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Electronic Structure of Superconducting FeSe Studied by Photoemission Spectroscopy[1] RIKIYA YOSHIDA, Okayama University, TAKANORI WAKITA, RLSS-Okayama University, JST-TRIP, HIROYUKI OKAZAKI, Okayama University, YOSHIKAZU MIZUGUCHI, University of Tsukuba, NIMS, SHUNSUKE TSUDA, NIMS, WPI-MANA-NIMS, JST-TRIP, YOSHIHIKO TAKANO, NIMS, University of Tsukuba, JST-TRIP, HIROYUKI TAKEYA, KAZUTO HIRATA, NIMS, TAKAYUKI MURO, JASRI/SPring-8, MARIO OKAWA, KYOKO ISHIZAKA, ISSP-The University of Tokyo, SHIK SHIN, ISSP-The University of Tokyo, RIKEN, HISATOMO HARIMA, Kobe University, JST-TRIP, MASAAKI HIRAI, YUJI MURAOKA, TAKAYOSHI YOKOYA, RLSS-Okayama University, JST-TRIP — We have performed soft x-ray and ultrahigh-resolution laser photoemission measurements on tetragonal FeSe, which was recently identified as a superconductor. Energy dependent study of valence band is compared to band structure calculations and yields a reasonable assignment of partial densities of states. However, the sharp peak near the Fermi level slightly deviates from the calculated energy position, giving rise to the necessity of self-energy correction. We have also performed an ultrahigh-resolution laser photoemission experiment on FeSe and observed the suppression of intensity around the Fermi level upon cooling.

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