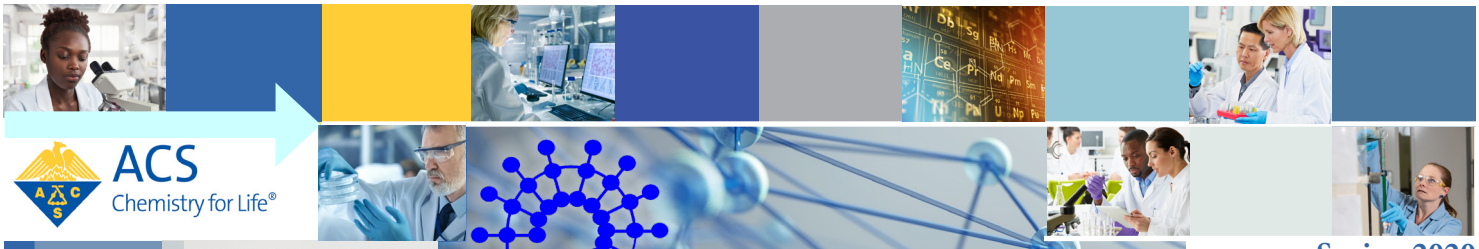


ACS Chemistry for Life®

POLY NEWSLETTER

Spring 2020

American Chemical Society
Division of Polymer Chemistry, Inc.

2020 POLY Chair
Michael Meador

Inside

It is my great pleasure and honor to serve as the 2020 POLY Chair and to work with the Executive Committee to ensure that POLY continues to be ACS's most dynamic, innovative, and relevant Technical Division. A key to POLY's success is the hard work and dedication of our many volunteers - from symposium, workshop, webshop and webinar organizers to our National Meeting Programming Chairs to members of the Executive Committee and its subcommittees. This is evident now more than ever in these challenging times and I am profoundly grateful to them for their service and dedication.

While the cancellation of the Spring ACS National Meeting was necessary to protect the health of ACS members, it created several challenges that needed to be addressed. I am proud of how POLY volunteers and the Business Office stepped up to the plate and addressed these issues to minimize the impact of this cancellation on the Division. I would like to recognize a few people for their efforts and leadership. Hayley Brown and the Programming Committee did a truly exceptional job of communicating with symposium organizers to make them aware of events as they developed, understand their concerns, and help with cancelling or moving their symposia. Carlee Linkous in the POLY Business Office worked with the organizers of the Excellence in Graduate Polymer Research (Christine Coltrain, H.N. Cheng, Chris Ellison, and Tim Long), to create a website to allow participants to upload their abstracts, their poster or slides, and an audio file of their presentation. This "virtual symposium" offers students an opportunity to still present their research to their peers and the entire division. Last, but not least, Kathy Mitchem and the POLY Business Office worked with various vendors to recoup deposits and with sponsors to determine the disposition of their funding. I am grateful to them for their efforts and to all of those sponsors who have agreed to let POLY use their donations to fund events at the 2021 Spring National Meeting. This has also been a challenging time for POLY workshops as we are faced with the need to postpone the remaining 2020 workshops. A big thanks to workshop organizers, the POLY Workshop Committee, and Lesia Pristas who have worked tirelessly to minimize the effect of this on POLY and develop a viable strategy to realign the workshop schedule for 2021 and beyond.

The Spring 2020 National Meeting, with its theme of "100 Years of Macromolecules", was going to be an exciting event for POLY. A number of our members, including National Meeting Thematic Co-chairs Kris Matyjaszewski and Tim Lodge, invested considerable effort planning symposia and special events to celebrate the contributions of polymer chemistry to the broader chemical enterprise and the global economy, and to highlight future challenges and opportunities. POLY, in collaboration with PMSE and several other ACS Technical Divisions, successfully advocated with ACS to reassign that theme to the Spring 2021 National Meeting that will be held in San Antonio. Many of the symposia that were planned for Philadelphia will now be held in San Antonio and we will have the opportunity to see the fruits of all of that hard work.

As the coronavirus pandemic continues to affect our personal and professional lives, POLY will continue to look for ways to help our members grow and thrive professionally. Take care of yourselves. I hope to see you again soon.

Upcoming

- July 1 — Carl S. Marvel Award Deadline
- Aug. 17-20 — Fall ACS National Meeting
- September — POLY Outstanding Poster Deadline
- October 31 — YIPS Award Deadline
- November 1 — Herman F. Mark Award Deadline
- November 30 — POLY Fellows Award Deadline

MACROMOLECULAR SCIENCE AT THE DAWN OF ITS SECOND CENTURY

Authors:

Dr. Timothy P. Lodge, University of Minnesota, lodge@umn.edu

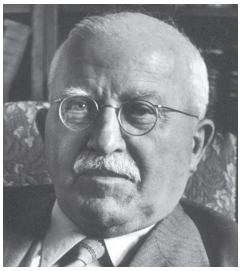
Dr. Krzysztof Matyjaszewski, Carnegie Mellon University, matyjaszewski@cmu.edu

Dr. Peter Zarras, NAWCWD, peter.zarras@navy.mil

Professor Hermann Staudinger was born in 1881 in Worms, Germany. After receiving his Ph.D. in Chemistry from University of Halle in 1903, he went on to be a lecturer at the University of Strasbourg, where he discovered a family of molecules he named "ketenes." At the University of Strasbourg, ketenes would form the basis for important intermediates in the production of future antibiotics such as penicillin and amoxicillin. At the Swiss Federal Institute of Technology in Zurich, Switzerland, Dr. Staudinger discovered what would be called the "Staudinger Reaction", a mild method for reducing an azide to an amine. This important transformation is conducted in two steps. The first is the reaction of an azide with a phosphine to produce an iminophosphorane intermediate, and the second is the hydrolysis of the iminophosphorane intermediate to the amine and the phosphine oxide byproduct.

Also at this time, he studied the chemistry of rubber. The analytical methods employed indicated that rubber and other materials such as starch, cellulose, and proteins were high molecular weight compounds. This formed the basis for his outstanding theory regarding polymer structures. In his landmark publication in 1920, he proposed that these high molecular weight compounds are long chains of short repeating molecular units linked by covalent bonds. He also contrasted "true polymerization", in which the resulting products had the same bonding pattern as the monomers, and "fake polymerization", which included condensation reactions. It is hard to appreciate today, but in Staudinger's time the term "polymer" was often used to denote an inert dimer of a small molecule; this was the distinction that Staudinger emphasized. The term he used for these specific types of molecules was "Makromolekule", which became the foundation for the science of polymer chemistry. He was ultimately awarded the Nobel Prize in 1953 for this discovery. Since that initial discovery, polymer chemistry and commercialization of polymers have revolutionized the world that we live in. Both military and industrial applications of polymer science are found in everyday products such as nylon, Teflon®, synthetic rubber products and composites, coatings, electronics, and biomedical applications.

Although the proposal by Staudinger in 1920 ushered in the era of macromolecular chemistry, the wider chemistry community at this time did not readily accept the idea of high molecular weight compounds linked by covalent bonds. In fact, leading scientists dismissed this idea, preferring alternative explanations based on aggregation of small molecules. However, additional evidence supporting Staudinger's hypothesis was confirmed via membrane osmometry, viscosity measurements, and X-ray diffraction studies. For example, Herman Mark's investigation into the structures of natural polymers showed definitive proof that long chains of repeating units were the basis of macromolecules. Interestingly, there was a persistent controversy about polymer conformations, and the molecular weight dependence of, e.g., the intrinsic viscosity. Staudinger clung to the idea that macromolecules were extended objects, and that the intrinsic viscosity would increase linearly with molecular weight. It was Werner Kuhn who first advanced the correct explanation of the random coil through a statistical thermodynamics argument, and thereby also provided the molecular origin of entropic rubber elasticity. On the chemistry side, the work led by Wallace Carothers at the DuPont Company was pivotal in convincing the organic chemistry community of the covalent nature of polymers.



Hermann Staudinger
Photo Credit: Photo from the Nobel Foundation archive.

Herman F. Mark
Photo Credit: Photos from the Poly Archives.

Richard Kuhn
Photo Credit: University of Basel.

Wallace Carothers
Photo Credit: DuPont.

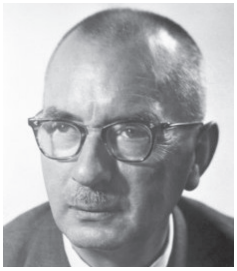
Article continued on next page.

One goal in those days was to exceed a molecular weight of 4021, a target set by the synthetic prowess of Fischer and coworkers. Carothers team achieved this milestone repeatedly, by systematic application of established condensation reactions (somewhat ironically, in view of Staudinger's initial hypothesis).

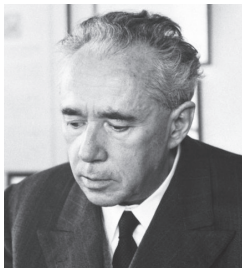
From Staudinger's pioneering work, the award of the Nobel Prize in chemistry in 1953 may be classified as signifying the first generation of polymer materials, which comprise natural polymers such as cellulose, leather, bone and silk. The second generation of polymer materials are based on synthetic polymers, and thermoplastics in particular. Commercial success began with the work of Carothers at the DuPont Company, and his discovery of nylon. The synthetic rubber project during the second world war greatly furthered understanding of polymer properties and polymerization processes. The work by Ziegler and Natta on new catalysts for olefin polymerization resulted in the award for the Nobel Prize in Chemistry in 1963. Even today the resulting isotactic polypropylene and high-density polyethylene are two of the top three synthetic polymers in total mass production worldwide.

The 1950s also saw the first living polymerization, which had been predicted to give a Poisson distribution of chain lengths by Paul Flory as far back as 1940. Flory's extensive and broad-ranging contributions to understanding the properties of polymers were finally recognized with the Nobel Prize in Chemistry in 1974.

Macromolecules play a vital role in our modern society. Since the initial discovery and development of polymer science from such early twentieth century innovators as Staudinger, Carothers, Kuhn, Mark, Flory, Ziegler, and Natta and numerous polymer scientists from today and into the future, polymers and their commercial products will continue to shape our daily lives. A very thorough exposition of the history of our field has been given by the late Herbert Morawetz.



Karl Ziegler
Photo Credit: Photo from the Nobel Foundation archive.



Giulio Natta
Photo Credit: Photo from the Nobel Foundation archive.

Paul J. Flory
Photo Credit: Photo from the Nobel Foundation archive.

Herbert Morawetz
Photo Credit: the Poly Archives Portrait Collection.

1. H. Staudinger, Ketenes. III. Diphenyleneketene, Berichte der Deutschen Chemischen Gesellschaft, 39, 3062-3067 (1906).
2. H. Staudinger, Ketens, Berichte der Deutschen Chemischen Gesellschaft, 38, 1735-1739 (1905).
3. H. Staudinger and J. Meyer, Über neue organische Phosphorverbindungen III. Phosphinmethylenederivate und Phosphinimine, Helv. Chem. Acta., 2(1), 635 (1919).
4. H. Staudinger, Uber Polymerisation, Berichte der Deutschen Chemischen Gesellschaft, 53(6), 1073-1085 (1920).
5. H. Staudinger and J. Fritschi, "Über Isopren und Kautschuk" Helvetica Chimica Acta, 5, 785–806 (1922).
6. H. F. Mark, High Polymers. Molecular Structure and Mechanical Behavior of High Polymers, Advancing Fronts in Chemistry, 1, 7-13 (1945).
7. W. Kuhn, Über die Gestalt fadenförmiger Moleküle in Lösungen, Kolloid Z. 68, 2 (1934).
8. E.T. Strom, Wallace Carothers and Polymer Chemistry: A Partnership Ended Too Soon. Chapter 7 in The Posthumous Nobel Prize in Chemistry. Volume 1. Correcting the Errors and Oversights of the Nobel Prize Committee, E.T. Strom, V.V. Mainz, ACS Symposium Series, ACS Publications, Washington, DC, 2017.
9. W. H. Carothers, Polymerization, Chemical Reviews, 8, 353-426 (1931).
10. J. Boor " Ziegler-Natta Catalysts and Polymerizations", Academic Press, New York, 1979.
11. M. Szwarc, Living Polymers, Nature, 178, 1168, (1956).
12. P. J. Flory, Molecular Size Distribution in Ethylene Oxide Polymers, J. Amer. Chem. Soc. 62(6), 1561-1565, (1940).
13. P. J. Flory, Conformation of Linear Macromolecules (Nobel Lecture), Angewandte Chemie, 87(22), 787-797 (1975).
14. H. Morawetz, Polymers - The Origins and Growth of a Science. John Wiley & Sons, Chichester and New York, 1985.

POLY AWARDS PROGRAM

Congratulations to the 2020 recipients highlighted below. Awardees noted with a star have been invited to provide a special award presentation at an upcoming ACS National Meeting. Watch the ever-changing POLY symposia schedule for the correct time and meeting.

POLY strives to recognize members at all levels of their career including established investigators, emerging investigators, and graduate students, without regard to race, color, national origin, sex, religion, age, disability or sexual orientation. This is made possible by members, like you, nominating outstanding diverse colleges. The Awards Committee is unable to solicit individual nominations and serve to select awardees. In order for POLY to provide a diverse award recipients list, we need YOU to nominate outstanding scientists.

UPCOMING AWARD DEADLINES:

Carl S. Marvel Creative Polymer Chemistry Award
Deadline 7/1/2020

POLY Poster Award
Deadline National Meeting Submission Deadline (SciMix)

Young Industrial Polymer Scientist Award
Deadline: 10/31/2020

The Herman F. Mark Polymer Chemistry Award
Deadline: 11/1/2020

POLY Fellows Award
Deadline: 11/30/2020

Award Committee
Johan Foster
johan.foster@ubc.ca
Semra Colak Atan
semracolak@gmail.com
Toby Nelson
toby.nelson@okstate.edu

Additional Information
carleel@vt.edu
https://polyacs.org/AWARDS/

ACS Division of Polymer Chemistry

2020 Outstanding Service Recognition

Distinguished Service

Marc Hillmyer
University of Minnesota

Development of POLY Webinars and POLY Web-shops

Exceptional Service

H.N. Cheng
US Department of Agriculture

Dedication and Organization of the Excellence in Graduate Polymer Research Symposium

Special Service

Scott Iacono
US Air Force Academy

Outstanding Contributions, Guidance and Leadership to the POLY Programming Committee for ACS National Meetings

2020 POLY Fellows

Recognizing Outstanding Achievements and Contributions to Polymer Science and the Profession

M. Becker
Duke Univ.

D. Patton
Univ. of Southern Mississippi

K. Cavicchi
Univ. of Akron

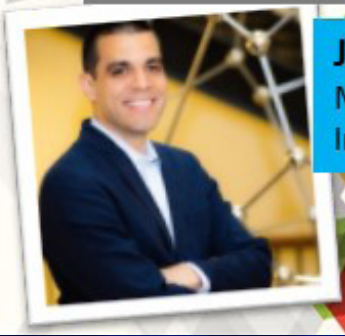
N. Peppas
Univ. of Texas at Austin

S. Cooper
Ohio State Univ.

S. Swarup
PPG

B.Freeman
Univ. of Texas at Austin

Henkel Award for Outstanding Graduate Research in Polymer Science & Engineering



Jeffrey Lopez
Massachusetts Institute of Technology

Sponsored by Henkel

ACS Macro Letter/
Biomacromolecules/Macromolecules

2020 Young Investigator Award

Keiji Numata
Kyoto University

Rodney Pristley
Princeton University

ACS Macro Letters · Biomacromolecules · Macromolecules · ACS Division of Polymer Chemistry

POLY – Industrial Advisory Board Sponsors
Graduate Student Travel Award

POLY IAB

Will Henderson
University of Florida
"Structure–Property Studies of Self-Assembling [n.n]Paracyclophanes"

Laura Murdock
University of South Carolina
"Enhanced PPA Process Polybenzimidazole (PBI) Membranes and their use in High Temperature Fuel Cells"

Abhishek Dhyani
University of Michigan
"Low Interfacial Toughness (LIT) Materials for Effective Large-Scale De-Icing"

Georg Scheutz
University of Florida
"Synthesis and Photocrosslinking of Strained Disulfides

LIVE WEBINARS AND YOUTUBE POSTS

The newest POLY and American Chemical Society collaboration Webinar was on June 18, 2020. The webinar, **Self Healing Polymers and Vitrimers**, featuring Professor Christopher Bowman of the University of Colorado Boulder and Professor Marek Urban of Clemson University was moderated by Professor Brent Sumerlin of the University of Florida.

Christopher Bowman
University of
Colorado Boulder

Marek Urban
Clemson University

This POLY and ACS collaborative webinar series featured two twenty-five minute presentations followed by a moderated question and answer session. These webinars are hosted by rotating POLY webinar committee members, composed of Brent Sumerlin, Tomonori Saito, and Laura Stratton, three times a year, this year on April 16, June 18, and August 6. Typically attracting hundreds of attendees, these webinars are a popular benefit organized by POLY. The POLY Webinar committee has an exciting working list of topics and speakers, and we welcome your ideas for topics and speakers for future webinars.

Past webinars prior to 2020 are posted to the POLY YouTube channel. April 2020 and future webinars speakers and titles will be posted on the American Chemical Society Webinars website after the initial live broadcast.

View Past POLY Webinars on YouTube

- The Power of Plastics Polymerized Ionic Liquids and Nanostructured Polymers
- How to Design the Next Generation of Sustainable Polymers
- How to Design Better Biomedicine: Polymeric Materials and Nanomaterials
- Semi-Conducting Polymers: The New Horizons and Unmet Future Challenges
- High Impact Nanotechnology Applications of Layer-by-Layer Assemblies
- Opportunities in Photochemistry: Photocontrol of Polymer Synthesis and Properties

View POLY/ACS Co-Sponsored Webinars

- The 3D Printing Revolution: Advances in Material Design and Methods
- Self Healing Polymers and Vitrimers

ACS Webinars®
CLICK * WATCH * LEARN * DISCUSS

COMING SOON

POLY ELECTIONS

2020 Election Results - over 21% past membership participation!

Approved election slate below. Election will go live in October 2020.

An email will be sent to voting members containing website and login instructions.

Keep your email address up-to-date! Postcards will NOT be mailed as in previous years. Send your updated email to carleel@vt.edu.

Officer Duties

Vice-Chair Duties: Support the Chair and Executive Committee of the Division while acting as liaison for Division Committees. Become familiar with operations of the Division to prepare for the functions of Chair-Elect and Chair in succeeding years. Attend Executive Committee meetings and promote the interests of members, committees, and Executive Committee.

Treasurer Duties: This officer handles all financial affairs for the Division including, but not limited to, overseeing Division dues/ renewals, process income and expenditures, file annual income taxes, submits ACS financial reports and develops, maintains, and executes the POLY budget, which is approved by the Executive Committee. This person will solicit and collect support for POLY programs. The Treasurer provides fiscal oversight and approval of national meeting and workshop activity. He/She will oversee investment accounts and provides guidance for growth. The Treasurer serves as the direct supervisor for the POLY Business Office during a 3 year term.

Councilor Duties: Councilors represent the Division at an ACS level. Once elected, ACS assigns the Councilor an ACS committee(s) on which to serve. The Councilors attend committee and ACS Council meeting, held during ACS National Meetings, to provide input to represent the Division. They serve as an active voting member of the POLY Executive Committee. A Councilor provides helpful feedback to Division Officers and the membership in regard to ACS level activity. POLY elects both academic and non-academic officers independently to best represent the broad interests of Division's membership. A Councilor is typically a seasoned POLY Member or past officer who can represent the interests of our Division members at the ACS level.

Alternative Councilor Duties: During a 3 year term, be available to replace or fill in if a Councilor is unable to fulfill their duties at a National ACS Meeting. Attend POLY Executive Committee meetings and provide the Councilor's report, if absent. Become informed on National and Divisional issues in order to serve as needed. Carry out specific assignments as requested by the POLY Division Chair, Councilor, or serve on committees as needed.

Vice Chair Candidates

Jianjun Cheng
Univ. of Illinois

Allan Guymon
Univ. of Iowa

Treasurer Candidates

Christine Coltrain
Eastman Kodak

Erin Murphy
Exponent

Councilor Candidates

Kevin Cavicchi
Univ. of Akron

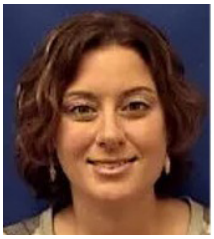
Kathryn Uhrich
UC Riverside

Alternate Councilor Candidates

Johan Foster
Univ. of British Columbia

Wei Gao
Dow

THE INDUSTRIAL ADVISORY BOARD



Corinne Lipscomb
3M, Chair of IAB

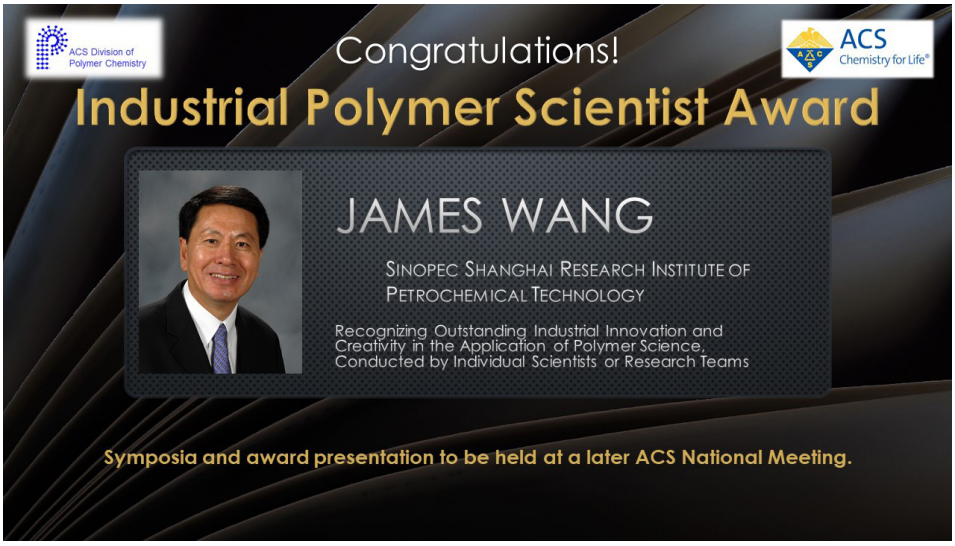
As we all maneuver our professional and private lives amid our new reality amid COVID-19, IAB's thoughts are with those affected by the virus in the U.S. and around the globe. IAB knows that many of you are directly and indirectly engaged with research and applications. The Industrial Advisory Board is grateful for your work. POLY IAB will continue to tailor its approach to meet the needs of its members and those causes for which we support.

Founded in 1980, the IAB is presently celebrating its 40th anniversary. Throughout its tenure, IAB has accomplished many successes year after year. This year has been no exception.

IAB continues to keep POLY relevant for its industrial membership by creating and supporting opportunities for networking, programming, education, and awards. Initiatives to date are:

- Supporting students in their journey: IAB supported the virtual Graduate Research Symposium, see page 11 for more information..
- New initiatives: IAB is exploring ideas for supporting external meetings. Peter Boul, IAB Vice-Chair will be forming a committee and encourages you to get involved. More information to the right.
- Awarding its members: See IPS award below.

As always, IAB extends our heartfelt thanks and appreciation for our Members' active participation on the board and encourage you to reach out to Vice Chair, Peter Boul or Chair, Corinne Lipscomb (celipscomb@mmm.com) if you have any suggestions or if we can answer any questions. IAB always welcomes the participation of new members—it will be your energy and ideas that keep IAB relevant and dynamic in the years to come. IAB looks forward to working with you!



New Initiative: Exploring Support of Relevant Workshops, Call for Committee Members

IAB is considering an initiative for IAB Sponsorship of events (ie. Symposia, Workshops, or Summits) where IAB has the potential to broaden its base for membership. As a prerequisite for sponsorship/partnership, the event would need to have (1) application to polymer science, (2) industrial sponsorship, and (3) be selected by IAB through a committee for meeting sponsorship.

Peter Boul, Vice-Chair will be forming a small committee and will present a formal initiative. IAB Members, if you are interested in getting involved, please contact Peter at: Peter.Boul@aramcoamericas.com.

Thank You! Board Members Industrial Advisory Board

POLY IAB

3M Science. Applied to Life. · ADM · aramco · ARKEMA · BASF We create chemistry · covestro · DSM Bright Science. Brighter Living. · EASTMAN · DOW · Gelest Enabling Your Technology · illumina · KRATON · Milliken · NSC National Security Campus · Polymer Chemistry Innovations, Inc. · PPG · Pfizer · Rochal Industries LLC · TOSOH BIOSCIENCE · United Technologies Research Center · WYATT TECHNOLOGY

POLY GRADUATE STUDENT TRAVEL AWARD

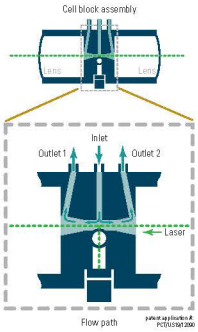
Did you know the Industrial Advisory Board supports a program to provide a total of two $750 travel awards for graduate students to attend each ACS Meeting? The award may be applied for registration, travel, and accommodations and are restricted to the next ACS National Meeting.
See page 5 for the 2020 POLY Graduate Student Travel Awardees!
For more information or to apply: https://polyacs.org/poly-graduate-student-travel-awards/.

Award Winning LenS3 Detector Pushes the Limits of Size Measurement by MALS

THE INNOVATION AWARDS 2019 Analytical Scientist

LenS3™ Multi-Angle Laser Light Scattering

A completely new detector design...

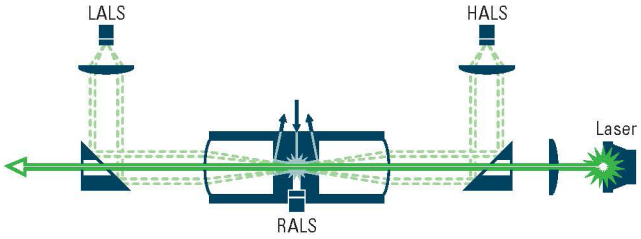


Revolutionary flow cell

- Black polymeric material eliminates stray light, thus reducing noise
- Elongated flow path maximizes interaction with molecules to increase scattered light intensity
- Dual conical shape improves signal collection at extreme angles 10° (LALS) and 170° (HALS)

Enhanced optics

- Green laser (505 nm) delivers higher scattering intensity than a traditional red laser (660 nm)
- Incident beam is eliminated to further minimize noise



Angular dissymmetry detected with higher sensitivity

- Extreme low and high angles (10° and 170°) allow the detection of ultra-small differences in scattering intensity
- Flow cell and optics design deliver unmatched signal-to-noise performance

... to determine R_g down to 2 nm for the first time!

R_g of Polystyrene Standards in Toluene by LenS3 vs SAXS*

- EcoSEC® GPC in toluene @ 1.0 mL/min, 40 °C
- 2× TSKgel® GMHHR-N (7.8 mm ID × 30 cm)
- Injection vol. = 80 µL

Sample ID	MW [Da]	Conc. [mg/mL]	R_g by LenS3 [nm]	R_g by SAXS* [nm]	Difference [%]
A5000	5,796	4.81	**2.11**	2.04	3.37%
F-1	10,650	4.27	**3.04**	2.93	3.69%
F-2	18,554	3.22	**4.34**	4.32	0.46%
F-4	40,510	2.79	**6.59**	6.69	1.51%
F-10	100,432	1.97	**10.48**	N/A	N/A
F-20	195,787	1.02	**15.78**	16.2	2.63%

* Abe, Fumiaki, et al., Macromolecules Vol 26 Issue 8 (1993) Pages 1884-1890

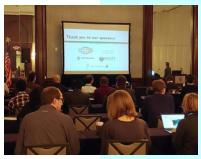
www.tosohbioscience.com

TOSOH BIOSCIENCE
www.tosohbioscience.com

TOSOH

In Review...

NEXT GENERATION SMART MATERIALS 2019



The Next Generation Smart Materials workshop held in Savannah, GA in December 2019 was a huge success, with 76 attendees, and 55 talks over three days. Highlights included updates from top scientists in Europe, the US, and Asia. Savannah provided an excellent backdrop for networking sessions, group discussions, and fruitful discussions. The organizers intend to hold another Next Generation Smart Materials conference in 2023. The organizers hopes everyone can attend.

LAYERED POLYMERIC SYSTEMS 2020



Layered Polymeric Systems workshop was held in Windsor, CA in February 2020. It focused on the production, structure, properties and applications of layered polymeric systems. Layered structures represent a growing area in the polymer world, and by taking a “systems look” at them, they become even more interesting. There were a number of new faces and lots of good networking. Moving forward, organizers will consider a broader topical approach for bringing others into the conversation.

Information coming soon regarding POLY Virtual Webshop...

Moving to 2021, Stay Tuned

SUSTAINABLE POLYMERS
Safety Harbor Resort and Spa
Safety Harbor, FL USA
Organizers: Hillmyer, Epps, and Robertson

FLUOROPOLYMER
Embassy Suites Denver Downtown
Denver, CO USA
Organizers: Iacono, Ameduri, and McCollum

CONTROLLED RADICAL POLYMERIZATION
Hotel Emeline
Charleston, SC USA
Organizers: Matyjaszewski, Tsarevsky, Gao, and Sumerlin

NATIONAL GRADUATE RESEARCH POLYMER CONFERENCE
The Inn at Virginia Tech and the Moss Arts Center
Blacksburg, VA USA
July 26 - 28, 2021

Also in 2021

POLYMERS AND NANOTECHNOLOGY
February 21 - 26, 2021
Location Embassy Suites Napa Wine Country, Napa, CA USA
Organizer: Laine

SILICON-CONTAINING POLYMERS AND COMPOSITES
Location TBD
San Diego, CA
Organizers: Furgal, and Hartmann-Thompson

Workshop Chair: Marc Hillmyer (hillmyer@umn.edu) or contact: Lesia Pristas (lesiar@vt.edu)

EXCELLENCE IN POLYMER GRADUATE RESEARCH

The sixteenth symposium on "Excellence in Polymer Graduate Research" took place online this year due to the Spring ACS Meeting cancellation. Each university's graduate department was encouraged to nominate one outstanding graduate student to present on his/her research. There were 39 oral and 15 poster presentations. The purpose of this symposium is 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.

Students were encouraged to submit their presentaion materials to the Excellence in Polymer Graduate Research On-Demand website. The website was made available to the POLY community for exposure of their hard work. As part of the recognition, each student received a certificate and a small cash prize. In addition, Wiley (Journal of Polymer Science) presented awards to four students (Reuben Bosire, Vivian Feig, Alfred Fung, and Nairiti Sinha) in recognition of outstanding presentations.

Congratulations Students!

Amal Abdulrahman
Clark Atlanta Univ.
Dylan Anstine
Univ. of Florida
Eric Bailey
Univ. of Pennsylvania
Dylan Barbar
Univ. of Mass.
Reuben Bosire
Univ. of Connecticut
Eugene Caldona
Mississippi State Univ.
Robert Centore
Rensselaer Poly. Inst.
Tamuka Chidanguro
Univ. of S. Mississippi
Hannah Dedmon
N.C. State Univ.

Abhishek Dhyani
Univ. of Michigan
Austin Evans
Northwestern Univ.
Vivian Feig
Stanford Univ.
Alfred Fung
Australian Nat. Univ.
Prabhath Gamage
Univ. of TX at Dallas
Jitendra Gurjar
Univ. of S. Cal., LA
Nicholas Hampu
Univ. of Minnesota
Amber Hancock
Univ. of Dayton
Justin Harris
Univ. of Michigan

Sara Heedy
Univ. of Cal. Irvine
Will Henderson
Univ. of Florida
Joseph Jaye
Univ. of Cal., LA
Haley Jones
Clemson Univ.
Jayan Karunarathna
Bowling G. State Univ.
Brian Khau
Georgia Tech.
Shadi Kordbacheh
Univ. of Cal., LA
Susan Kozawa
Case W. Reserv. Univ.
An Le
Yale Univ.

Daniel Lee
Univ. of Washington
Jaeho Lee
Seoul National Univ.
Huina Lin
Rutgers Univ-Newark
Anna Luke
Univ. of Minnesota
Neha Manohar
Univ. of Pennsylvania
Douglas Montjoy
Univ. of Michigan
Amal Narayanan
Univ. of Akron
Kathryn O'Harra
Univ. of Alabama
Justin Paloni
MIT

Bijal Patel
UIUC
Lisa Savagian
Georgia Tech
Liyang Shen
Iowa State Univ.
Nairiti Sinha
Univ. of Delaware
Yue Song
Texas A&M Univ.
Rui Sun
Texas A&M Univ.
Spyridon Varlas
Univ. of Birmingham
Haonan Wang
Univ. of Pennsylvania
Andrea Westlie
Colorado State Univ.

Jill Williamson
UNC, Chapel Hill
Emily Wilts
Virginia Tech
Caitlyn Wolf
Univ. of Washington
Mo Yang
Florida State Univ.
Daryl Yee
Cal. Inst. of Tech.
Qi Zhang
East China Univ.
Tianqi Zhang
Georgia Tech
Luyao Zheng
Univ. of Akron
Tianyu Zhu
Univ. of S. Carolina

Organizers
H.N. Cheng (USDA), Christine Coltrain (Eastman Kodak Company), Christopher Ellison (Univ. of Minnesota), and Timothy Long (Virginia Tech)

Sponsors
ACS President-Elect Funding, BASF, IAB, TOSOH, and Wiley

Visit the virtual symposium at https://www.polyacs.net/poly2020excellencesite

UNDERGRADUATE RESEARCH SYMPOSIUM

The 15th annual Undergraduate Research in Polymer Science Symposium was scheduled to be held at the 2020 Spring ACS National Meeting in March. The symposium would have highlighted 20 oral and 40 poster undergraduate presentations from 40 universities across the United States and Puerto Rico. Due to the meeting cancellation, the symposium was moved to SciMeetings. SciMeetings is a virtual science-sharing platform developed by ACS Publications. Fifteen Undergraduate presentations are now highlighted on the online SciMeeting website. Click the link below to view these outstanding undergraduate presentations.

Undergraduate students focused on polymer research are encouraged to participate in future spring Undergraduate Symposiums. Watch for the POLY – ACS National Meeting call for papers which is typically due in September/October each fall or contact one of the organizers listed below for additional information.

Organizers
Sarah Morgan, Heather Broadhead, and Sergei Nazarenko (The University of Southern Mississippi)

Outstanding Winners
1st: Morgan Young-Univ. of Michigan, 2nd: Kennalee Orme-Idaho State Univ., and 3rd: Virginia Mullins-Mississippi State Univ.

View symposium submissions at https://bit.ly/20SUNDERGRAD

IN MEMORY OF ABHIMANYU PATIL

Abhi Patil passed away suddenly due to a heart attack on March 27th, 2020.

Abhi grew up in a small town in Maharashtra, India where he still holds the high school's academic record. He was passionate about education and relentless in his pursuit of academic excellence. He placed first in his Master's program at Pune University and received his Ph.D. in Organic/Polymer Chemistry from the prestigious Indian Institute of Technology in Bombay. This is where he met and married Anjali. They moved to the US where he worked with Professor David Curtin on solid-state organic chemistry as a postdoctoral fellow at the University of Illinois at Urbana-Champaign. He went on to be a research scientist at the Institute for Polymers and Organic Solids at the University of California, Santa Barbara, where he discovered the first water-soluble conducting polymers and synthesized novel self-doped conducting polymers with Professors Fred Wudl and Alan Heeger (2000 Nobel Prize in Chemistry).

A promising position at ExxonMobil brought the family to New Jersey. Over the next 30+ years, Abhi built an impactful career at ExxonMobil and was deeply honored by the respect of his peers. He made countless friends and worked to build up the next generation of scientists by mentoring colleagues and interns. Abhi always looked forward to patent & publication dinners and Long Range & CRC meetings.

Abhi strongly believed in the power of education to empower and elevate. He loved exploring the world one bite and step at a time from Paris to Cape Town. He relished in good food and sharing it with the people he loved. He also cared deeply about meditation and the power of the mind as an avid practitioner of vipassana meditation for 20 years.

Abhi's legacy will live on through his scientific achievements in addition to the people he has touched. He found great joy in approaching complex technical challenges with creativity and ingenuity. He has 110 issued US patents (with more coming!) and over 80 publications. He organized 5 National ACS symposia and co-edited 2 books. He was recognized as a fellow by both the POLY and PMSE divisions of ACS and was invited to speak at the Smithsonian about innovation. He loved attending talks and asking the hardest question in the room to push forward collective thinking. He loved what he did and even worked on two patent memos hours before he went to the hospital on March 25th. He leaves behind his beloved wife Anjali and two children, Anura and Ojus.

CONNECTING WITH POLY MEANS CONNECTING WITH YOUR COMMUNITY

www.twitter.com/POLY_ACS
@POLY_ACS

POLY E-LIST
https://polyacs.org/poly-electronic-discussion-list/

POLY WEB
www.polyacs.org

www.facebook.com/ACSPOLY/
"ACS Division of Polymer Chemistry"

http://bit.ly/youtubepoly
"ACS Division of Polymer Chemistry"

www.linkedin.com
"Division of Polymer Chemistry"

POLY COMMUNITY EVENT CALENDAR

Consider spotlighting your event with other notables in the field on POLY's community event calendar!

Email: carleel@vt.edu with details of your contribution to the POLY Calendar.

POLY Event Calendar: http://bit.ly/polycalendar

INTERESTED IN ADVERTISING?

On behalf of the ACS Division of Polymer Chemistry, we would like to invite you to consider advertising in the POLY Newsletter. Our non-profit organization distributes the POLY Newsletter to approximately 4,000 of it's polymer scientist members. The POLY NEWSLETTER is distributed in June and October each year and describes the Division activities and announces polymer-related scientific activities worldwide. The POLY Newsletter provides an excellent opportunity for advertising.

Complete information is available by going to: https://www.polyacs.net/newsletter.

INTERESTED IN A POLY/PMSE STUDENT CHAPTER?

Student Chapters are student run organizations affiliated with the POLY and PMSE division, that provide networking and development opportunities to students and post-doctoral associates in the polymer field.

Learn more at: https://polyacs.org/student-chapters/

MACRO - POLY'S NEW EDUCATION INITIATIVE

Macromolecular Alliance of Community, Resources, and Outreach (MACRO) is a newly created committee that is being supported by both the POLY and PMSE divisions of ACS. Our goal is grow and develop the polymer community by supporting three distinct initiatives, which are:1) curriculum; 2) professional development; 3) outreach.

Curriculum: create a depository of teaching materials for instructors to be able to acquire and utilize in their classrooms. Materials will range from undergraduate to graduate level lecture material as well as a range of laboratory experiments (both teacher and student guides). The aim is to create materials students of various academic standing (freshman, sophomore, junior, senior or graduate) and of various backgrounds so that polymer content can be incorporated into various aspects of a student's curriculum (i.e. polymer exposure in general chemistry, organic chemistry, physical chemistry, etc…). The hope is to create an interface where an instructor can request instructional content based upon student level, interest and background. MACRO's vision is to create a two-way interface where individuals can submit and withdraw polymer knowledge.

Professional Development: create an open forum for individuals within the Polymer community to engage with each other in a range of topics including but not limited to:

- Undergraduate Level: Resources for connecting undergraduate students to research opportunities. A guide on applications to graduate studies.
- Graduate / Postdoc Level: Information on graduate fellowship opportunities. A guide for graduate students to apply for postdoctoral fellowships, and for current postdoctoral fellows to apply for faculty positions of particular interest will be guidance for potential faculty members to consider R1 vs PUI positions.
- Faculty Level: Materials to guide new faculty on mentoring and training postdoctoral fellows and graduate students and setting up a new group in polymer science. Materials, resources and content to help junior faculty navigate the proposal process.

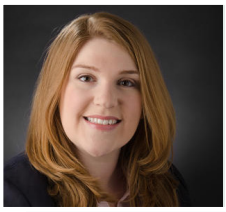
Outreach: create a depository of outreach materials for individuals to be able to spread their passion and knowledge of science to the general population. The hope is to create an interface where individuals can request instructional content based upon audience composition and support resources. Additionally, we plan to create an opportunity for individuals to share what they are currently utilizing in their communities and receive appropriate recognition for their contributions to the Polymer community. MACRO's vision is to create a two-way interface where individuals can submit new polymer knowledge and also access and gain new resources in polymer science.

Visit the MACRO website for more information at https://macro-poly-pmse.org/.

If you are interested in contributing to any of these initiatives, please feel free to contact Phil (pcostanz@calpoly.edu) or Dominik (d.konkolewicz@miamioh.edu).

Pictured left to right: Philip Costanzo and Dominik Konkolewicz.

POLY/ACS NATIONAL MEETING ACTIVITY



260th Virtual ACS National Meeting (Fall)
August 17-20, 2020

ACS Theme: Chemistry from Bench to Market
Lead Program Chair: Hayley Brown (hbrown1@dow.com)

- ACS Macro Letters/Biomacromolecules/Macromolecules Young Investigator Award
- Additive Manufacturing: From Molecules to Marketplace
- Circular Economy of Polymers
- DSM Graduate Student Award
- Entrepreneurial Polymer Chemistry: From the Lab to Start-Up
- General Topics: New Synthesis and Characterization of Polymers
- Industrial Innovations in Polymer Science
- Industrial Polymer Scientist Award in honor of James Wang
- Mark Scholars Award in honor of Luis Campos
- Mark Scholars Senior Award in honor of Karen Winey
- Mark Scholars Young Award in honor of Frank Leibfarth
- Nuclear Magnetic Resonance of Materials
- Silicon Based Hybrid Materials for Today, Tomorrow and the Future

As the meeting changes to a virtual venue, there will be symposium changes. An updated program will be posted to the POLY website and media in July once details are finalized.

POLY welcomes the newest addition to the POLY programming committee - Sara Orski, NIST (POLY Program Chair).

261st ACS National Meeting (Spring)
March 21-25, 2021

In light of the Spring 2020 cancellation, the majority of the planned POLY symposia for that meeting will instead be held during the Spring 2021 Meeting.

ACS Theme: Macromolecular Chemistry: The Second Century
Lead Program Chair: Rob Mathers (rtm11@psu.edu)

- 50 Years of Polymer Science & Engineering at Southern Miss
- ACS NASA - Polymer Advanced Materials & System for Humanity Next Giant Leap
- Carl S. Marvel Creative Polymer Chemistry Award
- Celebrating Inclusivity in Polymer & Materials Science
- Celebrating Underrepresented Groups in Polymer Science
- Engineering Functionality into Bio(mimetic) Polymers
- Excellence in Graduate Polymer Research
- From Staudinger Macromolecules to the Genome of Macromolecules
- Frontiers in Conjugated Polymer Design & Synthesis
- General Topics: New Synthesis & Characterization of Polymers
- Industrial Developments in Polyolefin Macromolecular Design
- Industrial Innovations in Polymer Science
- Macromolecular Science at the Dawn of its Second Century
- Paul Flory Education Award in honor of Kris Matyjaszewski
- Polymer Colloids Synthesis Analysis Modeling & Application
- Polymer Symposium Honoring the Winner of the Frederic Stanley Kipping Award
- Road to Packaging Sustainability
- Structure to Function in Supramolecular
- The Joseph C. Salamone Symposium – Revolutionary Innovation
- Undergraduate Research in Polymer Science

NOTE ON SUMISSIONS:

In light of the shift in programming from Spring 2020 to Spring 2021, POLY is not currently soliciting new symposia proposals for the 2021 spring meeting. However, the programming team happily welcomes proposals for later meetings starting with Atlanta Fall 2021.

Please visit https://polyacs.org/symposium-proposal-landing-page/ for more details or contact the POLY Programming Team.

POLY VIRTUAL MEETING OPTIONS:

POLY is currently developing virtual options to support members who are unable to attend in-person meetings. Updates will be provided soon!

- **ACS National Meeting: www.acs.org/content/acs/en/meetings/national-meeting.html**
- **POLY Program Info: https://polyacs.org/poly-at-national-acs-meetings/**
- **POLY Abstracts Archieve: https://polyacs.org/poly-at-previous-national-acs-meetings/**
- **ACS Symposia Submission: https://polyacs.org/symposium-proposal-online-form/**

NATIONAL MEETINGS CHALLENGES AND CHANGES

As you might have heard, ACS is planning an experiment for the Fall 2021 National Meeting, eliminating all Thursday programming. ACS will evaluate the success of this experiment and may decide that future National Meetings will end on Wednesday. The loss of one day of programming will significantly reduce the number of oral slots and will require Technical Divisions to maximize the use of both oral and poster presentations.

POLY has a long and rich tradition of developing high quality, ground-breaking, and impactful programming at National Meetings and is committed to continuing this tradition. The POLY Executive Committee has discussed the potential impact of this change on programming. We also discussed proactive approaches for addressing these challenges to ensure that POLY National Meeting Programming meets the needs of our members, by providing meaningful opportunities to enhance their careers. This includes presenting their research and learning the latest developments in traditional and emerging areas of polymer chemistry. Based upon these discussions, the following changes are recommended for the Fall 2021 ACS National Meeting:

- **All oral sessions for symposia will be limited to a maximum of 2 full days.** The number of rooms that POLY has assigned to us will be reduced putting further constraints on oral programming. In order to maintain a diverse portfolio of symposia that meet the needs of meeting participants, we will need to limit the duration of each symposium to no more than two full days. The number of poster presentations will not be limited and symposium organizers are encouraged to develop a robust program that maximizes their use.
- **Speakers are encouraged to accept no more than two invitations from POLY organized symposia at any given National Meeting.** In order to maximize the opportunities for oral presentations as well as the diversity of our presenters, we are asking all POLY speakers to limit their participation in oral sessions to no more than two presentations.
- **A POLY Task Force has been established to identify innovative approaches for poster sessions.** Currently poster participation in POLY symposia is well below that of other large ACS Technical Divisions. It is clear that this participation will need to be increased to provide our members with the most opportunities to present their research. Many meeting participants feel that a poster presentation is less desirable and prestigious than an oral presentation and addressing this attitude will require some novel and creative approaches. This Task Force will focus on new ways to make posters a more attractive medium for meeting participants to present their work and will identify approaches to increase attendance at POLY poster sessions. Your suggestions are welcome and can be sent to the POLY Business Office at kathyl@vt.edu.

The changes that are outlined above may not be popular with all National Meeting presenters, but the POLY Executive Committee feels that they are necessary to address the challenges we will face with future meetings. Thank you in advance for your cooperation and understanding as we continue to work through this. As always, I welcome your thoughts and suggestions. Please feel free to send me an e-mail at michael-meador@sbcglobal.net.

Submitted By:
Michael Meador
POLY Chair

EMAIL DISCUSSION LIST

The discussion list is a great way to inform others and receive information about upcoming symposia, workshops, job positions, share questions and answers, and more. The list is available to all POLY members who choose to sign-up.

To sign up, sign off, or change e-mail address . . .
Go to: https://polyacs.org/poly-electronic-discussion-list/

Complete and submit the web site form.

Members can send e-mails to:
POLY-L@LISTSERV.OKSTATE.EDU

SIGN UP TODAY!

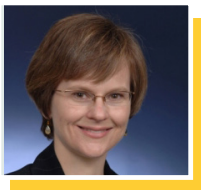
GRC/GRS on Complex Active and Adaptive Material Systems

Date: January 30 - February 5, 2021
Location: Ventura Beach Marriott, Ventura, CA, USA

Purpose: to bring together a cross-disciplinary community of researchers from academia and industry, with the common aim of exploiting the complexity of non-equilibrium processes and architectured material systems to forge a new generation of compliant machines that can adapt to their environment.

GRC: https://www.grc.org/complex-active-and-adaptive-material-systems-conference/2021/

GRS: https://www.grc.org/complex-active-and-adaptive-material-systems-grs-conference/2021/




POLY COUNCILORS' REPORT

Despite the cancellation of the ACS Spring National Meeting, your councilors are working hard for you. The following are some things happening at ACS you might be interested in.

The Council Policy Committee (CPC) held a Special Meeting of the Council on April 20, 2020 for voting Councilors to hear from and question the four nominees for ACS President-Elect, 2021. Following the meeting, Councilors will be asked to select two candidates for this office by Council ballot. Information on the nominees for ACS President-Elect, 2021 can be found in the Philadelphia Council agenda, and on the Elections page of www.acs.org.

CPC acting Ad Interim for Council passed resolutions in memory of Past President Mary L. Good, Past Secretary Halley A. Merrell, Jr. and other deceased Councilors. CPC voted on the recommendation of the Committee on Budget and Finance (B&F) to set the member dues for 2021 at the 2020 rate of $175. The Board of Directors (BOD) previously committed to ensure that this pause in the dues escalator will not have a negative impact on the overall amount in the dues pool, from which allocations to local sections and divisions are made. CPC also voted on the recommendation of the Committee on Membership Affairs (MAC) to approve the Petition on Benefits and Dues. This Petition makes it possible for MAC to offer versions of ACS membership that are less expensive, more appealing to members who are price sensitive, and with enhanced products that are more relevant and targeted.

PUBS Report (Greg Tew): Dr. James Milne was named President of ACS Publications following the retirement of Brian Crawford. Jim joined ACS in 2016 as senior vice president of the Journals Publishing Group and will oversee the Society's portfolio of over 60 journals, e-books, Chemical & Engineering News, and other services. 2020 will see two new journals, ACS ES&T Water and ACS ES&T Engineering, related to the prestigious Environmental Science & Technology family of environmental journals.

Meetings and Expositions, M&E (Kathryn Uhrich, Mary Ann Meador): M&E met virtually on March 25, 2020 to review the impact of cancelling the Spring 2020 meeting and planning for the Fall 2020 meeting. Many events planned for Spring 2020 are being shifted to Spring 2021 – such as the Macromolecular Chemistry celebration. ACS is closely monitoring the impacts of COVID-19 pandemic on in-person events, governmental actions and health authority directives. The ACS Fall 2020 National Meeting & Expo will take place virtually. Various scenarios are under consideration to allow for a safe and meaningful exchange of scientific research and information.

Divisional Activities, DAC (Kate Beers): The DAC met virtually on March 25, 2020. With the cancellation of the Philadelphia meeting, there was much discussion regarding the 2021 dues allocation, which is typically dependent on division representation at the prior year National Meetings. A list of options including carrying forward the prior year's allocation percentages or averaging over the prior 2-3 years were discussed. A final determination will be made later this year.

Report Submitted By:
Kathryn Beers, Mary Ann Meador, Greg Tew, and Kathryn Uhrich

Future ACS Meetings

Chemistry from Bench to Market
Virtual Meeting
August 17 - 20, 2020

Macromolecular Chemistry:
The Second Century
March 21 - 25, 2021
San Antonio, TX

Resilience of Chemistry
August 22 - 26, 2021
Atlanta, GA

Bonding Through Chemistry
March 20 - 24, 2022
San Diego, CA

Sustainability in a
Changing World
August 21 - 25, 2022
Chicago, IL

Crossroads of Chemistry
March 26 - 30, 2023
Indianapolis, IN

Harnessing the Power of Data
August 13 - 17, 2023
San Francisco, CA

Many Flavors of Chemistry
March 17 - 21, 2024
New Orleans, LA

Elevating Chemistry
August 18 - 21, 2024
Denver, CO

http://bit.ly/futureacsmeetings

MEMBER-AT-LARGE REPORT

POLY hopes that all of our members are staying safe and healthy during these uncertain times. POLY understands that several of our members may be experiencing travel restrictions and other cut-backs in their professional positions due to the COVID-19 crisis. In light of this and the cancellation of the national ACS meeting in Philly, we are doing our best to find ways to keep our members active virtually and continue to provide value to POLY membership. POLY is exploring new webinar platforms to expand our educational and professional development capabilities as well as a strategy to offer POLY workshops and other events virtually.

We encourage our members to take advantage of the other benefits we offer, especially those available to graduate students. Other benefits that our POLY members can access are:

- 1st Year Free Membership!
- Eligibility for awards (including Member of the Month!)
- Job opportunities shared through the POLY list serve
- Networking and professional development events at local/national ACS meetings and local POLY/PMSE chapters
- Industrial scientist support and networking through IAB (Industrial Advisory Board)
- Polymer science-related conferences and workshops advertised through the POLY list serve
- Online educational webinar and webshop series covering cutting-edge polymer research
- Opportunity to vote for the executive committee (annually)
- Recognition for membership (5th, 10th, 20th, and 30th anniversaries)
- Student awards, symposia, career panels at ACS meetings, and student chapters.
- An excellent support group for building strong networks in the polymer community!

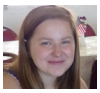
If you have other ideas of ways we can keep our POLY community active during the COVID-19 lockdowns please contact Kat Knauer at katrina@biocellection.com. We want to thank our members for their continued support for POLY and we encourage everyone to stay safe and exercise social distancing!

Report Submitted By:
Kat Knauer
Member-At-Large

THREE MINUTE PITCH COMPETITION

POLY was recently awarded the Innovation Project Grant (IPG) to conduct a "Three Minute Pitch Competition" for graduate students at the National Graduate Research Polymer Conference (NGRPC). The IPG proposal was led by POLY's Member-At-Large, Kat Knauer. The purpose of the "Three Minute Pitch Competition" is to encourage students to communicate their research in a clear and effective manner and inspire students to think about their thesis as an entrepreneurial effort. This will be the first Three Minute Pitch competition hosted by the ACS Division of Polymer Chemistry. While the POLY Division provides excellent symposia at national and regional meetings for graduate students to present their research we realized there was no platform in place for students to compete against each other on their communication skills. The funds from the IPG will go to supporting students to compete in a Three Minute Pitch competition at the NGRPC at Virginia Tech (recently rescheduled for Summer 2021). Each POLY student chapter will host their own local Three Minute Pitch competition at their respective universities. The winners will be selected by judges assigned by the local POLY student chapter. The selected winners of the local competition will be given a $625 travel award to attend the NGRPC and compete in a national POLY competition. The students will present in front of an audience of 100+ attendees and a panel of judges from industry, academia, and government. The student winner of the national competition will receive a grand prize of $1,500!





Contact POLY for Advertising Opportunities, Membership Benefits, & More

- Newsletter & E-news Advertising
- Membership Benefits
- POLY Workshops
- POLY Webinars
- ACS National Meetings
- POLY Sponsored Events

POLY Business Office
1075 Life Science Circle, M.C. 0917
ICTAS II, Virginia Tech
Blacksburg, VA 24061
540-231-3029, KATHYL@VT.EDU

ACS Division of Polymer Chemistry, Inc. - Executive Committee

CHAIR
MICHAEL MEADOR
NASA Glenn (Retired)
michael-meador@sbcglobal.net

CHAIR-ELECT
ANDREA KASKO
Univ. of California, Los Angeles
akasko@ucla.edu

VICE CHAIR
SEMRA COLAK ATAN
3M Company
scolak@mmm.edu

SECRETARY
ERIK BERDA
Univ. of New Hampshire
Erik.Berda@unh.edu

TREASURER
CHRISTINE COLTRAIN
Eastman Kodak Company
christine.coltrain@kodak.com

MEMBER-AT-LARGE
KATRINA KNAUER
BioCellection
katrina@biocellection.com

PAST CHAIR
SARAH MORGAN
Univ. of Southern Miss.
Sarah.Morgan@usm.edu

COUNCILORS
KATHRYN BEERS
NIST
kathryn.beers@nist.gov

COUNCILORS *(continued)*
MARY ANN MEADOR
NASA Glenn (Retired)
mabmeador@gmail.com

GREG TEW
Univ. of Mass., Amherst
tew@mail.pse.umass.edu

KATHRYN UHRICH
Univ. of California, Riverside
kathryn.uhrich@ucr.edu

ALTERNATE COUNCILORS
PHILIP COSTANZO (CAL POLY)
pcostanz@calpoly.edu

JOHAN FOSTER (Univ. of BC)
johan.foster@ubc.ca

EMILY PENTZER (TAMU)
emilypentzer@tamu.edu

LAURA STRATTON (Polymer Chemistry Inn.)
laura@polychemistry.com

ExComm & Past Chairs Dinner, Fall 2019