

Abstract Submitted  
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**Synthesis and Characterization of Au@Pd@Au core-shell nanostructures** ALEJANDRA LONDONO-CALDERON, J. JESUS VELAZQUEZ-SALAZAR, MIGUEL JOSE YACAMAN, Univ of Texas, San Antonio — In this work we present a systematic study on the synthesis of (Au@Pd)@Au nanostructures by a seed mediated method in aqueous solution. In the first step, single crystal Au octahedra nanoparticles are used as seeds to produce bimetallic Au@Pd core-shell nanocubes of 40 nm in size. The growth mechanism of successive Au layers over the Au@Pd nanocubes and the crystallinity on the Au/Pd and Pd/Au interfaces are studied by the use of Scanning Electron Microscopy (SEM), High Resolution Transmission Electron Microscopy (HRTEM) and Scanning Transmission Electron Microscopy (STEM). A transformation from cubes to truncated polyhedrons is observed by Electron Tomography in the reconstruction of the surface.

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