# DR. VON OHAIN TO BE HONORED AS A FELLOW

The Board of Governors has selected Dr. Hans J. von Ohain to be a Fellow of the Engineers Club of Dayton. Dr. von Ohain will be recognized as a Fellow at the Founders Night Program on February 20th.

Dr. von Ohain is a Senior Research Scientist at the University of Dayton Research Institute and an Adjunct Professor of Mechanical Engineering at the University of Dayton. He was the Chief Scientist of the Air Force Aero Propulsion Laboratory.

Dr. von Ohain has received many honors and awards including:

- Decoration of Exceptional Civilian Service, 1965
- AIAA Goddard Award, 1966
- Meritorious Service Award, 1967
- Fellow of American Institute of Aeronautics and Astronautics, 1970
- Distinguished Member, Jet Pioneer's Association of the United States of America, 1974
- AF Association Citation of Honor, 1978
- Wings Club Distinguished Achievement Award, 1980
- DoD Distinguished Civilian Service Award, 1980
- Member, National Academy of Engineering, 1980
- International Aerospace Hall of Fame, 1982
- Appointment of Charles Lindbergh Professor, National Air and Space Museum, Smithsonian Institute, 1984 to 1985
- Aachen and Munich Prize for Technology and Applied Natural Sciences, 1985
- Enshrinee, The Engineering and Science Hall of Fame, 1985

Following completion of studies in physics and aerodynamics under Professors Pohl, Prandtl, and Bets at the University of Goettingen, Germany, Dr. von Ohain received the Ph.D. degree in Physics in 1935. He continued working under Professor R. W. Pohl at the University from 1935 to 1936. In this time period he privately developed a theory of turbojet engines and built a working model.

Upon the recommendation of Professor Pohl, he disclosed the theory and the model to Dr. Ernest Heinkel, owner of the Heinkel Company, Warnemude, Germany—later Heinkel-Hirth Company, Stuttgart, Germany—and became associated with that organization for the development of his turbojet ideas.

Given support and a free hand by Heinkel, he used an aggressive research and development program that resulted in the first turbojet-powered flight in August 1939.

During the time he was with the Heinkel-Hirth Company, Dr. von Ohain obtained a number of company patents in the field of radial and axial turbojet engines. He left the firm in 1945 and was engaged in independent development and consultant work on gas turbines until 1947 when he accepted a contract with the U.S. Army Air Corps to do theoretical work on advanced airbreathing propulsion systems. He was later employed by the U.S. Air Force under Civil Service, and has since been engaged in both theoretical and experimental research in propulsion and energy conversion.

In 1965 while assigned to the Aeronautical Research Laboratory Aerospace Research Laboratories (ARL) as a group leader in propulsion and energy conversion research, Dr. von Ohain was requested by the Directorate of Research of the Wright Air Development Center (of which ARL was then a component) to make a survey study of trends and research objectives in the field of energy conversion and propulsion. The results of this study were documented in a report (WADC TN 57-13) and used by Headquarters, Air Research and Development Command for research planning in the field of propulsion.

Upon completion of this survey in January 1957, Dr. von Ohain resumed his leadership of the ARL propulsion and energy conversion research. Displaying the same analytical insight, initiative and drive as in the turbojet development, he generated new ideas and a strong program for basic and applied research, comprising new approaches to such items as a promising Colloid/Gas Core Reactor for propulsion and power generation in cooperation with Professor J. Kerrebrock (MIT), electrofluid dynamics with emphasis on power generation for electric discharge lasers, laser aerodynamics including cavity flow, advanced diffusers and ejectors, and fluid dynamic energy transfer with application to STOL and VSTOL aircraft having such significant characteristics as: (a) no rotating lifting devices, (b) low noise, (c) supercirculation, and (d) vehicle boundary layer acceleration.

In September 1963, Dr. von Ohain became Chief Scientist of the Aerospace Research Laboratories while continuing his responsibilities as research leader in the field of energy conversion and propulsion.

In 1975 he became Chief Scientist of the Air Force Aero Propulsion Laboratory, where he had a strong influence on the in-house research and development programs, specifically upon the development of the large "Compressor Research Facility."

In 1979 Dr. von Ohain retired from his Air Force career after more than 30 years service and joined the University of Dayton Research Institute as a Senior Research Engineer. Also, as adjunct Professor, he taught courses in aeropropulsion and became Professor of the University of Dayton in 1984. He is currently participating in research in the fields of mixing, interface stability and instability phenomena, and momentum and energy exchange with application of multicomponent flow. Dr. von Ohain has developed innovative concepts that have led to many new projects.

As a recognized expert in the field of energy conversion and propulsion, he was invited to many professional consultations, committees, and ad hoc committees such as the A. Silverstein Committee (NASA) on Advanced Propulsion, the Scientific Advisory Board (SAB) ad hoc Committee on the F-111 under G. Sutton, and the Research Advisory Committee of NASA on Electrical Energy Systems during the 1960's. In 1970 Dr. von Ohain and Lt. Colonel W. N. Jackomis were invited by the Atomic Energy Commission (AEC) Space Nuclear Propulsion Office to give a review of the Colloid Core Reactor concept. Dr. von Ohain was a member of the Propulsion and Energetics Panel, Advisory Group for Aerospace Research and Development, from January 1966 to January 1969 and was reappointed from January 1969 to January 1972. In 1980 he became a member of the National Academy of Engineering.

Dr. von Ohain's contributions to engineering sciences are described in books such as *Development of Aircraft Engines* by Rob Schlaifer, Harvard University; *Aerodynamics, Selected Topics in the Light of Their Historical Development* by Theodore Von Karman; *Jet Pioneers* by Grover Heimann, Meredith Press; and *Innovation and Military Requirements*, RAND Corporation report by R. Perry, RM 5182-PR, 1967. Dr. von Ohain is also mentioned in the *Encyclopedia Britannica* under jet propulsion for achievement of the world's first turbojet flight.