

## LEO ESAKI

Leo Esaki was born in Osaka, Japan in 1925. Esaki completed work for a B.S. in Physics in 1947 and received his Ph.D in 1959, both from the University of Tokyo. Esaki was an IBM Fellow and engaged in semiconductor research at the IBM Thomas J. Watson Research Center, Yorktown Heights, New York, from 1960 to 1992. Prior to joining IBM, he worked at the Sony Corp. where his research on heavily-doped Ge and Si resulted in the discovery of the Esaki tunnel diode; this device constitutes the first quantum electron device. Since 1969, Esaki had, with his colleagues, pioneered "designed semiconductor quantum structures" such as man-made superlattices, exploring a new quantum regime in the frontier of semiconductor physics.

The Nobel Prize in Physics (1973) was awarded in recognition of his pioneering work on electron tunneling in solids. Other awards include the Nishina Memorial Award (1959), the Asahi Press Award (1960), the Toyo Rayon Foundation Award for the Promotion of Science and Technology (1960), the Morris N. Liebmann Memorial Prize from IRE (1961), the Stuart Ballantine Medal from the Franklin Institute (1961), the Japan Academy Award (1965), the Order of Culture from the Japanese Government (1974), the American Physical Society International Prize for New Materials (1985), the IEEE Medal of Honor (1991), the Japan Prize (1998) and also the Grand Cordon of the Order of the Rising Sun, First Class from the Japanese Government (1998).

He serves on numerous international scientific advisory boards and committees. Dr. Esaki was elected a Fellow of the American Academy of Arts and Sciences (1974), a member of the Japan Academy (1975), a Foreign Associate of the National Academy of Science (1976) and the National Academy of Engineering (1977), a member of the Max-Planck-Gesellschaft (1989), and a foreign member of the American Philosophical Society (1991), Russian Academy of Sciences (1994), and Italian National Academy of Science (1996).

After returning to Japan, he had assumed the position of President, the University of Tsukuba for six years from 1992 to 1998, and President, Shibaura Institute of Technology from 2000 to 2005. During his tenure, he made great contributions to the reform and internationalization of the Japanese educational system as a member of many committees on education. He has been working at the Science and Technology Promotion Foundation of Ibaraki as Chairman appointed in April, 1998, and Tsukuba International Congress Center as Director-General appointed in 1999, also Science Academy of Tsukuba as Chairman in 2000. In April, 2006 he has assumed the position of President, Yokohama College of Pharmacy.