

Supporting Information

Tuning the magnetic properties of Co-ferrite nanoparticles through the 1,2-hexadecanediol concentration in the reaction mixture

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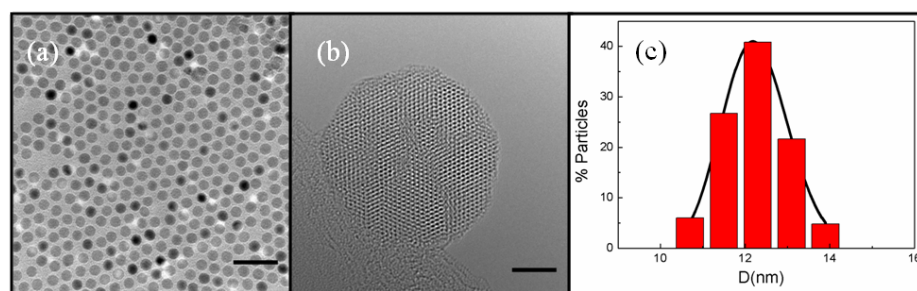


Figure S1. TEM characterization for sample R2. (a) Low-resolution TEM image, (b) HRTEM image, and (c) Particle size distribution obtained from TEM data. Scale bar is 50 nm for (a) and 3 nm for (b).

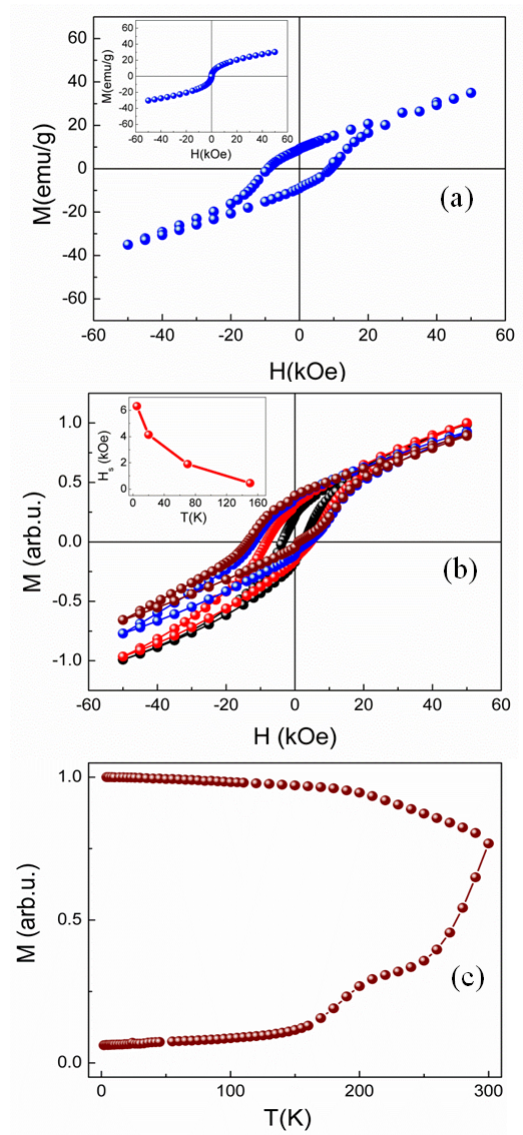


Figure S2. Magnetic properties of sample R2. (a) Hysteresis loop at 5K. Inset: hysteresis loop at room temperature. (b) Hysteresis loops after field cooling the sample under 10 kOe from 250 K down to the final measuring temperature. Symbols are as follows: $T = 5$ K brown spheres, 20 K blue spheres, 70 K red spheres and 150 K black spheres. Inset: loop shift, H_s , as a function of the temperature. (c) Zero field cooling and field cooling magnetizations as a function of temperature.

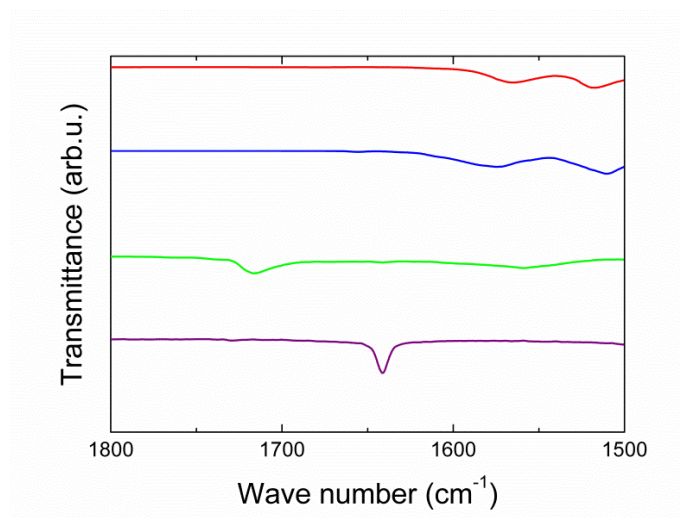


Figure S3. FTIR spectra for iron (III) acetylacetonate (red solid line), cobalt (II) acetylacetonate (blue solid line), $\text{Co}^{2+}\text{Fe}^{3+}$ -oleate complex (green solid line) and 1-octadecene (purple solid line).