Poster 1

Contrary to popular belief, $EuCd_2As_2$ is a magnetic semiconductor

Ana Akrap

University of Fribourg

$EuCd_2As_2$ has emerged as a topological material where magnetism may produce strong effects. This compound has been understood as a candidate Weyl semimetal, based mostly on transport and photoemission measurements. I will present our recent results on samples in which we control the carrier concentration through chemical synthesis. We find magneto-optical evidence of a sizeable band gap, remarkably sensitive to the local Eu magnetism. Our results contradict the current consensus on the ground state of this compound, bringing into question its topological nature.

[1] D. Santos-Cottin *et al.*, Phys. Rev. Lett. **131**, 186704 (2023).