

Program in Polymer Science and Technology

The interdepartmental [Program in Polymer Science and Technology](#) (PPST), founded in 1986, offers graduate education in the interdisciplinary field of polymer science and engineering. Its goals are to provide educational opportunities and to foster a spirit of community and collaboration among the large and widespread group of students, faculty, and visitors involved in polymer-related activities at MIT. PPST provides a core graduate polymer curriculum; written and oral doctoral qualifying examinations; seminars presented by prominent visitors from industry, government agencies, and academia; and special student-driven events. The program is administered voluntarily by faculty from the Departments of Materials Science and Engineering, Chemical Engineering, Mechanical Engineering, Biological Engineering, and Chemistry.

Increasing vitality was evident during AY2013. The PPST Graduate Student Association again successfully solicited Cabot Corporation and added a new sponsor, Cambridge Polymer Group, to help fund the third MIT Polymer Day, held on March 6, 2013. This event began with a polymer poster session that drew 43 contestants and more than 150 attendees to Morss Hall, and concluded with three seminars presented by MIT polymer researchers Charlotte Stewart-Sloan, Siddarth Srinivasan, and Dr. Huaxing Zhou. The total student roster—with home departments in Biological Engineering, Mechanical Engineering, Materials Science and Engineering, and Chemical Engineering—decreased (primarily due to a high number of graduations) from 19 to 17 students. In fall 2013, PPST will welcome two new students, both from the department of Chemistry, a historically under-represented PPST-affiliate. The PPST faculty roster, holding steady at 19 members, continues to show sustained broad-based support from all affiliated departments.

PPST faculty members have been recognized for several significant honors this year. Alfredo Alexander-Katz received the Early Career Award from the Office of Science of the US Department of Energy for his work, “Biomimetic Templated Self-assembly of Light Harvesting Nanostructures.” Robert Cohen was elected a fellow of the Polymer Division of the American Chemical Society. Professor Cohen also was selected for the MIT Balliol Exchange and was in residence for the first six months of 2013 at Balliol College, in Oxford, while on sabbatical leave from the Institute. Patrick Doyle received MIT Chemical Engineering’s C. Michael Mohr Outstanding Faculty Award for excellence in undergraduate teaching.

Karen Gleason was elected a fellow of the American Institute of Chemical Engineers (AIChE). Paula Hammond was elected to the 2013 Class of the American Academy of Arts and Sciences and was the recipient of the 2013 AIChE Charles M. A. Stine Award in recognition of her outstanding contributions to the field of materials science and engineering. Darrell Irvine was elected a fellow of the Biomedical Engineering Society.

Bradley Olsen received a National Science Foundation CAREER Award and was named Paul M. Cook career development assistant professor. Katharina Ribbeck received the European Molecular Biology Laboratory's 2013 John Kendrew Young Investigator Award for her in-depth exploration of the role of mucus in the human immune system. Timothy Swager received the American Chemical Society's 2013 Award for Creative Invention.

This year's weekly PPST seminar series, presented by leading polymer faculty from a number of universities from the US and overseas, was well attended and attracted an average of 50 to 80 students, faculty, and visitors per seminar. Professor Alexander-Katz, from the Department of Materials Science and Engineering, and Professor Olsen, from the Department of Chemical Engineering, administer the PPST seminars.

In AY2013, PPST continued to foster academic vitality, attract vibrant participation in community-building events and seminars, and experience fundraising success. Building on last year's growth, PPST anticipates an exciting year ahead.

Darrell J. Irvine

Director

Professor of Materials Science and Engineering and Biological Engineering

Investigator, Howard Hughes Medical Institute