

Supporting information

Bimetallic Mesoflowers: Region-Specific Overgrowth and Substrate Dependent Surface-Enhanced Raman Scattering at Single Particle Level

P. R. Sajanlal and T. Pradeep*

DST Unit on Nanoscience (DST UNS), Department of Chemistry and Sophisticated Analytical Instrument Facility, Indian Institute of Technology Madras, Chennai 600 036, India

*Address correspondence to pradeep@iitm.ac.in

Fax: + 91-44 2257-0545

Supporting information 1

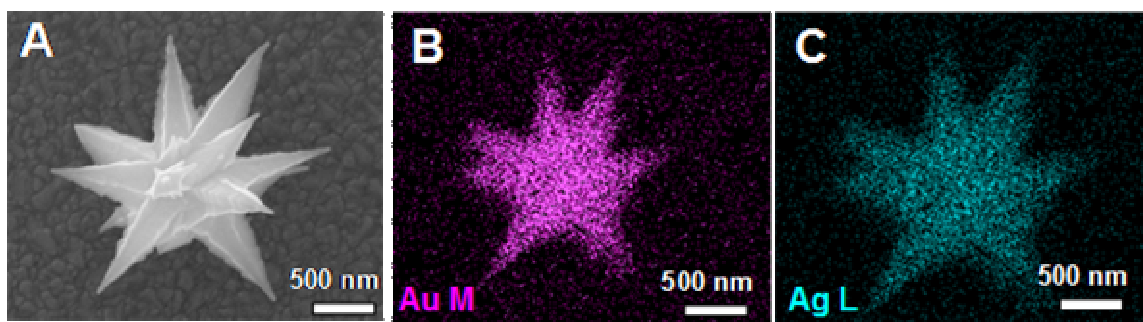


Figure S1. SEM (A) and corresponding EDAX images (B and C) of the Au/Ag MFs prepared in the absence of surfactant CTAB.

Supporting information 2

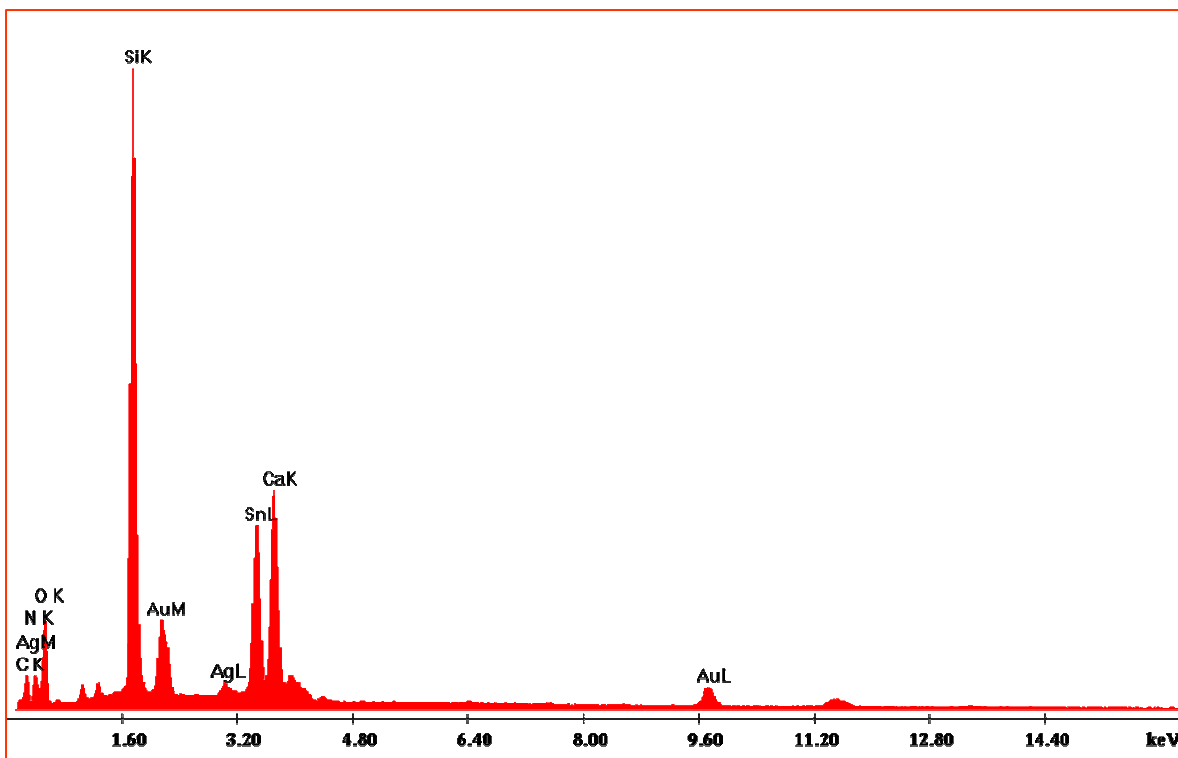


Figure S2. EDAX spectrum collected from a single bimetallic Au/Ag MF. The elements In, Sn and Si are due to the ITO conducting glass substrate.

Supporting information 3

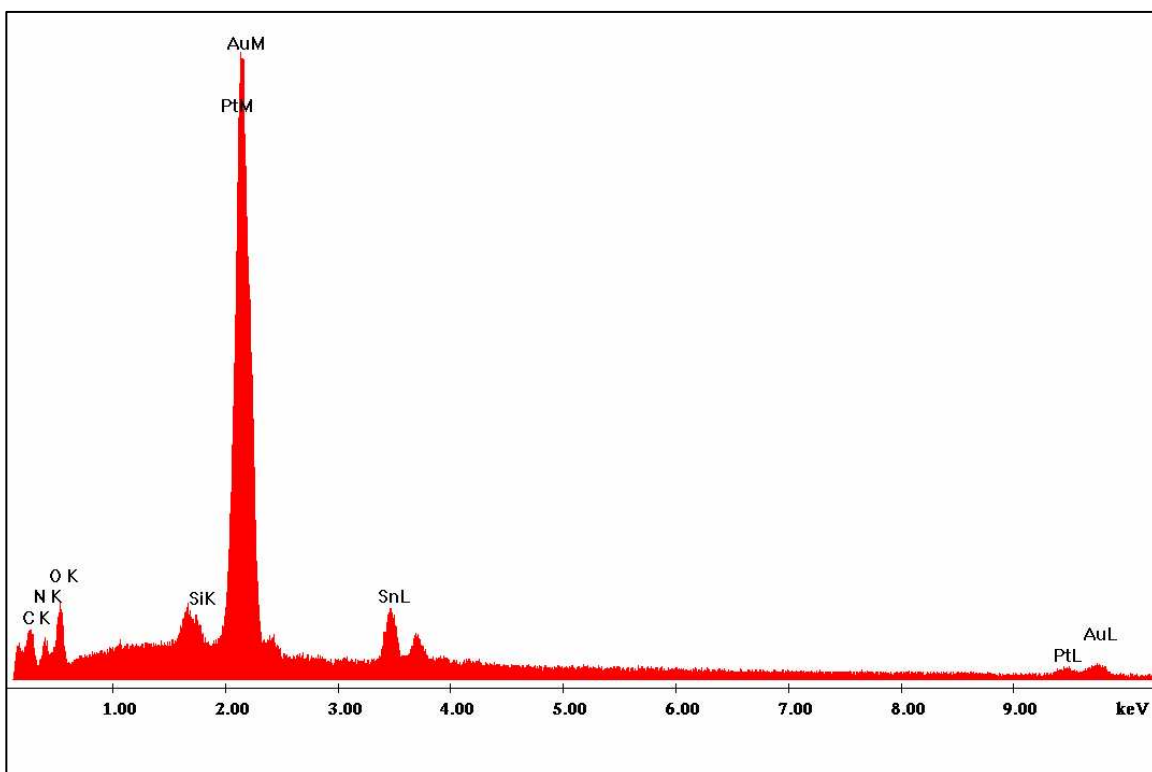


Figure S3. EDAX spectrum collected from a single bimetallic Au/Pt MF.

Supporting information 4

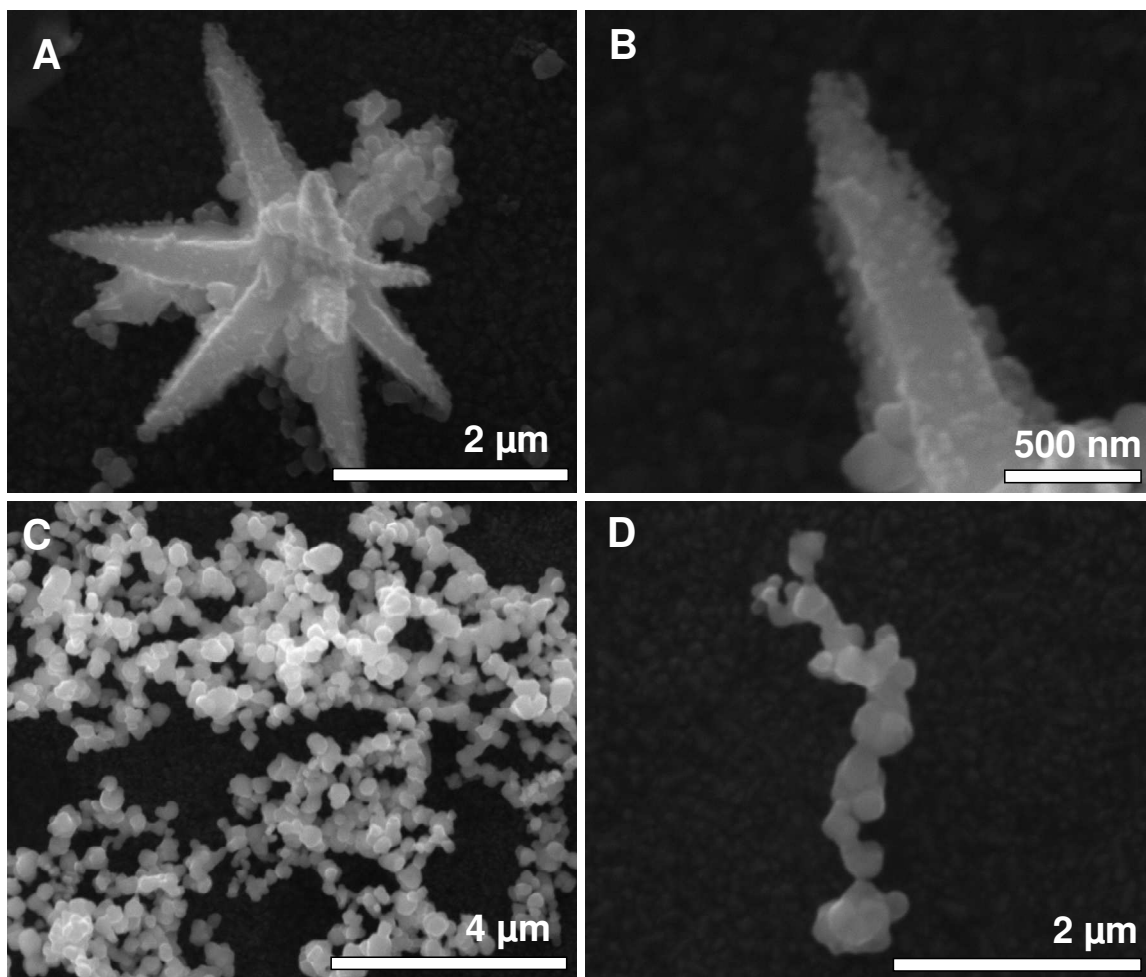


Figure S4. Shape transformation of MFs at a higher concentration of ascorbic acid (500 mM). (A) Partially reacted Au MF (Ag nucleation is observable on the surface); (B) Enlarged view of a single stem; (C) Necklace-like Ag nanoparticles formed after complete reaction and (D) single necklace-like Ag nanoparticle.

Supporting information 5

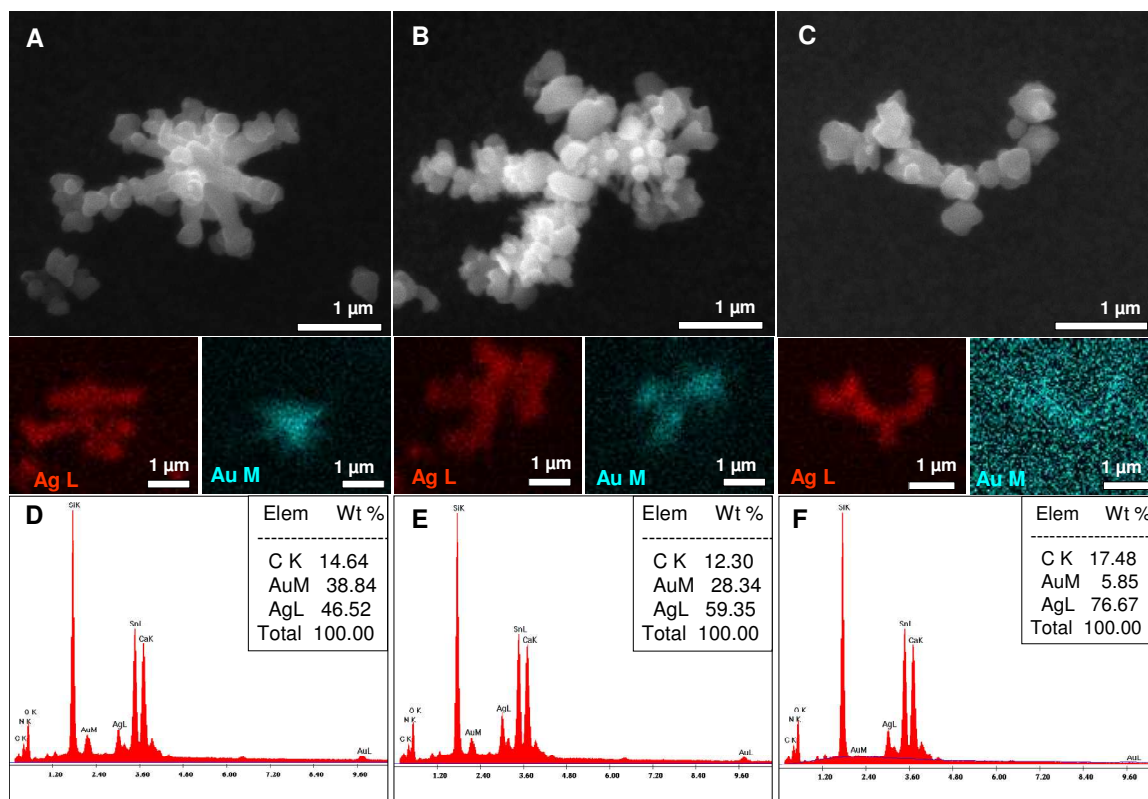


Figure S5. Compositional analysis of MFs during degradation reaction, conducted at a higher concentration of ascorbic acid (500 mM). A, B, and C are SEM and corresponding EDAX images of MFs at various stages of its degradation, isolated from the reaction mixture. D, E, and F are the EDAX spectra and quantification data corresponds to A, B, and C, respectively.

Supporting information 6

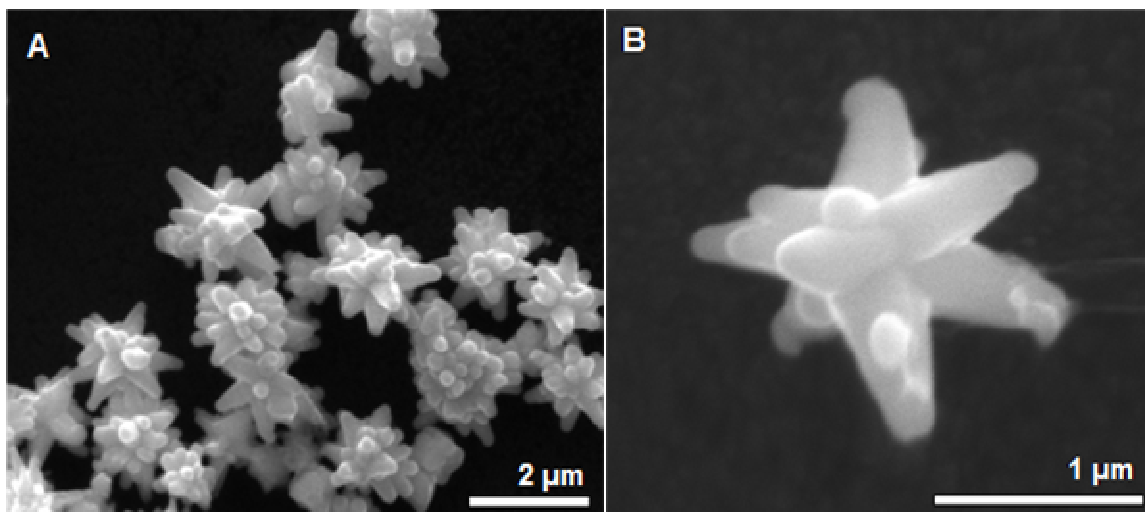


Figure S6. Large area (A) and single particle SEM images of Au/Pt MFs prepared by conducting overgrowth at higher concentration of ascorbic acid (500 mM).