Structure and isomers in odd -A isotopes in A~130 region

R. Palit
Tata Institute of Fundamental Research, Mumbai-400005, India

The interplay between single-particle and collective excitation modes generates complex and rich level structures for nuclei around A~135 with Z > 50 and N<82. Occupation of high-j orbitals for protons and neutrons is responsible for various structure phenomena for nuclei in this region, such as signature splitting, signature inversion, magnetic rotation, wobbling motion, chiral rotation and high spin isomers. As a part of a systemic study, we have investigated the level structures of odd-A Cs and La isotopes using ^{4}He, ^{7}Li and ^{11}B induced fusion evaporation reactions with INGA [1,2]. The g-factor measurements for some of the isomers in these isotopes have also been carried away with time differential perturbed angular distribution (TDPAD) technique [3]. Some of these results will be presented which highlight the advance of understanding of collective phenomena and structure of the isomers.

[1] S. Biswas et al., Phys.Rev. C 95, 064320 (2017).
[2] S. Biswas et al., arXiv:1608.07840.
[3] Md. S. R. Laskar et al., Phys. Rev. C 99, 014308 (2019)