

Puzzle of supersolid: history and current state

Yu. Lozovik

*National Research University Higher school of Economics, 101000 Moscow, Russia
Institute of Spectroscopy, RAS, 142190 Troitsk, Russia*

Possibility of supersolid, the phase with coexisting superfluidity and crystal order in macroscopic and mesoscopic systems is discussed for different physical realizations and correlation regimes. The theory and computer simulation results are analysed.