Electronic Supplementary Material (ESI) for Faraday Discussions.

Electronic Supplementary Information

Templated growth of gold satellites on dimpled silica cores

C. Chomette,[a] E. Duguet,[a]* S. Mornet,[a] E. Yammine,[a] V. N. Manoharan,[b,c] N. B. Schade,[c] C. Hubert,[d] S. Ravaine,[d]* A. Perro[e] and M. Tréguer-Delapierre[a]*

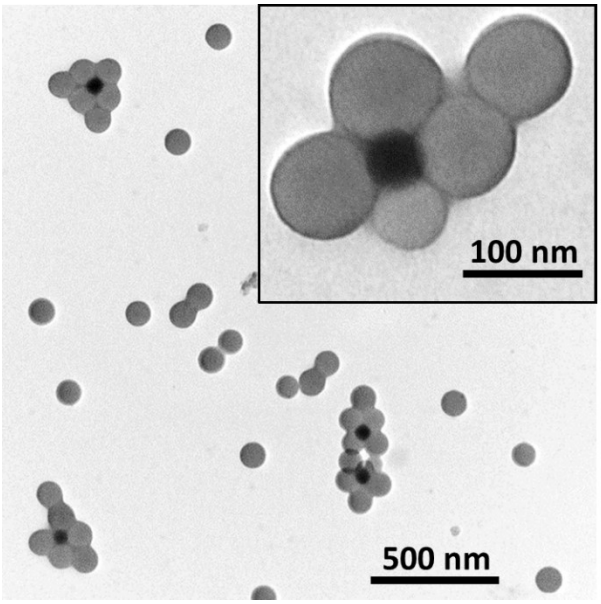

Figure §1: TEM images of silica/polystyrene tetrapods obtained through styrene emulsion polymerisation from 52-nm silica seeds previously surface-modified with acetoxypropyltrimethoxysilane (AMS).

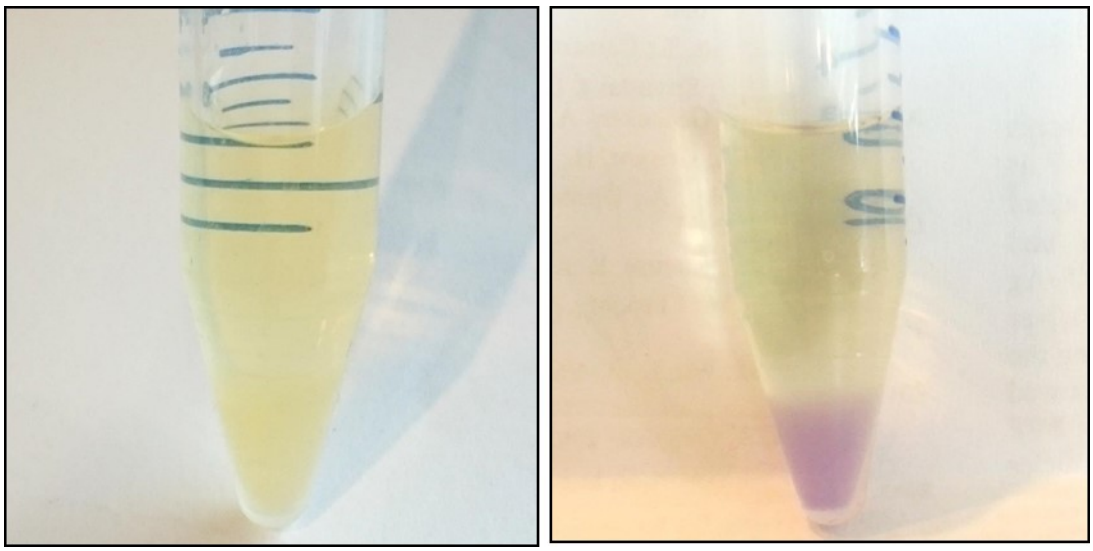

Figure §2: Pictures of the nitrobenzyl pyridine assay on dimpled silica particles before (left) and after (right) the chloromethylation reaction. The yellow color of the supernatant resulted from the presence of an excess of NBP.

Protocol: We sequentially added 1 mL of dimpled silica particles dispersion in DMF (10^{12} particles), 2 mL of nitrobenzyl pyridine (Sigma Aldrich, 0.05 M) and 15 µL of triethylamine (Aldrich) to a 10-mL flask. We increased the temperature to 90°C and we let the mixture react at that temperature under stirring for 30 min. Finally, we transferred the dispersion into a falcon tube, centrifuged it at 12,000 g for 10 min, and then observed it by eye.

Before chloromethylation the silica particles dispersion was colorless. Afterward, the chloromethylated particles exhibited a noticeable pink/purple color, which agrees with the results obtained for Merrifield-resin with nitrobenzyl pyridine [F. Galindo, B. Altava, M. I. Burguete, R. Gavara and S. V Luis, *J. Comb. Chem.*, 2004, **6**, 859].