The Macromolecules and Interfaces Institute (MII) is a university-wide interdisciplinary organization of faculty and students committed to continuing the growth and advancing the stature of the existing, highly-ranked macromolecular science and engineering program at Virginia Tech. We strive to foster a dynamic environment that enthusiastically promotes the recruitment and education of high-quality students, actively initiates and conducts timely research at both the basic and applied levels, and vigorously pursues continuing education and economic growth through outreach activities with industry and government agencies.

Achievements for FY 2012

- MII was the host organization for the World Polymer Congress of the International Union of Pure and Applied Chemistry June 24-29, 2012. Approximately 1500 polymer scientists and engineers (60% international) attended what is believed to be the largest conference of its kind ever held on the Virginia Tech campus. Twelve distinguished plenary lecturers, including one Nobel Laureate, highlighted the conference. Over 450 oral presentations were delivered in 13 simultaneous sessions along with approximately 500 posters in three sessions. The conference was supported by contributions from 30 companies and publishers, several major government agencies, and generous support from various organizations at Virginia Tech. An outreach short course with 50 attendees, “Principles in Polymer Chemistry,” was presented immediately before the conference. The WPC had an estimated $2 million economic impact on the Blacksburg area.

- MII conducted a successful outreach short course in Adhesion Science (24 attendees) in May 2012.

- MII faculty, led by Judy Riffle, successfully conducted its 24th consecutive NSF Research Experience for Undergraduate Students program. The focus of the 2012 summer session was on “Polymeric Drug Delivery Vehicles” and 16 students from 12 universities participated.

- MII faculty won a large NSF MRI grant (proposal led by James McGrath and Judy Riffle) for new size exclusion and field flow fractionation polymer characterization instrumentation.

- MII’s MACR Ph.D. program received IGEP (Interdisciplinary Graduate Education Program) status from the Graduate School.

- MII’s MACR Ph.D. program accepted nine new students in the fall of 2011 and eight Ph.D. students graduated in AY 2011-2012.

- MII and Fralin Life Sciences Institute hosted the second Visiting Scholar, Claus Michael Lehr of the Helmholtz Institute for Pharmaceutical Research Saarland (HIPS), Department of Drug Delivery, Saarland University, Germany.

GOALS AND OBJECTIVES
for FY 2013

Plan a 2013 Technical Conference and Review

Host David Tirrell from Caltech as the third MII/Fralin Life Sciences Institute Visiting Scholar in November 2012

Organize MII/Chevron-Phillips Seminar Series with leading visiting polymer scientists and engineers

Catalyze interdisciplinary proposals from MII faculty members

Continue focus on sustaining and growing polymer science and engineering effort with the need to hire new faculty members

Revise MII five-year strategic plan