

Electronic Supplementary Information For

Phase-segregated Pt-Ni Chain-Like Nanohybrids with High Electrocatalytic Activity towards Methanol Oxidation Reaction

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Table S1. The EDX data showing the composition of the corresponding products in Figure 1.

Product	Element	Weight%	Atomic%
Pt₃Ni₁	Ni K	9.43	25.71
	Pt L	90.57	74.29
Pt₁Ni₁	Ni K	20.67	46.41
	Pt L	79.33	53.59
Pt₂Ni₃	Ni K	30.48	59.30
	Pt L	69.52	40.70

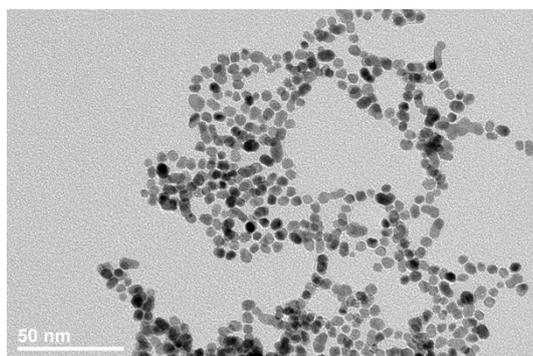


Figure S1. TEM image of pure Pt nanoparticles obtained under similar conditions except for the introduction of Ni precursor.

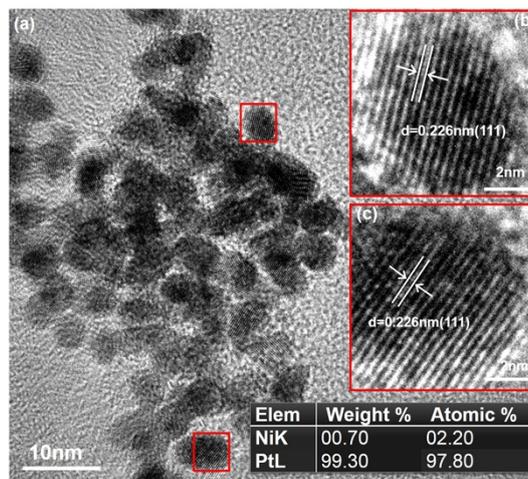


Figure S2. (a) TEM image of the products obtained at about 180°C, (b) and (c) are the corresponding amplified images recorded at the red framed nanoparticles, showing the lattice spaces of 0.226nm, consistent well with (111) planes of fcc-Pt. The insert table illustrates the composition of the products with overwhelming majority Pt.

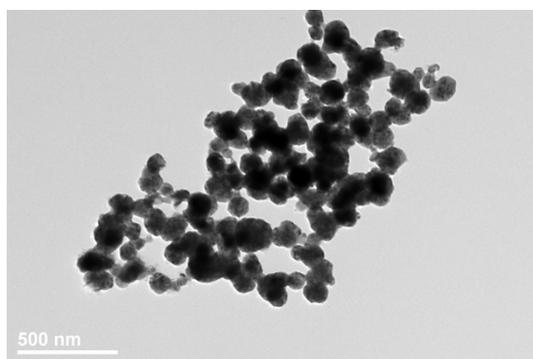


Figure S3. TEM image of the products obtained using similar process except for the addition of PVP.

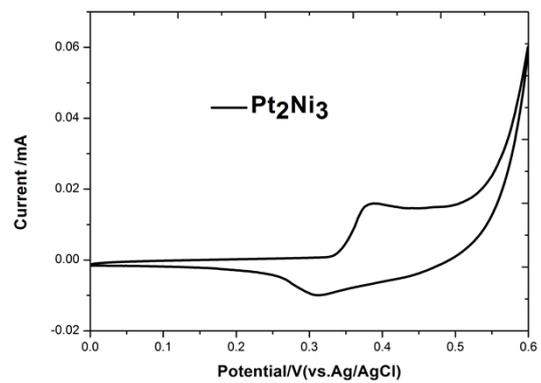


Figure S4. The CV curves of the as-prepared Pt₂Ni₃ nanohybrids cycled in 1 M KOH aqueous solution between 0.0 and 0.6 V (vs Ag/AgCl) at the sweeping rate of 50 mV/s.

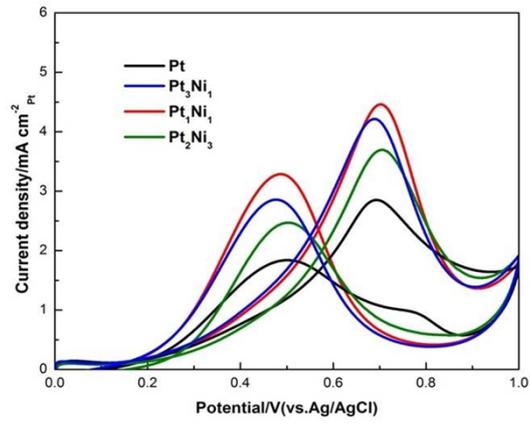


Figure S5. Cyclic voltammograms of Pure Pt and Pt-Ni nanoalloys in 0.5 mol/L H₂SO₄ + 1 mol/L CH₃OH. Scanning rate is 50 mV/s.