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## Supplemental data

1. High resolution scanning XPS spectrum f C1S of GO and high resolution core

level XPS spectrum of C 1s of the RGO-CdS/ZnS



Fig. S1 High resolution scanning XPS spectrum f C1S of GO (a) and high resolution

core level XPS spectrum of C 1s of the RGO-CdS/ZnS (b)

 The nitrogen adsorption-desorption isotherms of GO, CdS/ZnS and RGO-CdS/ZnS composites



Fig.S2 The nitrogen adsorption-desorption isotherms of GO, CdS/ZnS and RGO-

CdS/ZnS composites