

'Luminescence of molecules and crystals' by M D Galanin

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In M D Galanin's book 'Luminescence of Molecules and Crystals', published by the P N Lebedev Physics Institute of the Russian Academy of Sciences in 1999, an attempt is made to provide information about the physics of luminescence in a compact form. The author traces the history of the development of ideas about luminescence and introduces its fundamental characteristics. The luminescence and excitation spectra, the quantum yield, the duration of glow, and the degree of polarisation are considered. Much attention is devoted to fundamental questions, for example, the difference between luminescence and other kinds of secondary emission and the difference between the average lifetime of the excited state of molecules and the duration of their afterglow under the conditions of quenching by extraneous molecules. The results of experimental studies of the luminescence of molecules, of the impurity centres in crystals, and of the exciton mechanism of luminescence are analysed in detail.

The merits of the book include the fact that it is well written without excessive detail. However, the lack of detail sometimes obliges the reader to ponder profoundly on what he has read in order to understand and assimilate it.

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