

WE HEAR THAT

1998 Lawrence Awards Recognize Advances in Atomic Energy

A ceremony this month in Washington, DC, will honor the recipients of the 1998 E. O. Lawrence Awards. The awards are given annually by the US Department of Energy for outstanding contributions to the field of atomic energy in six areas: chemistry, environmental science and technology, life sciences, materials research, nuclear technology and physics. Each winner will be presented with a gold medal, a citation and \$15 000.

In the chemistry category, the recipient is **Ahmed Zewail**, the Linus Pauling Professor of Chemical Physics and a professor of physics at Caltech. A pioneer of the field of femtochemistry, Zewail is being honored for "discovering new ways to view molecular reactions using extremely short pulses of light."

Mark Thiemens is the winner in the environmental science and technology category for "his development and application of new isotope effects to the atmosphere and his discovery of a class of isotope effects that reveal the photochemical coupling of carbon dioxide to ozone in the stratosphere." Thiemens is the chairman of the department of chemistry and biochemistry at the University of California, San Diego.

The award in the life sciences category is going to **Joanna Fowler**, an organic chemist at Brookhaven National Laboratory. She is being recognized for "devising innovative ways to attach radioactive isotopes to molecules for research in biology and medicine." Through her work, Fowler has contributed substantially to the popularity of positron emission tomography (PET) throughout the world.

Laura H. Greene is being honored in the materials research category for "her pioneering experiments that clarify the behavior of electrons at the surfaces of low- and high-temperature superconductors, and what happens to the electrons when they travel into other materials." She is a professor of physics at the University of Illinois at Urbana-Champaign.

Dan G. Cacuci will receive the award in the nuclear technology category for "his methodology for measuring and analyzing the uncertainties of nonlinear mathematical models of processes and systems." Cacuci is the *Ordinarius* chaired professor and director of the Institute for Nuclear Tech-

nology and Reactor Safety at the University of Karlsruhe as well as director of the Institute for Reactor Safety at the Karlsruhe Research Center, a distinguished professor of engineering and applied science at the University of Virginia and a visiting professor of nuclear engineering and radiological science at the University of Michigan.

The physics award is to be presented to **Steven Koonin**, a professor of theoretical physics at Caltech, as well as the institute's vice president and provost. He is being honored for "his broad impact on nuclear and many-body physics." The award citation highlights Koonin's development of Monte Carlo techniques for modeling nuclei.

APS Plasma Physics Award Honors Four

Peter M. Celliers, **Gilbert W. Collins**, **Luiz B. Da Silva** and **Robert C. Cauble**, all at Lawrence Livermore National Laboratory, are the corecipients of the American Physical Society's 1998 Award for Excellence in Plasma Physics Research. The citation recognizes their "exquisite series of experiments using high intensity lasers to measure the high pressure properties of hydrogen across the molecular insulator to monatomic metal transition." They were presented with the award at the annual meeting of the society's division of plasma physics, held in New Orleans in November. Cauble is in the lab's physics and space technology directorate; the other three are in the laser programs directorate.

Ten Individuals Honored by ASA

At the fall meeting of the Acoustical Society of America, held in Norfolk, Virginia, in October, the following six individuals were recognized for their contributions to acoustics.

The von Békésy Medal, given for achievement in the area of psychological or physiological acoustics, went to **Murray B. Sachs**, Massey Professor and director of the department of biomedical engineering at Johns Hopkins University. Sachs received the medal, according to the citation, for his "contributions to understanding the neural representation of complex acoustic stimuli."

ASA presented its first Silver Medal in Animal Bioacoustics to **Whitlow W. L. Au**, "for contributions to the fun-

damental knowledge of the acoustics of dolphin sonar." Au is chief scientist of the Marine Mammal Research Program at the University of Hawaii's Hawaii Institute of Marine Biology.

Richard H. Lyon, a professor emeritus in the mechanical engineering department at MIT and founder of RH Lyon Corp in Cambridge, Massachusetts, received the Silver Medal in Engineering Acoustics for his contributions to "noise reduction of products through design and to statistical energy analysis."

The Silver Medal in Musical Acoustics was presented to **Neville H. Fletcher** for "contributions to understanding sound production, and especially the role of nonlinear processes, in string, wind, and percussion musical instruments." Fletcher is an emeritus professor of physics at Australia's University of New England and is currently a visiting fellow at the Australian National University.

"Time Reversed Acoustics," an article that appeared in PHYSICS TODAY in March 1997, garnered the ASA Science Writing Award for Professionals in Acoustics for **Mathias Fink**, director of the waves and acoustics laboratory at the Ecole Supérieure de Physique et de Chimie Industrielles de la Ville de Paris and a professor of physics at Denis Diderot University (University of Paris VII) and at the Institut Universitaire de France.

Jennifer Ouellette, a contributing editor of *The Industrial Physicist*, received the ASA Science Writing Award for Journalists for her article "Science and Art Converge in Concert Hall Acoustics," which appeared in the September 1997 issue of that magazine.

Four other individuals were similarly honored at the ASA spring meeting held in Seattle last June.

Floyd Dunn received ASA's highest honor, the Gold Medal, for his "creative contributions to fundamental knowledge of ultrasonic propagation in, and interactions with, biological media." The award citation also praised Dunn's "sustained leadership in biomedical ultrasound" over the last five decades. Dunn is an emeritus professor of electrical engineering at the University of Illinois at Urbana-Champaign and an adjunct professor of radiation oncology at the University of Arizona.

Robert L. Clark accepted the R. Bruce Lindsay Award, which recognizes achievements in acoustics by ASA members under the age of 35. Clark, an associate professor in the depart-