

Electronic Supplementary Information (ESI)

Electrochemical deposition of Pt on carbon fiber cloth utilizing Pt mesh counter electrode during hydrogen evolution reaction for electrocatalytic hydrogenation reduction of *p*-nitrophenol

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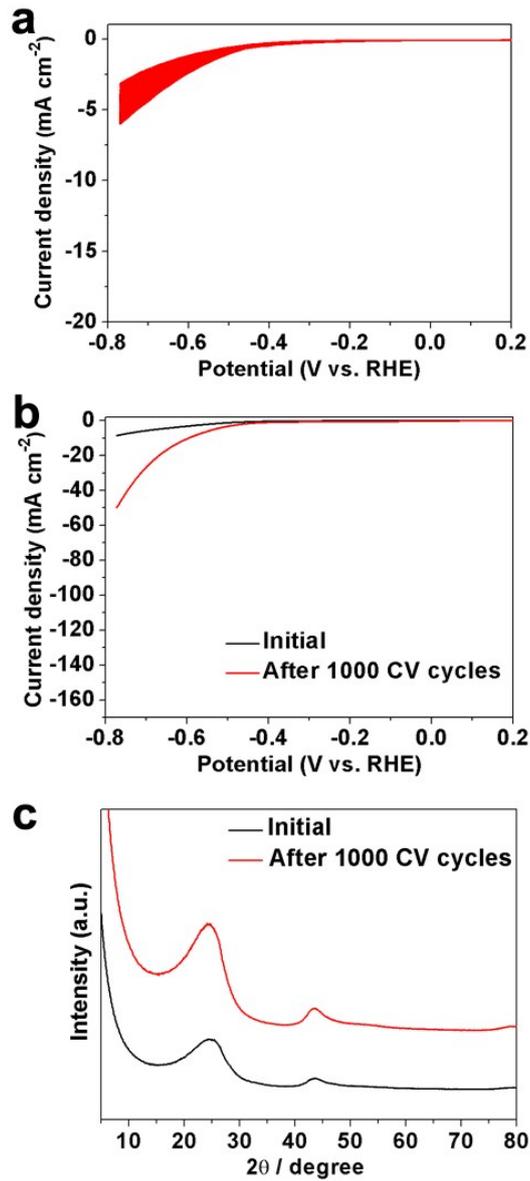


Fig. S1 (a) Cyclic voltammetry (CV) curves of bare CFC using bare CFC as counter electrode (scan rate 50.0 mV s^{-1}); (b) Linear sweep voltammetry (LSV) curves, and (c) XRD patterns of the bare CFC before (black line) and after (red line) 1000 CV cycles using bare CFC as counter electrode.

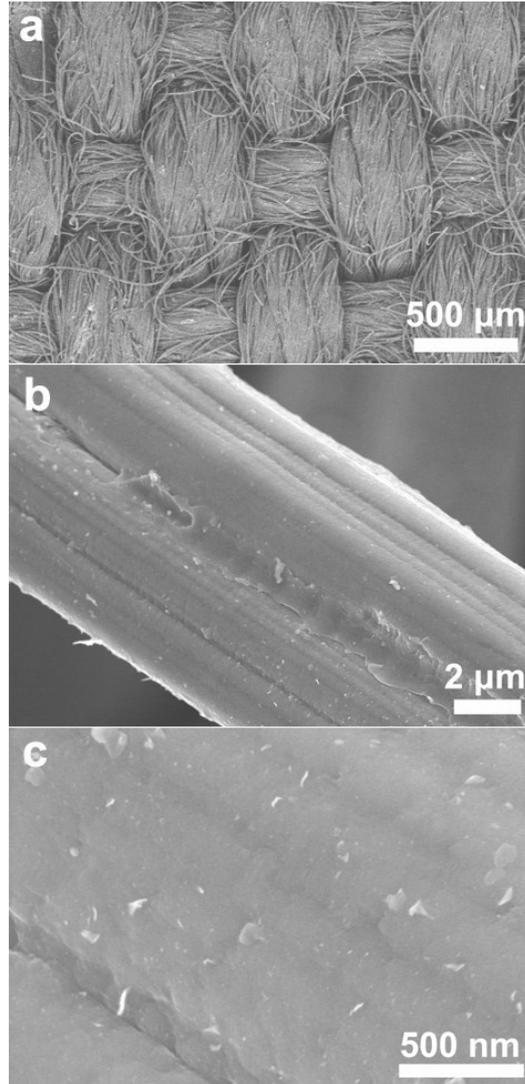


Fig. S2 SEM images of bare CFC.

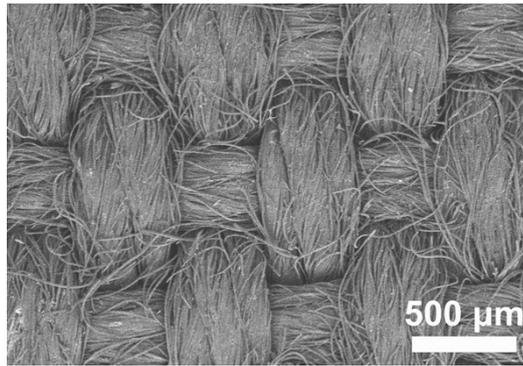


Fig. S3 Low-magnification SEM image of CFC substrate after CV scan for 1000 cycles using double platinum mesh as counter electrodes.

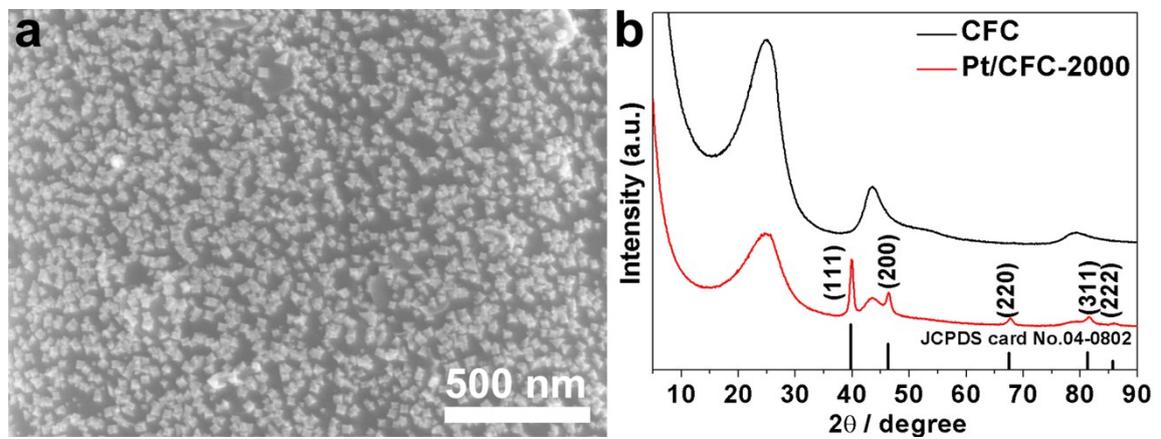


Fig. S4 (a) SEM image and (b) XRD patterns of CFC before (black line) and after (red line) Pt deposition by 2000 CV cycles using double platinum mesh as counter electrodes.

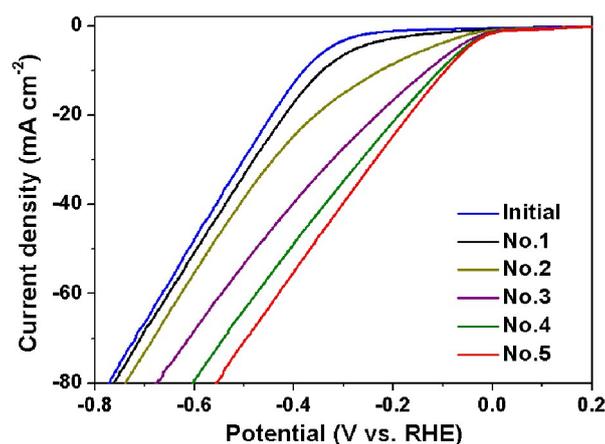


Fig. S5 LSV curves of CFC obtained by exchanging CFC for platinum mesh as counter electrode after different scan times.

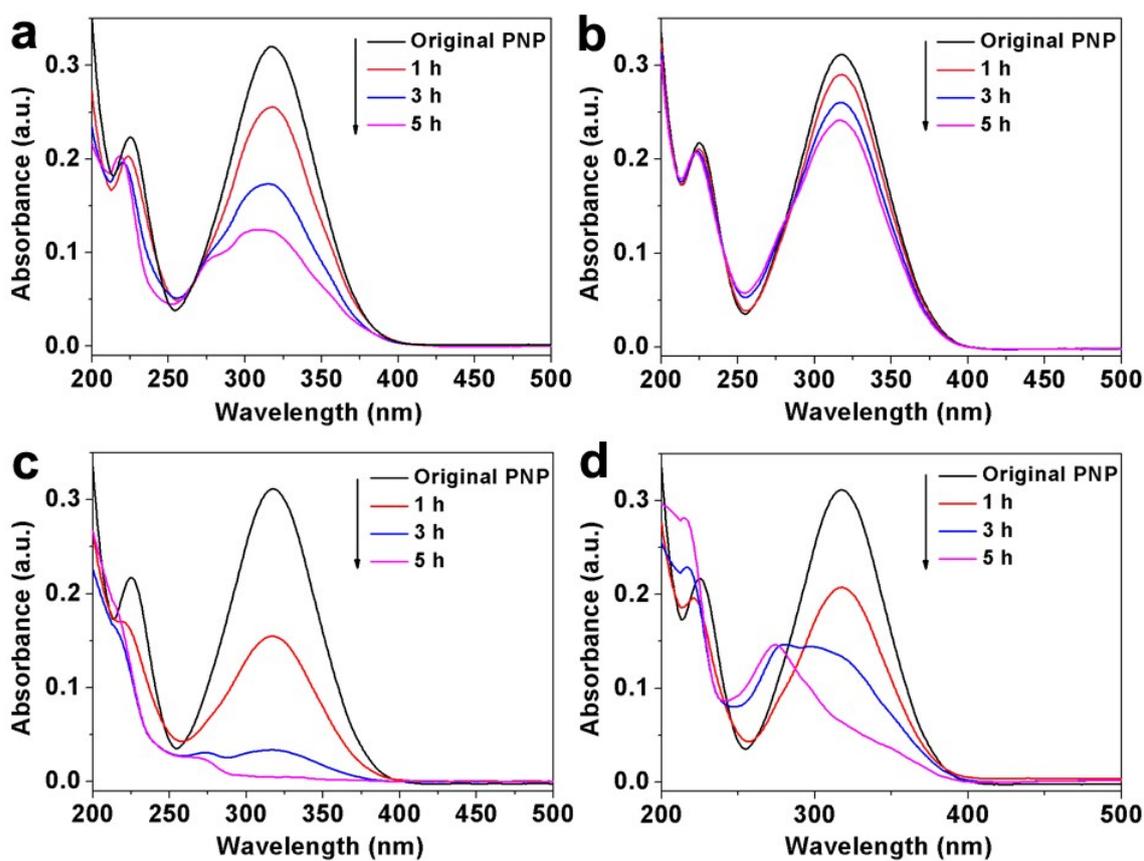


Fig. S6 UV-vis absorption spectra for the electrocatalytic reduction of PNP using different working electrodes: (a) Pt/CFC, (b) bare CFC, (c) Pt/C-CFC, and (d) Pt/CFC-1500 (CFC after Pt deposition for 1500 CV cycles using double platinum meshes as counter electrodes).

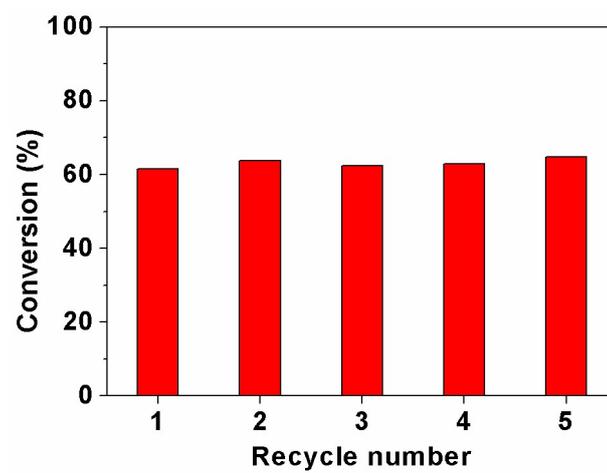


Fig. S7 The conversion of PNP after 5 h of hydrogenation reaction using Pt/CFC as working electrode for five repeated experiments.