



Facile Synthesis of Fe-Co Nanoparticles by One-Pot Polyol Process

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ABSTRACT

Ferromagnetic FeCo nanoparticles were prepared by a simple one-pot polyol process and followed by simple annealing treatment. The prepared ferromagnetic FeCo nanoparticles have spherical shape and the size was controlled by the annealing temperature. Importantly, single FeCo phase was obtained at 400°C and these samples have spherical shape and size about 50 nm. While at higher temperature (at 600°C) the nanoparticles have very lower aggregation and have higher coercivity. The prepared FeCo nanoparticle at low temperature with good magnetic properties is to be considered as potential candidate for many applications.

Graphical Abstract

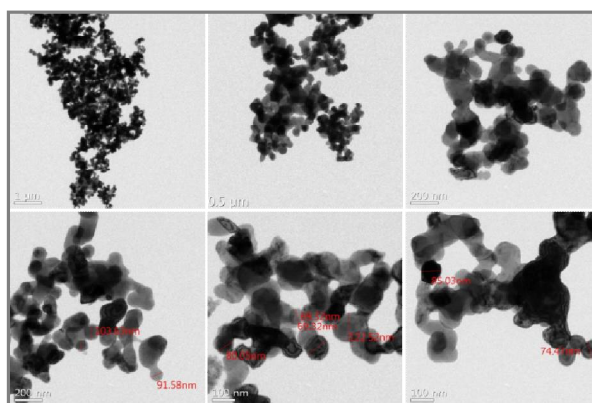


Figure 4. TEM images of FeCo nanoparticles prepared at 600°C

Keywords: Ferromagnetic, FeCo, Nanoparticles, Polyol, Vibrating sample magnetometer.