



ABOUT THE PROGRAM

Chemistry strives to understand natural phenomena and connects with physics and mathematics, earth and environmental sciences, and biology and medicine. The chemistry department at Brandeis has a tradition of innovation and excellence in teaching and research, offering students a world-class education in an intimate setting where faculty and students work closely. Chemistry majors develop extensive, practical experience through lab courses using both macro- and microscale techniques. We strongly encourage our majors to participate in independent research. Our B.A. and B.S. graduates are welcomed at the highest-ranking graduate and professional schools, as well as in industry.

What makes the program distinctive?

Our majors find a place to carry out research as soon as they are ready. Our faculty has developed innovative programs, including the peer-oriented Structured Study Group and laboratory experiences that

combine subject matter from wide-ranging disciplines. Students may enroll as B.A. or B.S. majors in chemistry or in our new chemical biology program. A four-year B.A./M.A. program is also a popular choice.

FAST FACTS

Current number of majors and minors: 40

Number of faculty: 16

Can you minor in this program? Yes

Emphasis within the major:

Our department encompasses broad and diverse interests, including synthesis, characterization, and applications ranging from very small molecular targets to very large macromolecular structures.

Popular second majors:

biochemistry, biology, physics

Website:

www.chem.brandeis.edu

ACADEMICS AND RESEARCH

Student research presentations

Students have attended American Chemical Society National Meetings and the MIT-Bruker X-ray Diffraction Symposium to present their research. Shai Posner '10, Aaron Gell '10, Greg Day '10, Dan Graham '10 and Scott Forman '09 have presented posters, while Benjy Cooper '11 gave an oral presentation.

Course offerings

The general chemistry lab course introduces students to more advanced quantitative and qualitative analytical methods, including gas chromatography, mass spectrometry, and infrared and atomic absorption spectroscopy. The introductory organic lab course involves research projects in areas of Huntington's Disease (synthesis of inducers/inhibitors of protein aggregation) and selective metalloprotease inhibitor design.

AWARDS AND RECOGNITION

Distinguished faculty

Jeffrey Agar was honored as the recipient of the 11th annual Alberta Gotthardt and Henry Strage Award for Aspiring Young Science Faculty. **Christine M. Thomas** received a \$750,000 award from the Department of Energy's Early Career Research Program for her work relating to the production of clean fuels. **Isaac Krauss** was awarded a National Institutes of Health grant of \$1.5 million for his research toward the development of an AIDS vaccine. **Jason Pontrello** is managing Department of Education grants to develop collaborative projects between introductory science courses.

Thomas received a \$750,000 award from the Department of Energy's Early Career Research Program for her work relating to the production of clean fuels. **Isaac Krauss** was awarded a National Institutes of Health grant of \$1.5 million for his research toward the development of an AIDS vaccine. **Jason Pontrello** is managing Department of Education grants to develop collaborative projects between introductory science courses.

Student distinctions

Aaron Gell '10 was awarded a prestigious Alan Davison Fellowship at MIT for the undergraduate research he carried out at Brandeis. Laura Gerber '07 received a Fulbright Fellowship to perform research in organometallic chemistry at the Universitetet i Bergen in Norway. Our undergraduate students have co-authored publications in the journals *Inorganic Chemistry*, *Organometallics*, *Journal of the American Chemical Society*, *Organic Letters*, *Journal of Medicinal Chemistry*, *Chemistry and Biology*, *Physical Review* and *Chemical Communications*.

BEYOND THE CLASSROOM

Student-run clubs

The Brandeis University Student Affiliate Chapter of the American Chemical Society enhances students' experience with chemistry outside the classroom. It also provides opportunities for students to bring their knowledge and enthusiasm about chemistry into the local community through outreach activities at local K-12 science programs.

Hands-on experience

Anna Volftsun '06 studied abroad at the Australian National University in Canberra. Adam Tornheim '06 carried out an internship at ChemMotif during his senior year, studying the effectiveness of test strips for the detection of contaminants in drinking water. Adam is now a graduate student in materials science at the University of California, Berkeley.

AFTER BRANDEIS

Diverse career fields

Recent graduates are pursuing graduate studies in fields such as chemistry, law and medicine; attending Ph.D. programs in geology, earth science and environmental science; and filling lab positions in educational institutions and industry settings, including the Broad Institute, Johns Hopkins Hospital, Sloan-Kettering Memorial Cancer Center, Ischemix and ChemMotif.

Real jobs

Recent chemistry graduates and their current positions include Steven P. Breazzano '07, National Science Foundation predoctoral fellow, Scripps Institute of Technology; Evan Guggenheim '03, scientist II, Intelligent Biosystems Inc.; Sandra Katz '95, scientific adviser/patent agent, Panitch Schwarze Belisario & Nadel LLP; Craig Parish '88, research fellow, Merck and Company; and Marcos Dantus '85, chemistry professor, Michigan State University.

Notable alumni

Paul Anastas is the assistant administrator for the Environmental Protection Agency's Office of Research and Development and is the science adviser to the EPA. Known widely as the "father of green chemistry" for his groundbreaking research on minimally toxic, environmentally friendly chemicals, Anastas was a Ph.D. student at Brandeis with an emphasis on organic synthesis.

"Shortly after declaring my chem major, I asked to join a professor's lab, started doing my very own research, received a fellowship to fund that research, co-authored a journal article and gave a presentation at a nationwide conference. The good news is that I've been able to network with tons of professionals as I begin applying to grad schools. The bad news is that whenever I see everyday objects, I think about their geometries as they relate to valence shell electron pair repulsion theory."

Benjy Cooper '11



Photo by Ken Schles

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