EXTENDED CONTENTS

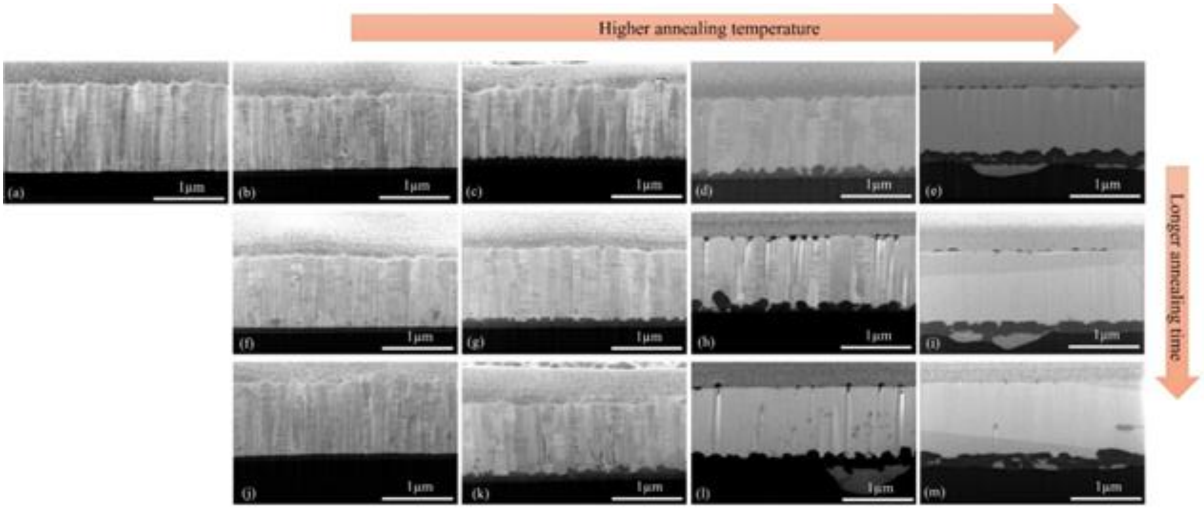

Figure 1. Microstructural evolution of Ag(Cu)/Ti films annealed under a vacuum pressure of 5.5 mTorrs. (a) As-deposited Ag(Cu)/Ti film. (b)–(m) Films annealed at various temperatures (200, 300, 400, and 500 °C from left to right) for different durations (1, 24, and 48 h from top to bottom).

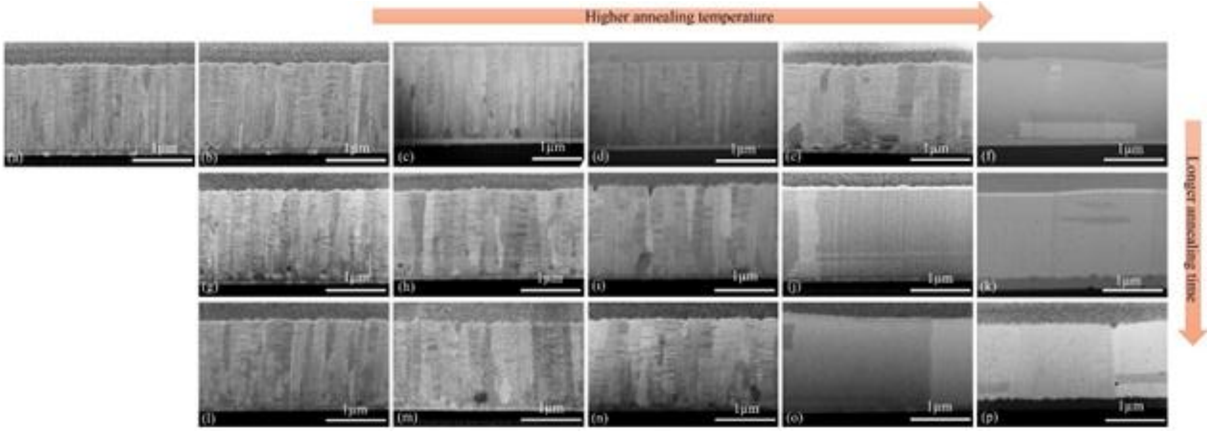

Figure 2. Microstructural evolution of Ag(Cu)/Ta films annealed under a vacuum pressure of 5.5 mTorr. (a) As-deposited Ag(Cu)/Ta film. (b)–(p) Films annealed at various temperatures (200, 300, 400, 500, and 600 °C from left to right) for different durations (1, 24, and 48 h from top to bottom).

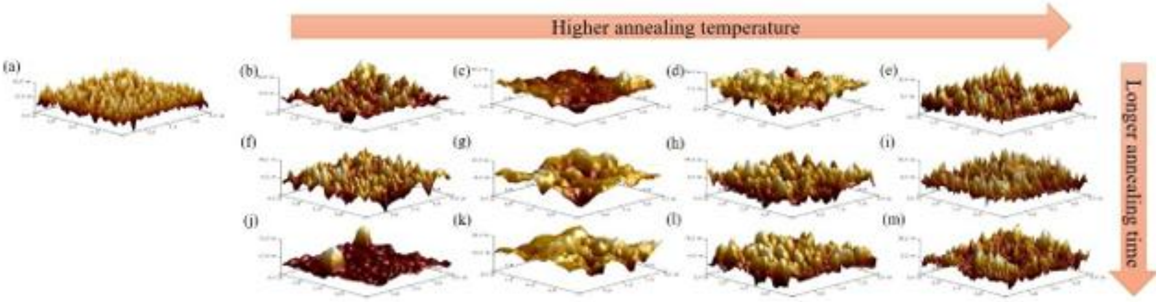

Figure 3. Three-dimensional surface morphology of Ag(Cu)/Ti films obtained by SPM scanning. (a) As-deposited film. (b)–(m) Films annealed at various temperatures (200, 300, 400, and 500 °C from left to right) for different durations (1, 24, and 48 h from top to bottom).

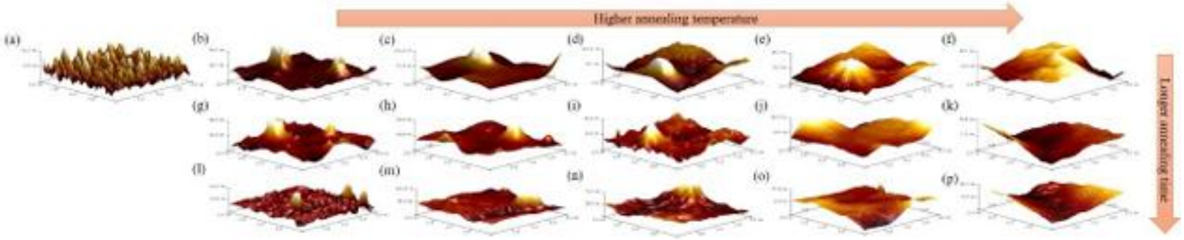

Figure 4. Three-dimensional surface morphology of Ag(Cu)/Ta films obtained by SPM scanning. (a) As-deposited film. (b)–(m) Films annealed at various temperatures (200, 300, 400, 500, and 600 °C from left to right) for different durations (1, 24, and 48 h from top to bottom).