

OBITUARY

PACS numbers: 01.60.+q
DOI: 10.1070/QE2008v038n03ABEH013847

Mikhail Alexandrovich Rotinyan

Mikhail Alexandrovich Rotinyan, a known researcher in the field of gas flow lasers, the head of the Research department of chemical gas dynamics, 'Applied Chemistry' Russian Scientific Center (St. Petersburg), a doctor of technical sciences, professor, an Honoured Scientist of the Russian Federation, a laureate of the prize of the RF Government in science and technology, died on 18 December 2007, after a long illness.

All the scientific activity of M.A. Rotinyan was connected with the 'Applied Chemistry' RSC (former State Institute of Applied Chemistry) at which he has worked since 1961 after graduating from Leningrad Polytechnic Institute, first as a junior researcher and then as the deputy general director in science. Here, he has developed into a scientist and an organiser.

The first years of the research activity of M.A. Rotinyan were devoted to investigations of cryogenic rocket propellants. He developed and experimentally tested the methods for calculating processes of heat mass exchange in two-phase flows in cryogenic systems for special rocket engines, which became the object of his candidate dissertation. The results of these studies were used in the development of rockets, in particular, the Energiya – Buran space rocket system.

N.A. Rotinyan devoted more than thirty years of his research to the development of laser technologies in our country. Owing to his energy and excellent organising abilities, the cooperation of institutes and enterprises was organised (State Institute of Applied Chemistry, Design Office of Electronic Machine Building, P.N. Lebedev Physics Institute, 'Luch' Central Design Office, Institute of Chemical Physics, etc.), the large experimental base was created, and many investigations devoted to the development of cw HF/DF lasers were performed during a short period of time, which were generalised in the doctoral thesis of M.A. Rotinyan, that he defended in 1988. Because of the specific properties of working gas mixtures used in these lasers, it was necessary to solve a number of complicated design, technological, and ecological problems for performing full-scale experimental studies. All these problems have been successfully solved under the leadership of M.A. Rotinyan. This, together with the investigations of flows of viscous chemically nonequilibrium media performed by M.A. Rotinyan with collaborators, resulted in the development of the first high-power gas flow HF/DF lasers in our country and in the study of the interaction of radiation from these lasers with various materials and objects.

M.A. Rotinyan was engaged in the last years in studies in the filed of plasma chemistry. Under his leadership, high-temperature plasma-chemical technologies for synthesis of promising chemical products, the conversion of hydrocarbon fuels and utilisation of industrial waste have been developed. All these technologies have found practical industrial applications, while his works on the thermal protection of hypersonic aircrafts by using the conversion of hydrocarbon fuels are being actively developed at present.

M.A. Rotinyan published more than 300 papers, received 25 of author's certificates and patents. Among his pupils there are two doctors and six candidates of sciences.

He led a large organisation work in science, being a member of the commission of the governor of St. Petersburg on the reformation of science and technology sphere, of many scientific and expert councils, and actively participated in the work of the Laser association. More than a quarter of century, M.A. Rotinuan was the organiser and ideological inspirer of the Chemical Lasers scientific and practical seminar, which was held every two years in Smolyachkovo settlement, Leningrad region.

In 1993, M.A. Rotinyan was made a professor. In 1996, he and the author collective were awarded the premium of the RF Government in the field of science and technology, and in 2002 he received a title of an Honoured Scientist of the Russian Federation.

The scope of scientific and business interest of M.A. Rotinyan was very broad. He generated ideas and proved personally the possibility of their realisation. During the difficult 1990s, when financing dropped almost to zero, he managed to preserve a great part of collaborators and the unique experimental base.

M.A. Rotinyan was an energetic, not indifferent, friendly, and jolly man with an excellent sense of humour. He had many friends. Mikhail Alexandrovich Rotinyan will always remain in our memories as a prominent scientists and organiser, kind and sympathetic friend.

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Kvantovaya Elektronika **38** (3) 298 (2008)

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