Abstract： Auger electron spectroscopy (AES) and low-energy electron diffraction (LEED) studies of Cu deposition on a 6H-SiC(0001) surface have shown fine-particle formation with an average size of approximately 2 nm for a 6H-SiC(0001) C-face at a nominal Cu coverage of approximately 2 ML, where its size depends on the nominal Cu film thickness. Soft-X-ray emission spectroscopy (SXES) of an annealed Cu(60 nm)/3C-SiC(001) specimen clarified that little reaction occurred at the Cu/SiC interface. The heated specimen is considered to have Cu islands on top.