



Xiaolin Lei
Shanghai Jiao Tong University
Academician of Chinese Academy of Sciences

Professor Xiaolin Lei, born in November 1938 in Guilin , Guangxi Province , is a physicist. Graduated from the Department of Physics of the Peking University in 1963, he successively held the positions as an assistant professor at Shandong University, an assistant research fellow at the Shanghai Institute of Metallurgy, Chinese Academy of Sciences, a senior visiting scholar at the Houston University, USA, a visiting associate professor at the City University of New York, and a visiting professor at the Steven Institute of Technology, USA. From 1986 to 2000, he worked as a research fellow at the Shanghai Institute of Metallurgy, the chief of the Department of Material Physics, the director of the Academic Committee and the director of the Academic Degree Committee of Institute for some time. He is a professor at the Shanghai Jiao Tong University . In 1997, he was elected an academician of Chinese Academy of Sciences.

Working at the transport of electrons and superconductivity of the condensed matter for a long time, he and together with professor Wu Hangsheng put forward an idea of size non-local effect of superconducting film and developed a theorem of a negative three-halves power equation for the superconducting film critical magnetic field fluctuating according to the thickness of the film. In the late 70s and early 80s, he focused his study on the theory of the critical temperature of the superconducting films, the theory of electrical resistance of alloy and the thermodynamics and optics of the complex superconducting system, acquiring a number of effective achievements. In the middle of the 80s, he developed the balance-equation transport theory of semiconductor in collaboration with professor Ding Qingsheng. The theory, after years of development, turned to be an outstanding method in the study of the hot carrier transport of semiconductor, known internationally as the Lei-Ding law. In early 90s, he worked out a model of superlattice subband transport, developing an equation of the hot carrier transport for the energy spectrum materials of any kind in the electrical field and the magnetic field. Recently, he put forward a new approach for the study of the transport of semiconductor and optical properties in strong and remote infrared radiation.

Professor Xiaolin Lei has published more than 200 papers in international journals of first class and one monograph titled: *A balance-equation of the transport of semiconductor* , etc. He was elected one of the National Youth and Middle-aged Experts with outstanding Contributions in 1988 and was awarded a May First Labor Day Medal in 1995. The prizes he got for his research achievements include a Natural Science Prize (2nd class) of Chinese Academy of Sciences in 1989, a Natural Science Prize (1st class) of Chinese Academy of Sciences in 1994 and a National Natural Science Prize (2nd class) in 1995.