

DEPARTMENT OF CHEMISTRY

Chemistry is the science that studies matter, the stuff of which all things are made. Chemists study the composition, structure, properties, and reactions of matter on the molecular scale and larger. Chemists also discover and synthesize entirely new materials. Modern chemistry touches many other fields of science, engineering, and medicine. Chemistry will continue to provide critical solutions to intellectually exciting and societally important problems.



Research Highlights

The Department is the home of two research centers: the UW Molecular Engineering Materials Center (MEM-C) and the South Asia International Center of Excellence for Malaria Research (South Asia ICEMR).

Chemistry is also a key department in several campus initiatives which support fellowships, travel awards, unique research facilities, and broader educational and professional opportunities for Chemistry students, faculty, and postdoctoral research associates, such as the UW Clean Energy Institute (CEI), the UW Molecular Engineering & Sciences Institute (MoES), and the joint UW-PNNL Northwest Institute for Materials Physics, Chemistry and Technology (NW IMPACT).

Faculty research highlights include:

- design of the world's most sensitive calorimeter for measuring the strength of chemical bonding on surfaces, then applied to clarify numerous surface chemical reactions of importance in catalysis and microelectronics fabrication.
- development of a mass spectrometry technique for newborn screening of lysosomal storage diseases, which is being used in newborn screening labs worldwide.
- a new fundamental understanding of metal-mediated oxidation reactions, processes that play important roles from biological chemistry to large-scale industrial production.

Education

The Department of Chemistry runs the largest chemistry and biochemistry undergraduate degree program in the nation. The Department also offers a chemistry minor, and master's and Ph.D. degrees.

The Department serves many non-majors, with more than 3,000 undergraduates taking at least one introductory chemistry course annually. It has the largest undergraduate instructional laboratory program at the UW.

A large fraction of our undergraduate majors enrich their educational experience through participation in undergraduate research with our faculty.

STUDENTS (Autumn 2017)

767	Undergraduate majors
240	Graduate students
55	Postdoctoral research associates

DEGREES AWARDED (Sept. 2016-August 2017)

420	Bachelor's degrees
34	PhD degrees

MAJOR STUDENT AWARDS (since 2010)

A&S Dean's Medal in the Sciences
 A&S Dean's Medal in the Humanities
 A&S Dean's Medal in the Arts
 A&S Graduate Medal in the Natural Sciences
 A&S Timeless Award
 Astronaut Scholarship Foundation Scholarships
 Bonderman Travel Fellowship
 Goldwater Scholarships
 Husky 100
 NSF Graduate Research Fellowships
 Pfizer Academic-Industrial Relations Diversity in Chemistry Research Fellowship
 UNCF-Merck Fellowships
 UW Junior Medal
 UW President's Medals
 UW Sophomore Medal

Faculty

The Department of Chemistry has 40 faculty who have received a large number of awards from a wide variety of organizations. Faculty honors include:

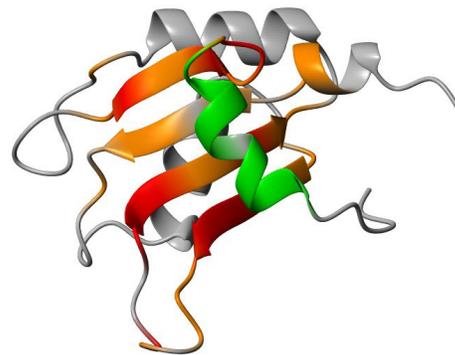
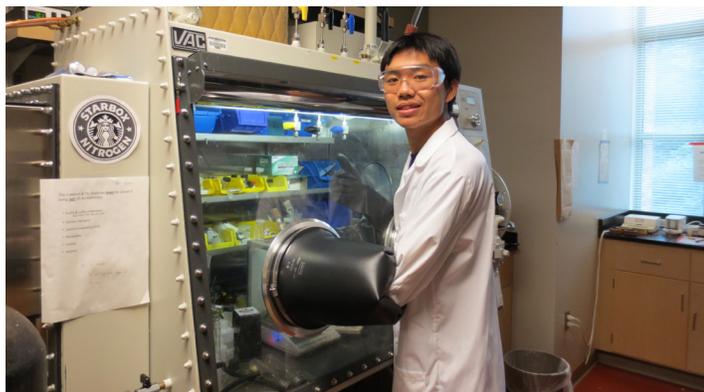
AAAS Fellows	NSF CAREER Awards
American Academy of Arts & Sciences	NSF Special Creativity Awards
ACS National Awards	Packard Fellowships
ACS Fellows	Pauling Medal
Beckman Young Investigator Award	PECASE Awards
Cottrell Scholars awards	Searle Scholar
Dreyfus Teacher-Scholar Awards	Sloan Fellowships
Guggenheim Fellowships	UW Distinguished Teaching Awards
Kavli Microbiome Award	UW Faculty Lecture
Keck Distinguished Young Scholar	UW Innovation Award
National Academy of Sciences	UW Presidential Entrepreneurial Fellow
National Medal of Science	Washington State Academy of Sciences

Supporting Chemistry at the UW

A student wishing to study and undertake cutting-edge research in chemistry in the Pacific Northwest has but a small number of options. UW Chemistry is the premier choice. Fortunately we are a public institution that charges students a relatively modest tuition. Providing an education in chemistry to these students is extremely expensive. We are increasingly reliant upon private support to maintain our high-quality educational and research programs. Please contact us if you are interested in making a contribution in support of our programs.

Annual Fund gifts to our "Friends of Chemistry" account are used to meet a wide variety of needs for which state-derived funding is unavailable. Examples include support for our undergraduate and graduate student organizations; awards to students, researchers, staff, and faculty; and department-wide events such as our annual graduation ceremony.

Endowed funds provide partial support for virtually all of the department's activities. These include undergraduate and graduate scholarships and awards, and faculty support that helps us retain talented faculty being sought by other universities. While we invest the vast majority of endowment-derived funds in our students and faculty, the relative urgency of the need in these areas shifts over time. For this reason, the most beneficial endowments are those that can be spent at the discretion of the Chair of the Department to support any of these needs.



AREAS OF RESEARCH INCLUDE:

- Analytical chemistry
- Bioanalytical chemistry
- Bioinorganic chemistry
- Bioorganic chemistry
- Biophysical chemistry
- Catalysis
- Chemical biology
- Clean energy
- Computational chemistry
- Electronic spectroscopy
- Inorganic chemistry
- Laser spectroscopy
- Mass spectrometry
- Materials chemistry
- Nanotechnology
- NMR spectroscopy
- Opto-electronics
- Organic chemistry
- Organic materials
- Organic synthesis
- Organometallic chemistry
- Photonics
- Physical chemistry
- Polymers
- Surface science
- Theoretical chemistry

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