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Supplementary Data

Preparation of Ni_5P_4/Ni Porous Composite Using Ni Foam As Skeleton and Its Application in Restoration of Large Volume Effluent with A High Concentration of 4-Nitrophenol at Room Temperature

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Supplementary Fig. S1

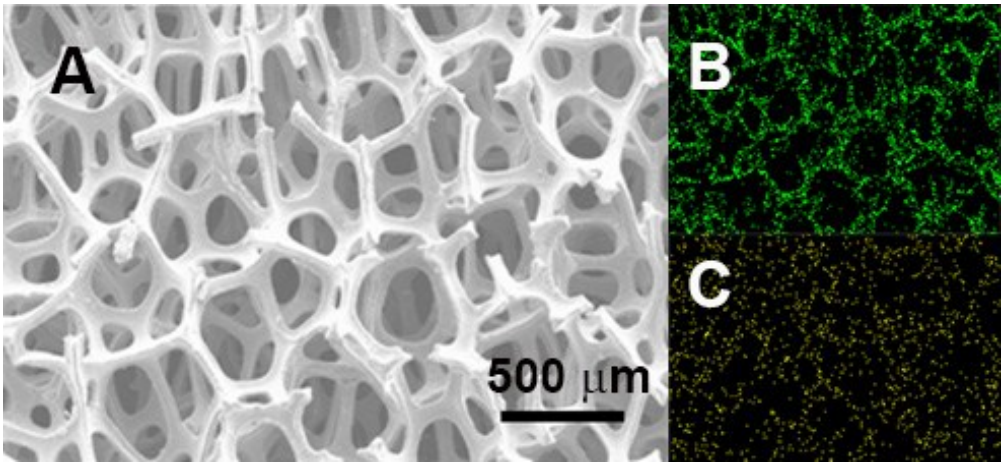

Fig. S1. (A) SEM image of Ni foam-Ni_5P_4 (30%), (B) elemental mapping of P element and (C) elemental mapping of Ni element.

Supplementary Fig. S2

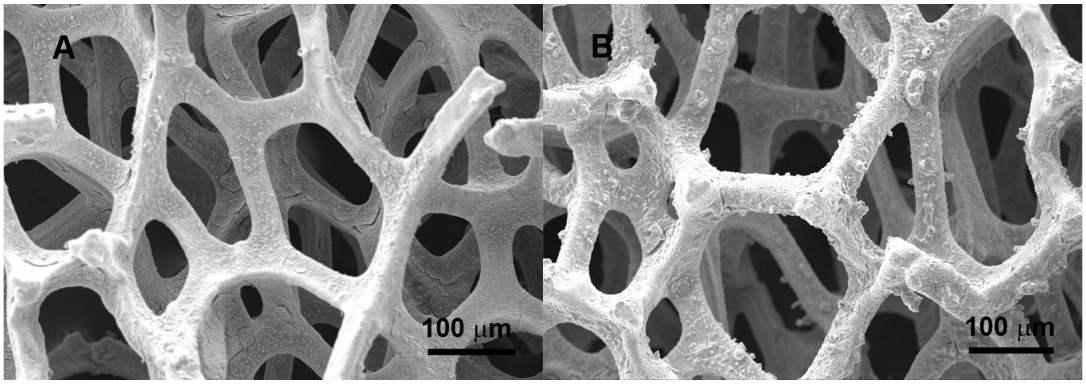

Fig. S2. SEM images of Ni foam-Ni_5P_4 (30%) after (A) stretched and (B) curled.

Supplementary Fig. S3

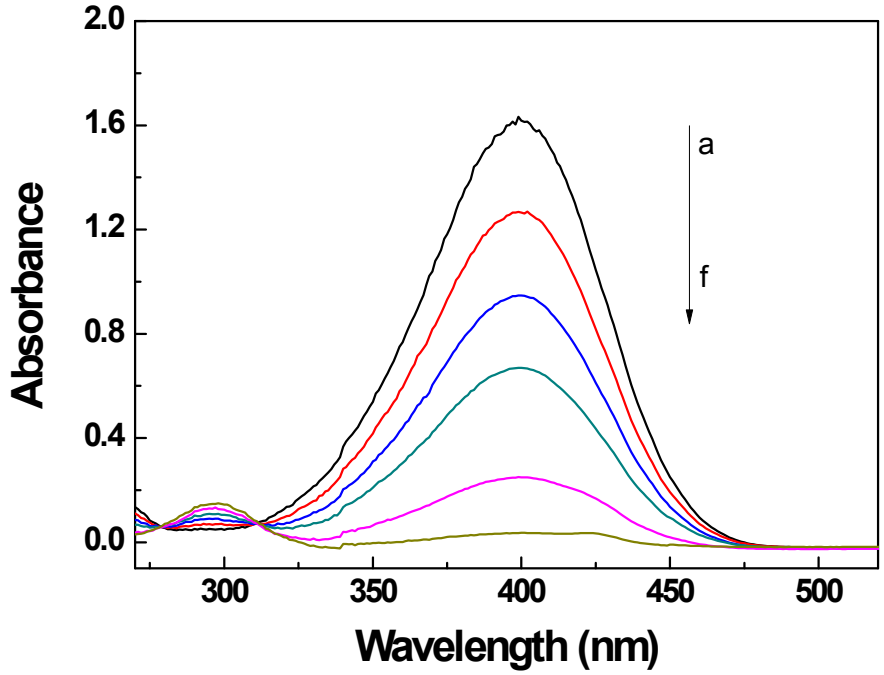

Fig. S3. Time-dependent UV-vis spectra of the solution containing 4-NP and $NaBH_4$ in the presence of Ni foam-Ni_5P_4 (30%), (a) 0 min, (b) 5 min, (c) 9 min, (d) 13 min, (e) 24 min and (f) 36 min.

Supplementary Fig. S4

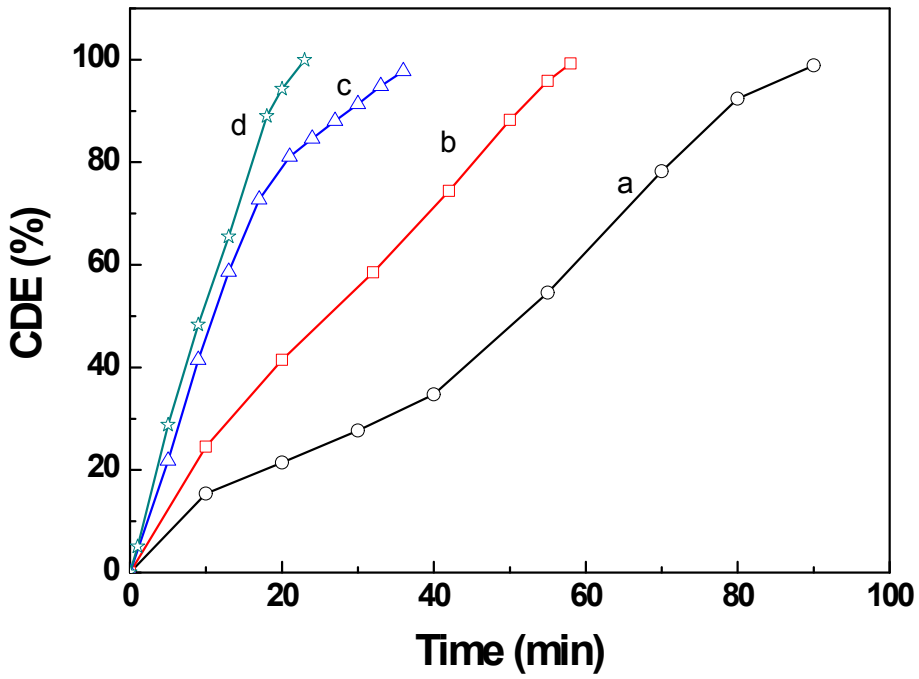

Fig. S4. Time-courses of catalytic 4-NP reduction over Ni foam-Ni_5P_4 (30%), concentration of $NaBH_4$ (a) 0.06 mol L^{-1}, (b) 0.08 mol L^{-1} (c) 0.1 mol L^{-1} and (d) 0.12 mol L^{-1}, volume 100 mL.

Supplementary Fig. S5

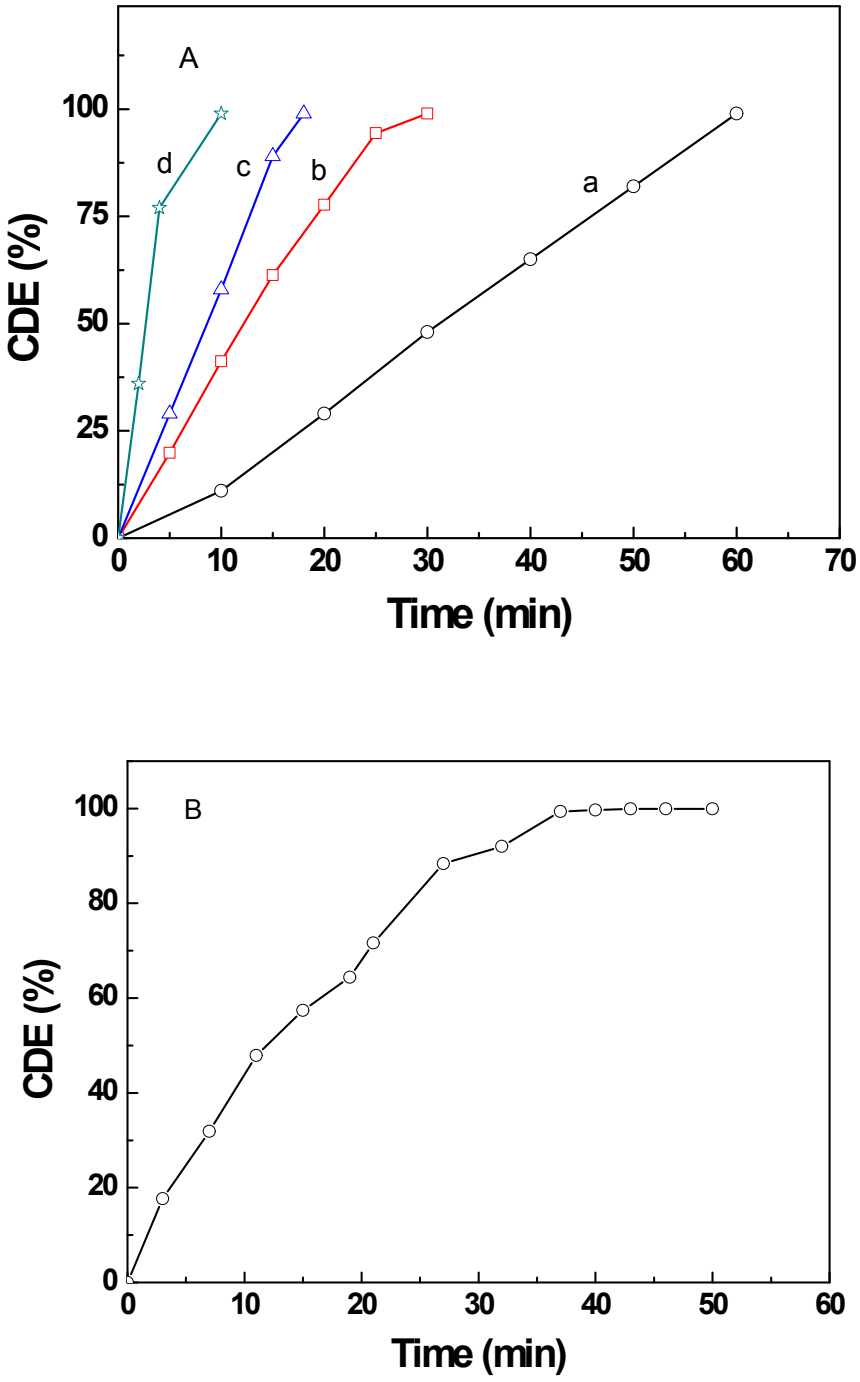

Fig. S5. (A) Time-courses of catalytic 4-NP reduction over Ni foam-Ni_5P_4 (30%) at (a) 5°C, (b) 25°C, (c) 35°C and (d) 45°C; (B) time-course of catalytic 4-NP reduction in the presence of Ag nanoparticles at 45°C.

Supplementary Fig. S6

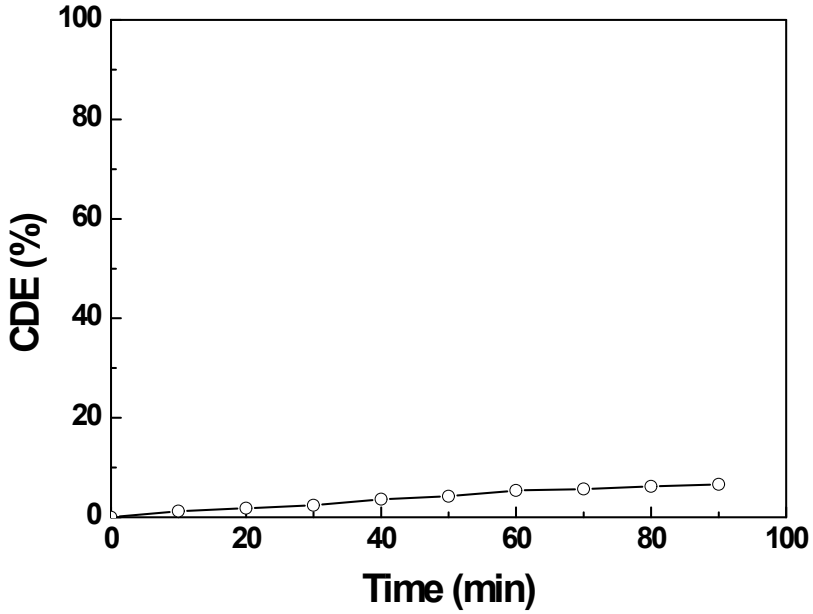

Fig. S6. Time-course of catalytic 4-NP reduction over the bare Ni foam.

Supplementary Fig. S7

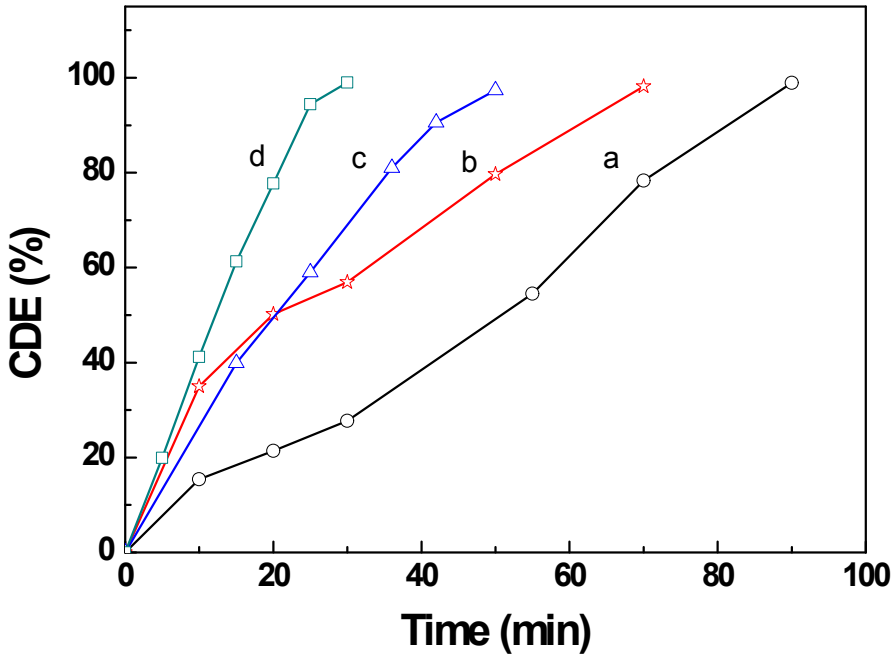

Fig. S7. Time-courses of catalytic 4-NP reduction over Ni foam-Ni_5P_4 (30%) at stirring rate of (a) 200 r min^{-1}, (b) 300 r min^{-1}, (c) 400 r min^{-1} and (d) 500 r min^{-1}.

Supplementary Fig. S8

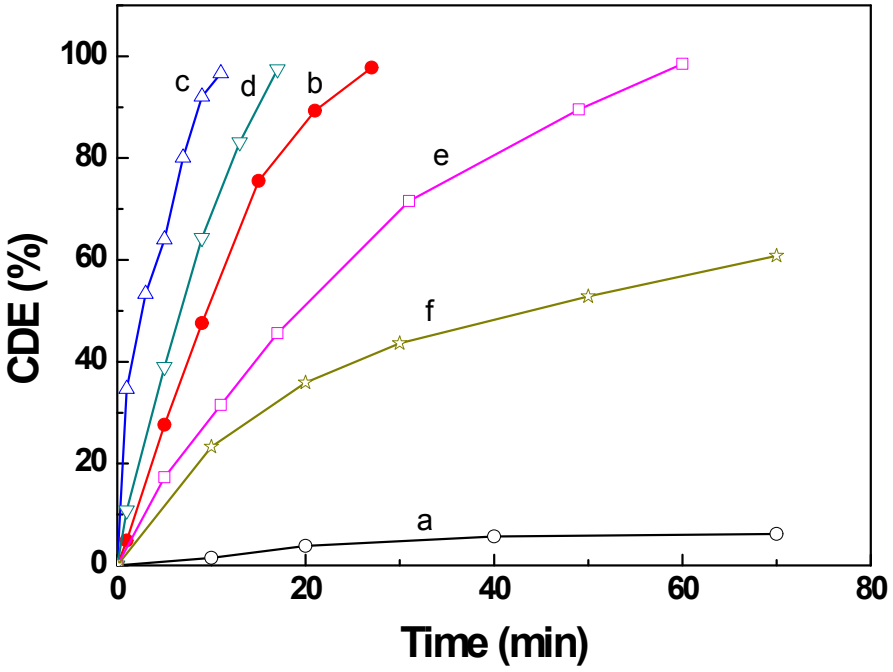

Fig. S8. Time-courses of catalytic 4-NP reduction over Ni foam-Ni_5P_4 (30%) at pH = (a) 8.3, (b) 9.3, (c) 10.3, (d) 11.3, (e) 12.3 and (f) 13.3.