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Electronic anisotropy and orbital ordering in Ru doped BaFe2As2 revealed by ARPES and XLD YOONYOUNG KOH, YEONGKWAN KIM, JUNGJIN SEO, Institute of Physics and Applied Physics, Yonsei University, MANJIN EOM, JUNSUNG KIM, Department of Physics, Pohang University of Science and Technology, HANGU LEE, BYEONGGYU PARK, JAEYOUNG KIM, Pohang Accelerator Laboratory, CHANGYOUNG KIM, Institute of Physics and Applied Physics, Yonsei University — A central issue in iron pnictides is the origin of electronic anisotropy. It is considered that its role in iron pnictides is important to the nature of magnetism and superconductivity. It was proposed that orbital ordering may play a key role. Since XLD can observe different occupation numbers for dyz and dzx orbitals, it is regarded to provide an experimental signature for the existence of orbital ordering. The work was motivated by the goal of exploring whether the orbital ordering and its fluctuation would explain the underlying mechanism on magnetism and superconductivity. We performed temperature dependent measurements both ARPES and XLD on Ba(Fe1−xRux)2As2 to experimentally verify existence of electronic anisotropy and orbital ordering.

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