26. Deutsche Physikerinnentagung 2022 (German Conference of Women in Physics)



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Type: Poster

Phase-transition in MoTe2 tracked by time-of-flight momentum microscopy

Saturday, November 26, 2022 4:00 PM (2 hours)

We have performed a comprehensive study of the temperature-induced phase-transition in transition metal dichalcogenide (TMDC) Mo1-XWXTe2 using ARPES, including linear and circular dichroism in the angular distribution (CDAD/LDAD), X-ray photoelectron diffraction (XPD) and spectroscopy (XPS) of the core-levels, Raman and X-ray diffraction (XRD) measurements at

different temperatures. Based on detailed structural information from XRD measurements,

calculations of XPD patterns were made using the Bloch-wave approach. It was found that the orthorhombic phase of MoTe2 shows inversion symmetry breaking and topological states and therefore has wide spectrum of potential applications.

Category

Solid State (Experiment)

Author: FEDCHENKO, Olena (JGU, Institut Für Physik)
Presenter: FEDCHENKO, Olena (JGU, Institut Für Physik)
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