

Electronic Supplementary Information

3-D Flower-like NiCo Alloy Nano / Microstructures Grown by a Surfactant-assisted Solvothermal Process

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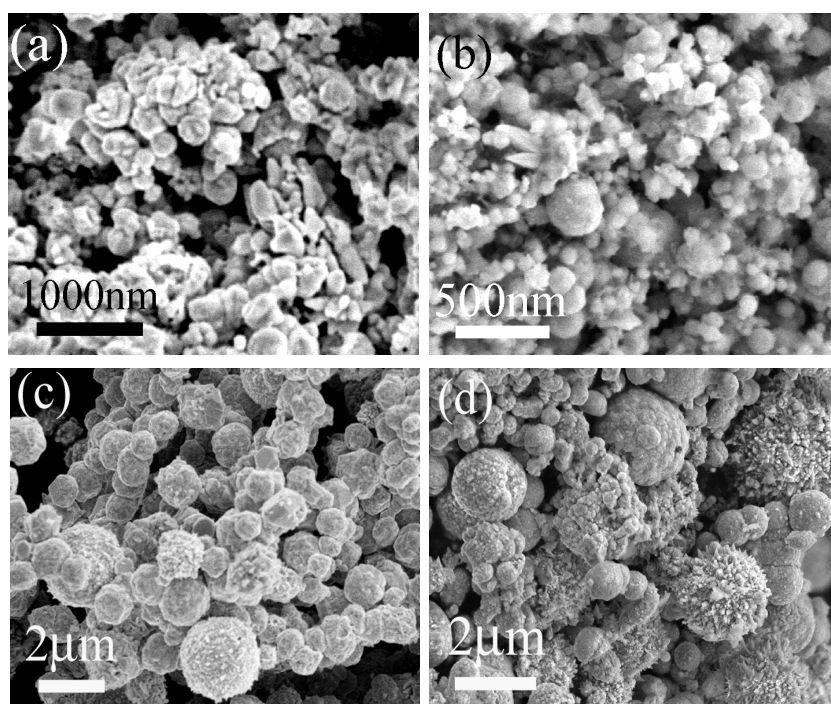


Figure S1. SEM images of the NiCo alloy obtained at different surfactants and solvents with other parameters constant: (a) no surfactant, (b) SDS. (c) H₂O and (d) EG, respectively.

Table S1. The initial NiCo composition, the final composition and the morphology obtained for the Ni_xCo_{1-x} alloys synthesized by a specified ratio of Ni²⁺ and Co²⁺ salts (total 0.2 mol/L) in ethanol at 120 °C for 10 h with other parameters constant.

Initial Ni _x Co _{1-x}	Final composition	Morphology
Ni ₁₀₀	Ni ₁₀₀	Aggregated nanoparticles (Figure 4a)
Ni ₈₀ Co ₂₀	Ni ₇₆ Co ₂₄	Mixture of nano- to micro-spheres with rough surface (Figure 4b)
Ni ₆₀ Co ₄₀	Ni ₅₉ Co ₄₁	Submicrospheres with pleat surface (Figure 4c)
Ni ₅₀ Co ₅₀	Ni ₄₈ Co ₅₂	Flower-like submicrospheres with hierarchical structures on their surface (Figure 2)
Ni ₄₀ Co ₆₀	Ni ₃₉ Co ₆₁	Mixture of dendrites and flower-like spheres (Figure 4d)
Ni ₂₀ Co ₈₀	Ni ₁₅ Co ₈₅	Dendrites (Figure 4e)
Co ₁₀₀	Co ₁₀₀	Dendrites (Figure 4f)

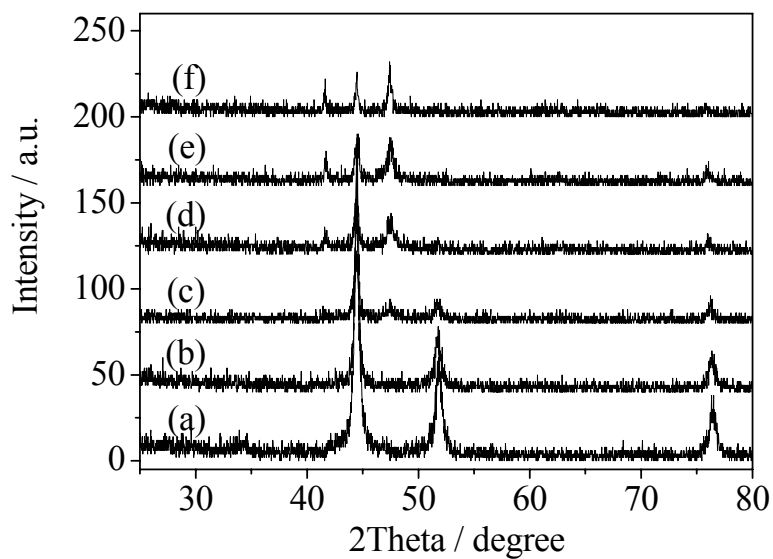


Figure S2. XRD patterns of different compositions of NiCo alloys: a) Ni₁₀₀, b) Ni₇₆Co₂₄, c) Ni₅₉Co₄₁, d) Ni₃₉Co₆₁, e) Ni₁₅Co₈₅, and f) Co₁₀₀.

Table S2. Magnetic Data of Obtained NiCo Alloy Samples.

Samples	NiCo final composition	Ms (emu/g)	Mr (emu/g)	Mr/Ms	Hc (Oe)
Sample 1	Ni ₄₈ Co ₅₂	111.33	5.643	0.044	84.27
Sample 2	Ni ₄₇ Co ₅₃	103.58	4.593	0.051	52.71