

Phase Transitions in Telluride Materials by X-ray Diffraction and Neutron Scattering

Saturday, 24 May 2014 09:00 (30 minutes)

After the discovery of topological insulators, a theoretical model of a new class of unconventional superconductors (topological superconductors) was predicted. One of the most promising materials is Pd doped IrTe₂. In our work, we plan to map out the phase transition between the CDW and the normal phase, for temperature above 4K. The details of the CDW distortion will be analyzed in detail as a function of temperature for different concentration of Pd doping. Full x-T diagram will be obtained after performing neutron powder diffraction in the superconducting phase in the 0.5-4 K region.

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