Electronic Supplemental Information

Anisotropic Manganese Antimonide Nanoparticle Formation by Solution-Solid-Solid Growth Mechanism : Consequence of Sodium Borohydride Addition Towards Reduced Surface Oxidation and Enhanced Magnetic Moment

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Figure S1: HAADF-STEM of MnSb nanoparticles synthesized in the presence of NaBH₄ and EDS mapping for B. The scale bar corresponds to 40 nm.



Figure S2: TEM image of MnSb nanoparticles reminiscent of peas in a pod synthesized in the presence of 2.64 mmol NaBH₄



Figure S3 (a): TEM images of the fractions obtained at different time intervals (30, 60, 90, 120, 180 min) and quenched in cold chloroform from the reaction using near-stoichiometric $Mn_2(CO)_{10}$ and 0.53 mmol NaBH₄



Figure S3(b): PXRD patterns of the fractions obtained at different time intervals (30, 60, 90, 120, 180 min) and quenched in cold chloroform from the reaction that used near-stoichiometric $Mn_2(CO)_{10}$ in the presence of NaBH₄ (0.53 mmol)



Figure S4 (a-c): PXRD patterns of MnSb nanoparticles synthesized in the presence of NaBH₄ (0.79 mmol), using (a) 0.7 (b) 0.9 (c) 1.5 mmol (40, 80, 200% mole excess) of $Mn_2(CO)_{10}$. MnO₂ peaks are marked with asterisks (PDF #-00-42-1169)



Figure S6: (a) Low magnification and (b) high magnification TEM images (c) PXRD pattern of the MnSb nanoparticles synthesized under near stoichiometric $Mn_2(CO)_{10}$ amount with NaBH₄ (1.59 mmol) after heating for a total of 8 h