

**Electronic Supplementary Information:**

**Synthesis and Chemical Transformation of Ni Nanoparticles  
Embedded in Silica**

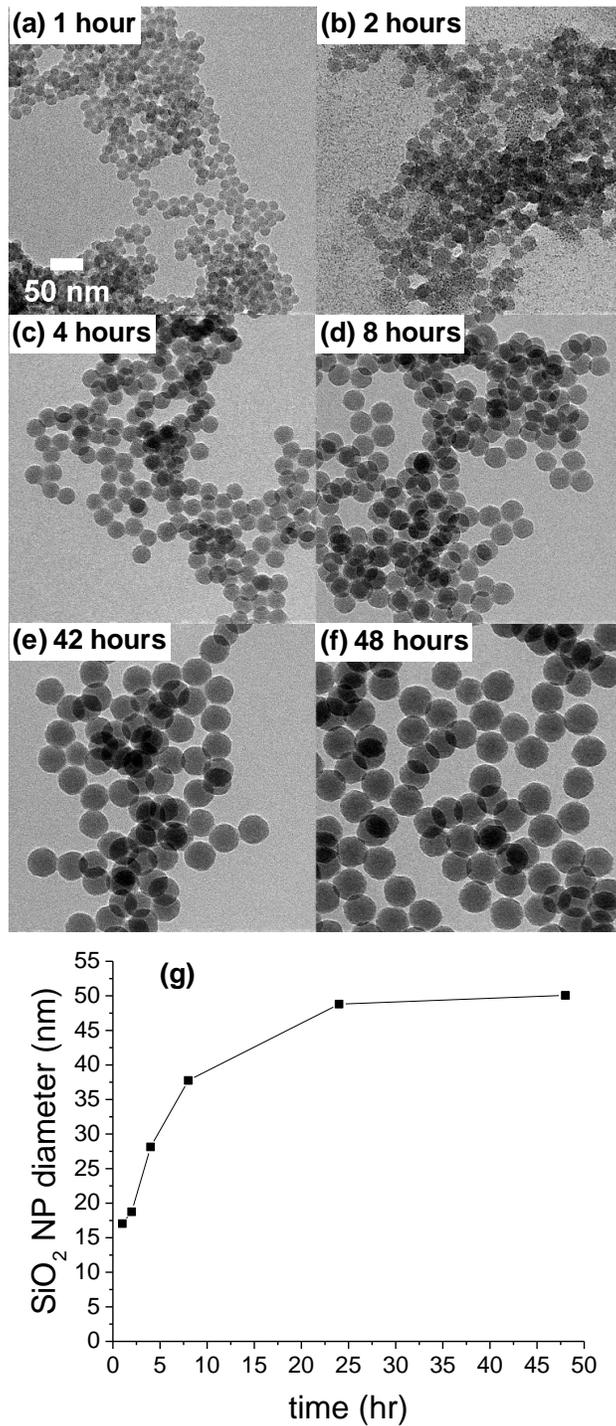
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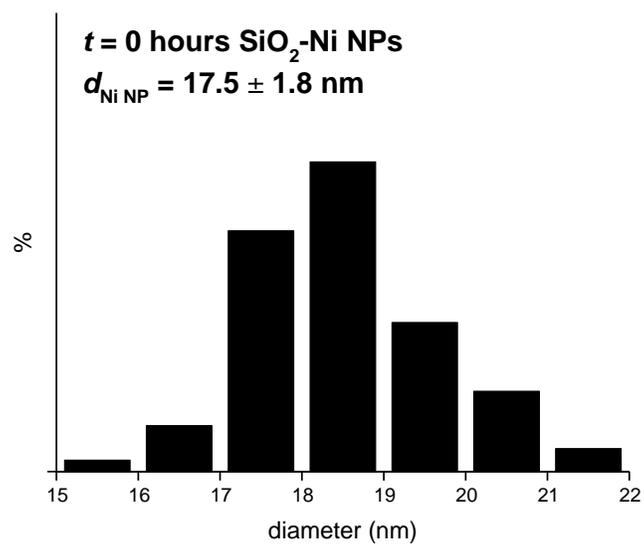
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**Growth of SiO<sub>2</sub> NPs without Ni NPs:**



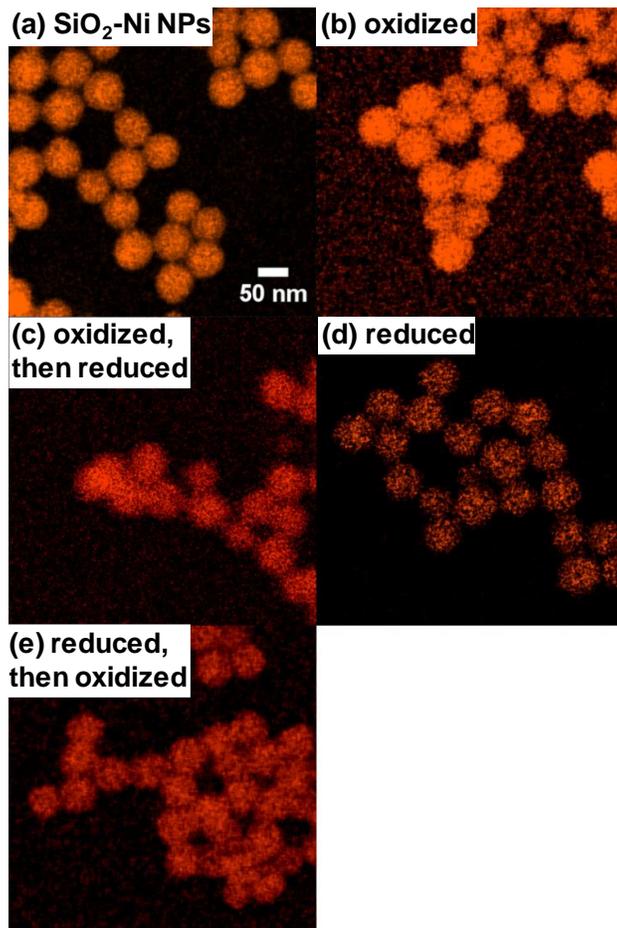
**Figure S1.** TEM images (common scale bar) for aliquots from the synthesis of SiO<sub>2</sub> NPs after (a) 1 hour, (b) 2 hours, (c) 4 hours, (d) 8 hours, (e) 42 hours, and (f) 48 hours. (g) Plot of the dependence of the average SiO<sub>2</sub> NP diameter on the growth time.

### Size Distribution of Ni NPs in SiO<sub>2</sub>-Ni NPs at $t = 0$ Hours



**Figure S2.** Histogram of diameters of Ni NPs within SiO<sub>2</sub>-Ni NPs at  $t = 0$  hours, corresponding to Figure 1a.

### Oxygen EDS Maps for SiO<sub>2</sub>-Ni NPs:



**Figure S3.** EDS maps (common scale bar) of O for (a) SiO<sub>2</sub>-Ni NPs, (b) oxidized SiO<sub>2</sub>-Ni NPs, (c) oxidized then reduced SiO<sub>2</sub>-Ni NPs, (d) reduced SiO<sub>2</sub>-Ni NPs, and (e) reduced then oxidized SiO<sub>2</sub>-Ni NPs.