

## Langmuir Award goes to McConnell

The American Chemical Society's Irving Langmuir Award in Chemical Physics was awarded to Harden M. McConnell, a chemist at Stanford University. The award, consisting of \$5000, was established by ACS under the sponsorship of General Electric Foundation to encourage combined research in chemistry and physics.

An authority on the combined fields of physics and physical chemistry, McConnell has specialized in studies of the electronic structure of molecules—their distribution and interactions. In the mid-1960's McConnell and his coworkers introduced a new spectroscopic technique, "spin-labelling," for studying biological systems. The technique, which involves incorporating a free radical into biological molecules, is used to trace the molecular conformation of proteins and other biological materials. One of the uses of this discovery was the development of a drug detection apparatus, which can detect as little as  $10^{-9}$  gram of "hard" drugs in the human body within seconds. McConnell has also made important contributions to nuclear magnetic resonance theory.

## NAS awards to Yoder, Deprit, Johnson, Uyeda

Among the eleven scientists honored by the National Academy of Sciences this year were Hatten S. Yoder Jr, director of the Geophysical Laboratory at the Carnegie Institution; André Deprit, a National Research Council postdoctoral resident research associate at the NASA Goddard Space Flight Center; Francis S. Johnson, director of the Center for Advanced Studies at the University of Texas, Dallas, and Seiya Uyeda, professor of geophysics at the

University of Tokyo's Earthquake Research Institute.

The Arthur L. Day Prize and Lectureship consists of \$10 000 and an invitation to deliver from four to six lectures that will be published in a book or monograph. It was awarded to Yoder for his contributions to petrology, especially the development of an apparatus that enables scientists to investigate a wide range of phenomena within the earth's crust. The mineral yoderite was named after him because he was the first to systematically study the magnesia-alumina-silica-water system in which this composition of the mineral lies.

Johnson received the Henryk Arcowski Medal for his study of the high atmosphere and space physics. Among his contributions was the development of the experiment used by the Apollo 14 astronauts to detect a lunar atmosphere with a vacuum gauge. He will receive \$5000 and a gold medal.

"For his adaptation of modern computing machinery to algebraic rather than arithmetical operations," Deprit received the Craig Watson Medal. Deprit's development makes it possible to correct the lunar theory differentially whenever small changes in the initial conditions are necessary. The Watson Medal, consisting of \$2000 and a gold medal, is awarded approximately every three years.

The Alexander Agassiz Medal, consisting of a gold medal and \$1000, went to Uyeda for his contributions to the tectonic and thermal history of the earth. His work, on how island arcs and the seas were formed through the development of the earth, supports the current theories of global tectonics. It also indicates that the mountain building processes are currently going on in the Japanese Islands and the seas surrounding them and that the ultimate origin of these activities is the flow in the earth's mantle.

rector's staff at the Naval Ship Research and Development Center.

**Robert J. Romagnoli**, working in magneto-optics, has been promoted to professor in the department of physics and astronomy at California State Univer-

sity, Northridge, Calif. Promotions to associate professor include **Barney Bales**, working in electron spin resonance, **Paul Chow**, in solid-state theory, **Giovan G. Natale**, in physical acoustics and **Ryoichi Seki**, in medium-energy nuclear physics.

The new chairman of the division of physical sciences at Scarborough College, University of Toronto is **Herbert C. Corben**, previously vice-president for academic affairs at Cleveland State University.

**R. J. Heimer**, formerly of Fairchild Camera and Instrument Corp, has been named director of optical sciences at EOCOM Corp.

**Betsy Ancker-Johnson** has been appointed to the new position of academic science advisor of the research engineering division of the Boeing Co. She will also continue as head of Advanced Energy Systems and as an affiliate professor of electrical engineering at the University of Washington.

Oak Ridge National Laboratory has appointed **John A. Auxier** as director of the health-physics division and **Michael K. Wilkinson** as director of the solid-state division.

**Julian Schwinger**, who has been serving as a visiting professor at the University of California, Los Angeles for the past year, became a permanent faculty member in July. Previously associated

with Harvard University (since 1945), Schwinger was one of the recipients of the Nobel Prize in physics in 1965. Together with Richard P. Feynman, of the California Institute of Technology, and Sin-itiro Tomonaga, a Japanese physicist, Schwinger was recognized with the Nobel Prize for his research in quantum electrodynamics contributing to the understanding of elementary particles.

**Robert L. Wildey**, of the US Geological Survey Center of Astrogeology and coinvestigator for the Mariner Mars Orbiter Television Experiment, has



SCHWINGER

**George A. Schupp** has been elected vice-president and chief engineer of color TV products for Zenith Radio Corp.

**Robert C. Allen**, previously with the Naval Coastal Systems Laboratory, has become a member of the technical di-