

UCSD chemist Michael Sailor honored by University of California for contributions to undergraduate research

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UCSD CHEMIST HONORED BY UNIVERSITY OF CALIFORNIA FOR CONTRIBUTIONS TO UNDERGRADUATE RESEARCH

Michael J. Sailor, an assistant professor of chemistry and biochemistry at UCSD, has been awarded the 1995 Presidential Award for Excellence in Undergraduate Research from the University of California.

The award, which recognizes efforts to provide research experiences for students, was granted for Sailor's role as a "mentor to many undergraduates" who has made a "significant difference in their educational lives."

Students under Sailor's guidance participate in laboratory activities, make presentations at scientific meetings and contribute to journal publications.

During his five years at UCSD, Sailor has been working on the chemistry of materials and their applications to the electronics industry.

Among other things, Sailor and his student collaborators developed a new way of connecting hairlike wires that could, in theory, speed up parallel processing in computers. A potential goal of this work is "to make a thinking machine analogous to a living brain.

"When you pack a logic system into three dimensions, a large amount of information fits into a small volume and it works much faster," he said.

Sailor and his laboratory team also have been conducting research into porous silicon, which is capable of emitting light when stimulated with a laser. The technology is opening up a long list of potential applications in opto-electronics, ranging from computers that rely on fiber-optic wiring and high-quality display screens for laptop computers to more efficient photovoltaic cells that convert sunlight to electricity.

Sailor's group is particularly interested in using porous silicon chips as chemical sensors capable of detecting alcohol on the breath of suspected drunk drivers or even the quality of air in hazardous areas.

Prior to joining UCSD, Sailor completed his postdoctoral work at Stanford University and California Institute of Technology; he received his Ph.D. from Northwestern University. He is known for his ability to link research with undergraduate teaching, with many undergraduates in his lab going on to seek advanced degrees in science.

Sailor's other honors include the 1994 Camille Dreyfus Teacher-Scholar Award, an Alfred P. Sloan Fellowship and the 1993 Young Investigator Award from the National Science Foundation.

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