

Construction of ZnIn_2S_4 - CdIn_2S_4 Microspheres for Efficient Photo-catalytic Reduction of CO_2 with Visible Light

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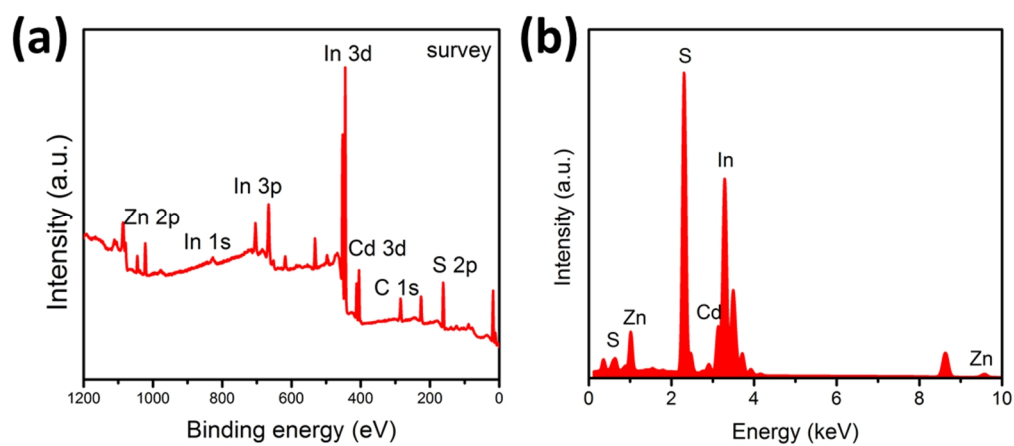


Figure S1. XPS survey spectrum (a) and EDS spectrum (b) of $\text{ZnIn}_2\text{S}_4\text{-CdIn}_2\text{S}_4$.

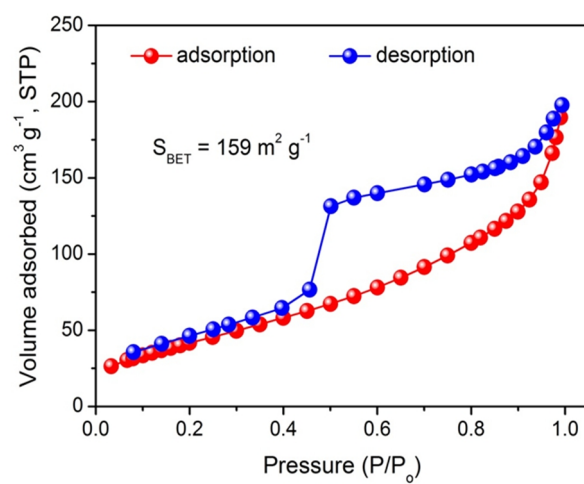


Figure S2. N₂ sorption isotherms of ZnIn₂S₄.

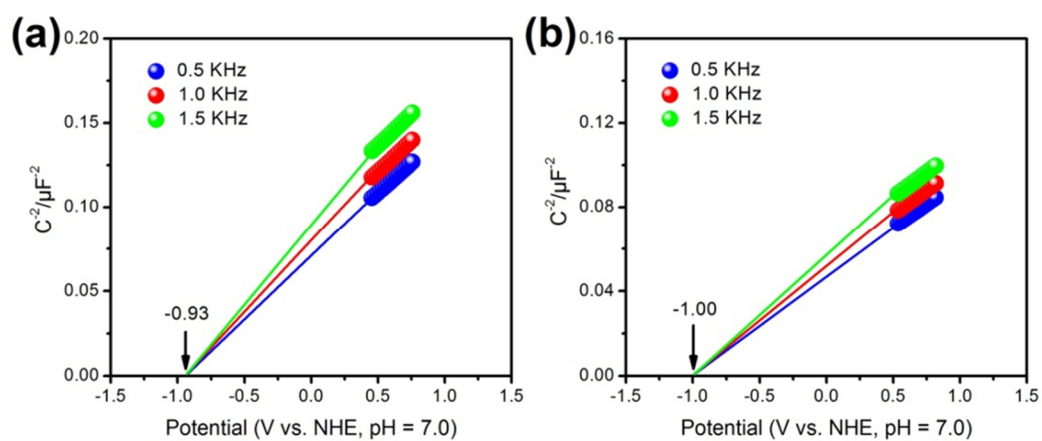


Figure S3. Mott-Schottky plots: (a) ZnIn_2S_4 , and (b) CdIn_2S_4 .

Table S1. Comparison of CO₂ Photoreduction Performance of ZnIn₂S₄-CdIn₂S₄ with That of Other Catalysts in Similar Reaction Systems under Visible Light Irradiation ($\lambda \geq 420$ nm).

Catalyst	Photosensitizer Cocatalyst	Sacrificial agent	Major product evolution rate ($\mu\text{mol}\cdot\text{h}^{-1}$)	Ref.
ZnIn ₂ S ₄ -CdIn ₂ S ₄	\ Co(bpy) ₃ ²⁺	TEOA	CO:33.6	This work
Fe ₂ O ₃ @ZnIn ₂ S ₄	\ Co(bpy) ₃ ²⁺	TEOA	CO:0.9	[1]
PCN/ZnIn ₂ S ₄	\ Co(bpy) ₃ ²⁺	TEOA	CO:44.6	[2]
ZIS@CNO	\ Co(bpy) ₃ ²⁺	TEOA	CO:12.7	[3]
ZnIn ₂ S ₄ -In ₂ O ₃	\ Co(bpy) ₃ ²⁺	TEOA	CO:12.3	[4]
In ₂ S ₃ -CdIn ₂ S ₄	\ Co(bpy) ₃ ²⁺	TEOA	CO:3.3	[5]
P-ZIS	\ Co(bpy) ₃ ²⁺	TEOA	CO:37.6	[6]
CdS/ZIF-8	\ Co(bpy) ₃ ²⁺	TEOA	CO:32.1	[7]
CdS/BCN	\ Co(bpy) ₃ ²⁺	TEOA	CO:12.5	[8]
g-C ₃ N ₄ /CdS	\ Co(bpy) ₃ ²⁺	TEOA	CO:4.7	[9]

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