



KLEMPERER

"significant impact on the scientific understanding of the subtle forces in molecules." Using analytical techniques such as molecular beam spectroscopy, the former Harvard professor has been able to determine the structural details of many important molecules and how electrical properties determine molecular behavior. His most recent investigations, for example, involve the formation mechanisms of molecules in interstellar space—a subject of great cosmological interest.

Klemperer received an AB from Harvard University in 1950 and a doctorate from the University of California, Berkeley in 1954. He had been on the Harvard faculty since 1954 and had been a full professor of chemistry since 1965.

The award, given once every two years by the ACS, was established by the GE Foundation in 1964. Its purpose is "to recognize and encourage outstanding interdisciplinary research in chemistry and physics, in the spirit of Irving Langmuir."

Franklin Institute honors scientists

The Franklin Institute honored eleven scientists and educators for their outstanding scientific and technical achievements at its annual Medal Day in October. Among those recognized were:

► Steven Weinberg, Higgins Professor of Physics, Harvard University. He received the Eliot Cresson Medal for his efforts in the development of a unified theory of weak and electromagnetic interaction (in addition to the 1979 Nobel Prize in Physics, see this issue, page 17) and for his contributions to other physical theories.

► Richard J. Whitcomb, head of the Transonic Aerodynamics Branch of Langley Research Center, Hampton, Virginia. The Howard N. Potts Medal

went to Whitcomb for "his outstanding and innovative contributions to transonic flight." He discovered and verified the "area rule," a revolutionary method for the design of aircraft with reduced drag and increased speed.

► Elias Burstein, professor of physics, University of Pennsylvania. Burstein was awarded the John Price Wetherill Medal for his work on the optical properties of solids and their applications in photoconductive technology. He holds the basic patents on extrinsic silicon and germanium infrared detectors.

► Benjamin Abeles, senior research associate at Exxon Research and Engineering Company, Linden, N.J. and George D. Cody, group head at the same facility. The pair shared the Stuart Ballantine Medal for their research on thermal conduction in semiconductors and for their development of certain germanium-silicon alloys, materials used in thermoelectric power generators.

► Richard G. Brewer, IBM Fellow at IBM Corporation, San Jose, California. The Albert A. Michelson Medal was presented to Brewer "for his many discoveries and contributions to laser physics in the area of nonlinear interaction of intense laser light with molecules." Very precise molecular spectroscopic measurements using nonlinear laser effects, the discovery of stimulated Brillouin scattering in liquids and versatile optical frequency switching techniques for the observation of optical coherence effects in materials are among Brewer's achievements.

Winterberg is Hermann Oberth Gold Medalist

This year's Hermann Oberth Gold Medal has been awarded to Friedwardt Winterberg, research professor at the University of Nevada Desert Research Institute. The Hermann Oberth-Wernher von Braun International Foundation for Space Flight, which presents the gold medal annually, recognized Winterberg for his achievements in the field of thermonuclear propulsion.

Winterberg received an MS from the University of Frankfurt in 1953 and a doctoral degree in nuclear physics from the University of Göttingen in 1955. From 1955 to 1959, he was group leader for theoretical physics at the research reactor in Hamburg, Federal Republic of Germany. In 1959 he became an assistant professor at Case Institute of Technology, and he joined the faculty of the University of Nevada Desert Research Institute four years later.

Winterberg did pioneering work on inertial-confinement fusion more than 15 years ago. He first proposed what is today known as "impact fusion" (fusion achieved through acceleration of macro-particles at fuel targets) in 1963. He



WINTERBERG

contributed the first ideas for starting small thermonuclear reactions with intense electron and ion beams. Beginning in the 1960's, Winterberg showed that thermonuclear microexplosion concepts together with a superconducting magnetic reflector might lead to a good space propulsion system. This idea was used by the British Interplanetary Society in their "Project Daedalus Study," a proposal to send a probe to Barnard's star.

Fowler and Schmidt get astronomy prizes

The Astronomical Society of the Pacific has recently conferred two awards. William A. Fowler, Institute Professor of Physics at Caltech, has won the 1979 Catherine Wolfe Bruce Gold Medal, and Gary D. Schmidt, a postdoctoral researcher at Lick Observatory, received this year's Robert J. Trumpler Award. The Bruce Gold Medal was established in 1898 to recognize distinguished service to astronomy. The Trumpler Award has been presented since 1956 to a recent PhD recipient whose research is "considered unusually important to astronomy." It carries with it a stipend of \$500.

Fowler's research has included studies of the origins of the elements, specifically the production of deuterium and helium in the "big bang" and in massive objects. He has also investigated the release of gravitational and nuclear energy from massive objects. Fowler took his doctorate from Caltech in 1936 and joined the faculty in the same year. In 1970, he was chosen the first holder of the Institute Professorship of Physics at Caltech, an endowed chair. He served as president of The American Physical Society in 1976.

Schmidt was honored for his development of a technique to photoelectrically map polarized radiation emitted by galaxies and galactic nebulae. Schmidt received his PhD from the University of Arizona at Tucson.