Abstract

Ground state deformation and its evolution with neutron number for several isotopic chains (Ru(Z=44), Mo(Z=42), Zr(Z=40), Sr(Z=38) and Kr(Z=36)) are obtained using the proxy-SU(3) model and compared with the results of the covariant density functional theory (CDFT) and available experimental data. The comparisons reveal the predictability power of proxy-SU(3), describing the shape evolution and transition of these nuclei with reasonable accuracy using this model.

Keywords: proxy-su(3), CDFT