



[Contact the Belfer Center](#) [Site Map](#) [Kennedy School](#)

Mission: Leadership in advancing policy-relevant knowledge about the most important challenges of international security and other critical issues where science, technology, environmental policy, and international affairs intersect.

Search  

[Advanced Search](#)

[Belfer Center Home](#) > [Press Room](#)

 [Printer-friendly page](#)

## The Belfer Center

[Publications](#)

[People](#)

[Fellowships](#)

[Events](#)

[Library](#)

[About the Belfer Center](#)

[Press Room](#)

### Programs

[International Security](#)

[Environment & Natural Resources](#)

[Science, Technology, & Public Policy](#)

[Intrastate Conflict](#)

[Dubai Initiative](#)



## Publications

[Back to All Publications](#)

"Robert Frosch, "Father of Industrial Ecology," Receives Prestigious SOCIETY PRIZE from International Society for Industrial Ecology"

For more information about this publication please contact the [BCSIA Communications Officer](#)

The International Society for Industrial Ecology (ISIE) has presented the Belfer Center's Robert Frosch with the Society Prize for Outstanding Research in Industrial Ecology, the ISIE's highest recognition of professional achievement. Frosch received the Society Prize during a special ceremony at the Royal Institute of Technology in Stockholm, Sweden, on June 14 during the ISIE 2005 Conference.

Frosch, who is considered the "father of industrial ecology," is credited with launching the field in 1989 with a series of articles, the first of which was published in Scientific American and entitled "Strategies for Manufacturing." That article, co-authored with Nicholas Gallopoulos, suggested the need for "an industrial ecosystem" in which "the use of energies and materials is optimized, wastes and pollution are minimized, and there is an economically viable role for every product of a manufacturing process." The articles he wrote in the late 1980s and early 1990s drew attention to the importance of managing industrial processes and waste in an environmentally acceptable manner.

Frosch was awarded the National Academy of Engineering's prestigious Arthur M. Bueche award in 2003 "for a career of advances in aerospace and automotive technology, and 'industrial ecology'; and for administration of research and development in industry, government, and academia."

Bob Frosch is internationally recognized for his contributions to the development of environmentally-friendly technologies. When he was in charge of General Motors Research, the group pioneered major developments in vehicle emissions control, cleaner automotive fuels, and safety. He also used systems engineering skills that he developed in his early research in the Navy and at NASA to found and guide Project Trilby, which led to the incorporation of unprecedented levels of computerized system control in GM cars and plants.

The International Society for Industrial Ecology, ISIE, promotes Industrial Ecology (IE) as a way of finding innovative solutions to complicated environmental problems and facilitates communication among scientists, engineers, policymakers, managers, and advocates who are interested in how environmental concerns and economic activities can be better integrated. The ISIE conferences highlight the contributions that industrial ecology can make toward attaining a sustainable future for the planet and its population.

Link to IE history: <http://www.is4ie.org/history.html>

Belfer Center for Science and International Affairs  
John F. Kennedy School of Government  
79 JFK St., Cambridge, MA 02138  
Tel. 617-495-1400 Fax. 617-495-8963  
Please send technical questions and comments to [bcsia\\_ksg@harvard.edu](mailto:bcsia_ksg@harvard.edu)  
© 2007 by the President and Fellows of Harvard College