

Tuning the visible-light photocatalytic degradation activity of thin nanosheets constructed porous g-C₃N₄ microspheres by decorating ionic liquid modified carbon dots: roles of heterojunctions and surface charges

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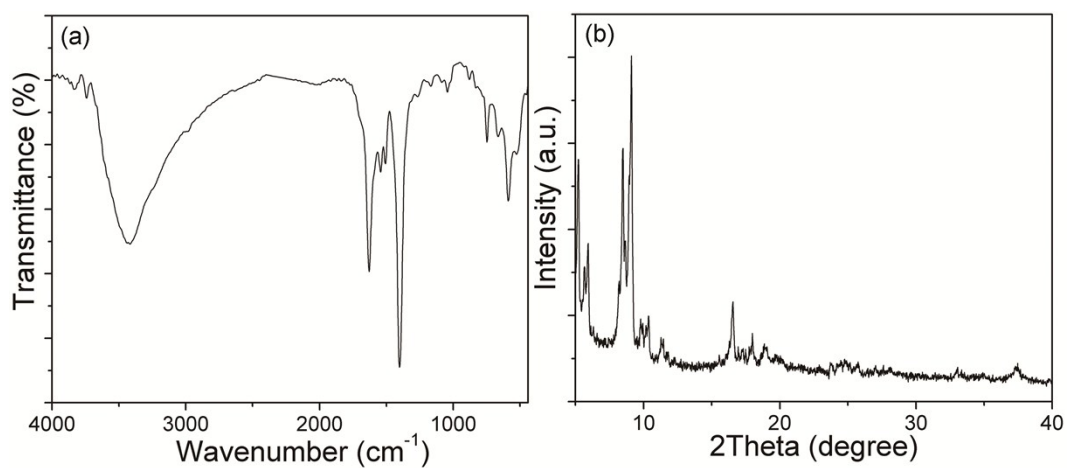


Fig. S1 (a) FTIR spectrum and (b) XRD pattern of MOF.

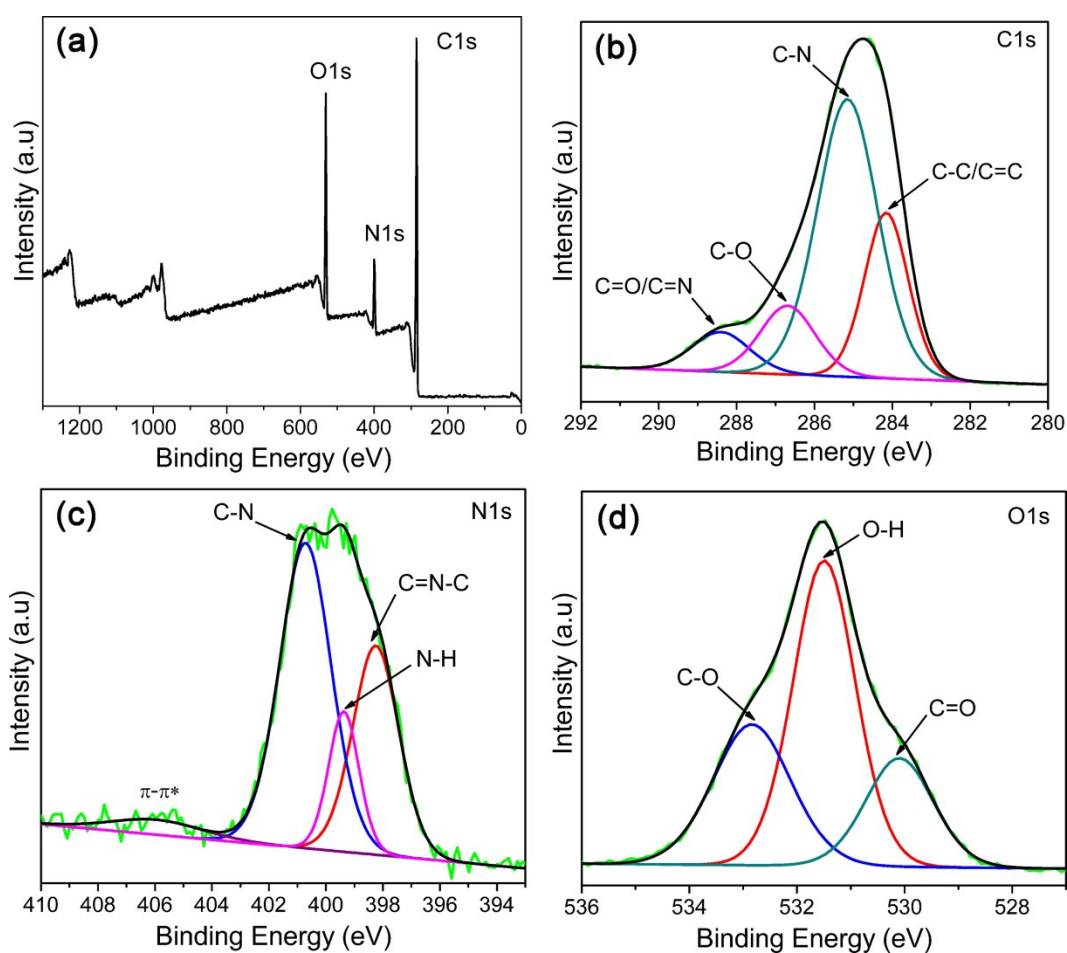


Fig. S2 (a) Full-scan XPS and corresponding high-resolution (b) C1s, (c) N1s and (d) O1s XPS spectra of CDs.

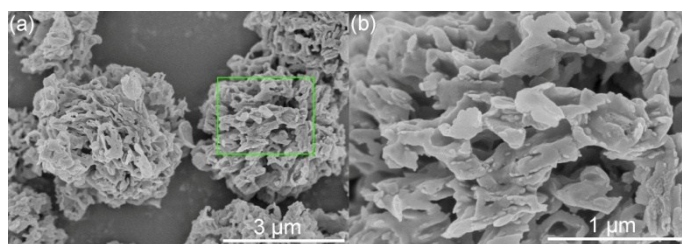


Fig. S3 (a) SEM and (b) high-resolution SEM images of CDs-1.6/C₃N₄.

Table S1

Element compositions of CDs, g-C₃N₄ and CDs-1.6/C₃N₄ calculated by their XPS spectra.

Sample	C%	N%	O%
CDs	70.72	11.36	17.92
g-C ₃ N ₄	44.45	54.39	1.16
CDs-1.6/C ₃ N ₄	45.60	53.14	1.26

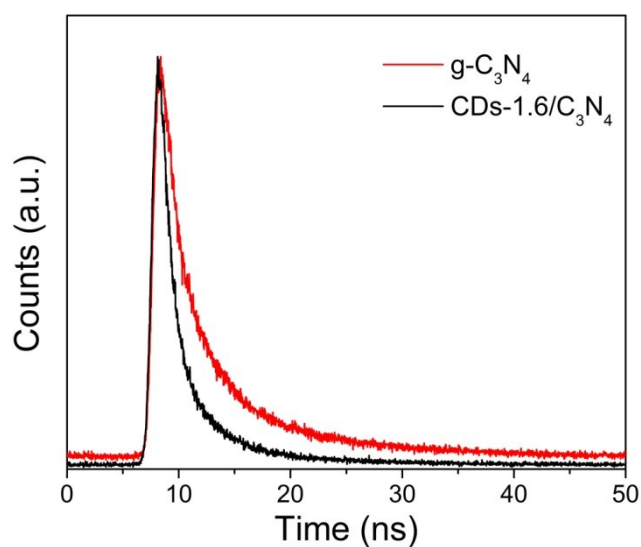


Fig S4 Time-resolved transient PL decay curves of g-C₃N₄ and CDs-1.6/C₃N₄ samples under the excitation wavelength of 405 nm.

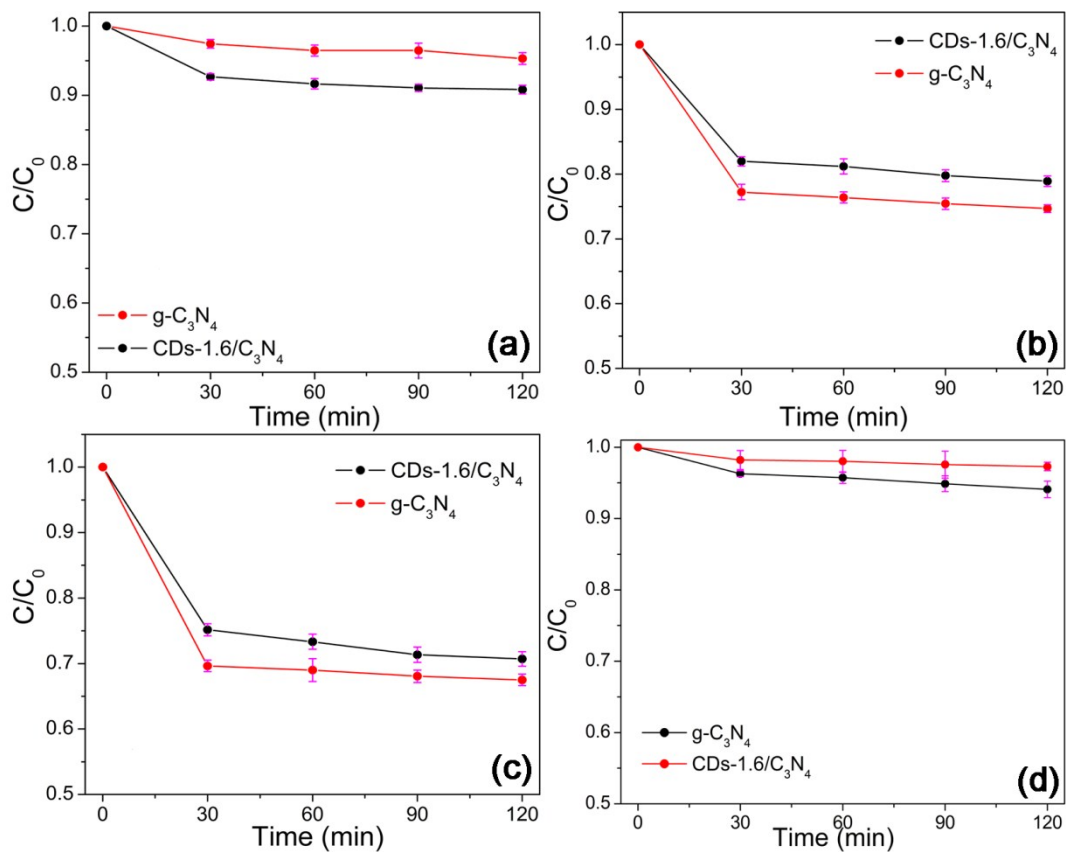


Fig S5 The absorption behaviors of $g-C_3N_4$ and $CDs-1.6/C_3N_4$ towards various pollutants of (a) MO, (b) MB, (c) RhB and (d) p-NP.

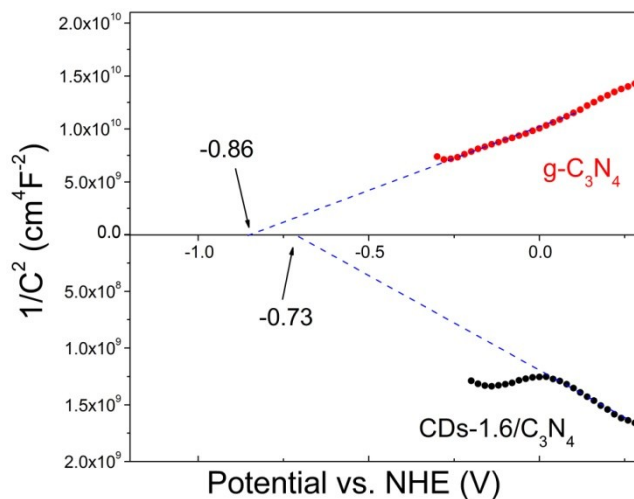


Fig. S6 Mott-Schottky plots of $g-C_3N_4$ and $CDs-1.6/C_3N_4$.

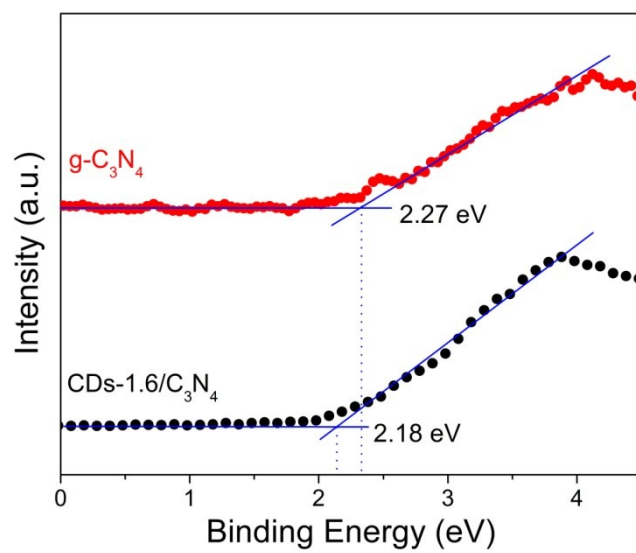


Fig. S7 VB XPS spectra of $g\text{-C}_3\text{N}_4$ and $\text{CDs-1.6/C}_3\text{N}_4$.