

# Large magnetotransport responses of topological van der Waals magnets

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Two dimensional topological semimetals and semiconductors, whose low energy electronic structure possesses band contact points or lines, are generally expected to exhibit novel transport responses. Particularly, when combined with magnetism, topological band degeneracy can be readily tuned by spin configuration or orientation, offering an efficient magnetic control of electronic conduction. In this talk, I will introduce van der Waals (vdW) magnets, where combination of magnetism, spin-orbit interaction, and orbital-driven topological band degeneracy gives rise to large magnetotransport responses and magnetic tunability. These unique transport properties clearly demonstrate that topological vdW magnets and their nanoflakes have great potential for realizing novel spin-dependent electronic functionalities, which may be suitable for spintronic applications.