

POLYMER SCIENCE & ENGINEERING

POINTS OF PRIDE

■ PSE is one of the largest academic polymer centers in the world and has graduated more PhDs than any other U.S. polymer program.

■ In recent U.S. National Research Council rankings, PSE was top-rated in polymers, and evaluated in the broader Materials Science and Engineering discipline; PSE placed as high as 3rd for research.

■ 200+ PSE students, post-docs, staff members, and faculty members work on polymers across the boundaries of traditional disciplines.

■ PSE students and faculty members have received all the major national

and international polymer awards (see below).

■ PSE research support exceeds \$15 million per year.

■ Projects are currently supported by DOE, FAA, NSF, NIH, EPA, DOD, and other federal agencies as well as 40+ companies.

■ 15-20 PhDs are awarded each year (well over 600 since the programs inception in 1966).

■ The cost of PSE instrumentation exceeds \$40 million, with many sophisticated instruments housed in staff-run shared instrument facilities.

EDUCATION

■ PhD degree program covers all aspects of the polymer field.

■ Cross-disciplinary research is integral to PSE, and on-campus collaborations extend across several departments.

■ The PSE core curriculum, consisting of eight courses, trains all first-year graduate students in polymer synthesis, physics, material properties, and engineering, with the advanced laboratory courses ensuring hands-on abilities in each area.

■ Invited world-class scientists present each week in the PSE seminar series.

■ Recent student awards include: NSF, DoD, NDSEG, DoE SCGF, NEAGEP, Society of Plastics Engineering, National GEM Consortium, Samsung, Covestro, Arkema and Isenberg Fellowships as well as Gates Millennium Scholars Awards. Over the same period, students received best paper/poster awards at numerous professional meetings.

PROFESSIONAL HIGHLIGHTS

■ Faculty members and students are heavily engaged in professional organizations such as the American Chemical Society, the American Physical Society, the Materials Research Society, the Adhesion Society, the American Institute of Chemical Engineers, and the Society of Plastics Engineers. Students and faculty members have chaired or co-chaired recent polymer Gordon Research Conferences along with other specialized polymer conferences.

■ PSE faculty members are editors for the following high impact journals: Macromolecules, ACS Macro Letters, Journal of Polymer Composites, Langmuir, Polymer Engineering and Science, and Journal of Chemical Physics. Several faculty members sit on editorial advisory boards of these as well as other journals.

■ Faculty Awards are numerous and distinguished, including memberships in the National Academies of Science and Engineering along with Presidential Early Career Awards in Science and Engineering (3 in total), numerous Early Career Awards from federal agencies, Percy Julien award of NOBCCHE, Sloan Research and Humboldt fellowships, Dillon Medals and High Physics Prizes of the APS, and the ACS Awards in Creative Polymer Chemistry and Applied Polymer Science.

BY THE NUMBERS FY17

Tenure-track faculty	20
Technical Staff	9
Graduate Students	123
Postdoctoral Scholars	24

RESEARCH AREAS

Synthetic Polymer Chemistry
Soft Materials Physics/Mechanics
Nanostructured Materials
Bio-Inspired Materials
Energy and Green Science
High Performance Composites
Electronic Polymers/Devices
Responsive Polymers

Central Research Facilities

Electronic Materials Characterization
Electron Microscopy
Light Scattering
Liquid Chromatography
Nanotechnology Cleanroom
Nuclear Magnetic Resonance
Photovoltaics
Rheology and Mechanical Testing
Roll-to-Roll Coating
Scanning Probe Microscopy
Surface Analysis
Thermal Analysis
X-ray Diffraction and Scattering

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