

Five scientists win E. O. Lawrence Awards



MCDONALD



RICHMOND



CERNY



FURTH



HONECK

E. O. Lawrence Memorial Awards were recently presented by the Atomic Energy Commission to Joseph Cerny III of the University of California, Berkeley, Harold P. Furth of the Plasma Physics Laboratory at Princeton University, Henry C. Honeck of the Savannah River Laboratory in Aiken, South Carolina, Charles A. McDonald Jr of R&D Associates in Santa Monica, California, and Chester R. Richmond of Los Alamos Scientific Laboratory.

Cerny was recognized for his "discovery of proton emission as a mode of radioactive decay, for investigation of the limits of nuclear stability of a number of light elements and for ingenious instrument development that made these discoveries possible." A PhD graduate of the University of California (1961), Cerny for the past 13 years has been engaged in investigations of the limits of nuclear stability of light elements.

Furth's award was given "for major contributions to the theoretical understanding of the physics of plasma confined in Tokamak geometries. His concept of adiabatic compression in a toroidal system has overcome the limitations on density and ion temperature that has characterized conventional Tokamaks." Furth received both his bachelor's and doctoral degrees from Harvard University.

The AEC cited Honeck for "contributions to reactor physics, particularly the development of many-energy solutions to the transport equations in lattice cells, for application of Monte Carlo techniques to complex lattices, for his origination, planning and development of the Evaluated Nuclear Data File System for the US reactor program and recently for his work on the JOSHUA code, a major contribution in the utilization of collision theory for the analysis of thermal lattice systems

of heavy water reactors." Honeck completed his doctorate at MIT in 1959.

McDonald received the award for "skillful leadership in the design of nuclear weapons and the application of nuclear technology to weapon systems, and his contributions through his service as advisor to the Department of Defense on nuclear weapons and military systems." McDonald has been involved in nuclear weapons research since 1954, when he completed his PhD in physics at the University of California.

Richmond was cited for his "research on the radiation biology of internally deposited radionuclides, for outstanding contributions to the resolution of radiation protection problems, and for significant administrative contributions to the AEC's research program." He holds a PhD from the University of New Mexico (1958).

NAE presents Zworykin Award to Giaever

The National Academy of Engineering has presented its third Vladimir K. Zworykin Award to Ivar Giaever, a physicist at the General Electric Research and Development Center and 1973 Nobel laureate.

Upon receiving the \$5000 award, Giaever was cited for "his original contributions to the fields of electronic tunneling, super-conductivity, and *in situ* protein detection." A native of Norway, Giaever went to Canada in 1955 to work with Canadian General Electric in Peterborough, and in 1958

he joined the GE Research and Development Center in Schenectady, New York. Giaever completed his PhD at Rensselaer Polytechnic Institute in 1964, the same year he received his American citizenship.

NAS Draper Medal awarded to Spitzer

Lyman Spitzer Jr, Young Professor of Astronomy and director of the Princeton University Observatory, has been awarded the Henry Draper Medal by the National Academy of Sciences. The medal, accompanied by \$1000, is

given approximately every two years for important work in astronomical physics.

During the 1950's Spitzer's study of interstellar matter laid the ground work for much of present theory about star formation. He was also one of the first individuals to suggest magnetic containment as a method for achieving controlled thermonuclear fusion. At Princeton he was primarily responsible for the establishment of the Plasma Physics Laboratory, then named Project Matterhorn, which he directed for 13 years.

Spitzer earned his PhD at Princeton in 1938. He worked at Harvard, Yale

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and Columbia before returning to Princeton as a professor of astronomy in 1947.

Michael J. Harrison, a professor of physics at Michigan State University, has also been named dean of Lyman Briggs College, an undergraduate residential college within the University for students who seek to combine education in the natural sciences and liberal arts.

George W. Wheeler, an accelerator physicist, has been named Dean of Science at Herbert H. Lehman College of the City University of New York. He was in the High Energy Physics Program of the AEC Division of Physical Research.

California State University, Fullerton has announced the promotions of **Ronald J. Crowley**, **Roger B. Dittman**, and **Edward L. Cooperman** to professor of physics, and of **Stuart B. Dubin** to associate professor of physics. Cooperman has also been elected to a three-year term as department chairman.

obituaries

Vern O. Knudsen

Vern O. Knudsen, the world's leading authority and most respected figure in architectural acoustics, died of pneumonia on 13 May at the age of 80.

He was born on 27 December 1893 in Provo, Utah and received his bachelor's

PhD *magna cum laude* in 1922 and joined the physics department at the University of California Southern Branch (later to become UCLA) that same year. He organized the graduate school there in 1934 and served as dean from its inception until 1958. In 1956 he was appointed vice-chancellor and then chancellor in 1959.

Knudsen, Harvey Fletcher, Wallace Waterfall and Floyd R. Watson were the founders of the Acoustical Society and he was its first vice president. He served as president, 1933-35. He was honored by that society with its Wallace Clement Sabine Award for contributions to architectural acoustics, and the Gold Medal for contributions to acoustics.

In his physics research he is best known for his experiments that uncovered the role which relaxation processes involving the vibrational and rotational states of gas molecules play in affecting the attenuation and dispersion of sound, and the way in which a measurement of these two acoustic qualities can be used to understand certain properties of molecular dynamics. For his pioneer work on this problem he was awarded the AAAS Prize in 1934.

Knudsen is principally known for his work in architectural acoustics. His books *Architectural Acoustics* (1932) and (with Cyril M. Harris) *Acoustical Designing in Architecture* have been and continue to be authoritative references in the field. Over 100 of his articles appeared in scientific and technical journals. Throughout his lifetime he served as a consultant and is responsible for the acoustical design of over 500 structures, of which some important auditoria are the Edwin J. Thomas Hall at the University of Akron, Ohio, the Grady Gammage Auditorium at Arizona State University, the Dorothy Chandler Pavilion at Los Angeles, and the Marin County (Cali-

fornia) Veterans Memorial Auditorium.

Knudsen took his responsibilities as a citizen seriously—he was a member of the Los Angeles Building and Safety Commission and president of the California Institute for Cancer Research and of the Hollywood Bowl Association. Two Vern Knudsen Graduate Fellowships in Physics are supported by the Hope for Hearing Foundation, and by voluntary donations to the UCLA Foundation. He received honorary degrees from Brigham Young University and UCLA. An added honor came from UCLA when the new physics building was named in his honor.

During World War II, Knudsen played a key role in anti-submarine efforts. He was the first director of research at what is now the Naval Undersea Research and Development Center at San Diego. During this period he served as a member of the National Research Council.

His administrative duties allowed him to take on only a moderate number of students, a high percentage of whom have since distinguished themselves.

The impact of a teacher on his students is manifold. For Knudsen the dominant force was his character. The high principles by which he lived and conducted his affairs were so deeply integrated in his behavior that his response to all human situations, even most difficult ones, was immediately instinctive and always right. For men of affairs like Knudsen, this beneficial influence is not limited to students. He enriched the lives of the many who knew him.

Contributions to the California Institute for Cancer Research at UCLA may be made in his memory.

ISADORE RUDNICK
University of California
Los Angeles

Hans G. Bingham Jr

Hans G. Bingham Jr, a physicist at the Oak Ridge National Laboratory, died in an automobile collision on 8 April 1974. He was 30 years old.

A native of Chattanooga, Tennessee, Bingham graduated from the University of Chattanooga in 1965. He obtained his PhD in experimental nuclear physics from Florida State University in 1970 and was a research associate at the University of Pennsylvania for two years prior to accepting an appointment at the Cyclotron Laboratory at Oak Ridge. In his short career he collaborated on 14 contributed papers to APS meetings, and he was an author of more than ten publications in nuclear physics. His interests were broad; he



KNUDSEN

degree in 1915 from Brigham Young University where he studied with Harvey Fletcher. After service as a Mormon missionary and as acting head of the Northern States Mission in Chicago, he joined Fletcher at the Bell Telephone Laboratories, then Western Electric, and during World War I investigated Earth currents using the then new vacuum-tube circuits. Following the War he entered the University of Chicago where he studied with Robert A. Millikan, Albert A. Michelson and Henry G. Gale and wrote his thesis on hearing. He received the