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PERSONALIA

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Mikhail Dmitrievich Galanin (on his eightieth birthday)

Mikhail Dmitrievich Galanin — a distinguished Russian scientist, specialist in the field of luminescence and optics, Corresponding Member of the Russian Academy of Sciences, professor, and Honoured Science Worker of the RSFSR — celebrated his 80th birthday on 7th February, 1995.

Galanin headed for many years the Russian school of luminescence. He is a worthy successor and associate of the founder of this school — Academician S I Vavilov. Galanin's fundamental studies are widely known in our country and abroad. He has made a major contribution to the development of the fundamental aspects of luminescence and nonlinear optics.

At the end of the 1940s he undertook, jointly with S I Vavilov, investigations which brought him world-wide recognition. These studies were devoted to the transmission of electronic excitation energy in condensed media. Theoretical interpretation of the extensive and detailed experimental data led Galanin to most important results, which served as the basis for a general theory of the migration of energy in condensed systems. In the world literature, this theory is known as the Forster – Dexter – Galanin theory. It has been applied successfully in solid state physics, photochemistry, molecular biology, radiochemistry, and other branches of science. These researches, carried out over a period of many years, were summarised in 1956 in Galanin's Doctoral Dissertation and also in the monograph (jointly with V M Agranovich) *Electronic Excitation Energy Transfer in Condensed Media*, which was published in our country and abroad. In 1976, the Praesidium of the USSR Academy of Sciences awarded Galanin the Vavilov Gold Medal for a series of studies on energy transfer.

In the 1950s, Galanin and coworkers carried out yet another major series of investigations devoted to radioluminescence and the migration of energy on hard (alpha, beta, and gamma) excitation and the development of highly effective scintillators. The results served as a reliable scientific basis for the development of scintillators for important practical applications. Galanin's studies were exceptionally timely during the vigorous development of nuclear energetics and the associated wide-scale application of scintillation counters.

Galanin has made major contributions to laser physics and nonlinear optics. He discovered phenomena such as two-photon dichroism in liquids, as well as the quenching of luminescence by powerful light fluxes, the anti-Stokes Raman scattering by the electronic levels of dye molecules, and the superluminescence in molecular crystals on laser excitation.

Mikhail Dmitrievich Galanin

By combining the nanosecond and picosecond techniques with helium temperatures and a high spectral resolution, Galanin carried out a series of studies involving the measurement of short decay times and the growth of individual lines in luminescence spectra. On the basis of such measurements, he carried out yet another series of important studies, which have thrown light on the mechanism of exciton luminescence in pure molecular crystals and molecular crystals with impurities. These studies have confirmed the polariton model of luminescence.

Together with intense scientific research, Galanin engaged in extensive scientific-organisational activities.

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During many years, he headed the Scientific Council of the USSR Academy of Sciences on the problem of 'Luminescence and the Development of Its Applications in the National Economy'. Galanin was a member of the International Committee on Luminescence, member of the Scientific Council of the USSR Academy of Sciences on Spectroscopy, member of the Board of the Higher Academic Awards Commission (VAK), and member of the Specialist and Scientific Councils of the Physical Institute of the Academy of Sciences (FIAN).

Galanin has devoted much attention to the training of qualified scientific cadres. For more than 20 years, he was Head of the Department of Quantum Radiophysics at the Moscow Physicotechnical Institute, whose scientific director he remains to the present time. He has delivered courses of lectures on general physics, molecular spectroscopy, physical optics, and quantum radiophysics.

Galanin — a participant in the Great Patriotic War [Second World War] — has been awarded military orders and medals. Despite his achievements and great fame, Galanin remains an exceptionally modest and charming man. Indisputable authority and high principle are combined in Galanin with rare tact and humanity. A favourite activity throughout his life has been and remains experimentation. His new monograph *Lyuminestsentsiya Molekul i Kristallov* (The Luminescence of Molecules and Crystals) is now in print.

We wish M D Galanin good health and new creative successes on the occasion of his jubilee.

N G Basov, V L Ginzburg, N D Zhevandrov,
N V Karlov, L V Keldysh, O N Krokhin,
L P Presnyakov, A M Prokhorov, E A Sviridenkov,
I I Sobel'man, I L Fabelinskii, E L Feinberg