

Electronic structure of $\text{FeTe}_{1-x}\text{Se}_x$

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We report the electronic structure of the iron-chalcogenide superconductor, $\text{Fe}(\text{Te}_{1-x}\text{Se}_x)$, obtained with high resolution angle-resolved photoemission spectroscopy and density functional calculations. In photoemission measurements, various photon energies and polarizations are exploited to study the Fermi surface topology and symmetry properties of the bands. Meanwhile, since Se-doping only change the chemical pressure in $\text{Fe}(\text{Te}_{1-x}\text{Se}_x)$, we try to reveal how the chemical pressure would change the electronic structure of the superconductors and therefore affect superconductivity. This would be significant to reveal the mechanism of superconductivity.