

# Kagome metals, a platform for many-body physics

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Three important driving forces for creating qualitatively new phases in quantum materials are the topology of the materials' electronic band structures, frustration in the electrons' motion or magnetic interactions, and strong correlations between their charge, spin, and orbital degrees of freedom. In few material systems do all of these aspects come together to contribute on an equal footing to stabilize new electronic states with unprecedented properties; however, the search for such systems can be guided by models of configurational motifs or key sublattices that can host such physics. One of the most fascinating structural motifs for realizing this rich interplay of frustration, electronic topology, and electron correlation effects is the kagome lattice. This review provides an overview of the theoretical underpinnings driving the physics of kagome lattices and a subsequent discussion on experimental progress in realizing novel states enabled by kagome networks in crystalline materials. Different material classes are discussed, with an emphasis on the phenomenologies of their electronic states and how they map to interactions arising from their kagome lattices [1].

[1] D. Di Sante, *et al.*, *Kagome metals*, Rev. Mod. Phys. 98, 015002 (2026)

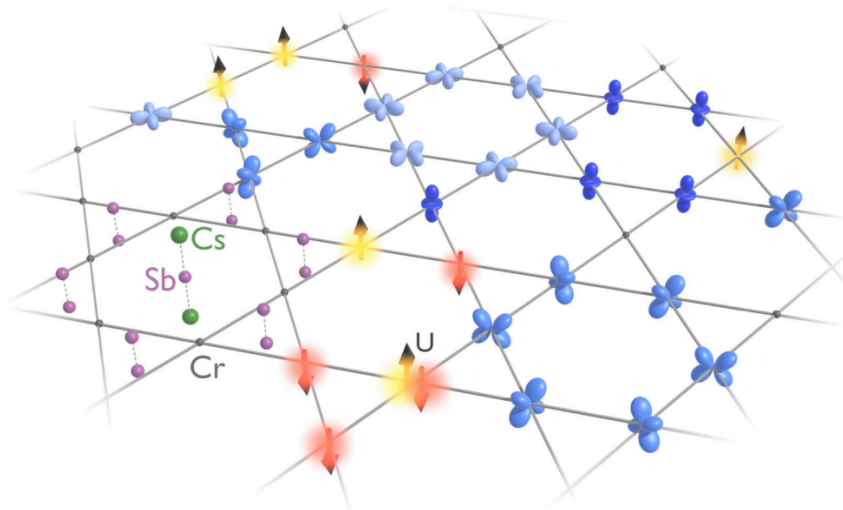


Figure adapted from Ref. [1]