Investigating the evolution of nuclear structure below $Z = 50$ with Ag*

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Exploring ground-state nuclear properties is a powerful tool to investigate our understanding of nuclear structure. Laser spectroscopy gives access to model-independent measurements of the ground-state properties (spin, nuclear electromagnetic moments, changes in the charge radius) of short-lived ($\geq$10 ms) nuclei, providing an excellent benchmark for theoretical predictions close to magic shell closures far from stability [1]. Moreover, combining laser spectroscopy and state-of-the-art quantum chemistry can provide insight into the nuclear magnetization distribution parameter [2].

One region of high interest is the region between below closed-proton shell tin ($Z = 50$), a region with many competing nuclear configurations, and thus the subject of recent investigations, for example: tin [3], indium [1,4], cadmium [5], palladium [6], and silver [7-10] studies have been successfully performed before, and neutron-rich silver has been studied recently at ISOLDE/CERN [11] and at IGISOL in Jyväskylä [9,10].

I will present the laser spectroscopy setup at IGISOL and the CRIS technique at ISOLDE. The nuclear spin and electromagnetic properties of the ground state and isomeric states are deduced. I will compare these data and literature data below the $Z = 50$ magic shell closure with state-of-the-art nuclear DFT, further broadening our knowledge in this region of the nuclear chart. Further, I will present an outlook on BW effect studies in silver as a probe to the nuclear magnetization distribution.

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