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## STUDY ON GROUND STATE ENERGY BAND OF EVEN Cd114-124 ISOTOPES UNDER THE FRAMEWORK OF INTERACTING BOSON MODEL (IBM-1)

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### Abstract

In this research, the ground state gamma ray bands of even Cd114-124 isotopes are calculated using interacting boson model (IBM-1). The theoretical energy levels for Z = 48, N = 66-76 up to spin-parity 8(+) have been obtained by using PHINT computer program. The values of the parameters in the IBM-1 Hamiltonian yield the best fit to the experimental energy spectrum. The calculated results of the ground state energy band are compared to the previous experimental results and the obtained theoretical calculations in IBM-1 are in good agreement with the experimental energy level.

### Keywords

**Author Keywords:** Interacting boson model-1; even-even isotopes; Cd; energy level; theoretical

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