

Supporting information

Printable Hierarchical Nickel Nanowires for Soft Magnetic Applications

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The XPS spectra of H-NiNWs is given in Figure S1 where Ni2p spectra is shown. The surface oxidation is clearly visible from the XPS analysis.

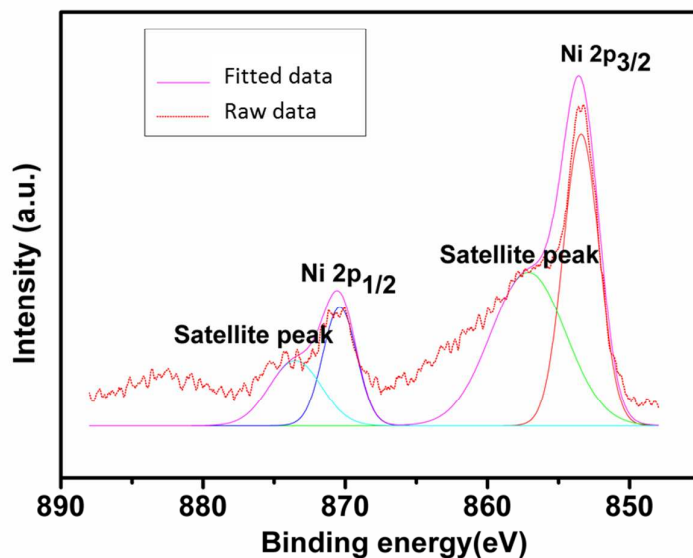


Figure S1. Ni 2p XPS spectrum of h-NiNWs.

Four probe was the method we have employed where two current carrying probes are given as outer probes and two voltage probes are given as inner probes and four probe method is usually used for conducting sample, instead of two probe method to avoid the issue of contact resistance. In the present case, the current was measured using Keithley source meter 2182A and the voltage by Aplab nanovolt meter 9710P. Scheme for four probe is given below which is newly added in the supporting information, as well.

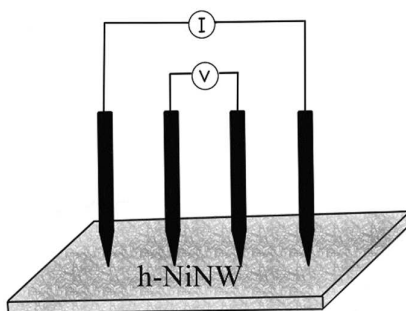


Figure S2. A typical 4-probe set-up for measuring dc-electrical conductivity of h-NiNWs

Figure S3 shows the variation of viscosity with increasing shear rate for second method of ink formulation where ethanol-xylene bi-solvent system is used. This formulation also exhibited pseudo plastic behaviour.

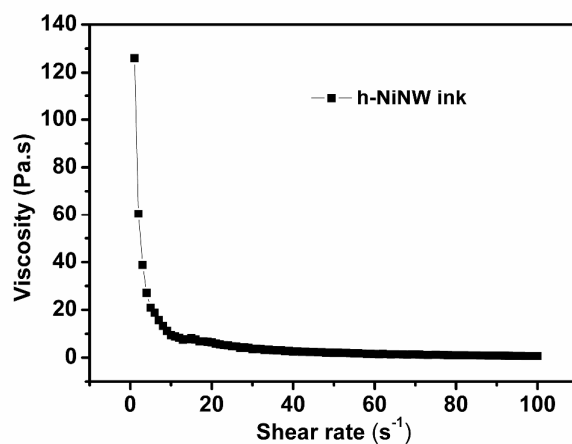


Figure S3. Viscosity trend for optimized second method of ink formulation.