

Macelwane Medal, which is given for significant contributions to the geophysical sciences by outstanding scientists younger than age 36. Eiler is an assistant professor of geochemistry in the division of geological and planetary sciences at Caltech and Manga is an associate professor of Earth and planetary science at the University of California, Berkeley.

AGU gave the Roger Revelle Medal to **Ralph J. Cicerone** for his "extraordinary breadth of contributions to the understanding of biogeochemical cycles and their effect on climate." Cicerone is the Aldrich Professor of Earth System Science, a professor of chemistry, and chancellor at the University of California, Irvine.

Daniel Weill, former director of the Ocean Drilling Program at the Joint Oceanographic Institutions, received the Edward A. Flinn III Award for his "unselfish efforts on behalf of the wider Earth science community to meet the needs of evolving instrumentation and facilities."

In 2001, AGU established the Charles S. Falkenberg Award to honor a scientist younger than age 45, who has contributed to the quality of life, economic opportunities, and stewardship of the planet through the use of Earth science information, and to the public awareness of the importance of understanding our planet. The first award went posthumously this year to **Charles S. Falkenberg**, a computer scientist, who was killed in the hijacked airliner that crashed into the Pentagon on September 11th.

National Academy Honors Achievements

Next month at a ceremony in Washington, DC, the National Academy of Sciences will recognize 18 individuals for their contributions in different fields of science, including chemistry and the Earth sciences.

The academy will present its Award in Chemical Sciences to **Harry Gray**, Arnold O. Beckman Professor of Chemistry at Caltech. This annual award recognizes innovative research in the chemical sciences that contributes to a better understanding of the natural sciences and that benefits humanity. Gray is being cited for his "demonstration of long-range electron tunneling in proteins, his inspirational teaching and mentoring of students, and his unselfish service as a statesman of chemistry." He will receive a medal and cash prize of \$20 000.

John Wasson will be the recipient of the J. Lawrence Smith Medal, which

NAS presents every three years for recent original and meritorious investigations of meteoric bodies. The academy is acknowledging him for his "important studies on the classification, origin, and early history of iron meteorites and chondritic meteorites, and on the mode of formation of chondrules." Wasson, who holds joint appointments in UCLA's Institute of Geophysics and Planetary Physics and in the departments of Earth and space sciences and of chemistry and biochemistry, will receive a medal and \$25 000.

To honor contributions to geology and paleontology, the academy's Mary Clark Thompson Medal will go to **Frederik Hilgen**, university lecturer on the faculty of Earth sciences at the University of Utrecht in the Netherlands. Hilgen is being cited for his "meticulous integration of various geological, geophysical, and proxy cyclostratigraphic sedimentological records in developing a Late Neogene (12–0 Ma) astronomical time scale." He will receive a medal and a cash prize of \$15 000. The award is given approximately every three years.

AIP Presents Science Writing Awards

The American Institute of Physics has acknowledged its science writing award winners for 2002.

Alfred B. Bortz, a Monroeville, Pennsylvania, physicist who writes children's science books under the name of Fred Bortz, garnered the 2002 Science Writing Award for Children's Literature. He was chosen for his book *Techno-Matter: The Materials Behind the Marvels*, published in 2001 by Twenty-First Century Books.

The 2002 Science Writing Award in Broadcast Media went to **David Kestenbaum**, science correspondent at National Public Radio, for his story "Measuring Muons," which aired on 8 February 2001. The story can be heard at http://search.npr.org/cf/cmn/segment_display.cfm?segID=118293.

For coverage of AIP's 2002 Science Writing Award to a Scientist, see the box in PHYSICS TODAY, December 2002, page 28.

Two Win King Faisal Science Prize

This month, the King Faisal Foundation in Riyadh, Saudi Arabia, presented the 2003 King Faisal International Prize for Science (Chemistry) to **M. Frederick Hawthorne** and **Koji Nakanishi**. Each received a

gold medallion and the pair shared a cash award of about \$200 000.

Hawthorne, University Professor of Chemistry at UCLA, is "one of the most creative and productive chemists in the world," according to the foundation. He is being recognized for his research in boron chemistry, which extends over many fields ranging from the synthesis of new classes of compounds to catalysis and novel therapies for cancer. His research "could lead to the development of a 'silver bullet' to target cancerous cells for destruction while sparing healthy ones," says the citation.

Nakanishi, Centennial Professor of Chemistry at Columbia University, is "an equally eminent chemist." Through his research in biologically active natural products, he has "established the properties and elucidated the structures of many chemical compounds including antibiotics, carcinogenic materials, and anti-cancer products." Over the years, he has also been working on the mechanism of vision. His recent research on age-related macular degeneration is "likely to accelerate the development of a treatment [of this disease], which afflicts many elderly people."

Science Prize topics rotate annually. Next year's topic will be biology.

Holonyak to Receive Top IEEE Medal

At its annual honors ceremony this coming June in Nashville, Tennessee, the Institute of Electrical and Electronics Engineers will present the 2003 IEEE Medal of Honor, its highest award, to **Nick Holonyak Jr.**

The institute is honoring Holonyak for a "career of pioneering contributions to semiconductors, including the growth of semiconductor alloys and heterojunctions, and to visible light-emitting diodes and injection lasers." Holonyak is the John Bardeen Chair Professor of Electrical and Computer Engineering and Physics at the University of Illinois at Urbana-Champaign. The award includes a gold medal and a cash honorarium.

In Brief

At a ceremony next month in Tokyo, the Science and Technology Foundation of Japan will award the 2003 Japan Prize to three individuals. In the science and technology complexity category, the prize will go jointly to **Benoit B. Mandelbrot**, Sterling Professor of Mathematical Sciences at

Yale University, and **James A. Yorke**, Distinguished University Professor of Mathematics and Physics at the University of Maryland, College Park, for their “creation of universal concepts in complex systems—fractals and chaos.” The prize in the category of visualizing techniques in medicine will go to **Seiji Ogawa** for his “discovery of the principle for functional magnetic resonance imaging.” Ogawa retired in 2001 as a distinguished member of the technical staff at Lucent Technologies’ Bell Labs in Murray Hill, New Jersey, but currently is director of Ogawa Laboratories for Brain Function Research at the Hamano Life Science Research Foundation in Tokyo. A cash prize of ¥50 million (about \$415 000) will be awarded in each category.

Wendy Freedman became the director of the Carnegie Observatories in Pasadena, California, this month, succeeding **Augustus Oemler Jr.**, who will continue at the observatories as a research staff member. Freedman joined the observatories in 1984 as a postdoctoral fellow and has been a scientific faculty member there since 1987.

In January, **Giovanni Bignami** became director of the Centre d’Etude Spatiale des Rayonnements (CESR) in Toulouse, France, replacing **Dominique LeQueau**. Bignami, who is also a professor of astronomy at the University of Pavia in Italy, previously was the science director of the Italian Space Agency (ASI).

John McTague has returned to the University of California, Santa Barbara, where he is a professor of materials. From May 2001 until early January of this year, he was the university’s vice president of laboratory management, overseeing Lawrence Berkeley, Lawrence Livermore, and Los Alamos National Laboratories, which are operated by UC for the US Department of Energy and its National Nuclear Security Administration. His successor is UC senior vice president **Bruce B. Darling**, who has taken the laboratory management post on an interim basis until a permanent replacement is found.

The European Physical Society’s division of nuclear physics awarded the 2002 Lise Meitner Prize for Nuclear Science to **James Philip Elliott** and **Francesco Iachello** for their “innovative applications of group theoretical methods to the understanding of atomic nuclei.” Elliott is an emeritus

professor of theoretical physics at the University of Sussex in the UK and Iachello is the J. W. Gibbs Professor of Physics and Chemistry at Yale University. The prize is given biannually.

At a ceremony during the 24th International Colloquium for Group Theoretical Methods in Physics held in Paris last July, **Harry J. Lipkin**

received the 2002 Wigner Medal given by the Group Theory and Fundamental Physics Foundation. Lipkin, professor in the particle physics department of the Weizmann Institute of Science in Rehovot, Israel, was recognized for his “contributions to the algebraic method in nuclear and particle physics and its extension to describe the spectra of nuclei.”

Obituaries

George Porter

With the death of George Porter on 31 August 2002 in Canterbury, England, the scientific community and the world at large have lost one of the key scientists of the post-1945 period. Porter was not only a Nobel Prize-winning physical chemist, but was deeply involved in promoting science.

Both the research and science communication aspects of his career were fulfilled by his directorship of the Royal Institution in succession to Lawrence Bragg. Porter had been a part-time professor of chemistry at the Royal Institution and, in 1960, had edited Michael Faraday’s *Advice to a Lecturer* (Royal Institution). Faraday was Porter’s hero; in many ways, Porter sought to emulate him insofar as the conditions of late 20th-century science and society would allow. As reflected in Porter’s book *Chemistry for the Modern World* (G. G. Harrap, 1962), Porter, like Faraday, was not only an enormously distinguished scientific figure, but was deeply involved in communicating science to a broad audience.

Porter was born in Stainforth, Yorkshire, on 6 December 1920 and attended Thorne Grammar School, where his interest in science began. His father bought him an old bus so that he could undertake experiments away from the house! After leaving school in 1938, Porter studied chemistry as an Ackroyd scholar at the University of Leeds and developed his particular interest in physical chemistry. He also took a course in radio physics. He put his knowledge of radio physics to good use when, after graduating, he joined the war effort in 1941 as a radar officer in the Royal Navy.

Following demobilization in 1945, he became a research student with photochemist Ronald Norrish at the University of Cambridge. During that time, Porter developed the ideas and experimental strategies that allowed him and, later, his research groups to make their fundamental discoveries in

photochemistry. Norrish was interested in understanding chemical reactions caused by intense beams of light produced by an arc lamp. At that time, Norrish and others studied such reactions by analyzing the stable products.

In 1947, Porter realized that the way to tackle the problem of identifying short-lived intermediates in photochemical reactions was to use highly intense short pulses of light for excitation, rather than a weaker continuous beam as Norrish had done. The intermediates thus created could be detected either by a second continuous weak beam of light or by a second pulse of light delayed in time with respect to the exciting flash. This so-called flash photolysis was the first “pump-and-probe” technique. It has proved immensely fruitful in understanding short-lived transient molecules and molecular fragments, and it was for the invention of flash photolysis that Norrish and Porter shared the 1967 Nobel Prize in Chemistry with Manfred Eigen of the Max Planck Institute for Physical Chemistry in Göttingen, Germany. By 1950, Porter could study molecules that existed for less than a millisecond. By 1960, micro-



George Porter