

Poster-2-4**Anomalous Hall Effect in Freestanding Strontium Ruthenate**

Patrick Blah, Edouard Lesne, Martin Lee, Mafalda Monteiro, Dmytro Afanasiev, Thierry van Thiel, Mattias Matthiesen, Jorrit Hortensius, Ulderico Filippozzi, and Andrea Caviglia

Kavli Institute of Nanoscience, Delft University of Technology, The Netherlands

SrRuO₃ (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].

[1] D. Lu et al., Nat. Mater., 15, 1255 (2016).

[2] D. Davidovikj et al. Commun. Phys. 3, 163 (2020).