

Electronic Supplementary Information

Hollow AgPt/SiO₂ Nanomaterials with Controlled Surface Morphologies: Is the Number of Active Sites Imperative to Optimized Catalytic Performances?

Thenner S. Rodrigues,¹ Alisson H. M. da Silva,² Anderson G. M. da Silva,¹ Daniel G. Ceara,¹
Janaina F. Gomes,² Jose M. Assaf,² and Pedro H. C. Camargo^{1*}

¹Departamento de Química Fundamental, Instituto de Química, Universidade de São Paulo,
Av. Prof. Lineu Prestes, 748, 05508-000, São Paulo-SP, Brazil

²Departamento de Engenharia Química – Universidade Federal de São Carlos, 13565-905,
São Carlos – SP, Brasil.

**Corresponding author: E-mail: camargo@iq.usp.br*

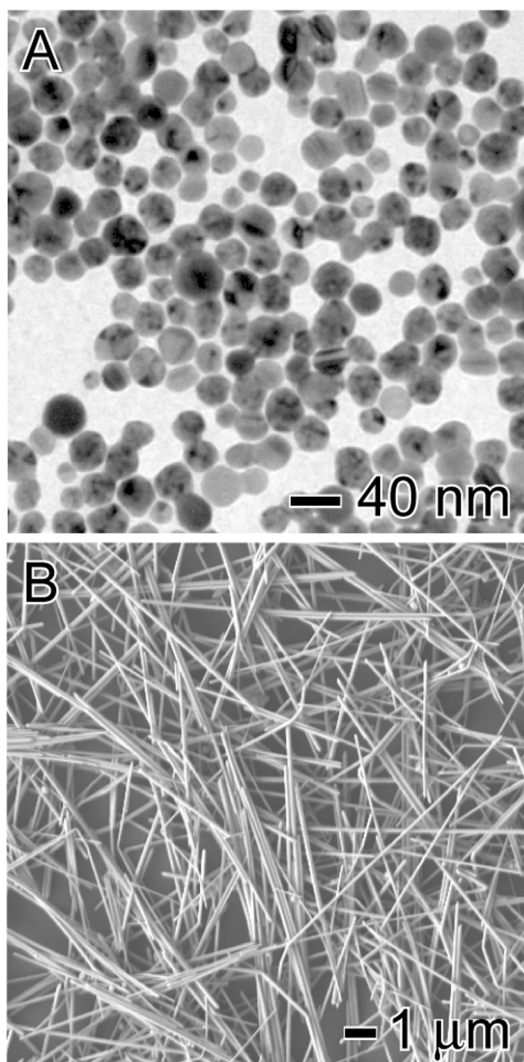


Figure S1. TEM image for Ag spheres (A) and SEM image for Ag wires (B) employed as templates for the synthesis of the AgPt hollow nanostructures depicted in Figure 1.

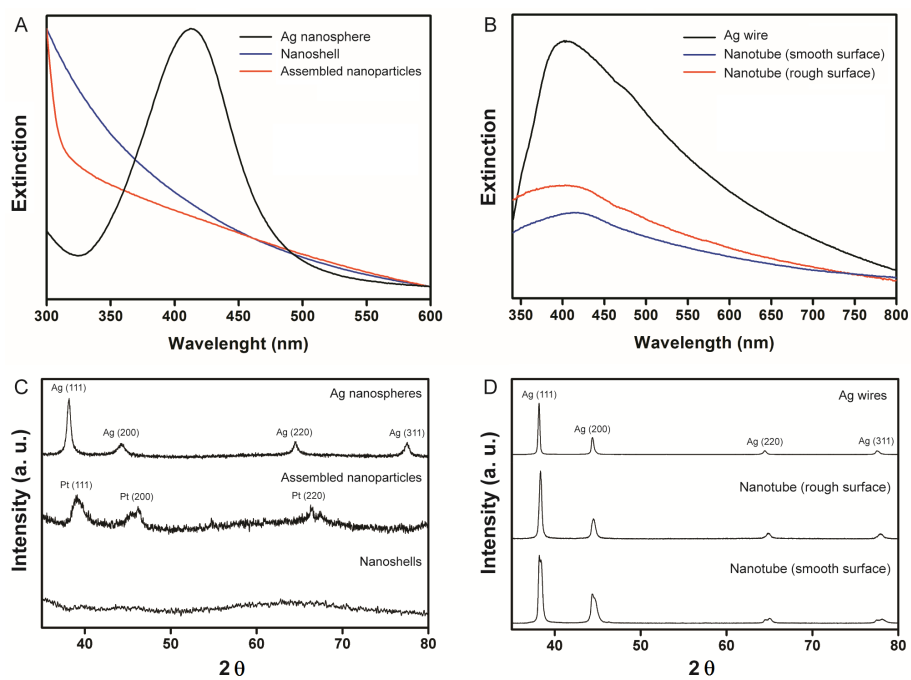


Figure S2. UV–VIS extinction spectra recorded from aqueous suspensions containing Ag nanospheres, nanoshells, and assembled nanoparticles (A) and wires, nanotubes with smooth surfaces, and nanotubes with rough surfaces (B).

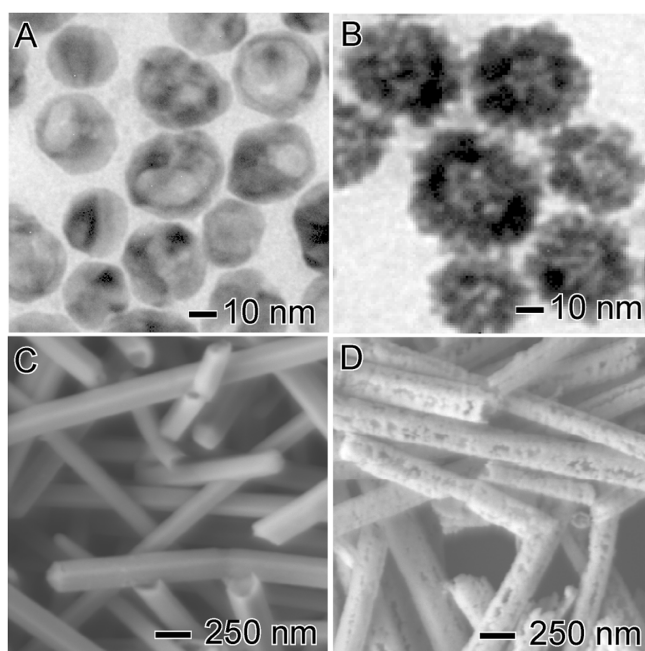


Figure S3. (A and B) TEM and (C and D) SEM images for AgPt nanoshells (A), assembled nanoparticles (B), nanotube with smooth surfaces (C), and nanotubes with rough surfaces (D) obtained after 1 h employing the scaled-up approach performed in the same conditions described in Scheme 1.

Table S1. Ag and Pt Atomic percentages obtained by ICP-OES.

Sample	Ag (mol %)	Pt (mol%)
nanoshells	49	51
assembled nanoparticles	49	51
nanotubes (smooth surface)	74	26
nanotubes (rough surface)	75	25