

Electronic Supporting Information

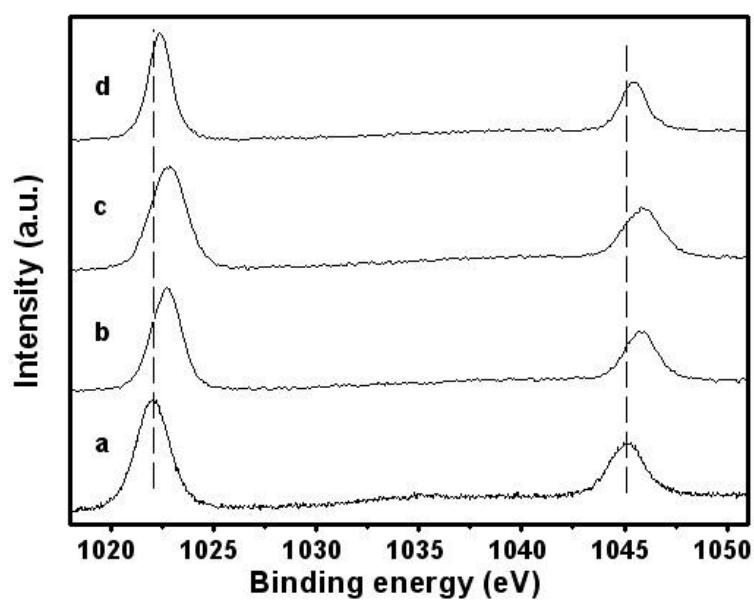


Fig. S1 XPS spectra in Zn 2p region for (a) ZnIn₂S₄; (b) RGO/ZnIn₂S₄-hydrothermal; (c) RGO/ZnIn₂S₄-photoreduction and (d) RGO/ZnIn₂S₄-hydrazine.

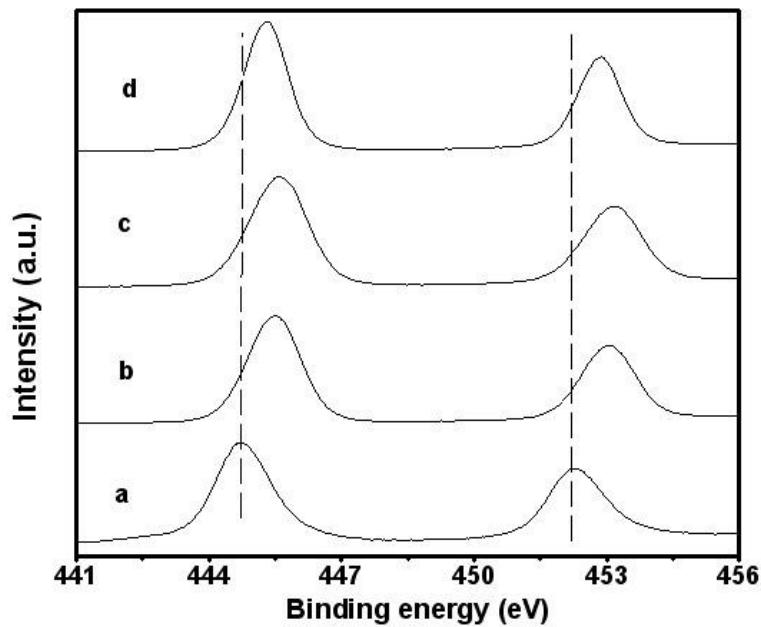


Fig. S2 XPS spectra in In 3d region for (a) ZnIn_2S_4 ; (b) RGO/ ZnIn_2S_4 -hydrothermal; (c) RGO/ ZnIn_2S_4 -photoreduction and (d) RGO/ ZnIn_2S_4 -hydrazine.

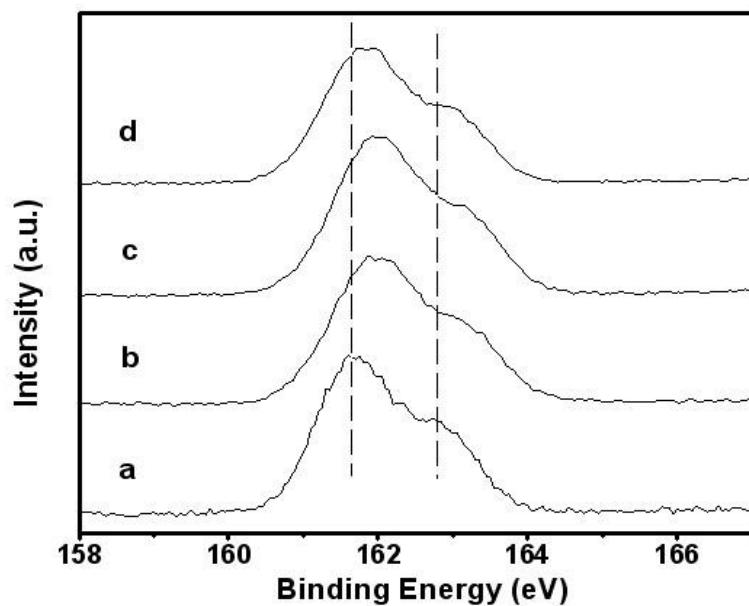


Fig. S3 XPS spectra in S 2p region for (a) ZnIn_2S_4 ; (b) RGO/ ZnIn_2S_4 -hydrothermal; (c) RGO/ ZnIn_2S_4 -photoreduction and (d) RGO/ ZnIn_2S_4 -hydrazine.

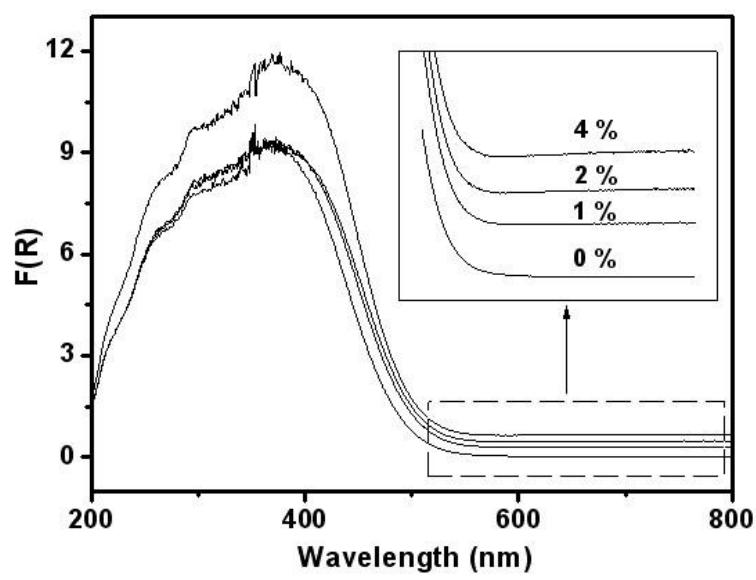


Fig. S4 UV-vis DRS of RGO/ZnIn₂S₄-hydrothermal prepared in the presence of different amount of GO.

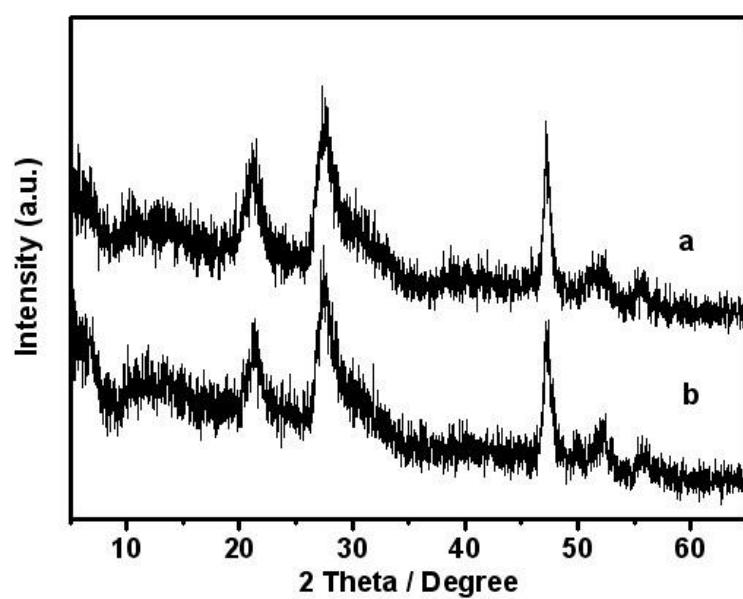


Fig. S5 XRD patterns of (a) RGO/ZnIn₂S₄-photoreduction and (b) RGO/ZnIn₂S₄-hydrazine.

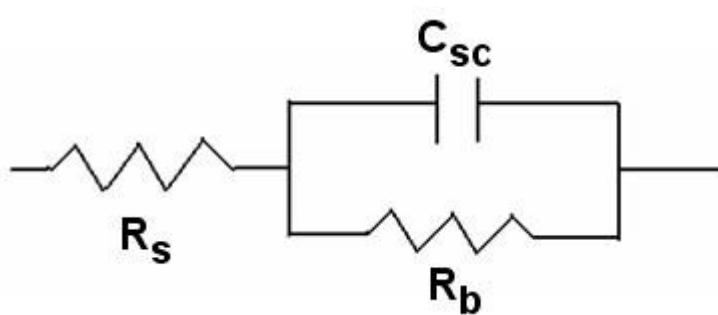


Fig. S6 The electrical equivalent circuit used for fitting of impedance spectra. R_s , C_{sc} and R_b represent electrolyte resistance, space charge capacitance and bulk electrode resistance, respectively.

Table S1 Values of R_b ($\text{k}\Omega\cdot\text{cm}^2$) extracted from the corresponding nyquist plots.

	RGO/ZnIn ₂ S ₄ -hydrothermal	RGO/ZnIn ₂ S ₄ -photoreduction	RGO/ZnIn ₂ S ₄ -hydrazine
Without light	424.4	242.2	166.9
With light	387.9	223.2	91.7