Abstract Submitted
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**Photoemission Study of VO2 Above and Below the Transition Temperature**[1] LUCA MORESCHINI, Advanced Light Source, YOUNG JUN CHANG, Advanced Light Source and Fritz-Haber Institut, DAVIDE INNOCENTI, Advanced Light Source and Università di Tor Vergata, ANDREW L. WALTER, Advanced Light Source and Fritz-Haber Institut, JONATHAN DENLINGER, AARON BOSTWICK, ELI ROTENBERG, Advanced Light Source — Angle-resolved photoemission (ARPES) experiments on $VO_2$ have traditionally been hindered by the quality of cleaved single crystals. The lack of a clear metal-insulator transition (MIT) in low photon energy measurements has even lead to the assumption of a surface region with a different electronic structure. WIth the *in situ* pulsed-laser-deposition (PLD) system available on beamline 7.0.1 at the Advanced Light Source we have grown $VO_2$(001) films on a $TiO_2$ substrate and measured the band structure above and below the transition temperature. We discuss our results in comparison with the available calculations, and we show that the MIT is clearly visible for photon energies within the UV range.

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