Abstract Submitted
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Low-Energy Electron Diffraction Study of Clean, Unreconstructed Au(111) STEPHANIE ASH, MELLITA CARAGIU, Ohio Northern University, JAMES THOMPSON, Lincoln University, RENEE DIEHL, HEEKEUN SHIN, GARRY MCGUIRK, Pennsylvania State University — The present study investigates the surface of clean gold, cut along the (111) crystallographic plane. Computational Low-Energy Electron Diffraction (LEED) analysis of experimental data reveals an unreconstructed Au(111) surface with the main feature being the relaxation of the top- most atomic layers, i.e. a variation in the interatomic distance between consecutive layers within the surface, as compared to the bulk interatomic distance. Understanding of the clean Au surface precedes future studies of the gold surface on which different species of atoms are adsorbed and expected to induce a reconstruction of the substrate.

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