Supporting Information for

Growth mechanism of core-shell PtNi-Ni nanoparticles via in situ transmission electron microscopy

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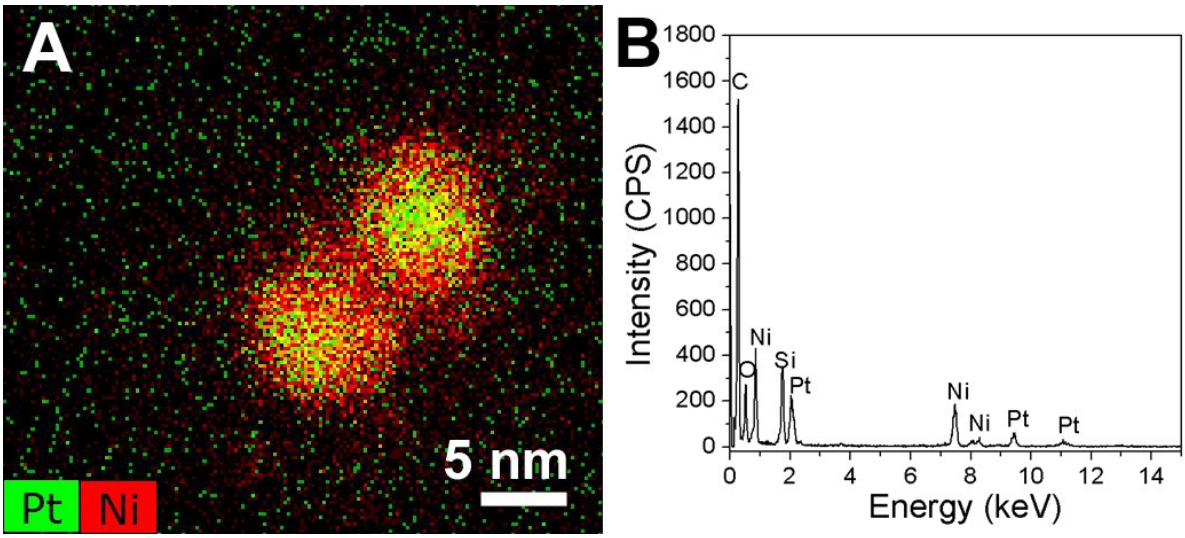

Figure S1. (A) The EDS element map of Pt L-edge and Ni L-edge and (B) full spectra of the core-shell nanoparticles

Table S1 Quantification results of the Pt:Ni ratio in the particles of Figure 4A

Particle	Element	series	Net	(norm.wt.%)	(norm.at.%)	Error in wt.% (3 Sigma)
1	Pt	L-series	1219	77.42	50.78	24.96
	Ni	K-series	713	22.58	49.22	3.47
2	Pt	L-series	1278	75,12	47.60	24.15
	Ni	K-series	850	24.88	52.40	3.61
3	Pt	L-series	1493	76.55	49.55	24.39
	Ni	K-series	918	23.45	50.45	3.34
4	Pt	L-series	2309	76.82	49.93	24.00
	Ni	K-series	1396	23.18	50.07	2.96
5	Pt	L-series	1519	76.74	49.81	24.43
	Ni	K-series	923	23.26	50.19	3.30
6	Pt	L-series	736	76.60	49.62	25.74
	Ni	K-series	450	23.40	50.38	4.19
7	Pt	L-series	845	77.24	50.52	25.60
	Ni	K-series	501	22.76	49.48	3.93
8	Pt	L-series	1109	76.19	49.05	24.73
	Ni	K-series	693	23.81	50.95	3.68

Supplementary Movies

Movie S1: The growth of core-shell nanoparticle in precursor solution with Ni:Pt =4:1 with electron dose of 3120 $e^{-}/Å^{2}\cdot s$. The movie plays six times faster than real time.

Movie S2: The growth of core-shell nanoparticle in precursor solution with Ni:Pt =4:1 with electron dose of 1500 $e^{-}/Å^{2}\cdot s$. The movie plays six times faster than real time.

Movie S3: The growth of core-shell nanoparticle in precursor solution with Ni:Pt =4:1 with electron dose of 5000 $e^{-}/Å^{2}\cdot s$. The movie plays six times faster than real time.

Movie S4: The growth of nanoparticle in precursor solution with Ni:Pt =1:1 under low magnification. The movie plays six times faster than real time.