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Intrinsic Quantum Anomalous Hall Effect in the Kagome Lattice Cs₂LiMn₃F₁₂ GANG XU, BIAO LIAN, SHOU-CHENG ZHANG, Stanford Univ, ZHANG'S GROUP TEAM — In a kagome lattice, the time reversal symmetry can be broken by a staggered magnetic flux emerging from the ferromagnetic ordering and intrinsic spin-orbit coupling, leading to several well-separated nontrivial Chern bands and intrinsic quantum anomalous Hall effect. Based on this idea and *ab initio* calculations, we propose the realization of the intrinsic quantum anomalous Hall effect in the single layer Cs₂Mn₃F₁₂ kagome lattice and on the (001) surface of a Cs₂LiMn₃F₁₂ single crystal by modifying the carrier coverage on it, where the band gap is around 20 meV. Moreover, a simplified tight binding model based on the inplane $dd\sigma$ antibonding states is constructed to understand the topological band structures of the system.

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