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Microscopic determination of the isospin symmetry breaking energy density functional

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The isospin symmetry breaking terms of the nuclear interaction is a small part of the whole, while it gives important contributions to some physical observables of nuclear properties. For instance, we showed that the isospin symmetry breaking terms affect the estimation of the slope parameter of the symmetry energy using the neutron-skin thickness and the charge radii difference of the mirror nuclei. Nevertheless, it depends on the strengths of the isospin symmetry breaking energy density functional. In this talk, we will show how to pin down the strength of the isospin symmetry breaking energy density functional using microscopic theories.

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