Abstract Submitted
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the effect of electron doping in TiO2 assessed by ARPES LUCA MORESCHINI, Advanced Light Source, Berkeley, SIMON MOSER, Institute of Condensed Matter Physics (ICMP)-EPFL-Lausanne, JACIM JACIMOVIC, Institute of Condensed Matter Physics (ICMP)-EPFL, Lausanne, OSOR BARISIC, Institute of Physics, Zagreb, HELMUT BERGER, ARNAUD MAGREZ, Institute of Condensed Matter Physics (ICMP)-EPFL, Lausanne, YOUNG JUN CHANG, KEUN SU KIM, AARON BOSTWICK, Advanced Light Source, Berkeley, LASZLO FORRO, Institute of Condensed Matter Physics (ICMP)-EPFL, Lausanne, ELI ROTENBERG, Advanced Light Source, Berkeley, MARCO GRIONI, Institute of Condensed Matter Physics (ICMP)-EPFL, Lausanne — The titanium oxide TiO2 has been object of extensive studies because of its suitability in many practical fields, ranging from photovoltaic applications, to catalysis, memristors, and others. As for many other transition metal oxides, great attention has been devoted to the impact on the electronic structure of different doping mechanisms, either extrinsic or due to the creation of oxygen vacancies. Here we report an angle-resolved photoemission (ARPES) work on TiO_2 single crystals and epitaxial films grown wIth the *in situ* pulsed-laser-deposition (PLD) system available on beamline 7.0.1 at the Advanced Light Source. We show the evolution of the electronic structure as a function of the amount of oxygen vacancies induced by the photon beam.

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