

ANALYSIS OF BIMETALLICS NANOPARTICLES.

Ariosto Medina¹, Luis Béjar² and J. A. Ascencio³.

¹Instituto de Investigaciones Metalúrgicas, ²Facultad de Ingeniería Mecánica, Universidad Michoacana de San Nicolás de Hidalgo (UMSNH), Cd. Universitaria, Morelia, Michoacán, México, C.P. 58000.

³Instituto de Ciencias Físicas, Universidad Nacional Autónoma de México, Cuernavaca, Morelos. México, C.P. 62210.

In this work, we present study on the structure of bimetallic nanoparticles. The application of Au–Cu nanoparticles is becoming increasingly important, the structure of such alloyed particles, which is critical for tailoring their properties. Bimetallic nanoparticles are characterized by high resolution transmission electron microscopy (HRTEM) elemental composition by Energy Dispersive Spectroscopy (EDS), Energy Electron Low Spectroscopy (EELS) which allowed us to study the internal structure, morphology, size, structure and the elemental composition in the clusters. Fast Fourier Transform (FFT) method is applied to determine the crystalline structure. The results showed the formation of bimetallic particles with size between 2 to 13 nm whit decahedra and octahedral morphology with like fcc structure and the Au is covering the core of Cu.