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**Characterizing the wetting process of Ag films on Cu(111) with the angle-resolved photoelectron spectroscopy** DAH-AN LUH, KUAN-CHUN LIU, Department of Physics, National Central University, CHENG-MAW CHENG, KU-DING TSUEI, National Synchrotron Radiation Research Center — Electronic states of a metallic thin film are closely related to its surface morphology. The dynamics in the change of the surface morphology of a metallic thin film can become explored if its electronics states are measured. In this study, we demonstrate that the wetting process of a Ag film on Cu(111) is characterized by monitoring the evolution of its surface states with the angle-resolved photoelectron spectroscopy (ARPES). A Ag film on Cu(111) is disordered when Ag is deposited at low temperature, but it wets on Cu(111) for up to 2 ML when Ag is deposited at and above room temperature. To study the wetting of a Ag film on Cu(111), we constructed a special disordered Ag film, and monitored its layer-resolved surface states with the real-time ARPES during the wetting of the Ag film. The result shows that there exists a transitional state before the wetting is complete, and suggests a two-process model of wetting.

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