



PMSE



PolyEd Report for the Denver ACS Meeting, March, 2015

Submitted by

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The agenda for the **PolyEd meeting on Tuesday, March 24**, may be found on the PolyEd web site at "<http://www.polyed.org>". The meeting begins at 7:30 am in the "**Sheraton Denver Downtown, Plaza Court 2**". Please visit our web site for additional details about all PolyEd programs.

The **ACS Committee on Professional Training (CPT)** has finalized its revision of the ACS Guidelines for ACS-approved undergraduate chemistry departments. Regarding polymers/macromolecules, CPT has approved **"...the principles that govern macromolecular, supramolecular, mesoscale, and nanoscale systems must now be part of the curriculum for certified graduates. Furthermore, instruction must cover the preparation, characterization, and physical properties of at least two of the following: synthetic polymers, biological macromolecules, supramolecular aggregates, meso- and/or nanoscale materials."** They have suggested that departments will meet the requirement by incorporation into existing courses amounting, *in toto*, to the equivalent of a quarter of standard semester course or by offering a stand-alone course. In a letter to POLYED, CPT has indicated that they plan to develop a supplement "to advise chemistry programs on how to satisfy the new "large molecule" requirement" and that they "will invite POLYED to review and contribute to this document".

PolyEd has been petitioning CPT for many years for a requirement to include polymers in the undergraduate curriculum for ACS-certified departments. We thank the Executive Committees of POLY and PMSE for contacting CPT and helping us communicate this message. While it still remains to be seen how this requirement will be implemented, having a polymer requirement in the undergraduate chemistry curriculum is a benchmark in polymer education and has been long-sought by PolyEd. We thank all who have contacted CPT and we urge you to continue to do so as CPT puts this new requirement into effect.

A symposium, **Integrating Chemistry and Polymer Science Research Into The Classroom**, organized by Sarah Morgan is being held on **Monday at the Denver ACS meeting**. The symposium is sponsored jointly by POLY and ChemEd. Sarah also organized a very successful symposium, **Undergraduate Research in Polymer Science**, at the Dallas ACS meeting.

As mentioned above, the ACS Committee on Professional Training 2014 Guidelines encourage the integration of polymer concepts into all foundational chemistry courses. Claire Tessier and Warren Ford have organized a symposium for the Boston ACS Meeting entitled **"Polymer Concepts in Inorganic Chemistry Courses"**. This symposium cosponsored with CHED invites papers on polymers in inorganic chemistry courses ranging from appropriate sections of General Chemistry to intermediate and advanced classroom and laboratory courses. Abstracts may be submitted at <http://www.acs.org/content/acs/en/meetings/abstract-submissions/acsnm250.html> The deadline is March 30, 2015.

The **2015 Henkel Award for Outstanding Graduate Research in Polymer Chemistry will be presented to Dr. Jessica Kramer** at the ACS National Meeting in Boston August 16-20. Dr. Kramer completed the Ph.D. in Chemistry in 2013 at UCLA with Prof. Tim Deming. Her Ph.D. research on the preparation of functional glycosylated polypeptides with controlled placement of sugar groups via living polymerization of highly pure glycosylated alpha-amino acid-N-carboxyanhydride monomers. She is now a postdoctoral with Prof. Carolyn Bertozzi at the University of California - Berkeley. The award will be presented during a symposium in honor of Dr. Kramer in the Division of Polymer Chemistry. Since AkzoNobel unexpectedly canceled its support for this award in October, 2013, the award was jointly sponsored by PolyEd, POLY,

and PMSE in 2014. Henkel Corporation kindly agreed to sponsor the award for 2015. We thank Henkel, Mary Ann Meador, new Chair of the Selection Committee, and Warren Ford for all their efforts on behalf of this award.

The **2014 Eastman Chemical Student Award in Applied Polymer Science** was awarded to **Michael Larsen**. Michael was chosen from six presenters of papers in the Eastman Chemical Award Symposium as part of the PMSE program at the Fall 2014 National ACS Meeting. Michael is pursuing his doctorate in Chemical and Biological Engineering as a graduate student at University of Washington where his Ph.D. thesis advisor is Prof. Andrew J. Boydston. The title of his paper was “Successive Mechanochemical Activation and Small Molecule Release in an Elastomeric Material”. The other finalists who presented at the Award Symposium were Brian McVerry (UCLA), Jangu Chainika (Va. Tech), Jung Ki Hong (Va. Tech), Mingjiang Zhong (Carnegie Mellon Univ.), and Xianwen Mao (MIT). The Award, consisting of \$1600 and a plaque, will be presented to Michael Larsen at the Joint PMSE/POLY Awards Reception at the Spring 2014 ACS Meeting in Denver, CO.

The print version of an **ACS Symposium Series book (volume 1151)** entitled “**Introduction of Macromolecular Science/Polymeric Materials into the Foundational Course in Organic Chemistry**” was published in 2014. This book resulted from an all-day symposium on the integration of polymer topics in sophomore organic chemistry courses that was held at the Philadelphia ACS meeting in 2012. This was a collaboration with CELL, CHED, PMSE, POLY, ORGN, Rubber, and SOCED. The book also was published in electronic form in November, 2013. Information about PolyEd programs is featured in Chapter One of the book, especially PolyEd programs that are directed towards assisting faculty interested in incorporating polymer topics in college and university chemistry courses. PolyEd thanks Bob Howell for his excellent job organizing the symposium and editing this symposium series book. We also thank those who contributed chapters for the book. Similar to the above symposium on integrating polymer topics in organic chemistry courses, the **Physical Chemistry of Macromolecules symposium**, organized by Paul Russo, Daniel Savin, and Frank Blum, was offered at the Indianapolis ACS meeting. As mentioned above, Warren Ford and Claire Tessier are organizing a symposium with ChemEd on **Polymer Concepts in Inorganic Chemistry Courses** for the Boston Fall 2015 meeting.

An update to the **ACS Exam in Polymer Chemistry** is in progress. Rick Laine is heading up this PolyEd effort and Rick has recently provided the first set of possible questions to a review committee. PolyEd is working with Rick and Tom Holme, director of the ACS Exams Institute, on this exam. Two exams are envisioned, one for upper level undergraduates and another for graduate students in polymer science. Anyone interested in assisting with this update of the ACS exam in Polymer Chemistry is urged to contact Rick or the PolyEd Center. Rick also is **very interested in receiving additional questions from POLY and PMSE members for possible inclusion on the exams**. He is particularly interested in questions at a basic level on liquid crystalline materials, conducting and semiconducting polymers, hybrid materials including silicones, rigid rod polymers, spectra, thin films, and 3-D structures, such as dendrimers.

PolyEd continues to recognize **outstanding research posters by undergraduate students at each of the national ACS meetings**. Anyone willing to assist with evaluation of the posters should contact Erik Berda, Bob Howell, or Sarah Morgan.

The PolyEd **Undergraduate Award for Achievement in Organic Chemistry** continues to recognize undergraduate students for their outstanding performance in sophomore Organic Chemistry courses. In 2014, more than 100 students at colleges and universities were recognized with the PolyEd award. Personalized certificates are sent to all awardees and congratulatory letters are sent to both the recipient and the faculty nominator. The award is administered by the PolyEd Center at the University of Wisconsin-Stevens Point.

PolyEd is successful because of the contributions of many. **We thank all who lead PolyEd's programs and especially POLY and PMSE for their support.** Any member of POLY and PMSE who would like to become involved in PolyEd should contact John Droske at the POLYED Center, University of Wisconsin-Stevens Point, jdroske@uwsp.edu or Charles Carraher, Jr., Florida-Atlantic University, carraher@fau.edu.

