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The pairing-interaction impact on the beta-decay characteristics and multi-neutron emission of the neutron-rich 126,128,130,132Cd

The effects of the residual interaction in the particle-particle channel on β-decay characteristics and the multi-neutron emission probabilities in the β-decay of 126,128,130,132Cd are studied within the quasiparticle random phase approximation with the Skyrme interaction. The coupling between one- and two-phonon terms in the wave functions of the low-energy 1+ states of the daughter nuclei is taken into account. It is shown that the inclusion of the spin-isospin interaction in the particle-particle channel leads to the reduction of half-lives and the redistribution of one- and two-neutron emission probabilities. The competition of tensor interaction and neutron-proton pairing in the β-decay characteristics of the neutron-rich Cd isotopes is discussed.

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