

Setup of laser-based angular resolved photoemission spectroscopy

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The laser angular resolved photoemission spectroscopy (ARPES) could achieve ultrahigh resolution, which is crucial in ARPES measurement. In addition, the dynamical and non-equilibrium processes in the condensed matter systems play a key role in their physical and chemical properties. Both ultraviolet laser ARPES and time resolved two-photon photoemission (TR2PPE) are established in our lab. The ultraviolet laser ARPES exhibits superior performance, including ultrahigh resolution and enhanced bulk sensitivity. Meanwhile, the TR2PPE could investigate the ultrafast electronic dynamics of the non-equilibrium charge carriers in the time domain directly. Here we show the setup of laser-based ARPES and some preliminary results.