

Chirality in atomic nucleus

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The progresses of the chirality in atomic nuclei are briefly reviewed from both experimental and theoretical sides. Chiral doublet bands beyond one-particle and one-hole coupled with a triaxial rotor as well as the possibilities of new phenomenon MxD are discussed. A particle rotor model is developed which couples several valence protons and neutrons to a rigid triaxial rotor core. It is applied to investigating the chirality in odd-A nucleus ^{135}Nd with $\pi h_{11/2}^2 \otimes \nu h_{11/2}^{-1}$ configuration in a fully quantal approach. The application of the covariant density functional theory for magnetic rotation and chiral bands are discussed and the importance of the magnetic currents are emphasized.