

Supporting Information

Hierarchical Heterostructures based on Prickly Ni Nanowires/ Cu_2O Nanoparticles with Enhanced Photocatalytic Activity

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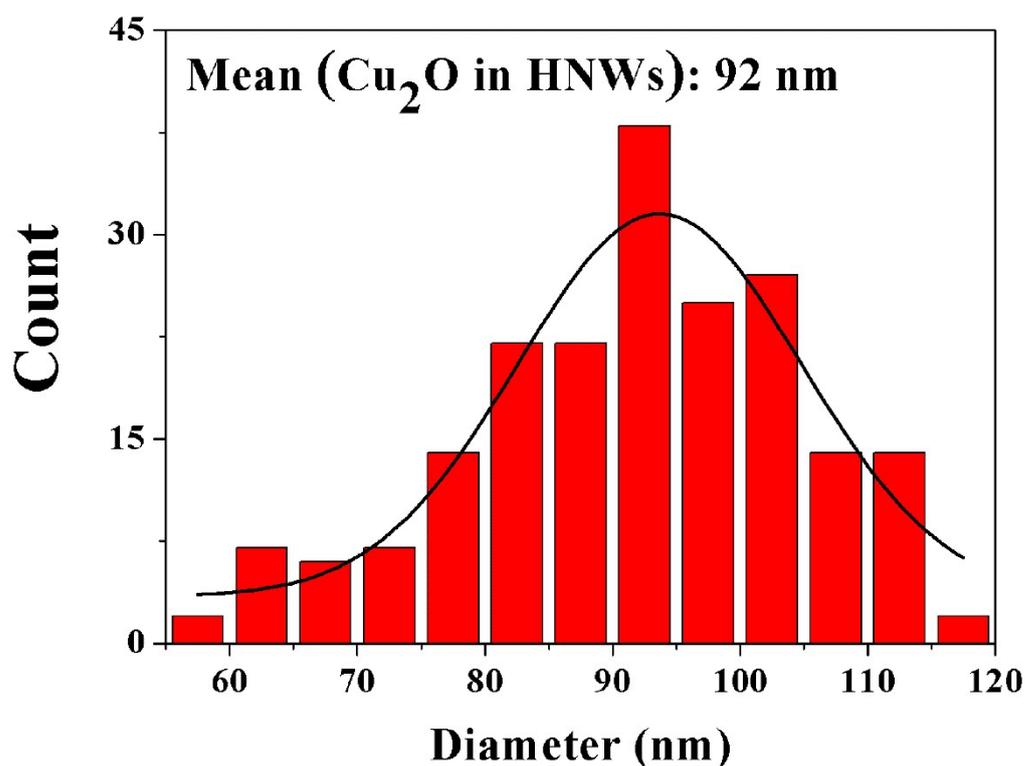


Fig. S1 The size distribution of Cu_2O nanoparticles in HNWs.

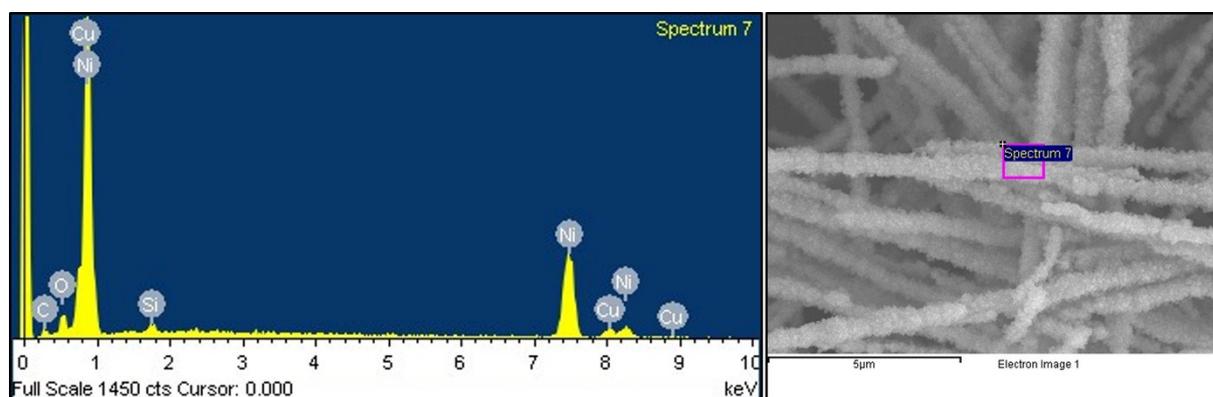


Fig. S2 EDX spectrum of as-synthesized Ni-Cu₂O HNWs.

Table S1. Cu element and Cu₂O content (wt%) in heteronanowires

Sample Weight ^{a)}	Cu content ^{b)}	Cu ₂ O content
Sample 1: 12.5 mg	10	11.52
Sample 2: 32.0 mg	10.5	11.81
Sample 3: 23.1 mg	12.3	13.84

a) Sample tested was prepared with different batches of Ni NWs. b) The Ni-Cu₂O HNWs was dissolved in aqua regia, and the content of Cu element was analysed by ICP.

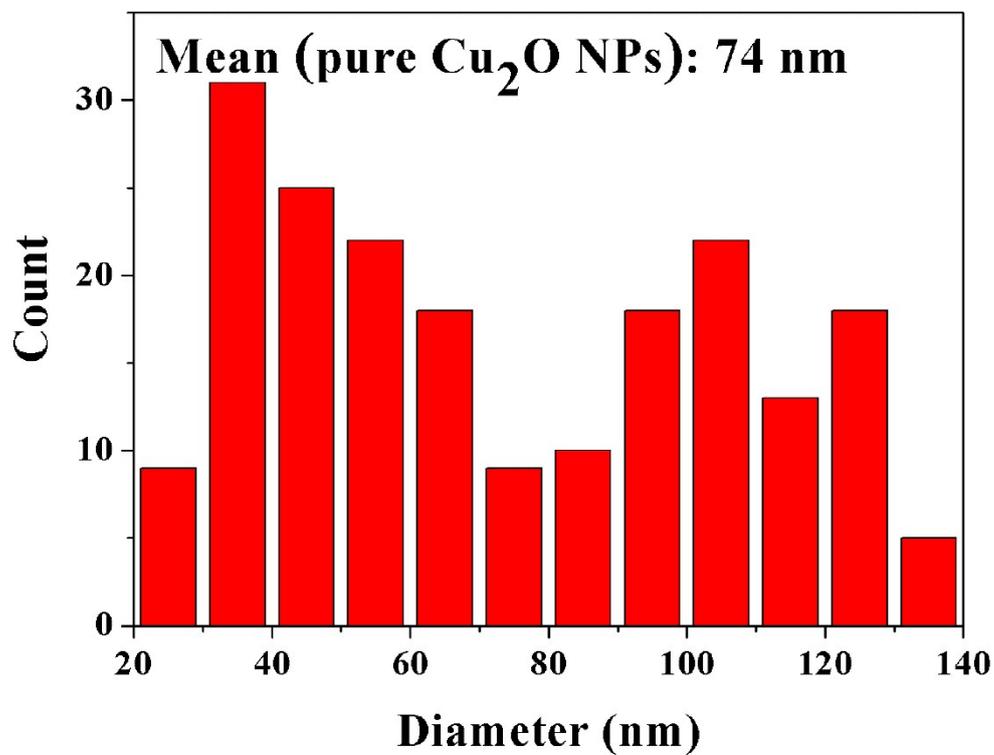


Fig. S3 The size distribution of pure Cu₂O NPs.

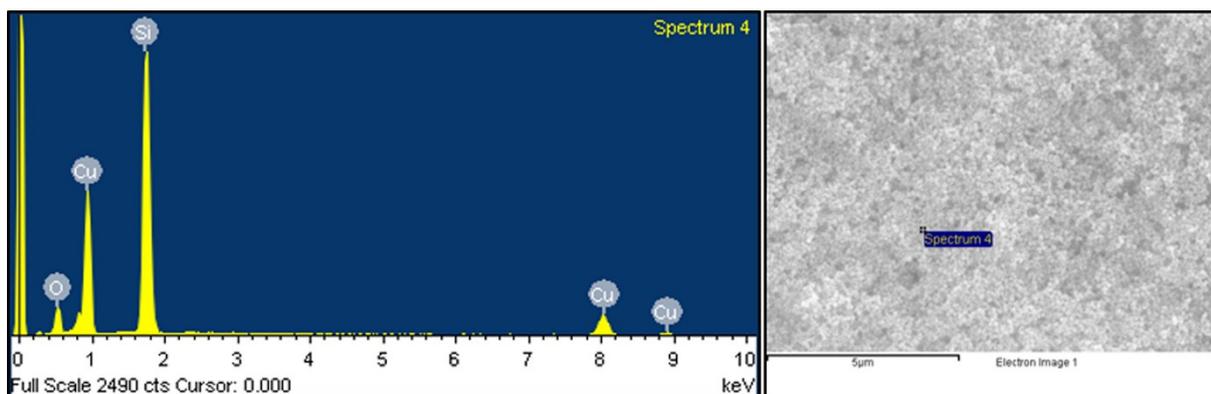


Fig. S4 EDX spectrum of pure Cu₂O NPs.

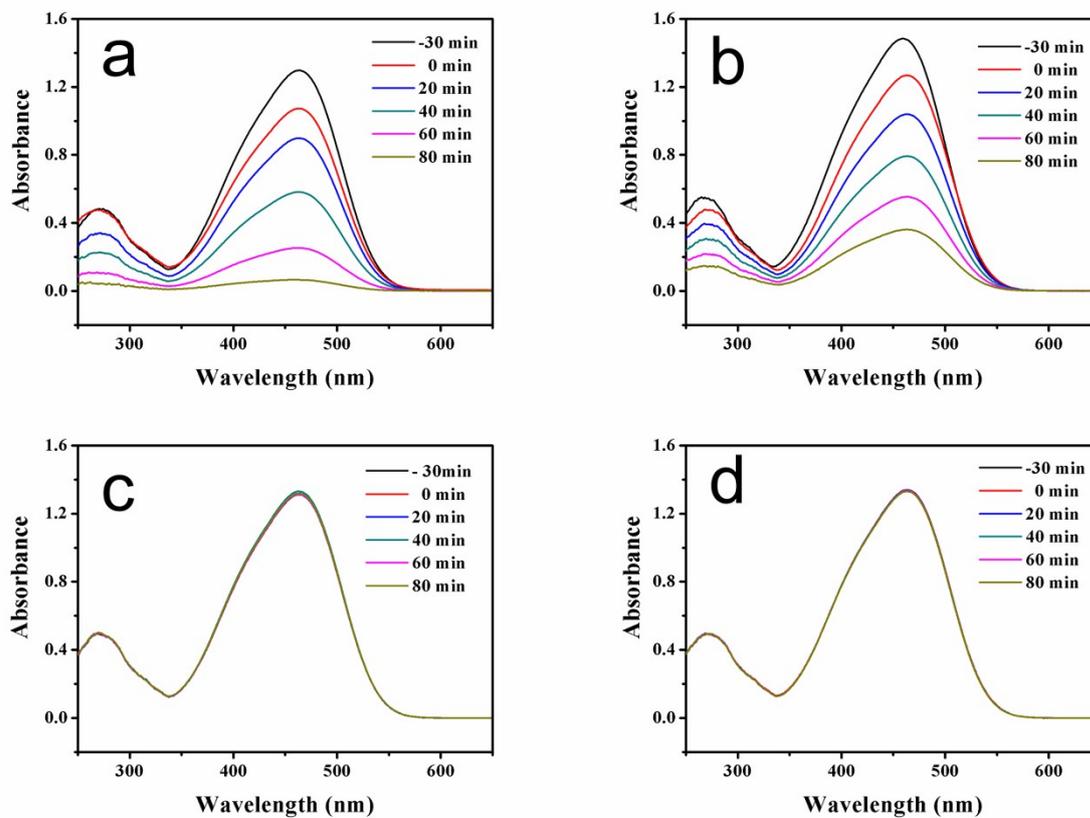


Fig. S5 Variation in the absorption of the MO solution in the presence of the as-prepared photocatalysts for different irradiation times: (a) Ni-Cu₂O HNWs, (b) Cu₂O NPs, (c) Ni NWs, and (d) blank.

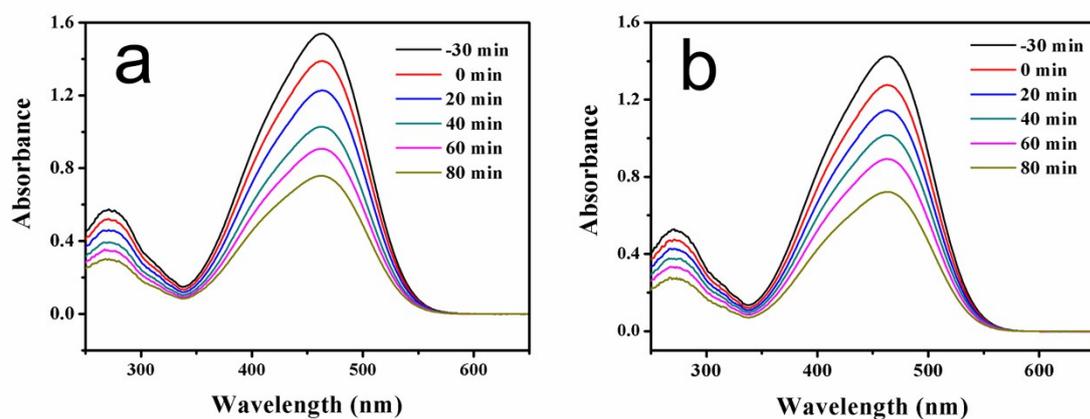


Fig. S6 The adsorption curves of MO in the presence of the as-prepared photocatalysts under dark for different times: (a) Ni-Cu₂O HNWs and (b) Cu₂O NPs.

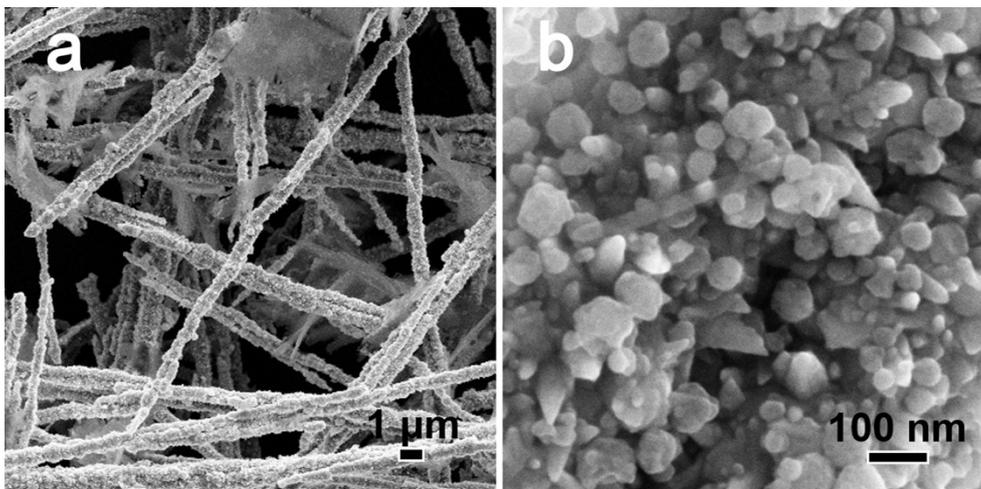


Fig. S7 The (a) low and (b) high magnification SEM image of Ni-Cu₂O HNWs after photocatalytic test.

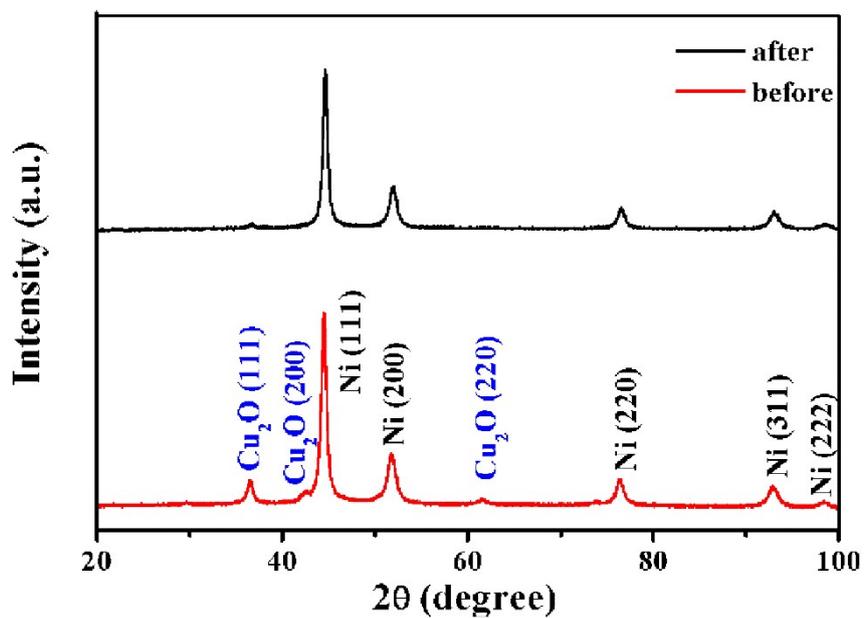


Fig. S8 XRD patterns of the Ni-Cu₂O HNWs before and after photocatalytic test.

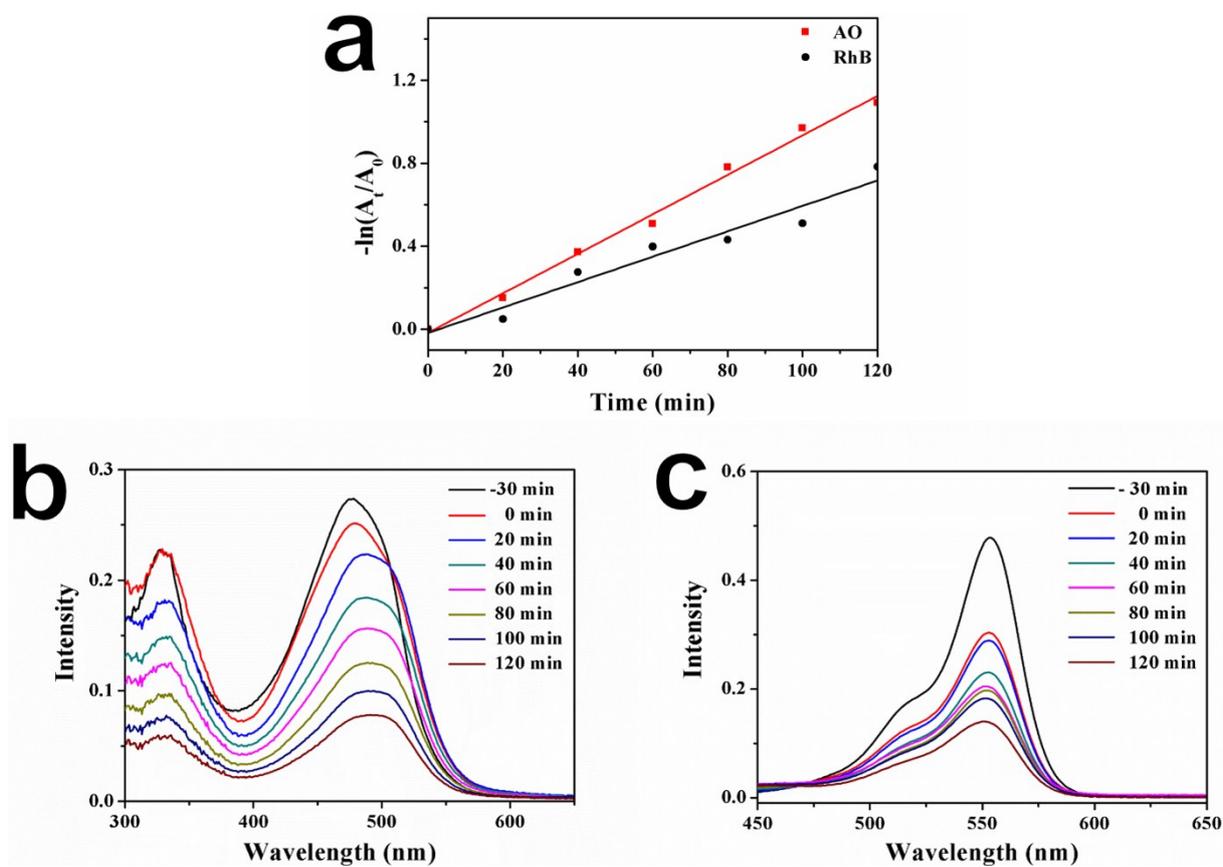


Fig. S9 (a) Plots of $-\ln(A_t/A_0)$ versus time for rate constant calculation of OG and RhB photodegraded by Ni-Cu₂O HNWs. Time-dependent UV-Vis spectra of (b) OG, and (c) RhB solution photodegraded by Ni-Cu₂O HNWs.

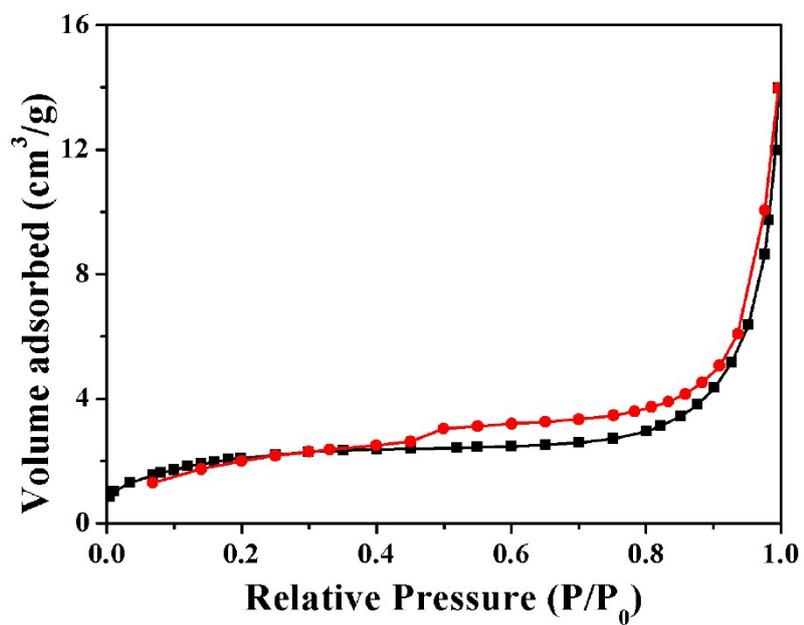


Fig. S10 N₂ adsorption-desorption BET isotherms of Ni-Cu₂O HNWs.