



Erratum

Correction to “Electrochemical Synthesis of Co-Rich Nanowires for Barcodes”

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Abstract—This erratum corrects scanning electron microscopy images and a magnetization curve that appeared in an article by the authors.**Index Terms**—Nanomagnetics, nanostructured materials, magnetic nanowires, barcode nanowires, finite element method simulation.

Incorrect field emission scanning electron microscopy (**FE-SEM**) images and an incorrect magnetization-field hysteresis curve appeared in an article by the authors [Torati 2017]. They are corrected here.

In corrected Fig. 1, the actual Co-Pt-P and Co-Pt-P/Au nanowires are shown. In corrected Fig. 2, the actual hysteresis loop (black symbols), corresponding to the Co-Pt-P nanowires, is shown. In Table 1 (corrected in this erratum) and in the text in Torati [2017], the coercivity H_c and the remanent magnetization M_r of the Co-Pt-P nanowires should be 1640 Oe and 49.2 ± 5.2 emu/g, respectively.

The Co-Pt-P nanowires have higher coercivity and remanence than the other two materials studied, Co-Ni-P and Co-Fe-P. The saturation magnetization for the Co-Pt-P nanowires, about 100 emu/g, is larger than originally reported. The simulation results for Co-Pt-P and Co-Pt-P/Au are similar to those originally reported. The conclusions in Torati [2017] remain the same.

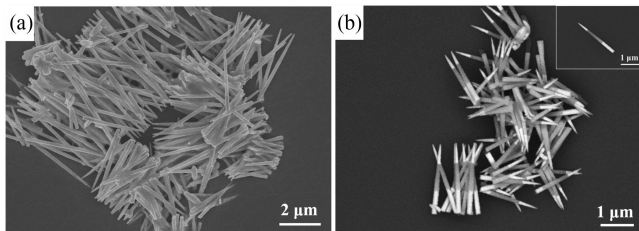


Fig. 1. (a) FE-SEM image of Co-Pt-P nanowires after removal of the polycarbonate membrane. (b) Backscattering image of Co-Pt-P/Au nanowires; the inset is the single barcode nanowire.

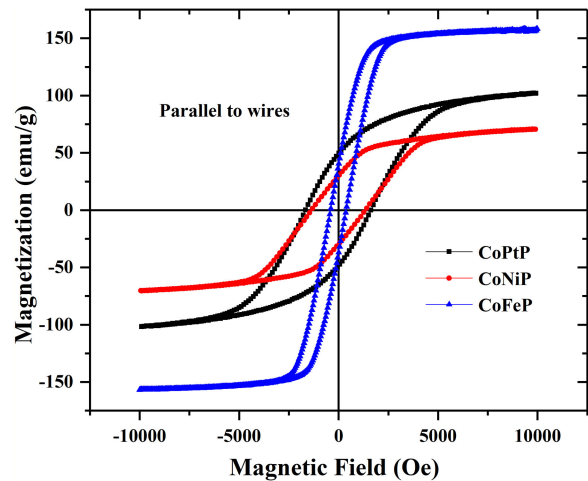


Fig. 2. Magnetic properties of Co-Pt-P, Co-Ni-P, and Co-Fe-P nanowires measured by vibrating-sample magnetometer.

TABLE 1. Magnetic properties of Co-Pt-P, Co-Ni-P, and Co-Fe-P nanowires

Materials Name	Coercivity H_c (Oe)	Remanence M_r (emu/g)
Co-Pt-P	1640	49.2 ± 5.2
Co-Ni-P	1304	26.6 ± 2.4
Co-Fe-P	387	36.3 ± 3.1

REFERENCE

- S. R. Torati, X. Hu, S. S. Yoon, and C. Kim, (2017) “Electrochemical synthesis of Co-rich nanowires for barcodes,” *IEEE Magn. Lett.*, vol. 8, 4100904, doi: [10.1109/LMAG.2016.2618781](https://doi.org/10.1109/LMAG.2016.2618781).