

Some of Hemley's recent accomplishments include the discovery of new phenomena in hydrogen at megabar pressures; the observations of new transformations in molecular materials and novel high-pressure molecular compounds; the creation of new materials under pressure, including superconductors, magnetic structures, and superhard materials; and the novel behavior of glasses and amorphous solids under pressure. Hemley continues to develop new high-pressure techniques, including optical methods, synchrotron radiation for diffraction and spectroscopy, and transport measurements.

In 1976, Mao and his colleagues were the first to create a static pressure of 1 megabar—a million times the ambient pressure at sea level and double what had previously been achieved in a laboratory. Since then, they have progressively improved the multi-megabar technique and coupled it with analytical methods, including synchrotron x-ray diffraction, infrared, Raman, Brillouin, fluorescence, and Mössbauer spectroscopies, according to the institution.

Since 1985, in collaboration with Hemley, Mao has further improved both the technique of creating such pressures and the methods of analyzing what happens to substances exposed to them, the foundation says.

Hemley and Mao have observed and described such extreme-pressure phenomena as the occurrence of new types of molecular bonds; the creation of new, extremely hard materials, superconductors, and magnetic structures; and pressure-induced crystallization and amorphization, the

foundation says.

Hemley and Mao received their prize of \$1 million Swiss francs (about US\$800 000) during a November ceremony in Bern, Switzerland.

In Brief

Philip H. Bucksbaum has joined the faculty of Stanford University to direct the new Ultrafast Science Center, a partnership between Stanford and the US Department of Energy. Bucksbaum will also be a professor at SLAC and in Stanford's applied physics department. Through the winter term he is continuing as the Peter Franken Distinguished Professor of Physics at the University of Michigan, where he has been since 1990. Bucksbaum was named to his new post last October.

Michael L. Coats has been named director of NASA's Johnson Space Center in Houston, replacing **Jefferson D. Howell Jr.**, who is on assignment as a visiting professor to the Lyndon B. Johnson School of Public Affairs at the University of Texas at Austin. A former astronaut, Coats began his new position last November and is responsible for overseeing the center, which is NASA's primary operations center for space flight. Coats is the ninth director in Johnson's 44-year history. He had been vice president of Lockheed Martin Astronautics in Denver.

The American Association of Physics Teachers in College Park, Maryland, has named **Charles H. Holbrow** its senior staff physicist, a new position for the society. Holbrow is

Charles A. Dana Professor of Physics Emeritus at Colgate University in Hamilton, New York, a visiting physics professor at MIT, and a visiting associate at Harvard University's physics department. He began last October at his AAPT post, in which he is developing programs to help make the society more useful to college and university physics faculty.

Ohio University in Athens, Ohio, has hired **Madappa Prakash** as a physics professor. As part of his new position, Prakash is also a member of the university's Institute of Nuclear and Particle Physics and is contributing to a newly funded joint research initiative between nuclear physics and astrophysics. Prior to beginning at his post in September 2005, Prakash was a research professor at Stony Brook University in Stony Brook, New York.

William M. Yen, Graham Perdue Professor of Physics at the University of Georgia in Athens, has been selected as winner of the ICL Prize for Luminescence Research and will receive the international award at July ceremonies in Beijing. The honor from the International Conference on Luminescence is being given for Yen's "pioneering discoveries in the dynamics of solid state optical processes and for exceptional leadership in the field of luminescence." The prize was established in 1984 and is awarded in conjunction with the tri-annual International Conference on Luminescence. Yen will receive a plaque and C2000 (about \$2500).

Obituaries

Alastair Graham Walter Cameron

Alastair Graham Walter Cameron, one of the key discoverers of stellar nucleosynthesis and a founder of modern nuclear astrophysics, died of a heart attack in Tucson, Arizona, on 3 October 2005.

Al was born in Winnipeg, Canada, on 21 June 1925. Son of a biochemistry professor at the University of Manitoba, Al was raised in an environment in which scholarly and professional work was valued. At the age of four, he addressed all men as "Doctor" in an early attempt to form a general hypothesis from limited data. He excelled in science and math and was entranced by the notion of space travel.

He did his graduate work in nuclear physics under Leon Katz at the University of Saskatchewan, and in 1952 received the first physics PhD there. The deep knowledge he developed of both experimental and theoretical nuclear physics proved a key to the creative work he would later undertake.

A report that Paul Merrill had discovered technetium in a red-giant star intrigued Al because of the neutrons required to produce Tc—which has only radioactive isotopes—and turned Al's attention to problems in astron-

omy, the source of neutrons in stars, and thermonuclear reaction rates. Looking for a place where he could pursue his new interests, he joined the Chalk River Laboratories of the Canadian Atomic Energy Commission.

By the early 1950s, mechanisms for producing the elements were a major focus of interest. The specific energy-producing nuclear reactions in stars had been shown earlier by Hans Bethe and Edwin Salpeter. Efforts by George Gamow, Ralph Alpher, and Robert Herman to explain cosmic

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