

# Recent progress in covariant density functional theory

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Covariant density functional theory is a modern theoretical tool for the description of nuclear phenomena. In recent years, the availability of high-performance computers has allowed to study a number of physical phenomena in its framework to the depth not accessible before. These are the description of odd-mass nuclei and single-particle excitations, systematic investigation of rotational response in paired regime, and fission process in actinides and superheavy nuclei. In addition, a global assessment of the accuracy of the description of physical observables and establishing theoretical uncertainties in their description became possible. I will discuss these recent developments. It is also clear that the current generation of covariant energy density functionals has some limitations. The possibilities of their extension and thus an improvement of the description of experimental data will be discussed.