

Abstract Submitted
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Lateral Quantum Well States on Pb Films Grown on Cu Step Surface PINGHENG ZHOU, Louisiana State University, Baton Rouge LA 70806, USA, YANG LIU, TOM MILLER, TAI-CHANG CHIANG, Department of Physics, University of Illinois at Urbana-Champaign, 1110 West Green Street, Urbana, Illinois 61801-3080, USA, PAOLO MORAS, CARLO CARBONE, Istituto di Struttura Materia, Consiglio Nazionale delle Ricerche, Trieste, Italy, LOUISIANA STATE UNIVERSITY, BATON ROUGE LA 70806, USA TEAM, DEPARTMENT OF PHYSICS, UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN, ILLINOIS 61801-3080, USA TEAM, ISTITUTO DI STRUTTURA MATERIA, CONSIGLIO NAZIONALE DELLE RICERCHE, TRIESTE, ITALY TEAM — The highly ordered Pb films were found to grow on Cu step surface as a “magic” heteroepitaxial grown model. The lateral quantum well states in these Pb have been investigated by angle-resolved photoemission. Across the step direction, the quantum well state display a dispersive character, with periodicity in reciprocal space defined by the step superlattice geometry. These observations are compared and analyzed with *ab initio* calculations based on the full-potential linearized augmented plane wave method.

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