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【601】 Topology-driven thermoelectricity and non-abelian statistics in momentum space

Thursday 30 August 2018 14:00 (30 minutes)

I will present examples of metals, which have topologically protected crossings in the phonon spectrum. I will show how the topological invariant of such crossings is defined and will show that the presence of such crossings puts the hosting metals among the best known thermoelectric metallic compounds.

Apart from that I will introduce the notion of non-abelian topological charge, defined in momentum space, and predicted previously in some phases of liquid He. I will show how this phase is realized in simple weakly-interacting crystalline compounds.

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