

Abstract Submitted
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Growth of Iridium and Silver on Ge(111) Studied by STM¹ MARSHALL VAN ZIJLL, CORY MULLET, EMILIE HUFFMAN, SHIRLEY CHIANG, UC Davis — We have used scanning tunneling microscopy (STM) to characterize the growth of iridium and silver onto Ge(111) as a function of coverage and annealing temperature. Ir was deposited onto the Ge(111) c(2x8) surface at different coverages less than 1ML. The Ir forms islands with a $(\sqrt{3}\times\sqrt{3})R30^\circ$ phase and island size increasing with increasing annealing temperature. Stranski-Krastanov growth was observed at most coverages. Ag deposited onto the Ge(111) c(2x8) surface and annealed at 450K forms both a (4x4) phase and a (3x1) phase. The Ge(111) surface reorganizes to a (2x2) phase after deposition of both Ir and Ag. High resolution images have been obtained allowing direct observation of the different phases.

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