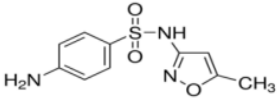


Table S 1. Chemical structure and characteristics of sulfamethoxazole²⁶

Chemical structure	Depiction	
	Therapeutic Class	Antibiotic
	Molecular Formula	C₁₀H₁₁N₃O₃S
	Molecular Weight	253.28 g/mol
	IUPAC Name	4-amino-N-(5-methyl-1,2-oxazol-3-yl)benzenesulfonamide
	Drug Bank ID	DB01015
	Solubility in water(37 °C)	610 mg/L
	Dissociation Constants	pKa₁ = 1.6; pKa₂ = 5.7

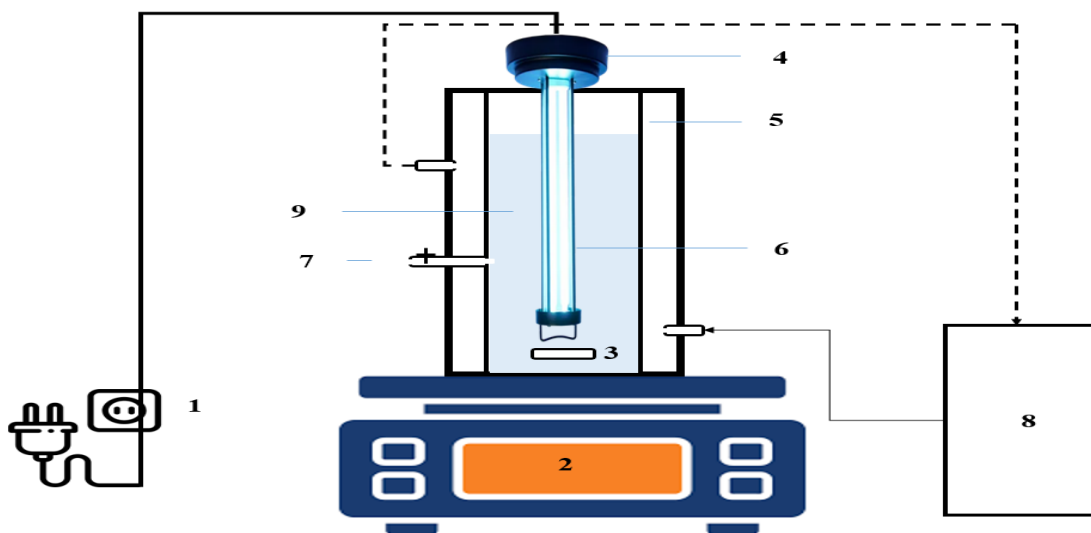
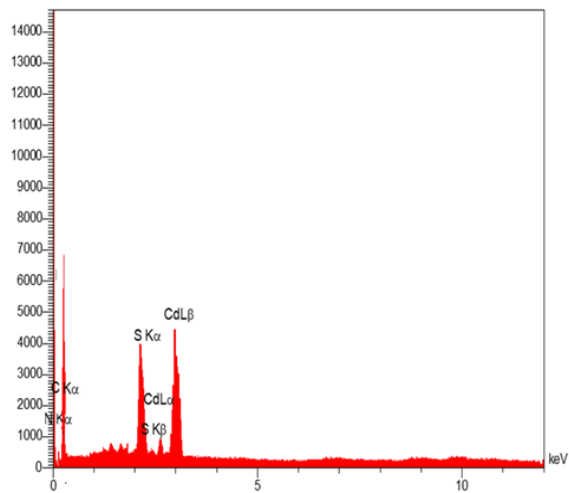
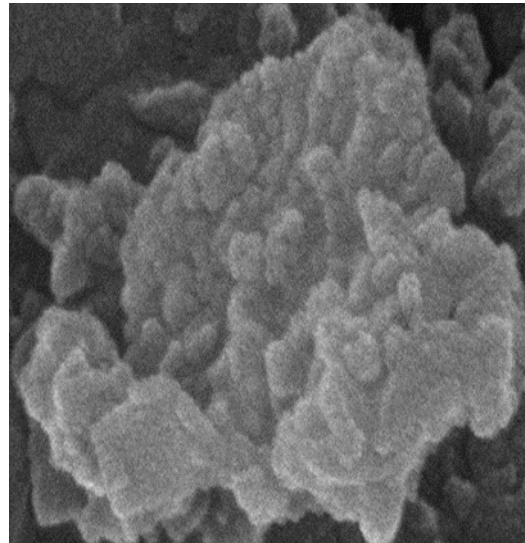
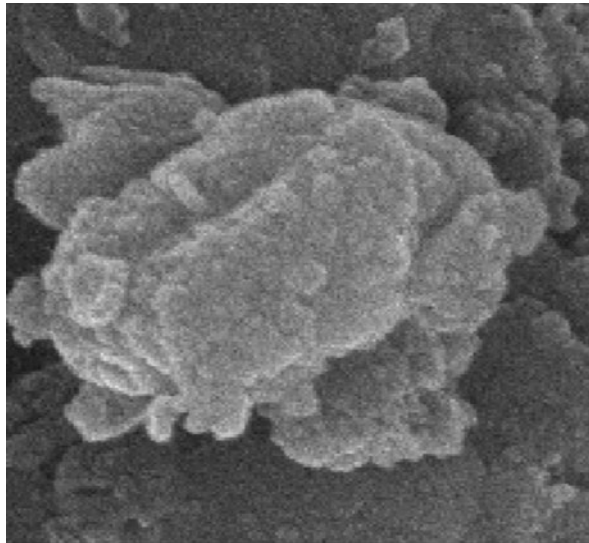


Figure S1. A schematic diagram of used experimental set-up: 1) UV light source; 2) magnetic stirrer; 3) tubular magnetic; 4) UV light; 5) solution reactor cover; 6) quartz sleeve; 7) outlet for sampling; 8) experimental solution container; 9) antibiotic and NPs suspension



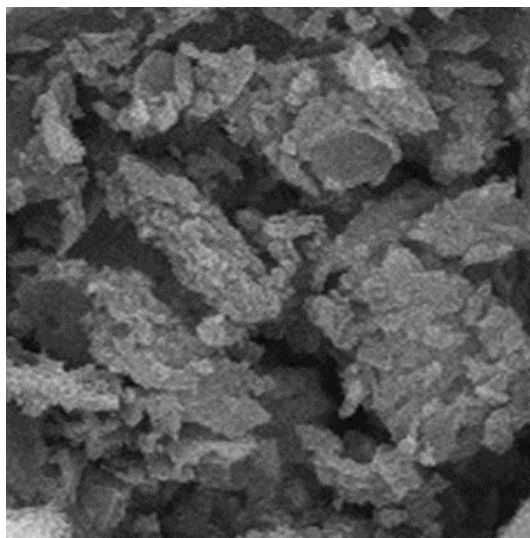
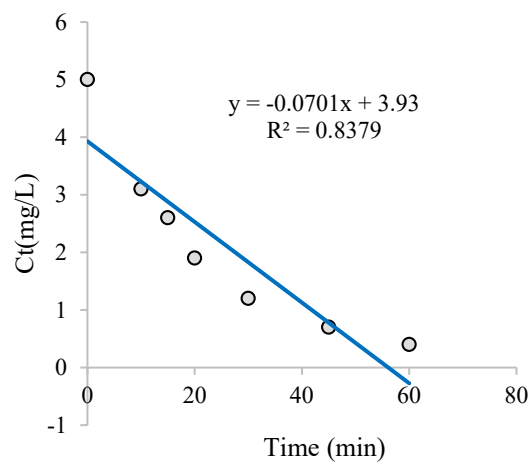
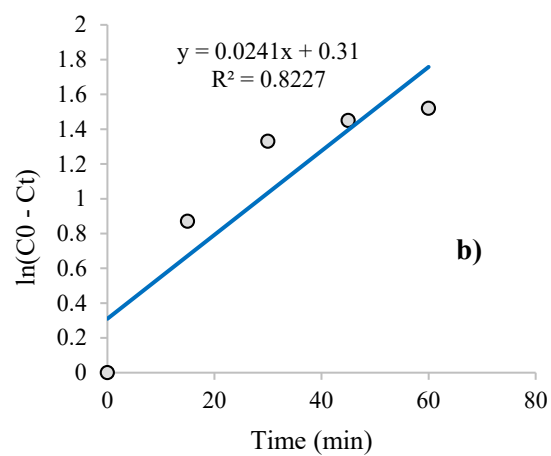


Figure S2. FE-study (0.5, 1 μm)

Element	W%	A%
N	40/2	47
C	30/4	37/6
Cd	15/3	9/1
S	14/1	6/3

SEM graph of G-C₃N₄-CdS synthesized in this

a)



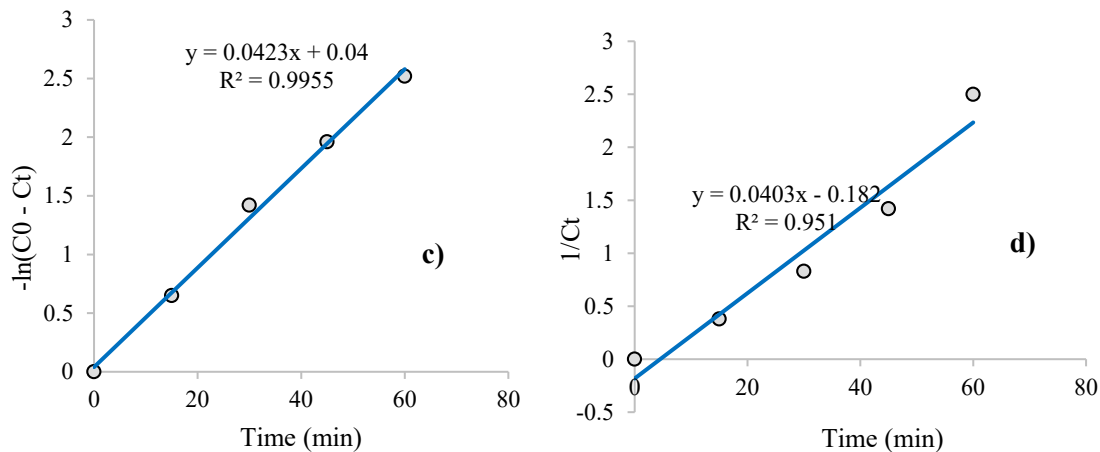


Figure S3. Obtained kinetic parameters: a) pseudo-first-order kinetic; b) Zero order kinetics; c) Second order kinetic; d) First order kinetic. Synthetic data of photocatalytic removal under optimal conditions (pH=5, sulfamethoxazole concentration 5 mg/L, photocatalyst dose=0.7 g/L, UV light source)

Kinetic name	Kinetic equation	k (1/min)	R ²
Zero order kinetic	$C_0 - C_t = kt$	0.12	0.84
First order kinetic	$\ln(C_0/C_t) = kt$	0.042	0.995
pseudo-first-order	$\ln(C_0 - C_t) = \ln C_0 - kt$	0.015	0.84
Second order kinetic	$1/c_t - 1/c_0 = kt$	0.02	0.95