Supporting Information

A general strategy for synthesis of metal nanoparticles by a solid-state redox route under ambient conditions

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**Fig. S1** XRD patterns of Ni nanoparticles with different additives: a, Ni nanoparticles with NaCl; b, Ni nanoparticles with SDS.

**Fig. S2** EDS patterns of Ni nanoparticles with different additives: a, Ni nanoparticles; b, Ni nanoparticles with NaCl; c, Ni nanoparticles with SDS.
**Fig. S3** XPS spectra of Fe, Sn, and Co nanoparticles: a, detailed spectra of Fe 2p; b, detailed spectra of Sn 3d; c, detailed spectra of Co 2p.

**Fig. S4** XRD patterns of the nanoparticles stored in air for two weeks: a, Ni nanoparticles; b, Fe nanoparticles; c, Sn nanoparticles; d, Co nanoparticles; e, NiCo nanoparticles.
Fig. S5 Nitrogen adsorption-desorption isotherms: a, Ni-1; b, Ni-2; c, Ni-3; the inset is the corresponding pore size distribution.