

Electronic Structure Studies of Magnetic Topological Semimetals

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Topological magnetic materials display a strong interplay between magnetic and electronic properties, giving rise to various exotic quantum phenomena such as the anomalous Hall effect (AHE), the topological Hall effect (THE), and the skyrmion lattice. On the other hand, the Kagome lattice, in which the atoms are arranged in a star-like formation, anticipates geometrical frustration leading to noncollinear antiferromagnetic (AFM) ordering. So far, several Kagome intermetallic systems, such as $\text{Co}_3\text{Sn}_2\text{S}_2$, Fe_3Sn_2 , YMn_6Sn_6 , $\text{Gd}_3\text{Ru}_4\text{Al}_{12}$, etc. have been explored for their magnetic and topological properties. In this presentation, I will discuss the electronic structure of some magnetic topological semimetals.