

Description of Additional Supplementary Files

File Name: Supplementary Movie 1

Description: The movie presents three-dimensional data streams of, photoelectron spectra displaying the photoelectron counts (color scale) as a function of the photoelectron energy E_f relative to E_F and k_{\parallel} -momentum. Details are described in the Supplementary Note 1.

File Name: Supplementary Movie 2

Description: The movie displays the IFT of the $2\omega_f$ -component of the data shown in Supplementary Movie 1. Details are described in the Supplementary Note 1.