

Supporting information

Video 1:

Name: PbCu-alloying_1

Title: Electrochemical surface alloying and dealloying of Pb in Cu surface

Legend:

Real-time STM video sequence (15 nm × 15 nm) of Cu(100) in Cl-containing electrolyte, showing the formation and subsequent dissolution of the Pb surface during a potential cycle from -0.24 to -0.47 V and back.

Keywords:

STM, dynamics, alloy, electrochemistry, electrodeposition, surface phase formation, Cu, Pb

Video 2:

Name: PbCu-alloying_2

Title: Electrochemical surface alloying and dealloying of Pb in Cu surface

Legend:

Real-time STM video sequence (16 nm × 16 nm to 13 nm × 13 nm) of Cu(100) in Cl-containing electrolyte, showing the Pb surface alloying and dealloying process during a potential cycle from -0.26 to -0.45 V and back.

Keywords:

STM, dynamics, alloy, electrochemistry, electrodeposition, surface phase formation, Cu, Pb