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Fifteen honored with National Medals of Science


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BENEDICT


HIRSCHFELDER


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BETHE


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WILSON

Fifteen researchers have been designated recipients of the 1975 National Medals of Science for achievements in science, mathematics and engineering. Among them are seven individuals who have made contributions to physics or physics-related fields: Manson Benedict, Hans A. Bethe, Joseph O. Hirschfelder, William H. Pickering, Frederick E. Terman, E. Bright Wilson Jr and Chien-Shiung Wu.

Benedict has been Institute Professor Emeritus at the Massachusetts Institute of Technology since 1973. He is known for his research on the separation of uranium isotopes through gaseous diffusion and has been honored with awards of several scientific societies—most recently he has received the Founders Award of the National Academy of Engineering (see PHYSICS TODAY July, page 69).

Nobel Prize winner in physics in 1967 for his work on the energy reactions underlying the energy production of stars, Bethe is now Emeritus John Wendell Anderson Professor of Physics at Cornell University. He received his current title upon retirement in 1975 after having served 40 years on the Cornell faculty. During his career Bethe contributed to a wide range of areas in theoretical physics and has been recognized by professional organizations in Europe and the US.

Hirschfelder, who holds doctorates in physics and chemistry from Princeton University, is Homer Adkins Professor of Theoretical Chemistry and director of the Theoretical Chemistry Institute at the University of Wisconsin–Madison. In addition to his career in academics, Hirschfelder has been associated with several government institutions—among them are Los Alamos Scientific Laboratory (1943–46), Argonne National Laboratory (1962–66) and the National Bureau of Standards (1962–67).

Pickering is director of the Jet Propulsion Laboratory and professor of electrical engineering at the California Institute of Technology. During his career he served on science advisory panels to branches of the armed services and, in the 1960's, he was head of the Cal Tech program that developed the first US artificial satellite, Explorer I.

Terman is Emeritus Vice President of Stanford University, where he served on the faculty from 1925 to 1958. A specialist in electronics engineering, he is a past president of the Institute of Electrical and Electronics Engineers.

Richards Professor of Chemistry at Harvard University, Wilson holds a doctorate in physical chemistry from the California Institute of Technology. His research interests include quantum mechanics in chemistry, molecular dynamics and microwave spectroscopy.

Wu, Pupin Professor of Physics at Columbia University, retired in February as President of The American Physical Society. A specialist in nuclear physics, Wu experimentally established non-conversion of parity in beta-decay. She has been honored by awards of scientific societies in China and the US and received the Woman of the Year Award of the American Association of University Women in 1962.

The eight other scientists who received National Medals are John W. Backus (IBM San Jose Research Laboratory), Shiing-Shen Chern (University of California–Berkeley), George B. Dantzig (Stanford University), Hallowell Davis (Washington University), Paul Gyorgy, Sterling B. Hendricks (US Department of Agriculture, retired), Lewis H. Sarett (Skillman, N.J.) and Orville A. Vogel (Pullman, Wash.).

University women honor astronomer Garmany

Catharine Garmany has been named recipient of the 1976 Annie J. Cannon Award. The Cannon Award, which is administered by the American Association of University Women in cooperation with the American Astronomical Society, is presented biennially to a woman under 35 years of age to encourage her active participation in research. Garmany received her PhD from the University of Virginia in 1971 and is presently a part-time research assistant at the National Bureau of Standards in Boulder, Colorado. The award includes $1000 and will enable Garmany to study "Motions of Intermediate-Age Stellar Subgroups."

Jeong wins Millikan Lecture Award

Tung Hon Jeong, professor of physics at Lake Forest College, has been selected to receive the American Association of Physics Teachers 1976 Millikan Lecture Award. The award honors a physicist for contributions to the teaching of physics and consists of a medallion and honorarium.

A native of China, Jeong came to the US in 1948 and received his PhD in 1962 from the University of Minnesota. Since 1963 he has been at Lake Forest, where he has conducted the only college-accredited holography workshops in the world. Last year he completed a national tour as Chautauqua Lecturer for the American Association for the Advancement of Science under the auspices of the Na-

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tional Science Foundation; Jeong will give a second series of Chautauqua lectures this year.

Harry Elliot receives British and French medal

Harry Elliot, professor of physics at Imperial College, London, has been awarded the 1976 Holweck Medal and Prize of the (British) Institute of Physics and the French Physical Society.

The astrophysical aspects of cosmic rays, including their interaction with geomagnetic and interplanetary magnetic fields, are among his research interests. In 1960 Elliot became professor of physics at Imperial College and he is now head of the cosmic-ray and space-physics group there.

Aeronautics institute gives new physics awards

The American Institute of Aeronautics and Astronautics has presented the Fluid and Plasmadynamics Award to Mark V. Markovin and the Thermophysics Award to Donald K. Edwards. Both of these annual awards are being presented for the first time.

Markovin, professor of mechanics and mechanical engineering at the Illinois Institute of Technology, received the Fluid and Plasmadynamics Award for his research on transition and turbulent flow of matter in the plasma state. The Thermophysics Award was given to Edwards, chairman of the energy and kinetics department at the University of California, Los Angeles, for his contributions to the fields of gaseous radiation, surface reflectance characterization and radiant heat transfer analysis.

The new systems manager for superconducting magnet systems at American Magnetics Inc is **Howard Coffey,** formerly of the Stanford Research Institute.

Robert S. Cooper, who was previously deputy director of the Goddard Space Flight Center, Greenbelt, Maryland, became director of that center 1 July.

Formerly senior scientist and director of high-energy laser technology at TRW Inc (Redondo Beach, California), **Theodore A. Jacobs** has joined the Naval Research Laboratory as superintendent of the optical sciences division.

Formerly academic vice-president of the Illinois Institute of Technology, **James J. Brophy** has been appointed senior vice-president of the Institute of Gas Technology.

At Harvard University, **Gerald Holton** has become Mallinckrodt Professor of Physics and professor of the history of science.

Recent appointments at RCA Corp are **James Hillier** as executive vice-president and senior scientist and **William C. Hittinger** as executive vice-president, research and engineering.

Formerly of the materials physics division, UK Atomic Energy Authority, Harwell, **Jack Wenzel** has been appointed research chemist with the National Bureau of Standards.

Shannon N. Shen has joined the scientific staff of RCA Laboratories at the David Sarnoff Research Center in Princeton.

obituary

Harry C. Kelly

KELLY

Harry C. Kelly, who received his PhD from the Massachusetts Institute of Technology in 1936, died 22 February at the age of 68. During the intervening years his career covered education, industry and government; his last post was provost and vice-chancellor of North Carolina State University. His contributions typified a generation of physicists who completed their graduate work as World War II was on the horizon.

Kelly's first intellectual commitment was to physics—as an associate professor of physics at Montana State College, 1937–41, he developed the use of fluorescence for disease detection in potato plants and also produced a good book on electricity and magnetism. During World War II he worked as a research associate at the MIT Radiation Laboratory and in 1945, he became science adviser to General Douglas MacArthur, who led the allied occupation of Japan. In this position Kelly had the opportunity to demonstrate his unique wisdom of the relationship of sciences, foreign policy and society. At that time, the nuclear bomb had colored the thinking and judgment of the allied military; Kelly's intervention and persuasion allayed the notion that the majority of instrumentation research in Japan was associated with the development of a bomb. For this reason, many Japanese technological innovations were saved from destruction. Kelly was also influential in bringing to Japan an American scientific delegation (which included I. I. Rabi and was headed by Detlev W. Bronk) that eased the strained relations of the US and Japanese scientific communities following the war.

With time, Kelly was recognized by Japan—he was honored by the Order of the Sacred Treasure and was made an honorary member of the Physical Society of Japan. In the US he received a Meritorious Civilian Service Medal of the Occupation Forces and a similar medal and citation from the US Department of State. After Kelly returned to this country he served briefly in the Office of Naval Research before joining the National Science Foundation in 1951 as the assistant director of scientific personnel and education. During his eleven-year tenure he made significant contributions in two areas—foreign policy and the educational responsibilities of the Foundation. In the foreign area, he accomplished the creation of the US–Japan Committee of Scientific Cooperation, of which he remained chairman for a number of years. This joint committee established a pattern of bilateral cooperation between the US and other countries as well.

In education, Kelly initiated the curriculum revision program for high-school students, and on the college level, a revision of introductory science courses. His innovation was the idea that leaders in each science field should be directly involved in curriculum revision—this has had a profound effect on science education. He was instrumental in bringing about NSF funding for the *Physical Sciences Study Committee* (PSSC) high-school physics course. Similarly as in education, many programs in foreign affairs bear Kelly's mark.

He returned to academia in 1962 when the increasing concern of young scientists was to leave their lab benches and actively contribute to science and its impact on society. Kelly was a man whose career merits close attention and study—he knew physics and physicists, but above all, he worked for a more dynamic involvement of the physics community in our society.

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