Supplementary Material

Tuning photocatalytic activity of g-C_3N_4 through Cu deposition via chemical reduction and DBD plasma method for visible-light-driven Cr(VI) reduction

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Raman spectroscopy

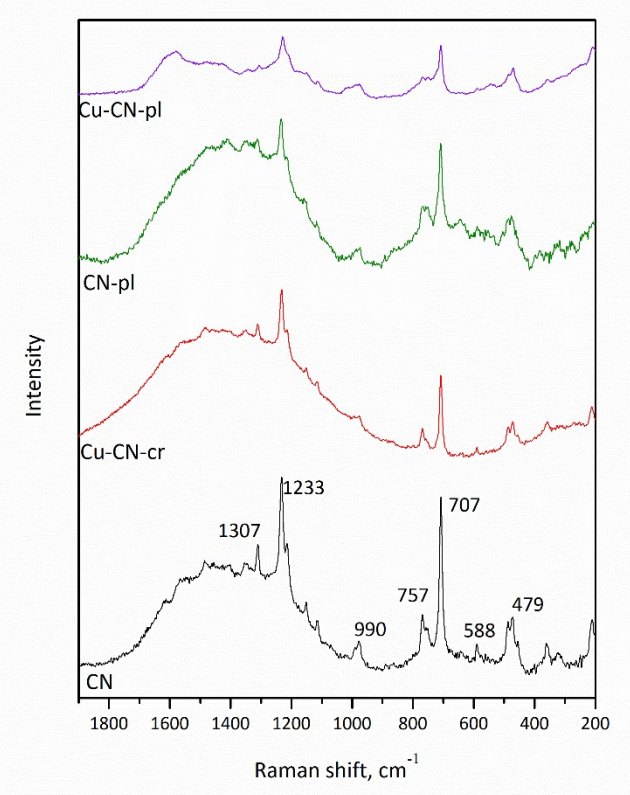


Fig. S1 Raman spectra of the CNs

EPR analysis

Table S1. Peak intensity (a. u) per 1 mg of the CN-based samples

Sample	CN	Cu-CN-cr	CN-pl	Cu-CN-pl
Intensity - dark	$3.30 \cdot 10^5$	$1.55 \cdot 10^5$	$4.43 \cdot 10^5$	-
Intensity - light	$5.07 \cdot 10^5$	$2.19 \cdot 10^5$	$5.66 \cdot 10^5$	-

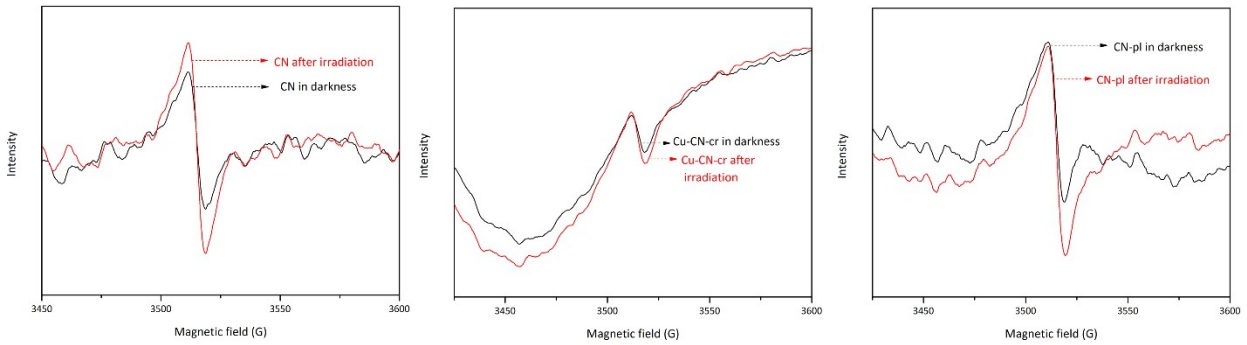
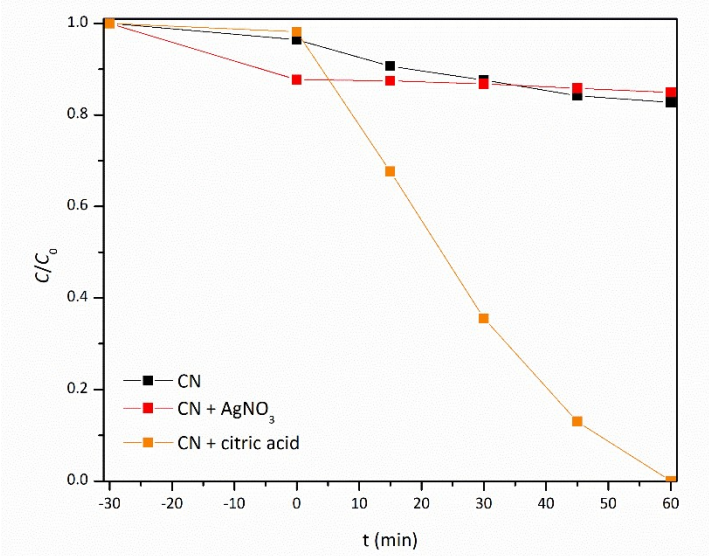


Fig. S2 EPR spectra of the CNs



Effects of scavengers and kinetic

Fig. S3 Photocatalytic reduction of Cr(VI) under the visible irradiation with the CN

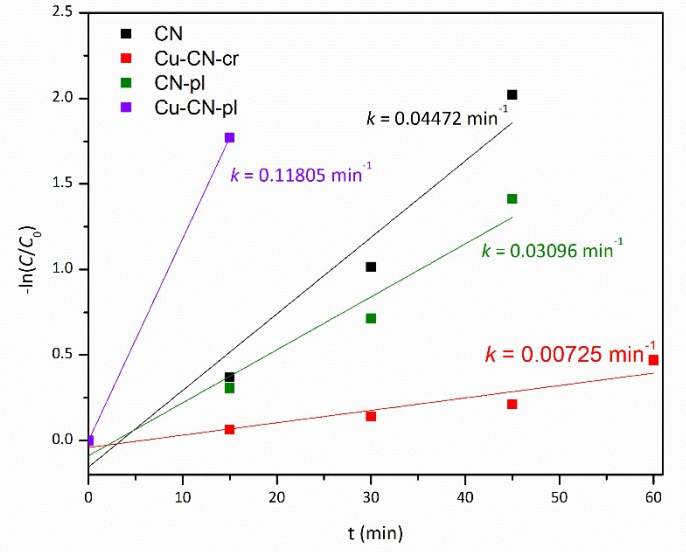


Fig. S4 Pseudo-first order kinetics plots

The photocatalytic reduction of Cr(VI) follows the pseudo-first-order equation[1]:

$$-ln\frac{C}{C_0} = k$$

Where C is the concentration of the solution at reaction time t, C_0 is the concentration of solution before the irradiation and k is rate constant.

Cyclic voltammetry (CV)

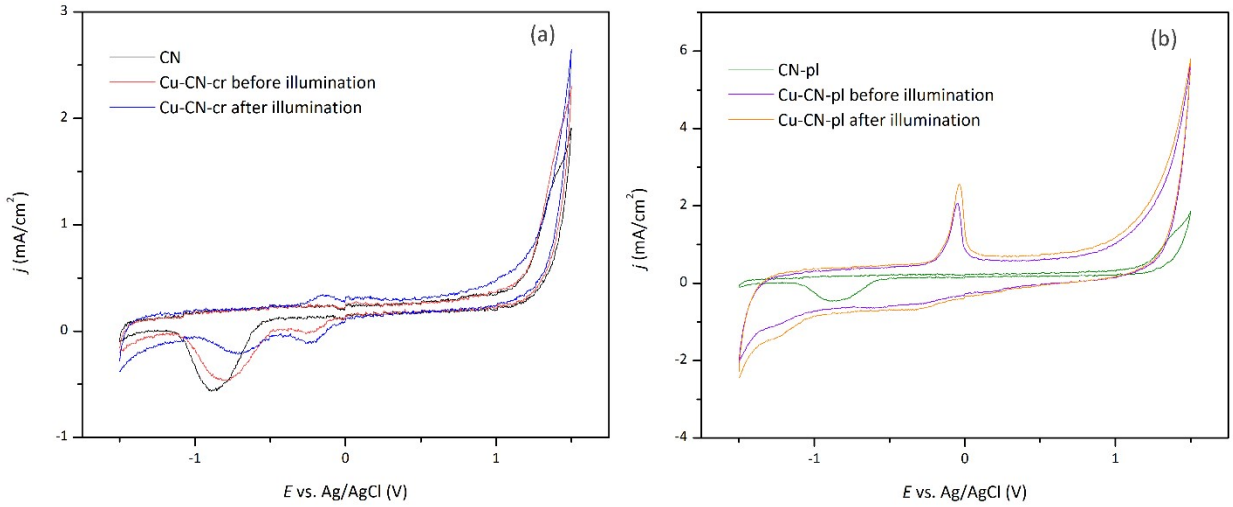


Fig. S5 CV curves of CN samples

Reference:

1 S. Liu, W. Zhang, P. Zhu, S. Zuo and H. Xia, *J. Environ. Chem. Eng.,* 2021, **9**, 105879.