Supplementary Information

Excellent degradation performance towards organic pollutants of 3D hierarchical nanoporous structures of Copper

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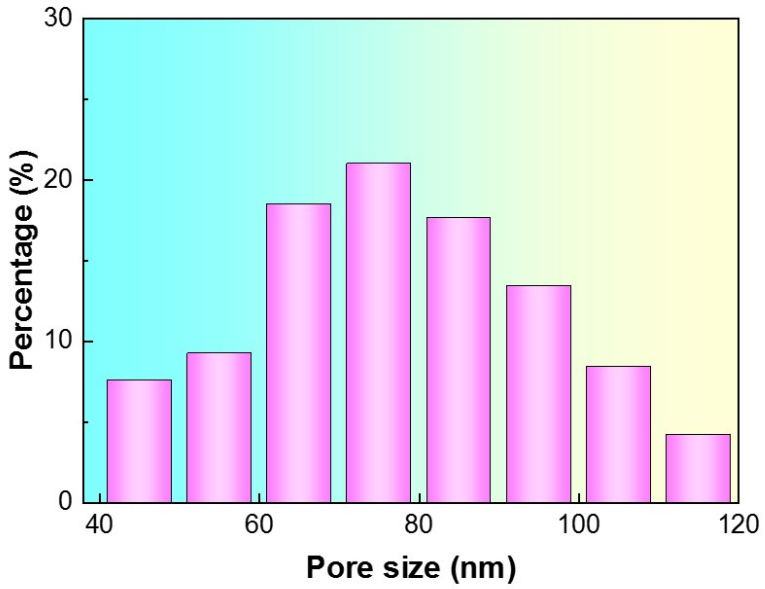

Figure S1. Nanopore size distribution in the 3D NP-Cu sample, as measured by SEM micrograph analysis using an ImagePro Plus software.

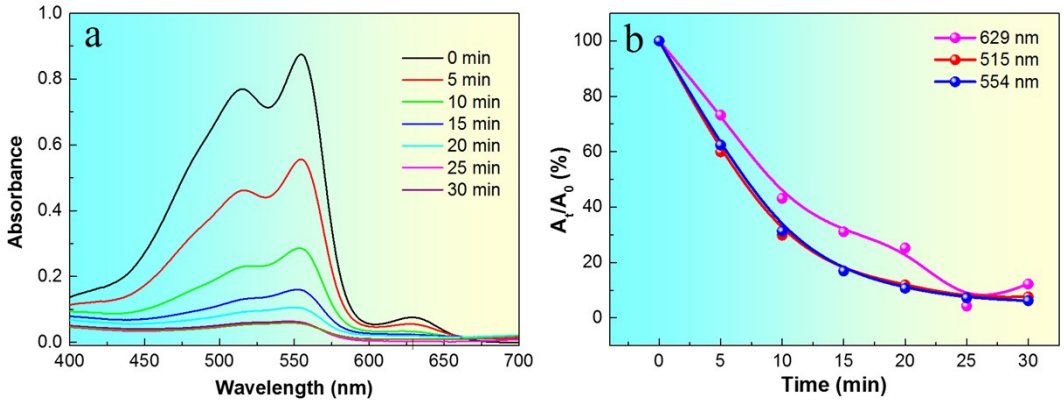

Figure S2. (a) UV absorption spectrum of the mixture of five dyes degraded using 3D NP-Cu within different time intervals; (b) degradation efficiency of the mixed dyes by using 3D NP-Cu.

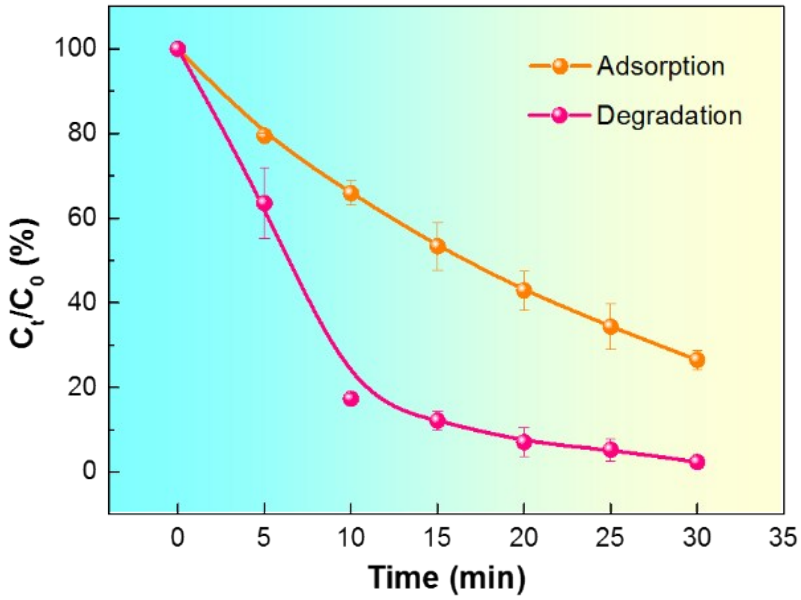

Figure S3. Comparison of degradation of MO (45 °C, $[H_2O_2]$=6 mM, light intensity 0.960 mW/cm^2) and absorption of MO (45 °C, $[H_2O_2]$=0 mM, Ar purge, in darkness).

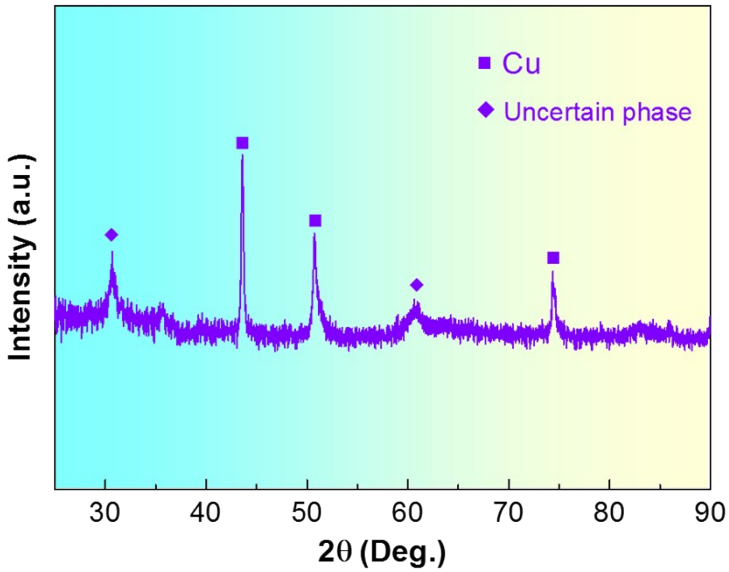

Figure S4. XRD pattern of the 3D NP-Cu sample after H_2 reduction. No peaks corresponding to Cu_2O phase could be detected in the XRD pattern, indicating that the Cu_2O was fully reduced to metal Cu after this treatment.

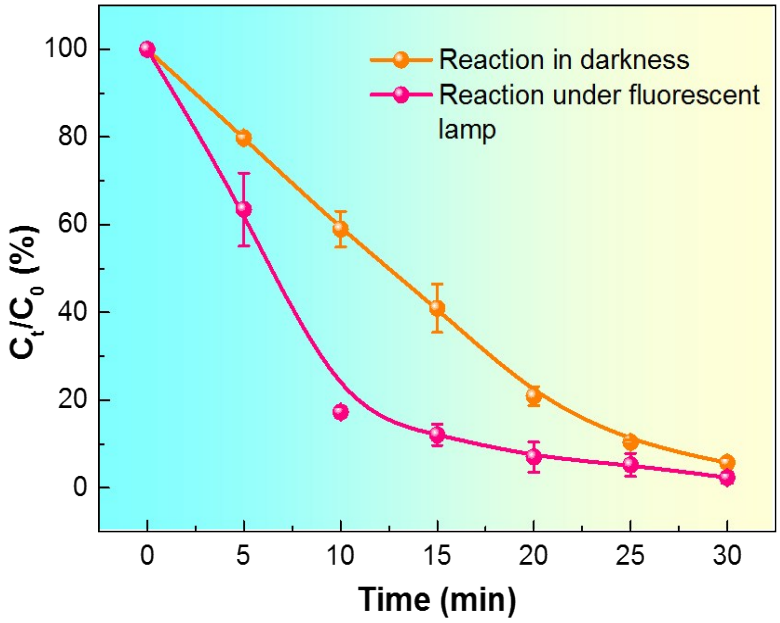

Figure S5. Comparison of degradation of MO solution under fluorescent lamp and darkness. Condition: pH=2, $[H_2O_2]$=6 mM, Temp.=45 °C.