Electronic Supplementary Material (ESI) for Physical Chemistry Chemical Physics This journal is O The Owner Societies 2011

Supporting Information Available

X-ray diffraction (XRD) patterns, selected high resolution transmission electron microscopy (TEM) images, thermo-gravimetric analysis (TGA) and differential scanning calorimetry (DSC).



S1. X-ray diffraction patterns for the three samples of magnetite nanoparticles. For the sake of clarity, the patterns have been arbitrarily shifted along the vertical axis.



S2. High resolution TEM image of sample NP1.



S3. High resolution image of sample NP2



S4. High resolution image of sample NP3.



S5. Weight loss in thermo-gravimetric analysis of Fe(III) decanoate and Fe(III) acetylacetonate.



S6. Differential scanning calorimetry for Fe(III) decanoate. Endothermic peaks are associated with the progressive loss of one decanoate around 204 °C, one second decanoate at about 246 °C, and the third at about 273 °C.

Toluene Benzaldehyde 1-Phenyl-1-decanone Benzyl decanoate 10-Nonadecanone

S7. List of species that were clearly identified with mass spectroscopy analysis. The amount of all these species increased drastically in the aliquots collected after reflux.