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【613】Spin reorientation in ferromagnetic type-II Weyl Fe3Sn2

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Fe3Sn2 is predicted to be a type-II Weyl semimetal which orders ferromagnetically below TC= 646 K. It undergoes a spin reorientation transition (SRT) between 300 K-100 K which together with recently shown coupling between its easy axis and the band structure paves the way of external control of its bulk properties. By probing anisotropic magnetoresistance, bulk magnetization and imaging the domain structure of Fe3Sn2 using XMCD-PEEM at different temperatures, we understand its domain structure together with evolution of easy axis during the SRT. We are able to clearly establish the nature of the SRT to be of first order.

Ref:
1. M. Yao et al. Switchable Weyl nodes in topological Kagome ferromagnet Fe3Sn2, arXiv 1810.01514 (2018).

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