

## Multiple shape coexistence around $Z = 30-48$ studied with beyond-mean-field methods

*Wednesday, 2 August 2023 09:00 (30 minutes)*

Nuclei in the region of the nuclear chart between  $Z = 28$  and 50 magic numbers show a collective behavior that can be attributed to the appearance of quadrupole shape mixing and/or coexistence. Advanced energy density functional (EDF) methods, including symmetry restorations and axial and triaxial shape mixing, are the perfect tools to study these phenomena from a microscopic point of view. In this contribution I will present recent systematic calculations performed with the Gogny EDF comparing with the available experimental data. Furthermore, I will focus on the appearance of multiple shape coexistence in the nucleus  $^{84}\text{Mo}$ .

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**Session Classification:** Collectivity from Zn to Zr