Supplementary Information # 2: Properties of barium hexaferrite core nanoparticles

Nanoparticles BaM_{10-70}

The BaM_{10-70} nanoparticles displayed a bimodal size distribution (Figures 1 (a) and (b)). While the majority of the nanoparticles are in the form of ultrafine discoid nanoparticles, up to 10 nm wide but only approximately 3 nm thick, larger platelet crystals, up to 100 nm wide and approximately 4 nm thick, were also present.

Nanoparticles BaM_{10}

The ultrafine, discoid nanoparticles BaM_{10} were up to 10 nm wide and approximately 3 nm thick (Figures S2 (c) and (d))

Nanoparticles BaM_{100}

The largest nanoparticles BaM_{100} were hexagonal platelets with relatively uniform sizes, ~100 nm wide and ~8 nm thick (Figures S2 (e) and (f)).

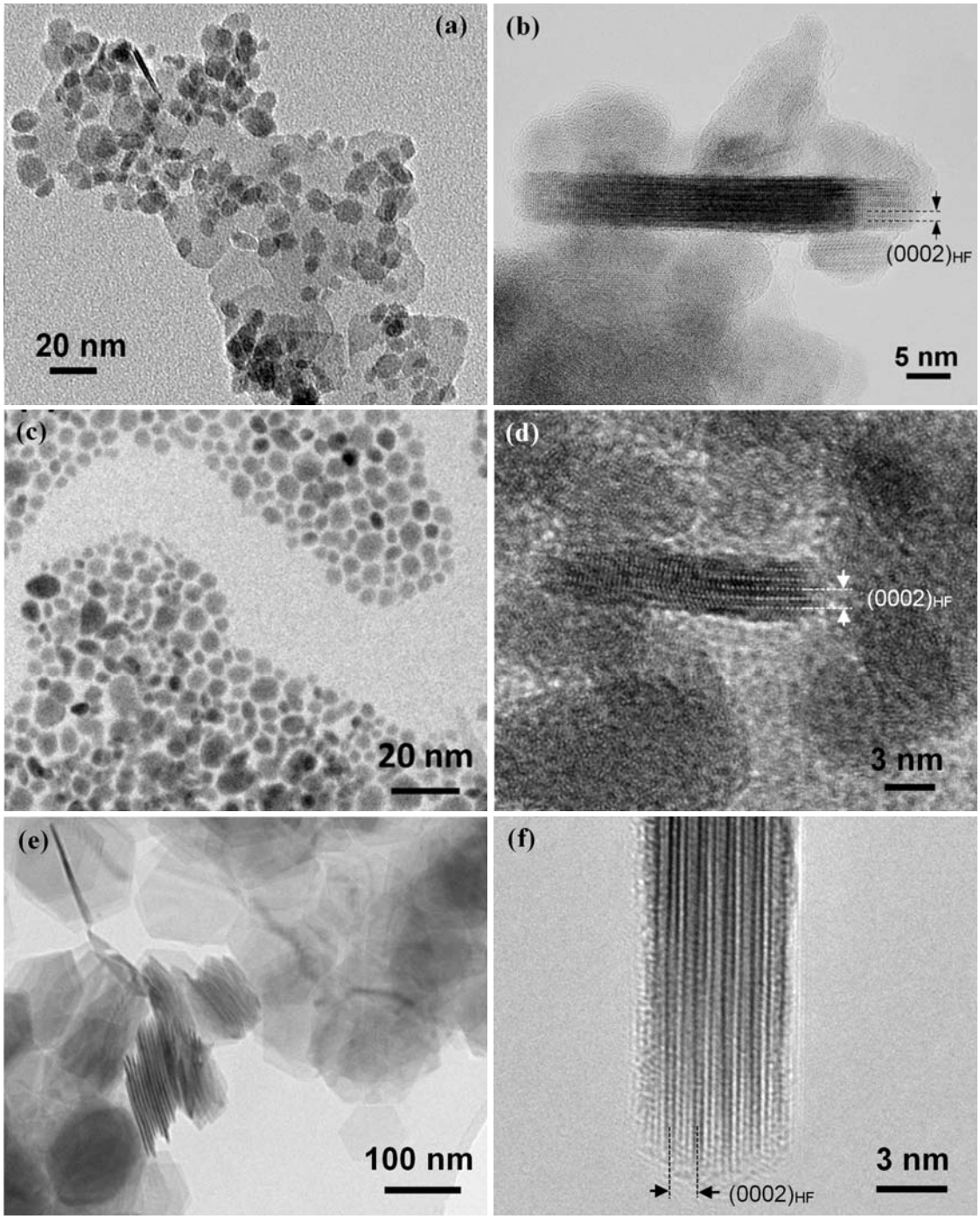

Figure S2: Ba-hexaferrite core nanoparticles $BaM_{10\text{-}70}$ (TEM image (a) and HREM image of larger platelet nanoparticle oriented with the large surfaces parallel to the electron beam (b)), nanoparticles BaM_{10} (TEM image (c) and HREM image (d)), and nanoparticles BaM_{100} (TEM image (e) and HREM image (f)).