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Supporting Information for

Synthesis of FeCo Alloy Magnetically-Aligned Linear Chains by Polyol Process: Structural and Magnetic Characterization

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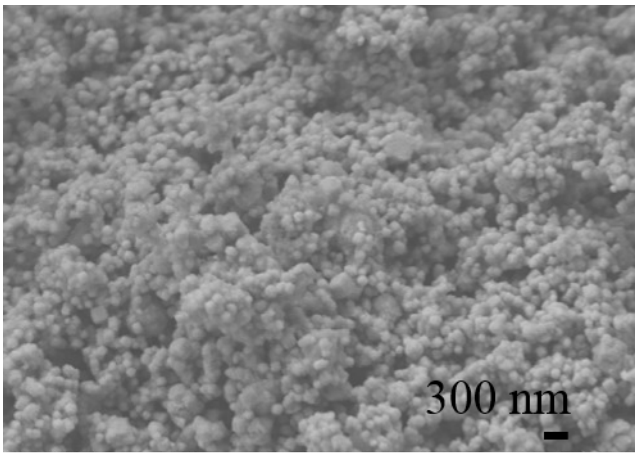
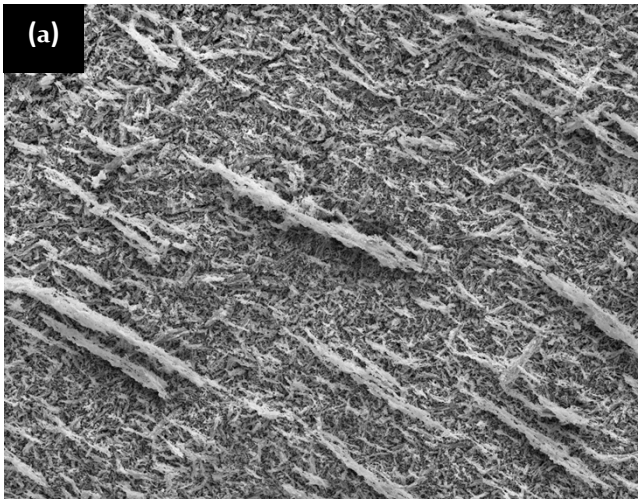


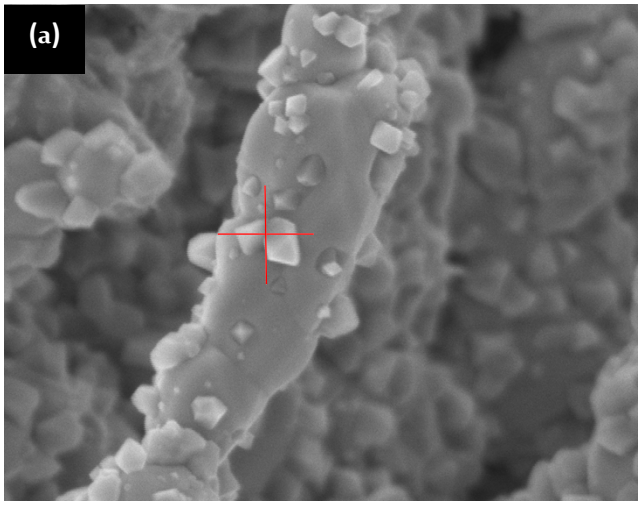
Figure S1. FeCo alloy cubes produced under similar reaction conditions using mechanical stirrer (no external field). Note the presence of cobalt ferrite impurities.



(b)

Element	Wt%	At%
CK	6.25	22.49
OK	3.39	9.17
FeK	51.30	39.70
CoK	39.06	28.64

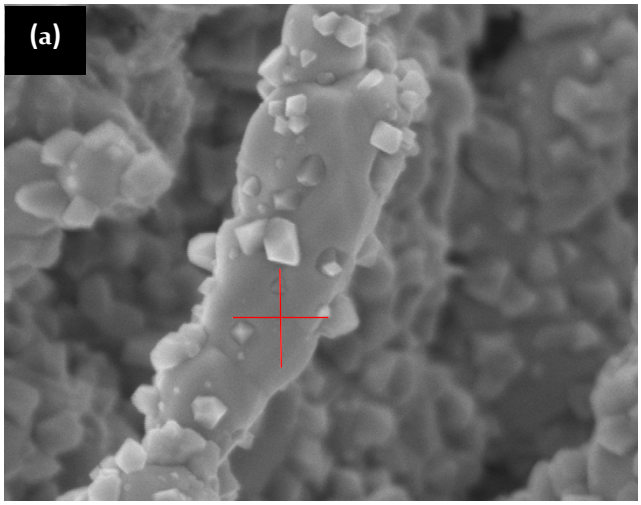
Figure S2. FeCo MALCs taken at low mag (a) used for EDS analysis with results (b) indicating an Fe-rich alloy of $Fe_{58}Co_{42}$.



(b)

Element	Wt%	At%
OK	16.50	41.10
FeL	65.34	46.62
CoL	18.16	12.28

Figure S3. EDS (energy dispersive spectroscopy) point analysis (a) (red cross-hair) on secondary phase formation of 1000 K annealed FeCo MALCs. Note the formation of a continuous microwires after annealing. Quantitative EDS results (b) indicate secondary phase to be cobalt ferrite with approximate atomic ratio calculated to be $CoFe_4O_{3.5}$.



(b)

Element	Wt%	At%
OK	2.81	9.40
FeL	48.02	45.99
CoL	49.16	44.61

Figure S4. EDS (energy dispersive spectroscopy) point analysis (a) on FeCo alloy microwire region (non-secondary phase) of annealed (FeCo MALCs indicated by red-crosshair). Quantitative EDS results (b) indicate a Co-rich alloy of approximately $Fe_{47}Co_{53}$ by atomic ratio.

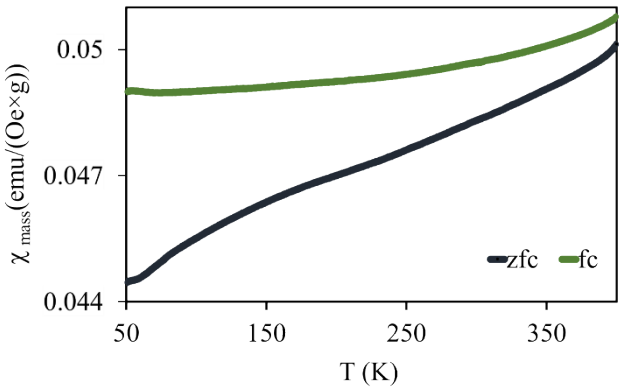


Figure S5. Zero-field (bottom) and field cooled (top) curves of mass susceptibility from 50 to 400 K measured under an external field of 500 Oe. Ferromagnetism is indicated by top (fc) as it possesses higher magnetization beginning at 50K than (lower) zfc plot. The blocking temperature, T_B, is over 400K.