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## **Supporting Information**

Spontaneous formation of Au-Pt alloyed nanoparticles using pure nano-counterparts as starters: a ligand and size dependent process

Laura Uson, Victor Sebastian, Alvaro Mayoral, Jose Luis Hueso, Adela Eguizabal, Manuel Arruebo and Jesus Santamaria.

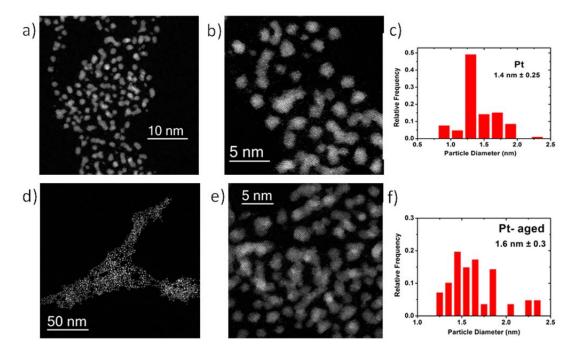


Figure S1. STEM-HAADF micrographs of Pt clusters. a) Pt clusters as prepared, b) Detail image of Pt clusters as prepared. It can be observed the nanocrystal lattice and a well-crystallization. c) Particle size distribution of Pt clusters as prepared. d) and e) Pt clusters after an ageing process of 4 months. The clusters keep a well-crystallized structured. f) Particle size distribution of Pt clusters aged during 4 months.

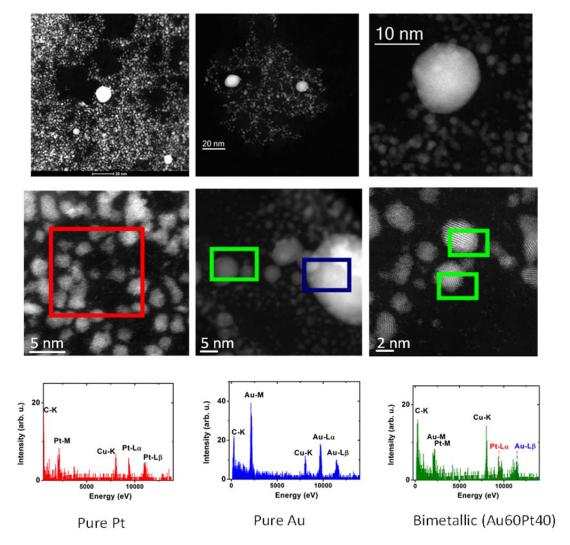


Figure S2. C<sub>s</sub>-corrected STEM-HAADF micrographs and EDS analysis of PtAu colloid obtained by the physical mixture of Au and Pt clusters stabilized with THPC ligands after 150 h of mixing at 50°C.