## **FALL 2012**

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Visit the POLY website at www.polyacs.org





American Chemical Society

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

#### **Chair's Address**

It has been a distinct pleasure to serve as your Chair for the past year. I have been privileged to work with individuals on the POLY Board who are dedicated to providing the maximum utility of membership to each individual member. POLY is committed to remaining adaptive and innovative in the methods we use to stay current through changing times, accomplishing our mission of professional service and acting on the wants and needs of our membership. I'm certain that my successor as Chair, Professor Greg Tew, will continue this tradition of dedicated service to the Division.

Successes in the past year have been many. First of all, I am pleased to announce the creation of a new award, which will be cosponsored by ACS Publications and POLY. This award will honor the contributions of two individuals, early in their careers, who have made significant contributions to the field of polymer science. The inaugural award will be given at the Fall 2013 ACS National Meeting. Additional details will be forthcoming. Secondly, an experiment at the Philadelphia national meeting resulted in the combination of the POLY/PMSE poster session and hospitality suite. By all accounts, this was a great success. I was pleased to see a high level of interaction between presenters and attendees. It appeared that everyone was enjoying themselves. With a few minor tweaks, we plan to continue this successful union in the future. Finally, there has been a significant increase in the number of POLY/PMSE student chapters. The Membership and Student Chapter Committees have done a great job of engaging motivated young individuals who are enthusiastic about participating in POLY activities.

This has also been a productive year for the Division, as we seek to remain the premier outlet for the presentation of cutting-edge polymer-based research activities. POLY held many successful symposia at both the San Diego and Philadelphia national meetings, thanks to the hard work of the symposium organizers and program chairs. This is also looking like a great year for our topical workshops, with the National Graduate Research Polymer Conference, IUPAC World Polymer Congress, and Polycondensation workshops held earlier this year. Upcoming workshops include Fluoropolymer 2012, Polyurethanes 2012, and the second installment of Silicon-Containing Polymers and Composites. These workshops are sponsored by the Division with reduced registration cost offered to POLY members. Please visit the workshops website: http://www.polyacs.org/7.html for further information.

A significant change considered this year was a modification to the format of Polymer Preprints. Member input was solicited through many sources. Based on your feedback, the POLY Executive Committee voted to eliminate Polymer Preprints in favor of graphical abstracts, which will be distributed to members, free of charge. We believe this will provide additional member benefit, while serving to eliminate the negative aspects of Polymer Preprints. Members will have the opportunity to vote on this topic, as well as additional modifications to the POLY bylaws when voting on the 2012 election slate, where we have an outstanding list of candidates for positions on the POLY Executive Committee. We are fortunate to have such a dedicated group of individuals willing to volunteer their time for the betterment of the Division.



Joseph M. Mabry

2012 Chair

POLY Executive Dinner, ACS National Meeting Philadelphia, PA - August 2012 As always, the POLY website (http:// www.polyacs.org) remains an important resource for POLY members. Information can be found on meetings, symposia, awards, jobs, membership, elections, and just about anything else that is POLYrelated. Please visit the website for further information. Also, please don't hesitate to provide feedback to the Division. Your ideas will help us to stay current in changing times.

It has been an honor to serve as your Chair during the past year. I look forward to continued participation and success in the ACS Division of Polymer Chemistry.



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## **POLY Recognizes Outstanding Members!**

The POLY/PMSE awards reception, held at the ACS National Meeting in Philadelphia PA, honored outstanding achievements by its members. 2012 POLY Chair, Joe Mabry, had the pleasure of congratulating this year's POLY award winners.

2012 Industrial Polymer Scientist Award: The recipient of the 2012 Industrial Polymer Scientist Award is Babu N. Gaddam. Dr. Gaddam is a 3M Corporate Scientist and adjunct professor. He is widely known in the polymer community and has continually made groundbreaking discoveries that have changed and shaped the field of polymer chemistry. As an industrial scientist his inventions have led to significant commercial products ranging from everyday items, like Postit Notes to pioneering work in the use of renewable resources. Dr. Gaddam has more than 100 patents in widely diverse polymer applications such as dentistry, health care, display and graphics, photoinitiators, optics and nanoparticles to name a few. Many of these patents support products that improve the quality of life for consumers. He has published 89 papers and also contributes to the greater scientific community as a journal reviewer, and National Science Foundation panelist.



(l to r) T. Baughman (Industrial Advisory

Board), B. Sharma (Grad. Student Travel Awardee), J. Mabry (POLY Chair), and

Z. Chen (Grad Student Travel Awardee)

ACS Fellows, and Distinguished Service Awardee Honored: POLY salutes its invaluable volunteer, Ulrich S. Schubert for his outstanding ACS National Meeting POLY session organization. Joe Mabry congratulated the 2012 ACS POLY Fellows Eric J. Amis, Bill M. Culbertson, Joseph M. DeSimone, Ray Alexander Dickie, James Economy, Diana J. Gerbi, Bernard Gordon, Michael Jaffe, Clark R. Landis, Joseph Paul Kennedy, John Pochan, Richard Alan Register, and J. Ernest Simpson. These individuals were recognized at a special ACS ceremony during the ACS National meeting.

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. Only members of the ACS and the Division of Polymer Chemistry

who study at U.S. institutions are eligible for this travel award.

Plenary Lecture: The POLY/PMSE award reception featured an invited plenary lecture by Paula Hammond. Massachusetts Institute of Technology. The presentation title was, "Macromolecular Assembly for Novel Biomaterials Micropharmacies and Delivery Platforms". She received a plaque and honorarium for this special technical presentation.

The event was extremely well-attended and provided an opportunity to better recognize the excellence and community in our 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.

## **Upcoming POLY Award Deadlines**

#### **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.

#### Paul J. Flory Polymer Education Award

Upcoming Deadline - 7/1/13 Purpose: To recognize, encourage, and stimulate outstanding achievements by an individual in promoting undergraduate and/ or graduate polymer education.

Division of Polymer Chemistry, Inc.

Upcoming Deadline - 1/31/13 **Purpose**: To recognize high quality thesis research, level of innovation demonstrated, and the impact of the research on the science of synthetic polymers or biopolymers. **DSM Polymer Technology Award** 

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(1 to r) D. Gerbi (Industrial Advisory Board), J. Mabry (POLY Chair), and B. Gaddam (Industrial Polymer Scientist Awardee)

This award recognizes outstanding industrial innovation and creativity in the application of Polymer Science, and is sponsored by the Polymer Division Industrial Advisory Board.

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. Congratulations to Zhuo Chen, University of Florida, "Well-Defined Light Harvesting

Polystyrenes Made from Controlled Radical Polymerization and "Click" Chemistry" and Babloo Sharma. The University of Texas at Dallas. "Perfluorocycloalkenyl (PFCA) Aryl Ether Polymers".



(l to r) J. Mabry (POLY Chair) and P. Hammond (Plenary Lecture)

#### AkzoNobelAward for Outstanding **Graduate Research in Polymer** Chemistry

Upcoming Deadline - To be determined. Watch web page for deadline updates. **Purpose**: To recognize and reward excellence in innovative PhD research in 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: krcarter@polysci.umass.edu

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

## **Miyake Receives 2012 AkzoNobel Award**

The winner of the 2012 AkzoNobel Award for Outstanding Graduate Research in Polymer Chemistry is Dr. Garret Miyake, who earned his Ph.D. in 2011 at Colorado State University under the mentorship of Prof. Eugene Chen. He also spent a summer doing



research as an NSF-EAPSI Fellow with Prof. Eiji Yashima at the University of Nagoya, Japan. Dr. Miyake is now a postdoctoral researcher at California Institute of Technology with Prof. Robert Grubbs.

In his Ph.D. research, Dr. Miyake accomplished the asymmetric coordination polymerization of achiral polar vinyl monomers into optically active, chiral vinyl polymers. He and a graduate student colleague prepared enantiomeric, cationic ansa-zirconocenium ester enolate catalysts via an 11-step synthesis and employed the catalysts to prepare optically active poly(N.N-diarylacrylamides). He also accomplished the first coordination addition polymerization of N,N-dialkylmethacrylamides and the first kinetic resolution of racemic methacrylamides by chiral metallocene catalysts. Dr. Miyake made important progress in the use of frustrated Lewis pair and organolanthanide catalysts for efficient polymerization of naturally renewable monomers into



(l to r) Garret Miyake, Awardee and Keimpe van den Berg, AkzoNobel

sustainable polymers that are alternatives for polymers based on petroleum. He also discovered the first kinetic resolution polymerization of racemic lactide using chiral organic catalysts. This method enables the synthesis of biomedical polymers such as polylactide with no trace of metal residues. Dr. Miyake's Ph.D. research appears in twelve papers in leading chemistry journals.

The award was presented at a symposium in honor of Dr. Miyake at the American Chemical Society National Meeting in Philadelphia in August, 2012 in the Division of Polymeric Materials Science and Engineering. The award is sponsored by the AkzoNobel Corporation and the ACS Divisions of Polymer Chemistry and Polymeric Materials Science and Engineering and is administered by PolyEd, the polymer education committee of the two Divisions.

## **Bao Named** 2013 Marvel Awardee

2013 Carl S. Marvel Creative **Polymer Chemistry Award** Zhenan Bao Stanford University



A symposium to recognize Dr. Bao will be held at the 2013 Spring ACS National Meeting in New Orleans LA.



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## **DSM & POLY Present the Second Annual Polymer Technology Award**

Frank Leibfarth, of the University of California-Santa Barbara, has been awarded the DSM Polymer Technology Award 2012 for his PhD research in the field of functional polymeric materials.

A judging committee comprising of experts in polymer chemistry chose the winner from among four candidates selected as finalists. Frank Leibfarth has developed a platform technology in polymer chemistry based on the ketene organic functional group. The versatility of this winning research allows discrete property changes of a material upon a simple heat treatment, providing on-demand access to robust and highly functional plastics in an operationally simple manner. The modularity and cost-effective nature



(1 to r) Vikas Sonak (DSM), Andrew Davis (Finalist), Travis Baughman (DSM, Award Coordinator), Brian Adzima (Finalist), Frank Leibfarth (Winner), Peiwen Zheng (Finalist), Reinier Grimbergen (DSM), and Rolf van Benthem (DSM)

Philadelphia, PA on August 21 as part of the ACS Fall Meeting. Dr. Reinier Grimbergen, VP R&D at DSM and chair of the judging committee, presented the award to Frank Leibfarth at the ACS POLY awards reception held in Philadelphia on August 22. Dr. Grimbergen: "With our Polymer Technology Award we want to recognize and reward exceptional PhD research by bright young researchers working at the cutting edge of science. I was deeply impressed by the quality of the work of all four finalists of this year and by the self-assured grasp of their topics that they showed in their presentations. I am convinced that their work will help us meet the innovation needs of the future."



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(1 to r) Frank Leibfarth (2012 Polymer Technology Award Winner) and Reinier Grimbergen (VP Resin R&D)

of this technology make it a powerful tool for chemists, materials scientists and engineers enabling old plastics to be imparted with new and complex functions. This opens up the way to innovative 'smart' plastic materials for application in areas such as microelectronics, energy and biotechnology. The award carries a cash prize of USD \$2,000.

Frank Leibfarth: "I am humbled to receive the prestigious Polymer Technology Award from DSM, whose support of young scientists not only displays their commitment to the research community, but also reinforces their reputation as an innovative and forward-looking company. DSM's partnership with the Polymer Chemistry Division of the American Chemical Society and academic researchers will be critical in developing commercial products which make our world a better, more sustainable and more equitable place to live. I am honored to be part of such an effort through this award."

The other three finalists were: Brian Adzima, Andrew Davis and Peiwen Zheng. All four finalists presented their PhD research at a special DSM - ACS POLY Symposium held in



CAS No.: 2695-37-6 US Patent: 5,898,083 Japan Patent: 3601222

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## **2012 POLY On-Line Elections**

The 2011 POLY Election was a huge success providing approximately 20% membership participation. POLY anticipates a repeat performance in 2012. The 2012 candidate information is summarized below. Full statements and bylaw information can be reviewed on-line at www.polyacs.org.

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

#### VOTING ON-LINE IS AS EASY AS 1-2-3!

- 1. Watch for the e-mail or postcard which will be sent to you in October from elections@vote-now.com, which will contain your individual password.
- 2. Once you receive your e-mail or card with the subject "2012 Division of Polymer Chemistry Elections", go on-line to complete the election ballot at http://ACS-**POLY.vote-now.com**
- 3. If you do not receive an e-mail or postcard by October 30th or for additional questions, please feel free to contact the POLY Business Office at KATHYL@ VT.EDU or call 540-231-3029.

Arthur Snow

Alan Hopkins

The Aerospace Corporation

Navel Research Lab. Center

## **2012 Election Slate**

#### **Candidates for Vice-Chair**





**Rigoberto** Advincula Case Western Reserve University

#### **Candidates for Councilor**



H. N. Cheng USDA Southern Regional **Research Center** 



Allan C. Guymon

The University of Iowa

Mary Ann Meador NASA Glenn Research Center



**Candidates for Member-At-Large** 

**Candidates for Alternate Councilor** 

Michael Hickner The Pennsylvania State University

Michael Meador

NASA Glenn Research

#### **Bylaw Change Approval**

- 1. Elimination of Bylaw IV, Section 4. Biennial Symposium Committee.
- 2. Elimination of Bylaw IV, Section 7. Polymer Preprints Committee.
- 3. Renumbering of some sections in Bylaw IV.
- 4. Changes to Bylaw VI, Section 4. Special Meetings
- 5. Removing the term "Sect. 1" in Bylaw VIII.

#### Rationale/information on the proposed changes.

- Elimination of the Biennial Committee is consistent with the changing needs of meeting venues. The Biennial meeting may still be held, but it would no longer be required. The Division's extensive workshop venue and other meetings fill the need that was once filled by the Biennial Conference.
- Polymer Preprints has a long and distinguished history. However, in today's quick-publishing climate, Polymer Preprints often take longer to publish than journal articles. In addition, the publication of work in Polymer Preprints often precludes their inclusion in primary journal articles making some authors hesitant to give papers at POLY symposia. These issues were never anticipated by the founders of the Division and are resolved with the elimination of Polymer Preprints. Nevertheless, Polymer Preprints has been valuable to many POLY members. The Executive Committee plans for the collection and distribution to members of "Graphical Abstracts" for future POLY programs at National ACS meetings. These will fulfill many of the needs of our members.

3&5 Labeling changes for clarity and consistency.

4 The changes to the section on Meetings (Bylaw VI) are to make our Bylaws consistent with the requirements for non-profit organizations in the District of Columbia





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## **Important Updates Regarding the Replacement of Polymer Preprints**

Over the past several months, there have been several announcements that the POLY Executive Committee was considering major changes, including the elimination of Polymer Preprints. This item was initially announced to the membership in the spring newsletter and comments from members were solicited At the Fall ACS meeting in Philadelphia, this item was discussed at the semi-annual board meeting and the annual business meeting, which was open to POLY members. Given the discussion at this meeting and the e-mail responses collected over the past several months, the conclusion is that Polymer Preprints will be replaced by a graphical abstract (a traditional abstract with one "Table of Contents (TOC)-like" figure. Specifically, this abstract can be up to 230 words plus one TOC-like figure. This content fits within the current ACS submission system and avoids pre-publication issues that were a major concern for our members. The submission of an abstract that contains a TOC-like figure will be the new requirement for paper submission to POLY symposia at all National ACS meetings. The Executive Committee took this action after serious consideration and in anticipation of the necessary approval of Bylaw changes by the membership which will be voted on this Fall.

Starting with the Spring 2013 ACS meeting in New Orleans, this new submission requirement will be implemented. Basically, this change is effective immediately.

Therefore, please take this new requirement into consideration as you plan your submission for the New Orleans meeting. The Division plans to assemble and distribute all POLY abstracts for the meeting to its members in electronic format. It is the feeling of the executive committee that this new, electronic abstract file will be of significant value to the membership. As this new benefit is rolled-out, we welcome your comments on its value and improvement. POLY members can send their comments to: preprints@polyacs.net. We thank POLY members in advance for their thoughtful consideration of this item.

> The Division of Polymer Chemistry Executive Committee

## **POLY Councilors' Report** of the Philidelphia, PA **ACS** Meeting

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

General Topics: The Philadelphia national meeting attracted 13,320 registrants, including 7,817 regular attendees and 3,177 students. The ACS Board of Directors approved an advance member registration fee of \$370 for national meetings held in 2013.

Council Policy Committee (CPC) - Frank Blum: For the 2013-15 term, Blum was elected to the CPC. The CPC is responsible for the smooth operation of the ACS Council. (This is the 25th year that Blum serves as a Councilor.)

**Committee on Committees (ConC) – H. N. Cheng:** 

The main purpose of ConC is to maintain a healthy committee system for all Council-related committees. Cheng serves as an elected member. In Philadelphia, potential appointments to committee were made. In addition, ConC recommended the continuation of the Committees on Chemists with Disabilities and on Professional Training, and the Council concurred.

Division Activities Committee (DAC) - John Pochan: 1. The ACS abstracts submission system, known as PACS, will be phased out in December 2014. ACS staff is working with DAC, M&E, and others governance entities to select a replacement system. 2. Starting with the 2013 New Orleans Meeting, ACS and the Kavli Foundation will launch a new lecture series recognizing outstanding young scientists under the age of 40. ACS has asked DAC to work with all divisions to nominate qualified candidates, and to have the Multidisciplinary Program Planning Group evaluate the nominations and select the scientist to deliver the lecture.

Meetings and Expositions (M&E) – Bill Daly: 1. The committee reviewed the status of meeting sites five years ahead of the event. The Fall 2017 ACS meeting originally scheduled for St. Louis has been moved to Washington DC. 2. Pochan and Daly served on a working group to develop a policy to allow divisions to implement electronic programming to supplement the ongoing national ACS project on electronic distribution of meeting content (EDMC), which has been renamed ACS Programming on Demand (ACS-POD). Both DAC and M&E approved the proposed policy and it is under review by M&PR. Allowing divisions to independently stream and/or record technical sessions presents a new opportunity to provide additional benefits to our members. 3. The feasibility of eliminating the hard copy meeting program is being considered. The all-electronic program would allow later abstract submission deadlines, significantly reduce printing costs, and support the ACS sustainability initiative.

Budget and Finance (B&F) – Frank Blum: The ACS finances continue to be strong. The year-end balance is expected to add to our reserves and be favorable to budget. Several programs were reviewed for financial effectiveness. The Leadscope lawsuit is yet to be resolved and currently sits with the Ohio Supreme Court.

Committee on Economic and Professional Affairs (CEPA) - H. N. Cheng: Cheng serves as the ConC liaison to CEPA. CEPA is the committee that deals with job search, career development, and workplace issues. In view of high unemployment, CEPA is doing a lot trying to help, such as face-to-face and virtual career fairs, and the new ACS Career Pathways workshops. At Philadelphia, CEPA unveiled six new four-hour Career Pathways workshops with trained facilitators, now available for regional meetings and local sections.

Younger Chemists Committee (YCC) - Frank Blum: Blum serves as a consultant to YCC. The YCC continues to be enthusiastic, diverse and hard working. Networking is one of their strengths. There are opportunities for YCC members, especially for those who are moving off of the Committee to become more involved with other parts of the Society, including divisions.

Senior Chemists Task Force - H. N. Cheng, Bill Daly: In Philadelphia, ConC recommended to the Council to establish a Joint Board-Council Committee on Senior Chemists to serve the needs of older chemists and to encourage their participation in ACS. The council voted to approve the committee formation. The Board of Directors must vote next on whether to establish the committee.

Presidential Task Force on Vision 2025 – H. N. Cheng: ACS President-Elect Marinda Wu established this task force with the goal of identifying challenges and opportunities related to the global chemistry enterprise, and providing recommendations to help members with jobs to thrive in the future. Cheng serves as co-chair. In collaboration with several committees and divisions, the task force has identified action items for implementation in 2013.





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- · Environment Care: Solvent Recycling System.
- Comprehensive Calculations integrating all detectors signals.
- · Reliable and robust system with Remote Control capabilities.



## **2012-2013 Polymer Division Workshops**

#### **Silicon Containing Polymers and Composites**

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

<u>Chair:</u> 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 siliconcontaining 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

Session Topic 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 Shemistry

- Silicon-Containing Copolymers
- Ceramics & Glasses
- Bio-Silification & Bio-Medical Applications
- Adhesives

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

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

Co-Organizers:

Brian Benicewicz, Ph.D. University of South Carolina Phone: 803-777-0778 E-mail: benice@sc.edu

Tom Zawodzinski, Ph.D. University of Tennessee-Knoxville Phone: 865-974-5137 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/WORKSHIPSHUB.HTM

Organizers:

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

Judy Riffle, Virginia Tech judyriffle@aol.com Lauren Greenlee, NIST

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

October 2012 Newsletter

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

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.

## **2013 Polymer Division Workshops**

**Sustainable Polymers** May 20-23, 2013

Safety Harbor Resort and Spa, Safety Harbor, FL

**Co-Organizers:** 

Dylan J. Boday, IBM Materials Engineering Phone: 520-799-2180 Email: dboday@us.ibm.com

#### **Introduction and Invitation:**

The use and development of materials from renewable sources is not a new concept, and there are many examples in history of the use of renewable materials to prepare primitive tools, clothes and shelter. As the complexity of human requirements increased, so did the materials and by the 19th century durable materials were being prepared from renewable resources such as vulcanized rubber and adhesives from starches and other natural resins. However, the widespread use of these materials was diminished in the 20th century with the development of fossil fuel derived leading to the polymer renaissance. In the following decades, coal and petrol-based polymers could be found in nearly every item we touched, e.g., clothing, packaging, paints, adhesives and plastics.

Today, the use of polymers is widespread but the sources which are used to prepare them are coming under scrutiny. The traditional sources to prepare the vast majority of conventional polymers are finite and will begin to dwindle in the future. This will put a significant cost pressure on the polymers prepared from these finite resources. Lastly, as the world begins to become much more aware of the needs for a sustainable future, there will be increasing pressure to incorporate sustainable materials. With these concerns, there is now a growing shift back to polymeric materials from renewable sources. Significant research is ongoing to develop new or improved products and processes based on sustainability.

#### **Polymer Composites and High Performance Materials** July 21 - 24, 2013

Hilton Sonoma Wine Country, Santa Rosa, California USA

#### **Organizers:**

Sarah E. Morgan, University of Southern Mississippi, E-mail: sarah.morgan@usm.edu Daniel A. Savin, University of Southern Mississippi, E-mail: daniel.savin@usm.edu Mary Ann Meador, NASA Glenn Research Center, E-mail: maryann.meador@nasa.gov Michael A. Meador, NASA Glenn Research Center, E-mail: Michael.A.Meador@nasa.gov Jeffrey W. Gilman, NIST, E-mail: jeffrey.gilman@nist.gov

The Polymer Composites and High Performance Materials Workshop will be offered as a three day symposium and professional networking session in July 2013 in the Sonoma. California wine country. The proposed workshop builds on successful symposia organized through POLY over the last two years. The first Composite Workshop was held in February 2010 in New Orleans, La, and hosted fifty attendees. A POLY symposium, "Advances in Polymer Composites," was held at the Fall 2011 National ACS meeting in Denver, Colorado, and hosted 5 sessions and 52 papers. The Polymer Composites and High Performance Materials workshop will bring together researchers from industrial, academic and government laboratories to discuss the state-of-the-art in polymer matrix science for aerospace, marine and infrastructure composite applications. The purpose of this workshop is to address key challenges and advances in the area of polymer composites, with specific emphasis on addressing fundamental structure-processing-property issues.

#### **Polymers in Medicine and**

**Biology: 2013** October 9-12, 2013 Hilton Sonoma Wine Country Santa Rosa, California

"Polymers drive therapeutics and diagnostics that save lives and improve the quality of life"

#### **Organizers:**

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Division of Polymer Chemistry, Inc.

Visit the web page: WWW.POLYACS.NET

or contact

**Additional** 

Workshop

Information

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

#### Workshop Committee

H. N. Cheng USDA hncheng100@gmail.com

**Gobet Advincula Case Western Reserve** University rca41@case.edu

Dylan Boday **IBM Materials Engineering** 

> Rakesh Nambiar DuPont

**Robert S. Moore** Kodak (retired)

\*Workshop proposals are being accepted at this time\*

www.polyacs.net/ workshopshub.htm

Marc A. Hillmyer, UMN Dept. of Chemistry Phone: 612-625-7834 Email: hillmyer@umn.edu

**Advances in Polyolefins** 2013 October 13 – 16, 2013 Hilton Sonoma Wine Country Santa Rosa, California

#### **Co-Organizers:**

Pal Arjunan pal arjunan2005@yahoo.com

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

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Jeffrey Youngblood Purdue University jpyoungb@purdue.edu

#### Future ACS Meetings

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 Washington, D.C.

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**

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

Program Chairs: Scott Iacono (Primary), Sheng Gibson-Lin, Jeffery Youngblood

**Overall Theme: Chemistry of Energy & Food** 

- ACS Award for Creative Invention: Honoring T. Swager
- Bottom-up Design of the Next Generation of Biomaterials
- Carl S. Marvel Creative Polymer Chemistry Award
- Cyclic and Multicyclic Polymers (Joint POLY/ PMSE)
- Excellence in Graduate Polymer ResearchGeneral Topics: New Synthesis and
- Characterization of Polymers
- Hybrid Materials (Joint POLY/PMSE)
- Integrating Chemistry & Polymer Science Research into the Classroom (Joint POLY/ CHED)
- Liquid Crystals and Polymers
- Natural and Renewable Polymers
- POLY/PMSE Plenary Lecture & Awards Reception: L. Wendling, 3M
- Polymer Precursor-Derived Carbon
- Polymer Composites for Energy Harvesting, Conversion and Storage
- Ronald Breslow Award for Achievement in Biomimetic Chemistry: Hororing S. I. Stupp
  - Understanding Complex Macromolecular and Supramolecular Systems using Innovative Magnetic Resonance Strategies
  - Undergraduate Research in Polymer Science

246th ACS National Meeting Indianapolis, IN September 8-12, 2013 Program Chairs: Jeffery Youngblood (Primary), Sheng Gibson-Lin, Scott Iacono

**Overall Theme: Chemistry in Motion** 

- AkzoNobel Award for Outstanding Graduate Research in Polymer Chemistry (Joint POLY/ PMSE)
- Biomacromolecules for Therapeutics and Diagnostics Delivery
- Biomacromolecules/Macromolecules Lectureship in Creative Polymer Science
  Block Copolymers
- Block Copolymers
   Charles Overbarger
- Charles Overberger AwardDSM Polymer Technology Award
- DSM Polymer Technology Award
  General Topics: New Synthesis and
- Characterization of Polymers
- Herman F. Mark Scholars Award
- Herman F. Mark Polymer Chemistry
- Herman F. Mark Young Award
- Herman F. Mark Senior Award
- Monomer and Polymer Mimicry with Renewables
- POLY/PMSE Plenary Lecture & Awards Reception
- Polymers for Transportation
- Sensing Fluid Motion with Polymeric Materials
- Sequence-Controlled Polymers
- Additional POLY Session
- Information http://www.polyacs.org/8.html

## **ACS National Meeting Abstract Submission**

PACS (Program and Abstract Creation System) is used by ACS authors, program chairs, and symposium organizers to view, edit, and prepare abstracts within a single system for ACS meeting publications. In order for you to submit an abstract or to be added as an organizer, you first must have an ACS ID.

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- abstracts.acs.org
- 2. Log in using your ACS ID
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**Organizers** are encouraged to utilize the user manual on-line at: <u>http://portal.acs.org/portal/</u> <u>acs/corg/content?\_nfpb=true&\_pageLabel=PP\_ARTICLEMAIN&node\_id=1202&content\_</u> <u>id=CNBP\_028247&use\_sec=true&sec\_url\_var=region1&\_uuid=8e99371e-a7c3-48de-8d76-</u> <u>2f242563a994</u>

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#### **Membership and Student Chapters**

• M. Meador, and M. A. Meador, and K. Cavicchi

**Call for** 

**Proposals** 

**POLY/PMSE** 

**Student Chapter** 

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

symposium, holding a poster session

be hosted by your chapter. Types

of events eligible for funding may

be hosting speakers for a special

with students from your chapter

region, community outreach events

to teach elementary or high school

students about polymers, job fairs

your members or which help your

chapter grow. Obtaining matching

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

announced at the end of January.

**For Additional Information:** 

WWW.POLYACS.ORG

Kevin Cavicchi

**POLY/PMSE Student Chapter** 

Chair

kac58@uakron.edu

for funding. Selections will be

funds from your school or local

and other events which add value to

and other chapters in the same

We are continuing our efforts to grow POLY/PMSE student chapters and encourage them to promote POLY, PMSE and polymer science through on-campus and outreach events. As you can see from the reports from each chapter below, great things are happening! In addition, POLY was awarded an Innovative Projects Grant from the ACS to host a Student Chapter Symposium at the Graduate Polymer Research Conference at Case Western Reserve University in May for student chapters to share ideas with each other and give advice to potential new chapters on getting started.

CASE WESTERN RESERVE UNIVERSITY: The CWRU chapter will host the 2013 Polymer Initiative of Northeast Ohio (PINO) Conference and Job Fair, an entirely student sponsored event. Representatives from 15 companies will participate in the Job Fair and provide networking and job search advice and conduct on campus interviews with students about to graduate from schools in Northeast Ohio.

UNIVERSITY OF MICHIGAN: The U of M chapter organized an invited lecture with alumni Dr. Lirong Bao, Technical Manager of the Advanced Technology Group at Henkel Adhesive Technologies in Bridgewater, NJ. Lirong spoke on the "Utilization of Silver Nanoparticles in Conductive Applications".

UNIVERSITY OF SOUTH CAROLINA: The USC chapter has been putting its grant from POLY and PMSE to good use. In their seminar series, Professors Sanat Kumar (Columbia U.) and Tim Long (VPI) have visited so far. In August, the



University of South Carolina Networking Social



(1 to r) Alica Smith, Dr. Lirong Bao, and Daniel Flynn, University of Michigan

chapter hosted their inaugural Industrial Networking Event. Representatives from 14 companies took part in a student-led panel discussion, an exposition, a poster session, and a networking social.

**UNIVERSITY OF SOUTHERN MISSISSIPPI:** This chapter has been hard at work with on several initiatives including preparing resume booklets to showcase undergraduate and graduate students at local and national meetings, providing outreach events at local grade schools to promote polymers and recycling

initiatives, and hosting lunches with invited seminar speakers to support networking. UNIVERSITY OF TEXAS - DALLAS: UT-Dallas is the newest student chapter. During

the summer, they participated in the George A. Jeffrey Nano-xplorer program, mentoring 6 high-

school students and 4 undergraduates. This allowed them to nurture young, interested minds by giving students projects in the field of polymer chemistry and helping them achieve their goals. They are also are working to connect with students at SMU UNT, UTA, and the University of Dallas to expand polymer student activity in Northeast Texas.



The UT-Dallas POLY/PMSE Chapter

## **Annual Treasurer's Report**

The table outlines the summary and status of the 2012 budget with respect to the current income and expenditures through July 2012 and is compared to the end-of-year figures for 2011 and planned 2012 budget.

We continue to balance the budget and ensure that the expenditures are within the allocated figures agreed upon at the last 2012 Ex-Com meeting. Any questions may be directed to Mark Dadmun, POLY Division Treasurer, dad@utk.edu.

	2011 Actual		2012 Budget		2012 Actual to Date	
Budget Category	Income	Expense	Income	Expense	Income	Expense
ACS Dues/Awards/ Allocations	197,479	28,497	243,500	27,500	156,527	13,632
National Meetings Activities	46,229	114,269	43,500	126,000	41,679	65,529
Workshop Activities	296,480	187,669	179,000	139,000	98,260	55,447
Administrative	0	154,197	0	150,000	0	111,007
Publications & Advertising	41,033	54,983	47,000	59,000	41,102	30,573
Committee Activities	13,341	21,610	10,000	21,500	10,100	22,362
Total Budget	594,562	561,225	523,000	523,000	347,670	298,550
Budget Delta	33,337		0		49,120	
Investment Balance	21,453				33,019	

- by Mark Dadmun, POLY Treasurer

#### October 2012 Newsletter

#### WWW.POLYACS.ORG

division of polymer chemistry, inc American Chemical Society

Visit the POLY website - We have what you are looking for!

## **Membership Benefits** and Questions

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## Newsletter **Production**

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