Anomalous Hall Effect in Freestanding Strontium Ruthenate

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SrRuO$_3$ (SRO) is a complex oxide that hosts a plethora of exotic magneto-transport properties due to its strong spin-orbit coupling and itinerant ferromagnetism. In particular it is an excellent candidate to investigate the intrinsic Berry-phase driven Anomalous Hall Effect. A recent breakthrough [1] has allowed complex oxides, epitaxially grown via pulsed laser deposition, to be exfoliated and released via a sacrificial layer. These freestanding complex oxide membranes are an exciting new platform for investigating and tuning the interplay between structural and electronic properties [2].