Odd-Odd $A \sim 80$ Systems Spectroscopic Properties in the Vicinity of rp-Process Path

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Exotic nuclei near proton drip-line are of great astrophysical importance [1]. Because of their positions,they give the opportunity of modelling the astrophysical rp-process [2]. *Odd-odd* nuclei in such unstable region are good candidates for developing our knowledge in both experimental and theoretical aspects [2–4]. In this work, we have studied odd-odd $N = Z$ nuclei that lay near the rp-process path in ^{100}Sn mass region. In this context, we have performed some spectroscopic calculations by means of $NuShellX@MSU$ nuclear structure code [5] in the framework of nuclear shell model. The used residual interaction is deduced from $sn100pn$ [6] original one considering similarity and $ni56pn$ new interaction is introduced [7]. Recent Single Particle Energies (SPE) are used in this later are [8]. The calculated nuclear structure properties are, then, compared with the available experimental data for all studied nuclei.

References

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