

Solvent dependent dispersion behaviour of macrocycle stabilized cobalt nanoparticles and their applications

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Raman spectra:

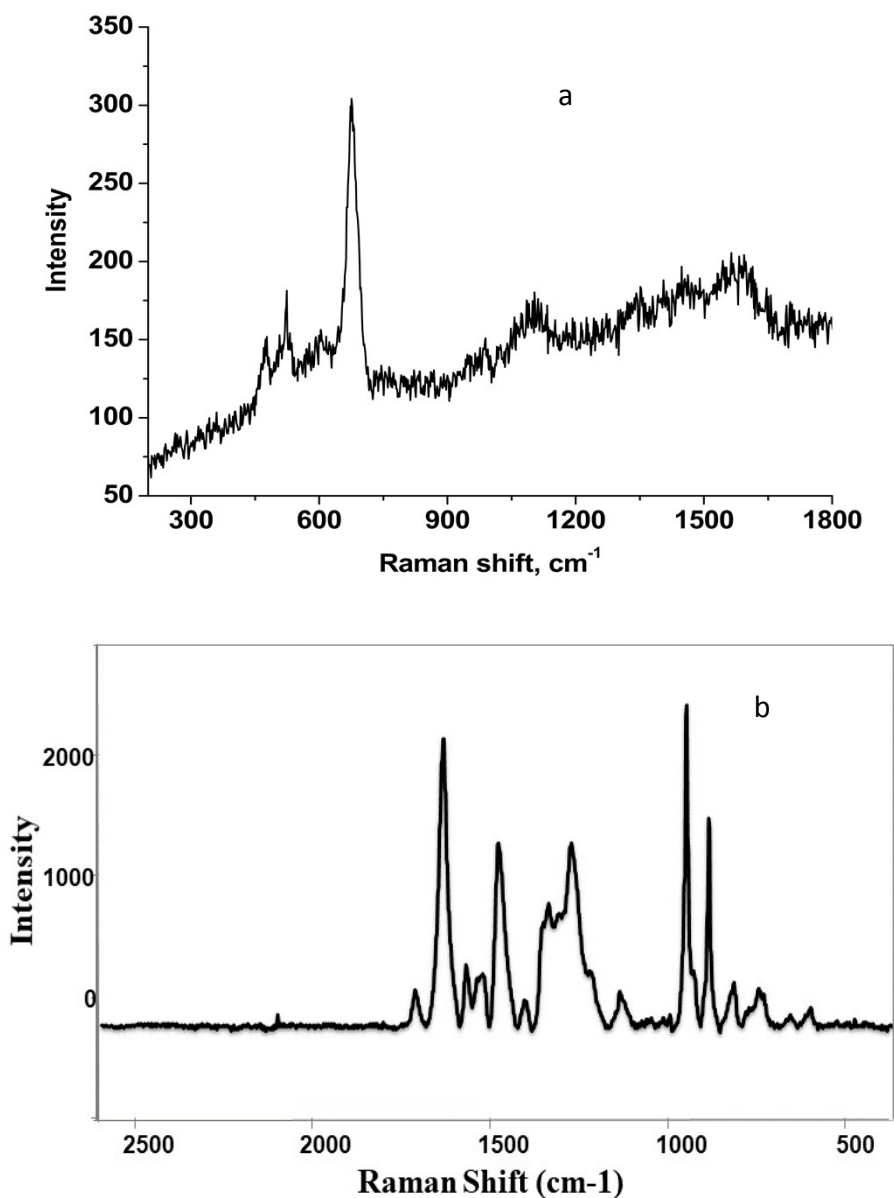


Figure ES-1. Raman spectra of a) CoTAPc stabilized Co nanoparticles and b) CoTAPc powder.

TEM studies:

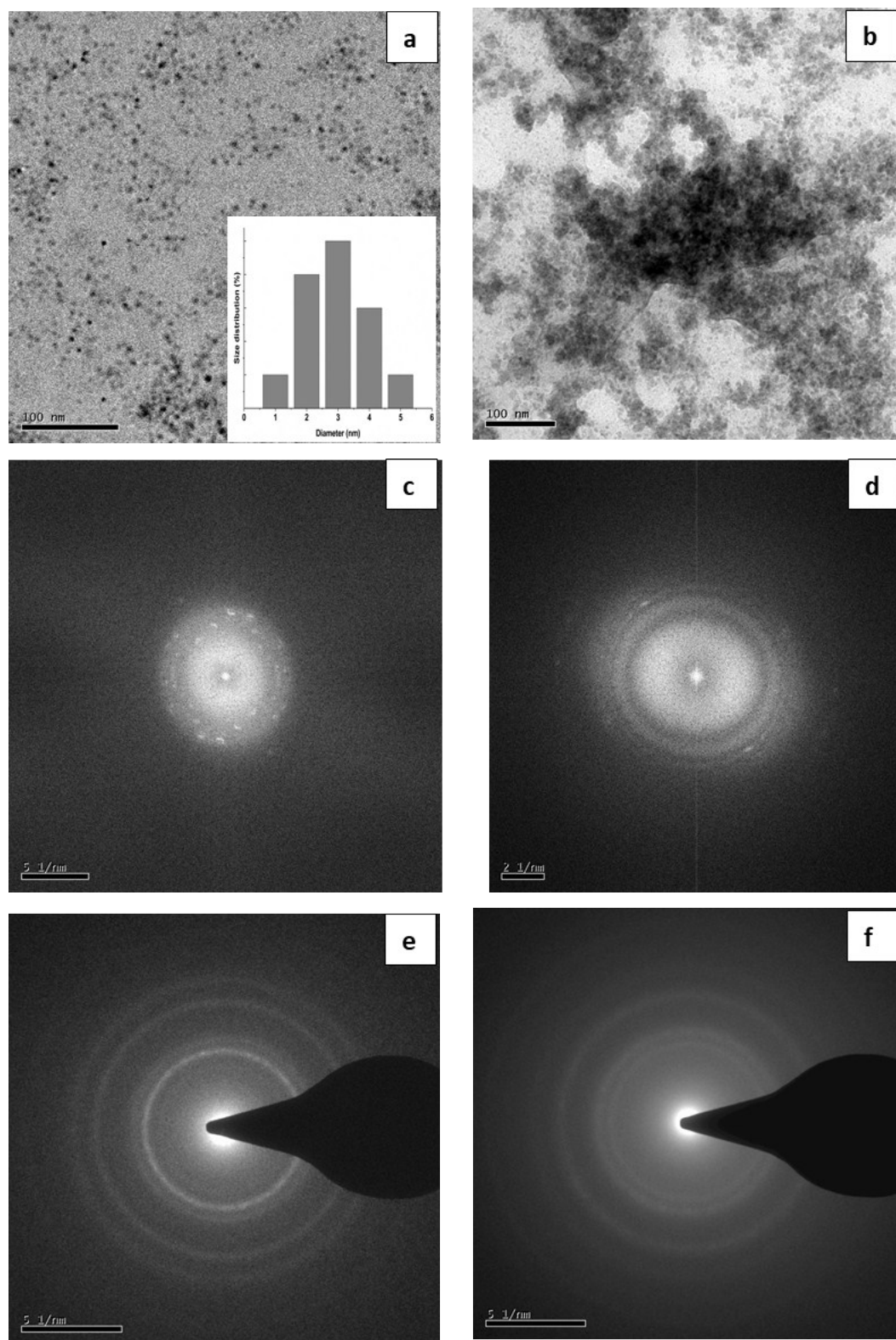


Figure ES-2. TEM images of cobalt nanoparticles a) stabilized with CoTAPc in DMSO (freshly prepared), b) without capping agent, FFT diffraction of the stabilised cobalt nanoparticles c) freshly prepared, d) after exposing to air for one week, SAED pattern of stabilised cobalt nanoparticles e) freshly prepared and f) after exposing to air for one week.

AFM studies:

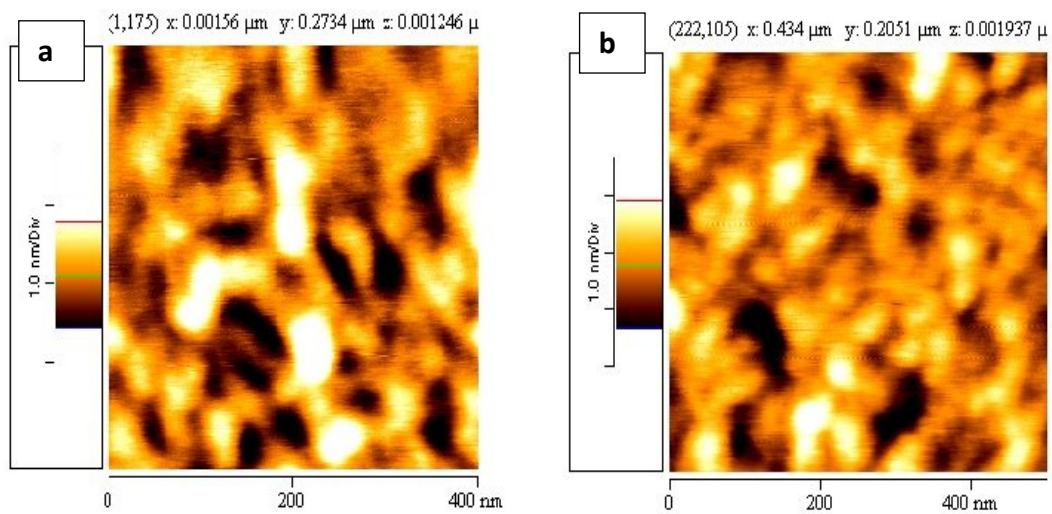


Figure ES-3. AFM surface roughness images of stabilized cobalt nanoparticles on silicon substrate a) coated from DMSO, and b) in alcohol dispersion of nanoparticles.

SERS Studies:

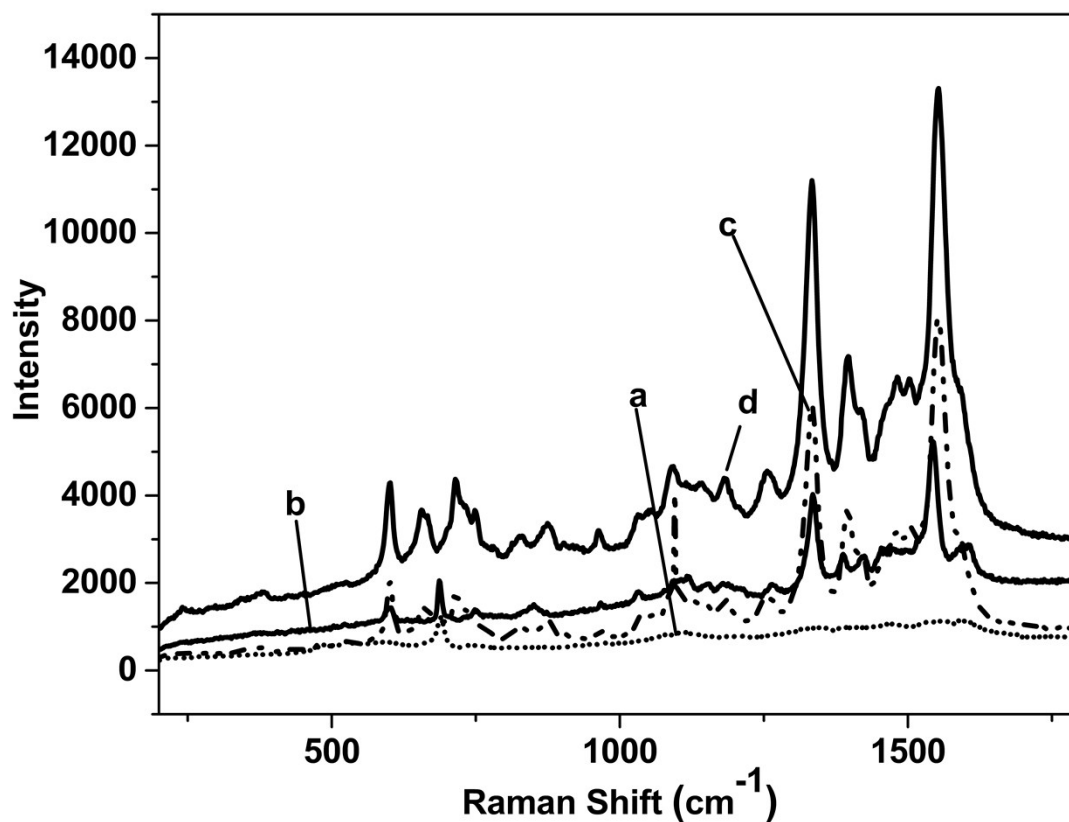


Figure ES-4. Raman spectra of 1 μM solution of a) CoTAPc capped nanoparticles in DMSO, b) NaCoTSPc, c) NaCoTSPc coated on CoTAPc capped nanoparticles in DMSO, and d) NaCoTSPc coated on CoTAPc capped nanoparticles in ethanol.