

Supporting Information for

**Polydopamine Induced In-situ Formation of Metallic Nanoparticles in Confined  
Microchannels of Porous Membrane as Flexible Catalytic Reactor**

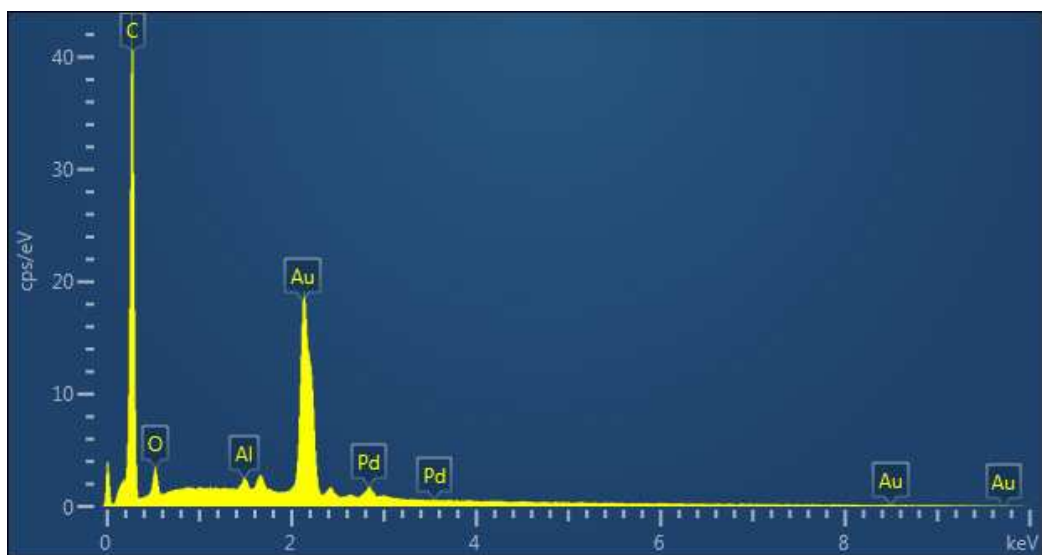
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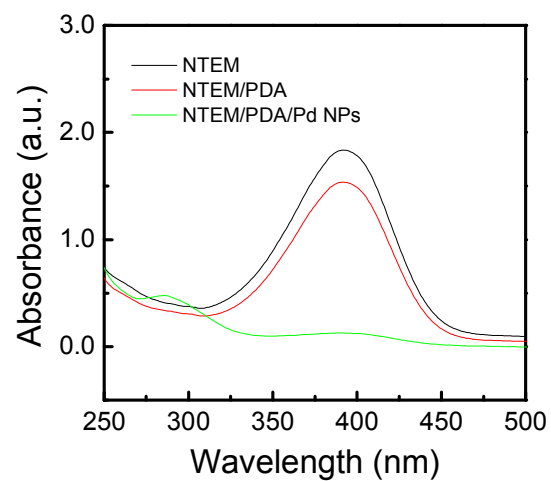
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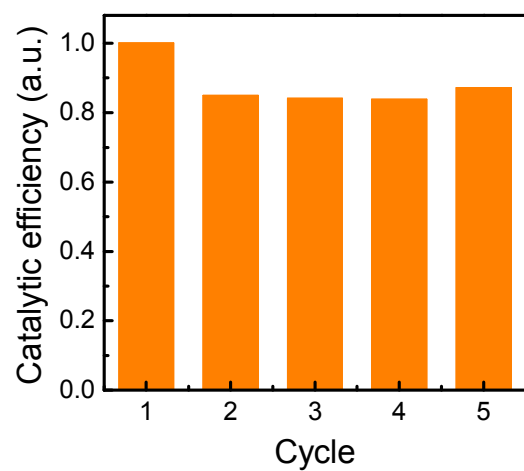
## Supporting Figures



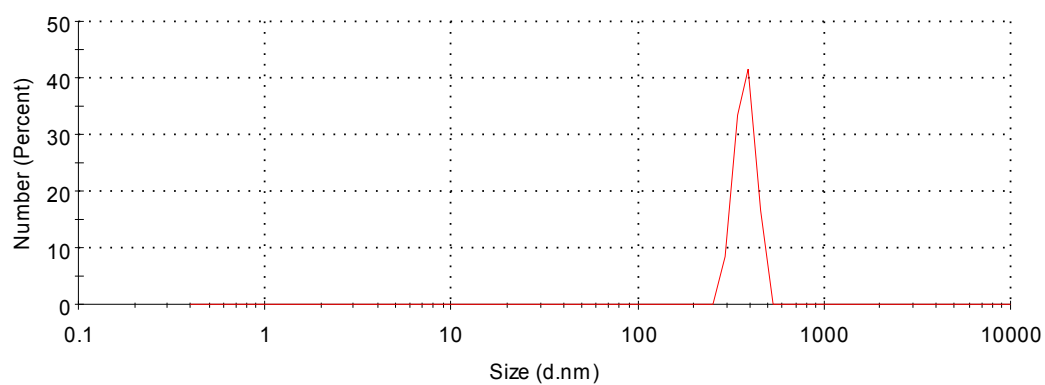
**Figure S1.** EDX spectrum of PDA modified NTEM after immobilization of Pd NPs



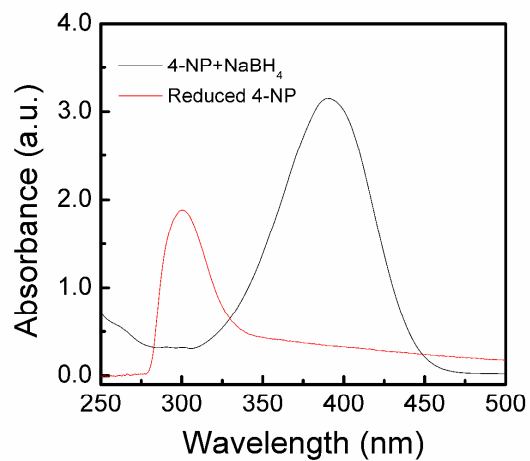
**Figure S2.** Catalytic reduction of 4-NP by native NTEM membrane, PDA deposited NTEM, and Pd NPs immobilized NTEM.



**Figure S3.** Reusability of the Pd NPs immobilized NTEM for catalytic reduction of 4-NP.



**Figure S4.** Dynamic light scattering (DLS) measurement of the filtrate in the first run catalytic reduction of 4-NP by the functionalized membrane.



**Figure S5.** UV-vis absorption spectra of reaction mixture of 4-NP and NaBH<sub>4</sub> (black line) and the reduced product (red line) catalyzed by isolated PDA/Pd hybrid nanotubes.