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Exploring Co₃Sn₂S₂ magnetic phase

Co₃Sn₂S₂ a kagomé semi-metallic half-metal that displays a large anomalous Hall effect [1] as well as its Nernst [2] and thermal Hall [3] counterparts. Thanks to the low density of carriers, mobility is high and quantum oscillations are easily detectable [3]. This material is known to become ferromagnetic below ~175 K, however its exact magnetic texture is still unclear. Proposed magnetic phases involve addition on spin glass [4], antiferromagnetic phase [5] or canting of moments [6].

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