

**Direct Z-Scheme of n-type CuS/p-type ZnS@Electrospun PVP Nanofiber
for Highly Efficient Catalytic Reduction of 4-Nitrophenol and Mixed-Dyes**

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Supplementary Information

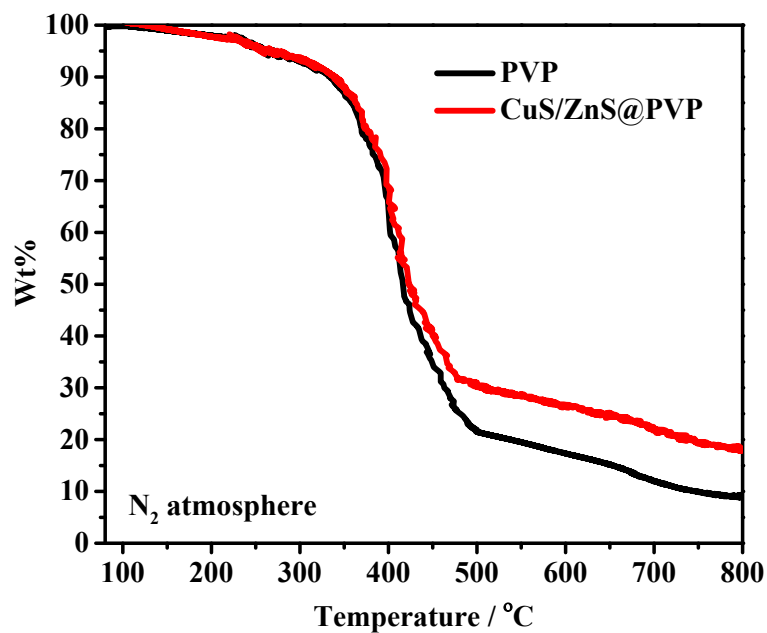


Fig. S1 TGA curves of PVP (black line) and CuS/ZnS@PVP nanofibers (red line) under N₂ atmosphere.

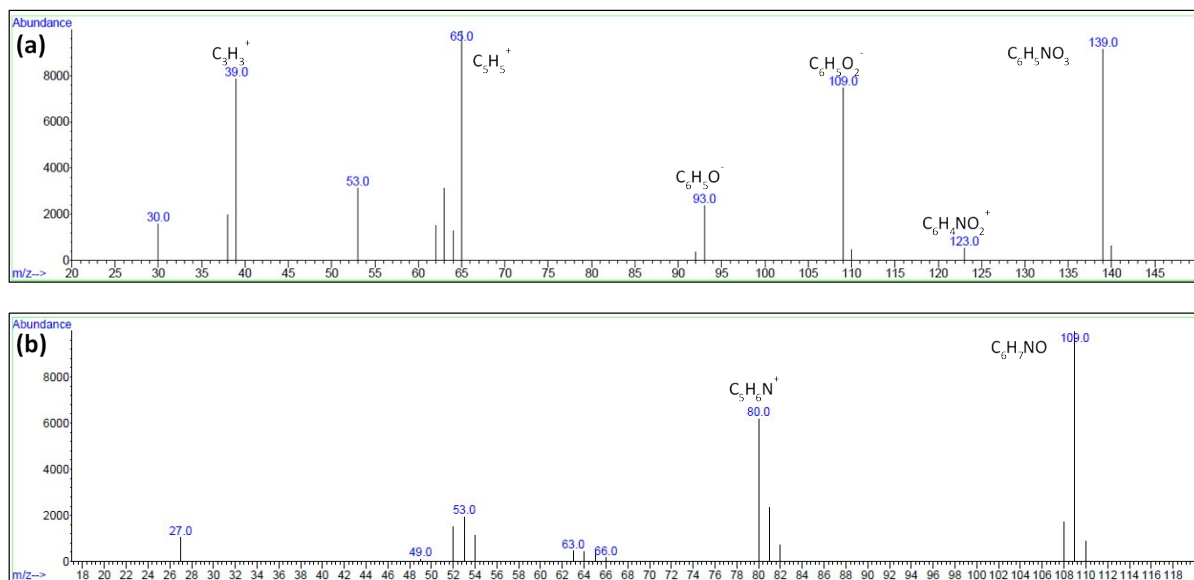


Fig. S2 The GC-MS chromatogram of (a) before and (b) after photocatalytic reduction of 4-nitrophenol for 2 h with methanol as the hole scavenger.

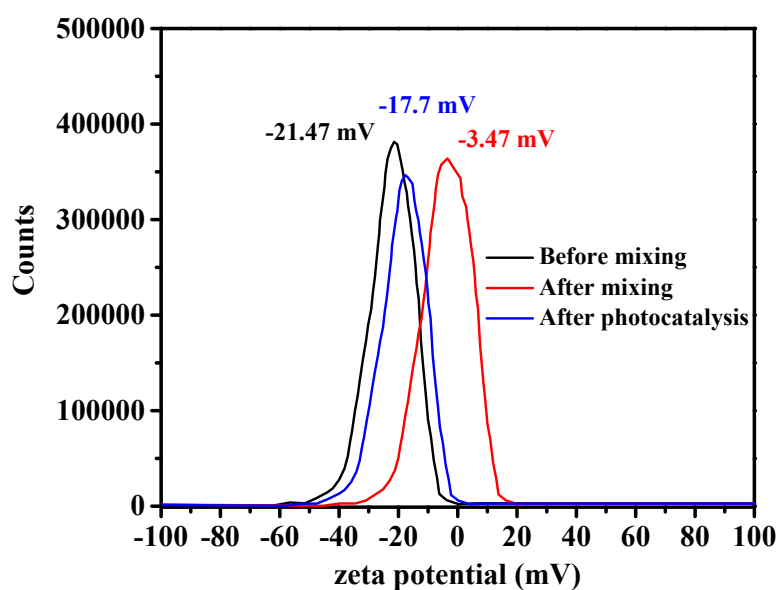


Fig. S3 Zeta potential CuS/ZnS@PVP nanofiber for sample (a) before mixing, (b) after mixing with mixed-dyes, and (c) after photocatalysis.

Table S1. The concentration of each dye during photocatalytic degradation in mixed-dyes by CuS/ZnS@PVP nanofiber

Time (min)	C_t/C_0		
	Methylene blue	Rhodamine B	Methyl Orange
-30	1	1	1
-15	0.73	0.73	0.73
0	0.67	0.67	0.67
15	0.51	0.11	0.21
30	0.33	0.07	0.14
45	0.19	0	0.07
60	0.13	0	0
90	0	0	0