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Photoemission measurements of strained VO2[1] JUDE LAVEROCK, ANDREW PRESTON, DAVE NEWBY, KEVIN SMITH, Boston University, SALINPORN KITTIWATANAKUL, JIWEI LU, STUART WOLF, University of Virginia, MATS LEANDERSSON, BALASUBRAMANIAN THIAGARAJAN, MAX-lab, Lund University
— The metal-insulator transition of VO_2 has been a textbook example for many years, despite a clear understanding of its microscopic origins proving elusive. Recently, the promise towards novel applications of high-quality thin films, in which the properties of the transition can be tailored by applied strain, has thrust VO_2 back into focus. Here, we report photoemission measurements of strained VO_2 thin films epitaxially grown on TiO_2(110) and TiO_2(100) substrates. The applied strain for these two films lead to moderate and large compressive rutile *c*-axis strains, respectively. By making use of the incident photon polarization, we observe the changes in polarization anisotropy both across the transition and as a function of applied strain, and demonstrate how we can use this to learn more about the origin of the MIT in VO_2.

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Jude Laverock
Boston University

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