAB Award Sponsor
Best Paper: Chris Parillo, Case Western Research Univ.
J. Mabry, POLY Chair



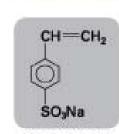
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University

Councilor:
H. N. Cheng, USDA Agricultural Research Service
Mary Ann Meador, NASA Glenn Research Center

2012 Election Slate

Vice Chair:

Allan Guymon, University of Iowa

Rigoberto Advincula, Case Western Reserve

Member at Large:

Michael Meador, NASA Glenn Research Center Arthur Snow, Navel Research Laboratory

Alternate Councilor:

Alan Hopkins, Aerospace Corporation
Michael Hickner, Pennsylvania State University

POLY Recognizes Outstanding Members!

The POLY/PMSE awards reception, held at the ACS National Meeting in San Diego, CA, honored outstanding achievements by its members. 2012 POLY Chair, Joseph Mabry, had the

(l-r) J. Mabry, POLY Chair, R. Cohen, MIT, and P. Arjunan



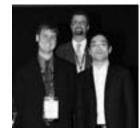
(l-r) J. Mabry POLY Chair and



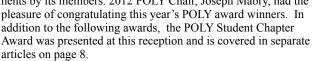
(l-r) J. Mabry, POLY Chair and R. Moore, Past POLY Chair



D. Tirell, California Inst. of Technology, and J. Mabry, POLY



(l-r) R. Weber, Univ of Wisconsin-Madison, J. Mabry, POLY Chair, and X. Wang, Univ. of Tennessee



2012 Herman F. Mark Award: Krzysztof (Kris) Matyjaszewski, the J.C. Warner Professor of the Natural Sciences at the Carnegie Mellon University, received the 2011 Herman F. Mark Award. Professor Matyjaszewsi was recognized as an outstanding polymer chemist who is highly regarded for his vision, his leadership in education and his many collaborative research



(l-r) C. Hunt, Past ACS President, A. Mueller, Elsevier, K. Matyjaszewski, Carnegie Mellon Univ, J. Mabry, POLY Chair, S. Z. D. Cheng, Elsevier, and R. Advincula,

efforts that have yielded significant innovations in polymer chemistry. He is perhaps best known for the discovery of atom radical transfer polymerization (ATRP), a novel method of polymer synthesis that has revolutionized the way macromolecules are made. He has won a long list of prestigious awards for his work. In 1995, the Division of Polymer Chemistry awarded Kris the Carl S. Marvel Creative Polymer Chemistry Award. The Herman F. Mark award recognizes outstanding research and leadership in Polymer Science and is sponsored by Elsevier.

2012 Paul J. Flory Polymer Education Award: Robert E. Cohen, St. Laurent Professor of Chemical Engineering at MIT, received the Paul J. Flory Polymer Education Award. Professor Cohen is internationally recognized for his development and leadership of MIT's interdepartmental Program in Polymer Science and Technology (PPST) that has served the educational interests of MIT graduate students in Chemistry, Chemical Engineering, Materials Science and Engineering and Mechanical Engineering for more than 25 years. He is also highly appreciated at MIT for his 40 years of undergraduate laboratory and graduate classroom instruction in polymers, as well as for the research mentoring of more than 70 doctoral students.

The Paul J. Flory Polymer Education Award is sponsored by *Albemarle* and was established to recognize, encourage, and stimulate outstanding achievements by an individual or team in promoting undergraduate and/or graduate polymer education.

POLY Fellows, Distinguished Service Awards and Past Chair: Pal Arjunan, Albemarle Corp., received the 2012 Distinguished Service Award in recognition of outstanding Polymer Division workshop organization. Rober B. Moore was honored for his outstanding service as 2011 Polymer Division Chair.

A total of 11 outstanding POLY members were honored recipients of the 2012 POLY Fellows Award for their outstanding achievements and contributions to Polymer Science and the Profession. Recipients include; Kathryn Beers, Polymer Division, NIST, Dana Garcia, Arkema, Inc., Diana Gerbi, 3M Company, Paula T. Hammond, Massachusetts Institute of Technology, Marc Hillmyer, University of Minnesota, Richard Laine, University of Michigan, Timothy Long, Virginia Tech, Charles McCormick, III, University of Southern Mississippi, John Pochan, Cornell University, Javid Rzavey, University at Buffalo, and Kathryn Uhrich, Rutgers, The State University of New Jersey.

Graduate Student Travel Awards: The Graduate Student Travel Awards were once again organized by the Polymer Division Membership Committee and sponsored by the POLY Industrial Advisory Board. The awards for the San Diego, ACS meeting were received by Xiaojun Wang, University of Tennessee at Knoxeville, presenting "Microstructure Effect on Self Assembly of Polystyrene-β-Sulfonated Polycyclohexadiene", and Ryan L. Weber, University of Wisconsin-Madison, presenting 'Nanostructured Polymerized Ionic Liquid Block Copolymers".



POLY Chair, R. Laine, Univ. of Michigan, Diana Gerbi, 3M Co., M. Hillmyer, Univ. of Minnesota, K. Beers, Polymers Division, NIST, T. Long, Virginia Tech, K. Uhrich, Rutgers, The State Univ. of New Jersey, P. Hammond, MIT

The Travel Awards are given at each ACS meeting to provide funding for polymer graduate students to travel to the National ACS meeting to present the results of their research. For additional information visit: http://www.

Plenary Lecture: The San Diego meeting featured a Plenary Lecture in conjunction with the joint POLY/ PMSE Awards Reception. David A. Tirrell, California Institute of Technology, presented the Plenary Lecture, "Reinterpreting the Genetic Code"

The event was sponsored by ACS MacroLetters and Soft Matter. The reception was extremely well-attended and provided an opportunity to better recognize the excellence and community in both the POLY and PMSE Division. The evening successfully celebrated the individuals who are the present and future of Polymer Chemistry. Congratulations again to all! Additional award information can be viewed on-line at WWW.POLYACS.ORG.



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June 2012 Newsletter





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POLY/PMSE Student Chapter Awards

- by Kevin Cavicchi

This year at the spring ACS meeting two student chapters were recognized for receiving the inaugural funding awards that are jointly administered by the POLY and

PMSE divisions. The University of Southern Mississippi chapter was awarded \$1,000 to bring one academic and one industrial scientist seminar speaker to campus, support a recycling outreach program in local public schools and provide professional development activities to chapter members. The University of South Carolina chapter was awarded \$1,000 to sponsor a lecture series in polymer science bringing in speakers from academia, government and industry. Each award had a matching cost-share of \$1,000 from the student chapter. The next call for proposals will be in fall 2012 and is open to all active POLY/PMSE student chapters.



(I to r) B. Benicewicz (USC Chapter Advisor), K. Cavicchi, (POLY/PMSE Student Chapter Chair), M. Mollelo (USC Chapter President), J. Mabry, (POLY Chair), R. Hensarling (USM Chapter President), and D. Patton (USM Chapter Advisor)

Membership Committee News

The Membership Committee has continued its focus on increasing the number of new members, including student members and chapters, and engaging our current membership. We have recently embarked on a Membership Drive – offering one-time discounted memberships to former POLY members who let their memberships lapse within the last 5 years as well as PMSE members who are not currently members of POLY. We also asked these former POLY members to participate in a brief survey to help us understand why they have not renewed their memberships and to identify things that POLY could do to bring greater value to its members.

On the Student Chapter front, we teamed with PMSE to offer special projects grants (\$1000 each) to chapters for use in special outreach events to promote awareness of POLY and PMSE and increase chapter membership (Please see Kevin Cavicchi's article above on Student Chapters and the Call for Proposals on this page). We also were successful in winning a \$6K grant from the ACS's Innovative Projects Program to sponsor a Student Chapter Symposium and Networking Reception at the upcoming 10th National Graduate Polymer Research Conference at Case Western Reserve University in Cleveland on May 21-24. This symposium will provide a forum where officers from current POLY/PMSE Student Chapters can share their efforts in establishing and sustaining their chapters with officers from other chapters and students and faculty from schools who are considering forming a new chapter.

The Membership Committee and POLY leadership is also working to enhance communication with POLY members. The POLY Facebook and LinkedIn sites are both up and running – these not only provide an opportunity for POLY leadership to share information with the membership but have also been used by members to share anything from help with a specific problem to employment opportunities. Kathy Mitchem has been putting together a monthly e-mail newsletter to highlight upcoming events and issues of interest to our membership. We are also looking at ways of providing networking opportunities at National Meetings and are interested in your thoughts on how we can make the POLY/PMSE Hospitality Suite more useful for networking.

The Membership Committee is interested in hearing from you about ways that we can improve and provide better service and value to our membership. Please send us an e-mail (Michael.A.Meador@nasa.gov or Maryann.Meador@nasa.gov) with your thoughts and ideas.

POLYED Survey

The POLYED committee (co-chairs Charles Carraher and John Droske) would like your feedback on proposed changes to the ACS undergraduate curriculum that would incorporate polymer science. Please take a few minutes to complete survey at the link below:

https://www.surveymonkey.com/s/ POLYEDsurvey

Call for POLY/PMSE Student Chapter Proposals

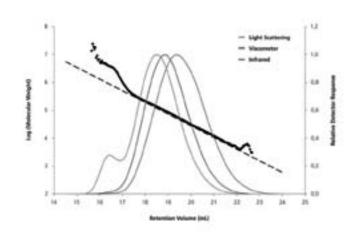
This is to announce the first annual call for proposals from POLY/PMSE student chapters. You may propose up to \$1,000 to help defray the costs for an event to be hosted by your chapter. Types of events eligible for funding may be hosting speakers for a special symposium, holding a poster session with students from your chapter and other chapters in the same region, community outreach events to teach elementary or high school students about polymers, job fairs and other events which add value to your members or which help your chapter grow. Obtaining matching funds from your school or local industries is highly encouraged and will enhance the likelihood of your proposal being funded. Proposals should be submitted by Dec. 1, 2012 using the template available on the POLY website to be eligible for funding. Selections will be announced at the end of January.

For Additional Information:

WWW.POLYACS.ORG
Kevin Cavicchi
POLY/PMSE Student Chapter Chair
kac58@uakron.edu



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- · Columns Care: Separate compartment to protect columns.
- · Environment Care: Solvent Recycling System.
- Comprehensive Calculations integrating all detectors signals.
- · Reliable and robust system with Remote Control capabilities.



Q

2012 Polymer Division Workshops

POLYCONDENSATION 2012

September 16-19, 2012 Sir Francis Drake Hotel, San Francisco, CA WWW.POLYACS.NET

Organizers:

Timothy E. Long Virginia Tech E-mail telong@vt.edu James L. Hedrick IBM Almaden

E-mail: hedrick@almanden.ibm.com

Topics of Interest

Polycondensation, has a long-standing presence in the international polymer community for over ten years. The event started in Paris in 1996, and has continued every two years since its inception. The theme of the conference will primarily be recent developments in the synthesis, characterization, and performance of step-growth (condensation) polymers. Oral presentations on linear, branched, tailored architecture, sustainable polymer design, and crosslinking are particularly invited. This event will attract speakers from all over the world, including North and South America, Europe, Australia, and Asia.

Invited Speakers

Chris Bielawski, Univ. of Texas at Austin Paul Buijsen, DSM Coating Resins John W. Connell, NASA Langley Research Ctr Theo Dingemans, Delft Univ. of Technology Benny Freeman, Univ. of Texas at Austin Masa-aki Kakimoto, Tokyo Inst. of Technology Kunio Kimura, Okavama Univ. Fuvuhiko Kubota Tovobo Co. Ltd. Heather Maynard, Univ. of California, LA Jim McGrath, Virginia Tech Regis Mercier, LMOPS, CNRS Cor Koning, DSM Jeff Pyun, Univ. of Arizona Rudy Rulkens, DSM Mitsuru Ueda, Tokyo Inst. of Technology Voit, Leibniz-Inst. for Polymer Research Willi Volksen, IBM

Tsutomu Yokozawa, Kanazawa Univ

Fluoropolymer 2012 October 14 - 17, 2012

The Flamingo, Las Vegas, NV

WWW.POLYACS.NET

Co-Chairs:

Prof. Dennis W. Smith, Jr. University of Texas at Dallas E-mail: dwsmith@utdallas.edu

Prof. Scott T. Iacono U.S. Air Force Academy E-mail: Scott.Iacono@usafa.edu

Fluoropolymers are enabling materials which find applications in critical technologies from energy conversion, to microelectronics and photonics, to extreme environment applications to biomaterials. Traditional fluoropolymer technology is nearly 65 years old and it maintains a growth rate above the US GNP. In addition to perfluoropolymers, partially fluorinated polymers will continue to impact a wide range of technologies as better control of their unique optical, electronic, processing, extreme environment stability, and surface properties is achieved. This will be the fifth biannual FLUOROPOLYMER conference hosted by the Division of Polymer Chemistry. FLUOROPOLYMER 2000, 2002, 2004, 2006, 2008, and 2010 were tremendous successes with a sell-out attendance. Please join us for the 7th in a series.

SESSION TOPICS

- * Fundamental and advanced technology tutorials
- * Polymer and copolymer synthesis and mechanisms
- * Structure / property relationships
- * Coatings and surfaces
- * Biological and biomedical applications
- * Membrane and energy conversion applications
- * Fluoropolymers in lithium battery applications
- * Piezoelectrical and PV devices
- * Photonic, optical, and electronic applications
- * Industrial elastomers and plastics
- * Composites, hybrids, and interphases
- * Semi-fluorinated polymers for emerging applications
- * Supercritical fluid processing
- * Environmental impact and regulatory status

Advances in the Science of Polyurethanes 2012 October 28 – 31, 2012

The Woodlands, Colonial Williamsburg, VA

WWW.POLYACS.NET

Organizers:

Kenneth J. Wynne Virginia Commonwealth University

E-mail: kjwynne@vcu.edu

Garth L. Wilkes Virginia Tech E-mail: gwilkes@vt.edu

James McGrath Virginia Tech E-mail: jmcgrath@vt.edu

Iskender Yilgor Koç University E-mail: iyilgor@ku.edu.tr

Fundamental Properties:

Tutorial session on polyurethanes

Structure-Property Relationships in Applications:

Polyurethanes (and polyureas) constitute a major class of polymeric materials that have found applications in a wide array of end products. Examples are flexible, high-resilience foam seating; rigid foam insulation panels; microcellular foam seals and gaskets; durable elastomeric wheels and tires; automotive suspension bushings; electrical potting compounds; high performance adhesives; surface coatings and surface sealants; synthetic fibers (e.g. Spandex); carpet underlay; and hard-plastic parts (i.e. for electronic instruments); biomedical applications (catheters, coatings, artificial organs).

Research Topics:

Surface science; tailoring chemistry for applications; hybrids

2012-2013 Polymer Division Workshops

Silicon Containing Polymers and Composites

December 9-12, 2012 Omni Hotel, San Diego CA WWW.POLYACS.NET

Chair: Dr. Joseph M. Mabry

Air Force Research Laboratory E-mail: joseph.mabry@edwards.af.mil

Many types of silicon compounds are used in polymer chemistry. They generally fall into one of four categories; silanes, siloxanes, silsesquioxanes, and silicates. Materials utilizing these compounds vary greatly in type and application. Silicone polymers are ubiquitous in the chemical industry. Silsesquioxanes can be used to improve polymer properties, although they are often used as resins, Silicates are used in chemical separations and as polymer fillers. Silanes are typically used to produce all of the above. This workshop will cover recent technological advancements in silicon-containing polymers and nano-composites produced in academic, industrial, and government laboratories, and will include everything from fundamental research to commercial product development. This workshop will be of interest to both academic and industrial communities.

Advances in Materials for Proton Exchange **Membrane Fuel Cells Systems**

February 17 - 20, 2013 Asilomar Conference Grounds, Pacific Grove, CA WWW.POLYACS.NET

Co-Organizers:

Brian Benicewicz, Ph.D. University of South Carolina E-mail: benice@sc.edu

Tom Zawodzinski, Ph.D. University of Tennessee-Knoxville E-mail: tzawodzi@utk.edu

This conference has had great success as the premier conference bringing together the polymer community and fuel cell scientists. Our objective is to engage a broad spectrum of the polymer community in meeting the needs of this technology. Thus, we have generally scheduled talks that present the vision of the funding agencies and industry to provide perspective followed by talks from leading researchers in proton-conducting electrolyte synthesis, characterization, processing and application. We will maintain the focus on polymer membranes for fuel cells. One area of added stress will be polymer/electrocatalyst composites that serve as electrodes in the fuel cells. Finally, extensive poster sessions present an opportunity for students and newcomers to 'show their stuff' to the community.

Advances in Materials and Processes for Polymeric Membrane Mediated Water Purification

February 24 - 27, 2013 Asilomar Conference Grounds, Pacific Grove, CA, USA WWW.POLYACS.NET

Organizers:

Benny Freeman, Univ. of Texas freeman@che.utexas.edu

Judy Riffle, Virginia Tech judyriffle@aol.com

Jeffrey R. McCutcheon, Univ. of Connecticut jeff@engr.uconn.edu

James E. McGrath, Virginia Tech jmcgrath@vt.edu

Lauren Greenlee, NIST lauren.greenlee@nist.gov

The purpose of this workshop is to bring together a broad range of stakeholders in the area of membranes for water purification. One objective is to establish a constructive dialogue between government, academic and industry representatives so that a robust, shared vision of the opportunities and challenges facing this field can be formulated. Another objective is to bring together leading research scientists and engineers in this field from all over the world to foster networking that can stimulate collaborative research to solve the most challenging problems in the field today. The final objective of this workshop is to provide a series of state-of-the-art presentations outlining the status of membrane materials for various separations critical for the purification of water and to set forth the challenges that must be resolved to reduce next generation water purification systems based on membranes to practice.

SESSION TOPICS

- Polysiloxane polymers & copolymers
- Nanocomposites
- Sol-gel chemistry & polysilsesquioxanes
- Polyhedral oligomeric silsesquioxanes
- Wetting-resistant surfaces & coatings
- Silica, silicate, & silsesquioxane fillers Industrial elastomers & plastics
- Composites, hybrids, & interfaces
- Anti-fouling & anti-icing surfaces Structure/property relationships
- Fluoro-silicones
- Organosilicon chemistry
- Silicon-containing copolymers
- Ceramics & glasses
- Bio-silification & bio-medical applications
- Adhesives

Additional Workshop Information

Visit the web page: **WWW.POLYACS.NET**

or contact

Lesia Linkous **POLY Business Office** 540-231-3029 LESIAR@VT.EDU

Workshop Committee

H. N. Cheng USDA hncheng100@gmail.com

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> Dylan Boday, IBM Rakesh Nambiar, DuPont

Workshop proposals are being accepted at this time

> www.polyacs.net/ workshopshub.htm

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Purdue University jpyoungb@purdue.edu

Future ACS Meetings

244th - August 19-23, 2012 Philadelphia, Pennsylvania Theme: Materials for Health & Medicine

245th - April 7-11, 2013 New Orleans, Louisiana Theme: Chemistry of Energy & Food

246th - September 8-12, 2013 Indianapolis, Indiana Theme: Chemistry in Motion

247th - March 16-20, 2014 Dallas, Texas

248th - August 10-14, 2014 San Francisco, California

249th - March 22-26, 2015 Denver, Colorado

250th - August 16-20, 2015 Boston, Massachusetts

251st - March 13-17, 2016 San Diego, California

252nd - August 21-25, 2016 Philadelphia, Pennsylvania

253rd - April 2-6, 2017 San Francisco, California

254th - September 10-14, 2017 St. Louis, Missouri

255th - March 18-22, 2018 New Orleans, Louisiana

256th - August 19-23, 2018 Boston, Massachusetts

257th - March 31-April 4, 2019 Orlando, Florida

258th - August 25-29, 2019 San Diego, California

POLY/ACS National Meeting Activity

244th ACS National Meeting, Philadelphia, PA August 19-23, 2012

Program Chair Contact: Jeffrey Youngblood Overall Theme: Materials for Health and Medicine

- AkzoNobel for Outstanding Graduate Research (Joint POLY/PMSE)
- Bioconjugate Polymers II
- Computational Polymer Modeling
- DSM Polymer Technology Award: Advanced Polymer Networks
- Energy and Materials
- General Topics: New Synthesis and Characterization of Polymers
- Green Polymer Chemistry: Biocatalysis and Biobased Materials
- Incorporation of Macromolecular Science/ Polymeric Materials into the Foundational Course in Organic Chemistry (Joint CHED/ POLY/PMSE/RUBB/COMP)
- Industrial Polymer Scientist Award
- New Developments: Engineering Materials from Carbohydrate Polymers (Joint CELL/CARB/ POLY)
- POLY/PMSE Plenary Lecture & Awards Reception (Plenary: Paula Hammond)
- Polymer Science of Everyday Things (Joint POLY/PMSE)
- Polymers at the Interface with Biology: Opportunities in Antimicrobial Materials, Immunology, Delivery, and Imaging
- Recent Developments in Scanning Probe Microscopy of Polymer Materials (Joint CELL/POLY)

245th ACS National Meeting, New Orleans, LA April 7-11, 2013

Program Chair Contact: Scott Iacono Overall Theme: Chemistry of Energy and Food

- Bottom-Up Design of the Next Generation of Biomaterials
- Carl S. Marvel Creative Polymer Chemistry Award
- General Topics: New Synthesis and Characterization of Polymers
- Joint POLY/PMSE: Hybrid Materials
- Liquid Crystals and Polymers
- Natural and Renewable Polymers
- POLY/PMSE Plenary Lecture & Awards Reception
- Polymer Nanocomposites for Energy Harvesting, Conversion, and Storage
- Polymer Precursor-Derived Carbon
- Undergraduate Research in Polymer Science
- Understanding Complex Macromolecular and Supramolecular Systems using Innovative Magnetic Resonance Strategies

Additional POLY Session Information

http://www.polyacs.org/8.html

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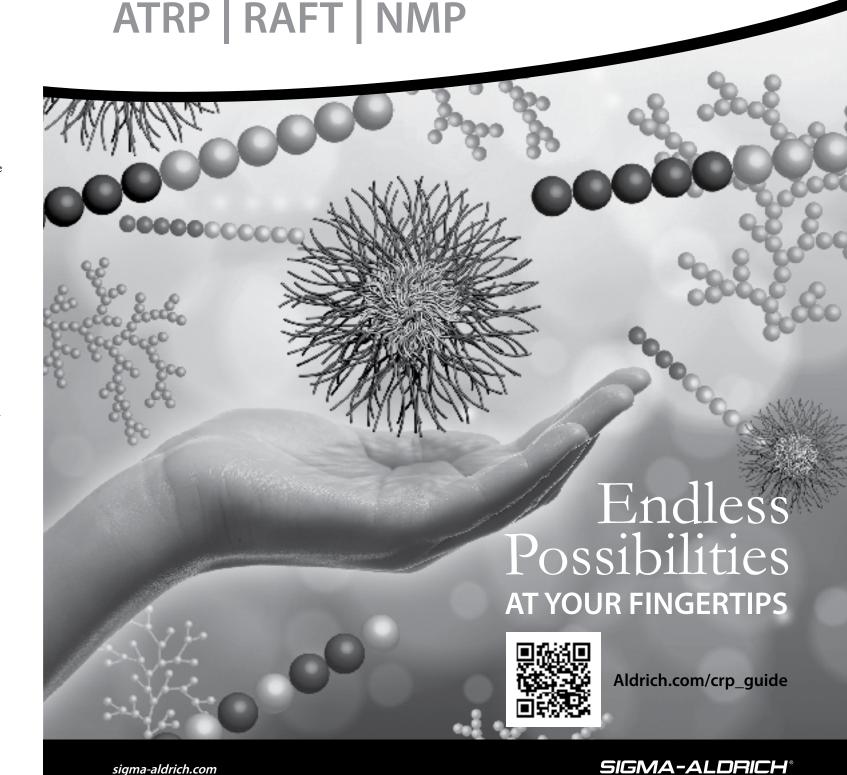
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June 2012 Newsletter

POLY Councilors' Report of the San Diego, CA ACS Meeting

- by F. Blum, H. N. Cheng, B. Daly, & J. Pochan

General Topics:

- 1. At the San Diego Meeting, ACS Council chose Thomas Barton and Luis Echegoyen as candidates for ACS President Elect. They will run in the fall and members will select the President Elect.
- 2. The ACS ended 2011 with 164,215 members the highest number in Society history. 24,249 new members joined the Society (16,092 Regular Members, 8,157 Undergraduate Members).
- The Council voted to set the member dues for 2013 at \$151.
- 4. The Society Committee on Education supported the recommendations from a task force to create a stand-alone teachers' association housed within ACS, supported by professional staff and governed by a volunteer board of association members.
- 5. Cheng serves as ConC liaison to the Committee on Economic and Professional Affairs (CEPA). CEPA and ACS Career Services continue to use on-site, virtual and hybrid strategies for career fair and exposition. The booklet, "Chemists' Code of Conduct", was approved by Council.
- 6. Blum serves as consultant to the Younger Chemists Committee and will help the YCC increase its effectiveness.

Division Activities Committee: (DAC) (John Pochan)

- 1. DAC and Meetings and Expositions (M&E) are forming a working group to consider policy recommendations to the ACS concerning most, if not all, aspects of electronic dissemination of ACS national meeting content.
- 2. POLY has been awarded an Innovative Project Grant from DAC that will focus on student chapters.

Budget and Finance Committee: (B&F) (Frank Blum)

- 1. At B&F Blum has been appointed to the subcommittee that determines the financial impact of petitions to modify the Constitution and Bylaws. Last year, the Society ended with total revenues of \$472.0 M (1.8% increase vs. 2010), total expenses of \$451.1 M (2.6% increase vs. 2010). The net from operations was \$20.9 M (2nd highest in record), with an increase of \$102.0 M in net assets.
- 2. The Pacifichem budget was proposed and endorsed by B&F including a provision that the Divisions would be reimbursed on a pro-rata basis for their programming

Committee on Committees: (ConC) (H. N. Cheng) ConC is responsible for the effective and efficient operation of Council-related committees. In addition to regular reviews of committees, ConC recommended to Council the continuation of the Committee on Project SEED. (The Council subsequently approved the recommendation.) ConC also reviewed the activities of Senior Chemists Task Force in the past three years and recommended to Council the conversion of the task force to a committee. This recommendation will be voted upon at the Philadelphia meeting in August.

Meetings and Expositions Committee: (M&E) (Bill Daly)

- Attendance in San Diego was 16,864, and 11,716 papers and posters were presented.
- 2. The reviews on the Denver meeting in 2011 were excellent: the site was very favorably received by both the ACS staff and the attendees.
- ACS lost money on both the Anaheim and Denver meetings but will make money on the San Diego meeting. The success of a meeting is clearly site dependent; M&E is working on an algorithm to predict the potential of a given site. The early registration fee for meetings in 2013 has been set at \$370 based on the CPI-W adjustment.
- 4. The ACS Meetings Department piloted a digital meeting program in Denver and have enhanced it by including direct links to the abstracts in San Diego. The web-based application is optimized for mobile devices such as smart phones and tablets and has active web links to the technical program and the exhibitor directory as well as bookmarks for easy navigation. Users can access the program (in pdf), perform keyword searches, and share content on social networks. The digital meeting program can be viewed at http://sandiego2012onsite.acs.org/i/57789.
- 5. Recording of technical sessions (EDMC) will likely be continued and expanded. Approximately 450 presentations were recorded in San Diego. Archive recordings for the Anaheim and Denver meetings are available at: http://www.softconference.com/ACSchem/.
- The cost of Wi-Fi access could reach \$600,000 annually and the ACS could be incurring legal liabilities if the science being discussed is "streamed" or "recorded" and used inappropriately. M&E recommended that Wi-Fi access be limited to public spaces and not be allowed in technical session rooms.



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This newsletter is sponsored by the ACS Division of Polymer Chemistry, Inc. and is published twice per year. in the spring and in the fall.

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Volume 51, 2012, 15 issues per year, Print ISSN: 0360-2559

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