

## Three-body forces and shell structure in tin isotopes

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### **Abstract**

This work is devoted to the study of the nuclear structure around the doubly magic  $^{132}\text{Sn}$  nucleus in the frame of the shell model. We are interested in studying and understanding the role of the three body effects on the shell model calculations for the neutron rich even-even  $^{134}\text{Sn}$ ,  $^{136}\text{Sn}$  and  $^{138}\text{Sn}$  nuclei. The calculations are carried out by means of OXBASH nuclear structure code. In order to reproduce the experimental data of excitation energies, we use the CWG interaction with Z50N82 space model. We carry out some modifications to get CWGM interaction. The obtained results are compared with experimental data and those of the literature.