The University of California, Berkeley Center for Green Chemistry is building a novel academic program to advance green chemistry through interdisciplinary education, research, and service. The Center consists of faculty, researchers, and students associated with the:

College of Chemistry
School of Public Health
College of Engineering
College of Natural Resources
Haas School of Business

Center Leadership

Director:
Prof. John Arnold
College of Chemistry

Executive Director:
Dr. Martin Mulvihill
College of Chemistry & School of Public Health

Associate Directors:

**Integrative Sciences**
Dr. Michael Wilson
School of Public Health

**Business & Economics**
Prof. Chris Rosen
Haas School of Business

**New Chemistries**
Prof. Robert Bergman
College of Chemistry

**Health & Environment**
Dr. Megan Schwarzman
School of Public Health

**Policy & Law**
Prof. Alastair Iles
College of Natural Resources

For more information visit: [bcgc.berkeley.edu](http://bcgc.berkeley.edu)
ABOUT GREEN CHEMISTRY

The Imperative of Sustainability

Over the last century, industrial chemicals have become ubiquitous in materials, products, and manufacturing processes used throughout society. In 2006, for example, more than 34 million metric tons of chemical substances were produced in, or imported into, the United States every day. While the widespread use of industrial chemicals has contributed greatly to economic growth and improvements in life expectancy and living conditions, it has also produced an array of health and environmental problems that are affecting societal sustainability. Over the next 25 years, global chemical production is projected to double, rapidly outpacing the rate of population growth. These challenges require us to reorient our approach to chemical design, production and use. The promise of green chemistry can be realized through a deep transformation in the chemical sciences and in the public policies and business practices that enable its adoption.

Green Chemistry

Green Chemistry is the science of sustainability focused on the design, production, use, and end-of-life of chemical substances. It seeks to:

- Use sustainable feedstock materials fully and efficiently
- Minimize waste and energy/resource impacts in chemical processes
- Create useful chemistries that are benign for humans and the environment and that are recyclable or naturally degradable

BCGC investigators in chemistry, the environmental health sciences, engineering, public policy, business, social science and law are developing new science and scholarship to meet the challenge of green chemistry and establish its place, alongside carbon-neutral technologies, as a critical element in global environmental regeneration and the green economy.

ABOUT BCGC

Collaborative Scholarship

To effectively advance green chemistry, new approaches are needed in the design of chemistries, the assessment of health and environmental risks, and the governance of the economy. This, in turn, requires new forms of collaborative, cross-disciplinary approaches to education and research. The interdisciplinary approach of the BCGC grows out of the recognition that the successful development—and adoption by society—of green chemistry hinges on the integration of knowledge in chemistry and engineering with an understanding of the health and ecosystem impacts of chemicals and the ways in which policy and law guide industrial innovation.

The BCGC is leading a novel interdisciplinary effort to advance green chemistry through scholarship in six spheres of inquiry:

- New Chemistries
- Health and Environment
- Policy and Law
- Business and Economics
- Curriculum and Outreach
- Integrative Sciences

Our Goal

We seek to bring about a generational transformation in the design, production, and use of chemicals, materials, and products. We are building a foundation to safeguard human health and ecosystems—including in the clean-energy economy—by embedding the principles of green chemistry into science, engineering, business decision-making, and public policy. We are working to realize this goal through innovations in:

Education

We are integrating the chemical sciences, environmental health sciences, and the study of public and private governance into a cohesive educational program in green chemistry. We are developing innovative, cross-disciplinary curricula for use in colleges and industry across the country.

Research

We are developing novel chemical processes and materials, informed by the principles of green chemistry and the priorities of the environmental health sciences. We are investigating new approaches to anticipatory toxicity testing, exposure analysis, and alternatives assessment to help prioritize chemical hazards and the identification of safer alternatives.

Engagement

We are providing academic support to decision-makers in California, the U.S. and abroad to advance green chemistry through new public policies that motivate the adoption of safer chemicals, materials, and products throughout the economy. We are convening a consortium of diverse business, environmental and labor groups to solve shared problems.

Printed on 100% recycled paper using soy inks