Supporting Information

Interfacial engineering boosting the photocatalytic performance of CdS/C_3N_5 heterojunction for organic pollutants degradation: Mechanism, degradation pathway, and DFT calculation

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Characterization of samples

The crystalline structure of the samples was characterized by X-ray diffractometer from Rigaku, Japan (XRD). X-ray photoelectron spectroscopy (XPS, Thermo, Escalab 250Xi, USA) was performed to determine the elemental composition and electronic structure. The micromorphology and microstructure were observed using the transmission electron microscope (TEM, JEOL, JEM-2100F) and scanning electron microscope (SEM, Hitachi, S-4800). The elemental species and distribution of the samples were analyzed using SEM coupled with Energy dispersive spectrometer (EDS). The performance of samples was tested by a UV-vis spectrophotometer (UV-VIS DRS, Shimadzu, UV3600). Photogenerated charge separation ability was tested by fluorescence spectrometer (PL, Hitachi, F-7000).

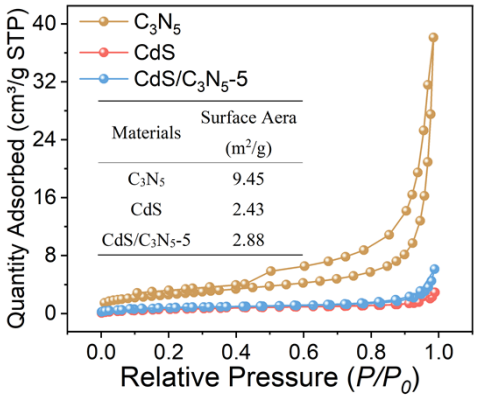


Figure S1. N_2 adsorption-desorption isotherms of as-prepared samples.

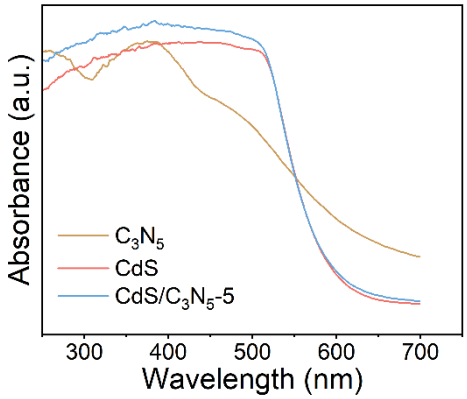
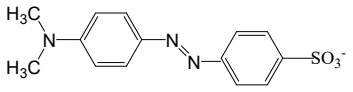
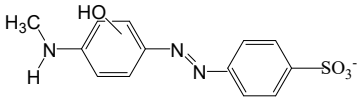
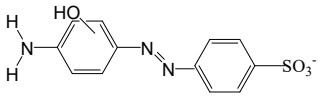
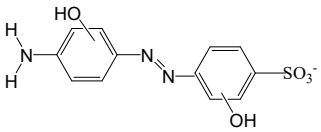
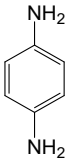
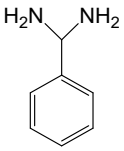
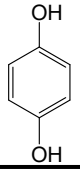


Figure S2. Plots of transformed Kubelka-Munk function versus photon energy of C_3N_5, CdS and CdS/C_3N_5-5.

Table S1. The molecular structure of intermediate products that may be formed by mineralization of molecule MO.

	Structure	Molecular formula	Mass-charge (m/z)
MO		$C_{16}H_{21}N_3O_3S^-$	309
P1		$C_{16}H_{21}N_3O_4S^-$	353
P2		$C_{15}H_{21}N_3O_4S^-$	339
P3		$C_{16}H_{25}N_3O_5S^-$	371
P4		$C_6H_8N_2$	108
P5		$C_7H_{10}N_2$	122
P6		$C_6H_6N_2$	110