

Looking for Topological Quantum Materials With ARPES

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Quantum materials is a rather broad class of materials which have properties emerging from quantum mechanics and collective quantum effects, but can't be explained in classical terms (perfect example being superconductors). Non-trivial topology of their electronic structure brings in even more interesting phenomenon which can be very desired for applications such as quantum computers and spintronics. Angle-resolved photoemission spectroscopy (ARPES) with synchrotron as a light source is a perfect experimental method to study such materials as it allows to directly measure their band structure. The study of such multiband electronic structure is the key to the understanding of quantum materials and to the design of new materials with desired properties. The talk will cover a few studies of candidates for non-trivial topology including samples measured at SOLARIS.

Type of presence

Presence at Taras Shevchenko National University

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