

Zhores Ivanovich Alferov is a Nobel Prize Laureate in Physics for 2000



The Royal Swedish Academy of Sciences has decided to award the Nobel Prize in Physics for 2000 to Zh I Alferov (A F Ioffe Physico-Technical Institute, St.Petersburg, Russia) and Herbert Kroemer (University of California at Santa Barbara, California, USA) ‘for developing semiconductor heterostructures used in high-speed- and opto-electronics’ and to Jack S Kilby (Texas Instruments, Dallas, Texas, USA) ‘for his part in the invention of the integrated circuit’.

The studies of Zh I Alferov and his school in the field of physics, techniques, and technology of semiconductors and semiconductor devices had a profound impact on the development of physics and technology of diode lasers. The heterostructures and the first cw heterostructure laser operating at room temperature created by him in fact paved the way for the rapid transformation of such a unique physical device as a semiconductor laser to a mass-produced device of the modern technology – a laser diode. In the last decade, semiconductor lasers and light-emitting diodes, highly efficient photodetectors, and fast transistors have become key elements of CD players and optical displays, mobile tele-

phones and solar batteries, fibre-optical communication lines, and many other advanced devices of the modern civilisation.

A member of the Russian Academy of Sciences, vice-president of the RAS, chairman of the Presidium of the St. Petersburg Scientific Center of RAS, director of A F Ioffe Physico-Technical Institute of RAS, member of the Committee on Education and Science of the State Duma of the Russian Federation, Zhores Ivanovich Alferov, who celebrated his 70th birthday in March 2000, has many achievements in the science. He is an author of more than 500 scientific papers, including three monographs, and has more than 50 inventions. Although his achievements have already been awarded with many prestigious prizes, it is in all fairness that his outstanding results in the field of semiconductor heterostructures have been rewarded with the highest scientific premium – the Nobel Prize.

On behalf of the editorial council, editorial board, and editorial staff of Quantum Electronics (Kvantovaya Elektronika), we cordially congratulate the Noble Prize Laureate Zhores Ivanovich Alferov.

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