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OBITUARY

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Mikhail Petrovich Petrov (6.06.1939 – 27.12.2008)

Mikhail Petrovich Petrov, doctor of physics and mathematics, deputy director of the Department of Solid-State Electronics at the A.F. Ioffe Institute of Physics and Technology, RAS, chief of the Laboratory of Quantum Electronics, professor of the Chair of Quantum Electronics at the St. Petersburg State Polytechnic University, laureate of the State Prize of USSR in Science and Technology, died on 27 December 2008 after a long and serious illness.

Mikhail Petrovich Petrov was born on 6 June 1939 in Leningrad and experienced all the hardship of living in the blockaded city during the Great Patriotic War. After graduating from the Chair of Radiophysics and Electronics at the M.I. Kalinin Leningrad Polytechnic Institute in 1962, M.P. Pertrov worked at the Institute of Semiconductors, USSR Academy of Sciences. He defended his candidate thesis in 1966. Beginning from 1972, the scientific activity of Mikhail Petrovich Petrov was connected with the IPT. He became a doctor of physics and mathematics in 1973 and organised the Laboratory of Quantum Electronics in 1974, where he supervised extensive NMR studies of magnetically ordered media and then investigations on the optical data writing, storage and communication. M.P. Petrov was deputy director of the IPT in the scientific research (1973 – 1987), head of the department (1988 – 1997), and from 1997 until the recent time – deputy director of the Department of Solid-State Electronics at the IPT.

The investigations of M.P. Petrov in the field of NMR in magnetically ordered media and in the field of coherent and nonlinear optics, beginning from the mid-1970s, brought him the scientific authority in Russian physics and the worldwide fame. In these studies, some important fundamental and applied problems were considered such as the investigation of the physical properties and development of the growth technology of photorefractive crystals, the application of these materials in optical systems for data processing and communication, the study of mechanisms of formation of dynamic holograms and charge transfer in semiconductors and dielectrics, and also of nonlinear optical effects in fibres and integrated optical waveguides. The most important achievements of M.P. Petrov include the development of a principally new spatiotemporal light modulator based on photorefractive crystals, the development of new fibreoptic and integrated optical systems based on nonlinear optical effects, the elaboration of the theory and optical methods for excitation of spatial-charge waves in semiconductors and dielectrics, and theoretical and experimental investigations of zero-point electromagnetic oscillations of vacuum and the Casimir force for the development of nanooptomechanical systems. The results of the scientific activity of M.P. Petrov were presented in three monographs and more than 270 papers. M.P. Petrov is also the author of a number of inventions.

Mikhail Petrovich paid great attention to the education of researchers. He was a teacher at the Chair of Quantum Electronics at the St. Petersburg State Polytechnic University for more than 30 years and was a supervisor of 23 candidate theses. Five of his pupils defended doctoral dissertations.

M.P. Petrov was a member of a number of scientific councils (Council on Holography, RAS, Council on Coherent and Nonlinear Optics, RAS, Council on Awarding Scientific Degrees) and a member of the Editorial Board of Quantum Electronics.

From 1984 to 1987 M.P. Petrov was vice-president of the International Optical Society (at the UNESCO). In 1997 he was elected honorary doctor of the Mexican National Institute of Optics, Electronics and Astronomy. M.P. Petrov was awarded the gold and silver medals of the Exhibition of Achievements of National Economy, the medal for great services for the motherland, a diploma of the Presidium of the USSR Academy of Sciences, the A.M. Ioffe Prize, and other decorations. In 1985 he was awarded a State Prize of USSR in Science and Technology for his investigations in the field of optics and photorefractive materials.

Mikhail Petrovich was an intelligent and benevolent person of ready sympathy. He was always capable to help people, possessed a delicate sense of humour, and could appreciate people and was glad at their successes.

Mikhail Petrovich Petrov, a gifted scientist and wonderful person, will always remain in the memory of his relatives, friends, pupils and collaborators.

Board of directors of the A.F. Ioffe IPT, RAS, staff of the Laboratory of Quantum Electroncs, Editorial Board of Quantum Electroncs

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Translated by M.N. Sapozhnikov