

Liquid crystals: discotic mesogens / N.V. Usol'tseva, O.B. Akopova, V.V. Bykova, A.I. Smirnova, S.A. Pikin; Edited by N.V. Usol'tseva. – Ivanovo: Ivanovo State University, 2004. – 546 p.: ill

The main aspects of the liquid crystalline state of the new type of organic mesogenic compounds, possessing discotic forms of molecules, are considered. The results of the research of the interconnection of the chemical organization of these compounds with their supramolecular organization and properties are summarized. These results also include those that have been obtained during the last twenty years at Ivanovo State University and the University of Crystallography named after A.V. Shubnikov (Russian Academy of Science).

The results of the research on the lyotropic mesomorphism of different chemical classes of discotic compounds in aqueous systems and organic solvents, and also the results of the relationship between thermotropic and lyotropic mesomorphisms in each of these classes are presented in detail for the first time in the world literature. The new criteria approach towards the directed construction of mesogenic discotic compounds and the main types of their synthesis are described. Some of the elaborated and perspective spheres of the application of discotic mesogens are also considered.

The monograph is written by the prominent Russian specialists in the sphere of liquid crystals and is addressed to students, PhD-students, scientific and technical workers that are engaged in the field of chemistry, physics and technology of liquid crystal materials.

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