

Homo- and Heterochirality in Crystal

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In the present communication the methods for the recognition of homo (Ho)- and heterochiral (He) crystals are considered [1], as well as the conditions for the transformations Ho→He or He→Ho crystallization [2], the directed construction of Ho-crystals [3], solid-phase reactions Ho⇌He, synthesis of Ho-crystals [4], isomerizations during the formation of the solid phase [5] and the spontaneous resolution of Ho-crystals [6].

On the example of glycoluriles the methodology for the development of chiral drugs via the spontaneous resolution is presented [7].

The differences in physical properties of enantiomers and racemates are demonstrated by distinct differences in ESR spectra of polycrystalline samples of the enantiomers and racemates of nitroxide radicals [8]. Recently it has been found that the enantiomers of a series of compounds are effective organogelators, whereas their racemates do not show that property [9].

For the first time the supramolecular H-bonded catenanes and polycatenated structures in crystals have been synthesized [10].

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