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ARPES Study on the Electronic Structure of FeTe
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Among the iron-based superconductors, iron chalcogenides FeSe$_x$Te$_{1-x}$
($T_c \sim 20K$) are special for their structural simplicity. FeTe, the parent compound
for iron chalcogenides, though without superconducting transition, shows a unique
antiferromagnetic order below tetragonal-orthorhombic structural phase transition
temperature. Here we present recent ARPES results on this material, including mea-
surements on electronic band structure and Fermi surface topology. We discovered
strong $k_z$ dispersion of the Fermi surface and observed electronic band evolution
through phase transition. The comparison of iron chalcogenides and other iron-
based superconductor families helps us identify the governing physics in this new
family of superconductors.

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