

Artur Afanas'evich Mak



Professor Artur Afanas'evich Mak, Doctor of Physics and Mathematics, an outstanding scientist in the field of laser physics, a winner of the Lenin prize, the USSR State Award, the Russian Government Science Award, and an Honoured Worker of Science, was 75 on 15 May 2005.

A.A. Mak was born on 15 May 1930 in the town of Kamenets-Podol'skii, Khmel'nitskaya region of the Ukraine. After graduating from the Leningrad Polytechnical Institute in 1954, the young specialist in the field of low-temperature plasma physics joined the S.I. Vavilov State Optical Institute, where he worked on the problem of designing pulsed light sources for optical location. A.A. Mak took an active part in the development of laser physics in our country from the very beginning.

In 1993 A.A. Mak headed the Laser Physics Research Institute based on the laser department of the S.I. Vavilov State Optical Institute. Under his guidance, the Laser Physics Research Institute became one of the leading centres in the world in the field of laser science. At present, A.A. Mak is the scientific supervisor at this institute.

The scientific interests of A.A. Mak cover the fields of physics and technology of solid state lasers, spectroscopy of laser active media, dynamics of laser systems, and applied nonlinear optics. His style of work combines fundamental research with the application of the obtained results for solving applied problems. As an example, we can mention the fundamental investigations of the generation kinetics in solid state lasers: a solution of the problem of laser radiation pulsation led to the fabrication of lasers with an ultrahigh stability of the amplitude and lasing frequency, which were used for precision measurements. Other examples of the research activity of A.A. Mak include the development of high-power lasers emitting diffraction-limited radiation, ultra-high precision control of the radiation pattern, and high-temperature laser heating of plasma.

As the scientific supervisor of the Institute, A.A. Mak pays considerable attention to advanced studies such as the development of diode-pumped solid-state lasers and high-power slab CO₂ lasers, investigations of optical properties of fullerene-containing materials, transport of high-power laser radiation over large distances, etc. Artur Afanas'evich headed many research and development projects ordered by the Ministry of Defence of the USSR and Russian Federation, as well as projects ordered by laboratories, agencies and companies from highly advanced countries.

A.A. Mak is the author of over 250 research papers, three monographs, over 60 inventor's certificates and patents. The International Conference on Laser Optics, first organised by him in 1977, has been held regularly ever since and is a congregation of the leading and competent authorities in the field of laser physics. A.A. Mak was awarded the Lenin Prize (1982), the USSR State Award (1974), and the Russian Government Science Award (1997). In 1993, he was conferred the title of Honoured Worker of Science. He was decorated with the Lenin order (1978), the Red Labour Banner order (1971), the order 'For Service to the Motherland' class IV (2001), and several medals.

Artur Afanas'evich was the deputy editor-in-chief of Quantum Electronics since the foundation of the journal over two decades ago. Currently, he is a member of the Editorial Council of the journal.

Prof. A.A. Mak enjoys a well-deserved reputation among the Russian and international scientific communities. The Editorial Board of Quantum Electronics congratulate Prof. Mak on the occasion of his jubilee and wish him sound health and further scientific achievements.

O.N. Krokhin