Coolidge Award for medical physics to Evans

The American Association of Physicists in Medicine has chosen Robley D. Evans, professor emeritus of the Massachusetts Institute of Technology, as the 1984 recipient of the William D. Coolidge Award. The award is presented annually to recognize outstanding contributions to medical physics. It was established in 1913 to honor William D. Coolidge, inventor of a new type of x-ray tube.

Evans had his first contact with medical physics as a graduate student in the 1930s. Having been requested by Frank Crandall, a Los Angeles County Health Officer, to compile information on the health dangers posed by radium-bearing patent medicines, he reviewed the available literature and wrote an article on radium poisoning. The seminal studies he conducted as a result of that exercise led to the development of the whole body, or *in vivo*, counter for evaluating radium burdens in living subjects. Evans was a pioneer in the development of fast counting techniques, and particularly in the analytical treatment of the statistical fluctuations inherent in such devices. He collaborated with several physicians in attempts to remove radium from living persons through diet modification; although these attempts met with limited success, they provided important information on the metabolism and biodynamics of radium and its natural analog, calcium. He also developed techniques for the control of radium exposure in industrial uses.

In 1937, Evans and his colleagues initiated the nuclear medicine program at Massachusetts General Hospital, using radio-iodine for diagnosis and therapy of thyroid disease. As a result of these studies, he wrote, with W. D. Chapman, a classic paper on the treatment of hyperthyroidism. In 1941, he and physician Harrison Martland established the first maximum permissible body burden. Their value, 0.1 μCi for radium, was adopted by the US Advisory Committtee on X-Ray and Radium Protection and is still the current basis for establishing maximum permissible body burdens for bone-seeking radionuclides. With Clark Goodman, Evans also established maximum permissible air concentrations for radon.

During World War II, Evans participated in studies on the preservation of whole human blood, radioactive labeling of blood cells and studies of blood distribution and flow. He and his colleagues also developed the first automatic sample changers in conjunction with this work. His classic text, *The Atomic Nucleus*, written in 1955, is still a standard reference work for medical and nuclear physicists.

Evans received his PhD in physics from the California Institute of Technology in 1932. He held a National Research Fellowship at the University of California in Berkeley before joining the faculty at the Massachusetts Institute of Technology in 1934. He founded the Radioactivity Center at MIT and established the country's first graduate-level course in nuclear physics.

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Evans retired from MIT in 1972, but continues to participate on several medical physics advisory boards.

AACG International Award to Chalmers

At the Sixth American Conference on Crystal Growth, held in July, the AACG presented its International Crystal Growth Award to Bruce Chalmers, professor emeritus at Harvard University, for "his contributions to the science and technology of crystal growth spanning more than half a century and for his guidance and mentorship of generations of students." Chalmers' studies of solid–liquid interfaces provided the foundation for modern dynamical morphological stability theory, as well as fundamental design studies for the practical preparation of such crystals as silicon, sapphire and garnet. Chalmers received PhD and DSc degrees from the University of London. He served as a senior experimental officer at the British Ministry of Supply, as head of the metallurgical division at the Royal Aircraft Establishment and as professor of physics at the University of Toronto. In 1953, he was appointed the McKay Professor of Metallurgy at Harvard University, a post he held until 1978. A fellow of AAAS, Chalmers helped organize the First International Conference on Crystal Growth in 1966. The International Crystal Growth Award is given once every three years for "outstanding contributions to the field of crystal growth"; previous winners include Sir Charles Frank of the University of Bristol, England, and Robert A. Laudise of AT&T Bell Laboratories.

OSA presents Max Born Award to Adolph Lohman

Adolph W. Lohman, professor of physics at the University of Erlangen–Nuremberg, has been presented the 1984 Max Born Award of the Optical Society of America. The award is endowed by United Technologies Research Center and was established in 1982 to commemorate the 100th anniversary of the birth of Max Born. It consists of a citation, a silver medal and a cash prize of $1000. Lohman's re-

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search interests range from physical optics to information processing, and he has made contributions to such pursuits as optical transfer theory, character recognition holography and astronomical-image processing. Following the award of a PhD in physics in 1953 from the University of Hamburg, Lohman held faculty positions at the Technical University of Braunschweig, the Royal Institute of Technology in Stockholm and the University of California at San Diego, as well as a research position at IBM Research Laboratories (1961–67), before joining the faculty of Erlangen in 1973. He served as president of the International Commission for Optics from 1978–81.

NAE Award to Bardeen; Bueche Medal to David

The National Academy of Engineering has presented its Founders' Award to John Bardeen, professor emeritus of physics and electrical engineering at the University of Illinois at Urbana–Champaign, and winner of two Nobel Prizes, in recognition of his "remarkable creativity in engineering, science and invention." Bardeen began his career as a geophysicist (1930–33) with the Gulf Research and Development Corporation, working on methods of interpreting magnetic and gravitational surveys. He was awarded a PhD in mathematical physics from Princeton University in 1936 for research on the theory of work functions of metals. Then, as a junior fellow at Harvard University from 1935–38, he studied solid-state physics—cohesion and electrical conduction—and conducted rudimentary investigations into superconductivity. In 1945 Bardeen joined the solid-state research group at Bell Telephone Laboratories; in 1956 he received his first Nobel Prize, together with Walter H. Brattain and William