Supporting Information

Mixed-solvothermal slow release synthesis of $Zn_xCd_{1-x}S_y$ nanorods with high visible light photocatalytic activities

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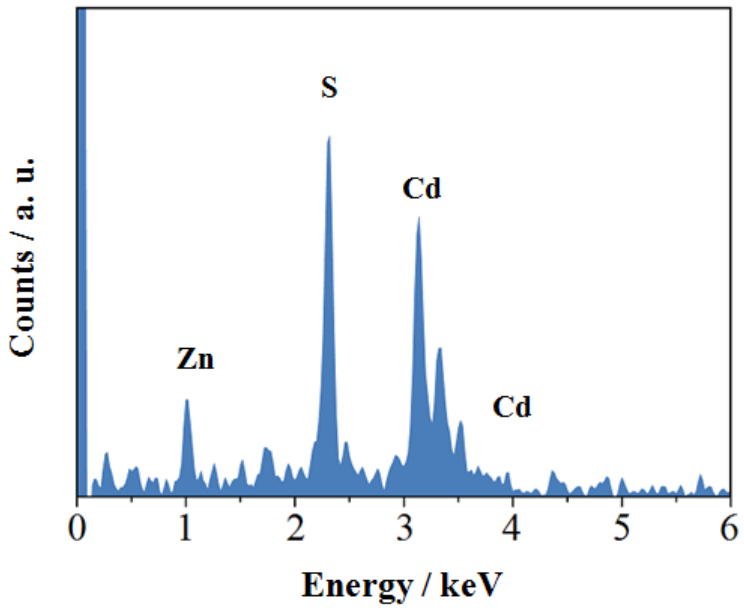

Fig. S1 The EDS analysis of catalyst film (top view SEM).

Photodegradation reaction

The photocatalytic degraditon of methylene blue was carried out as follows: typically, 0.2 g catalyst (B, $Cd_{0.78}Zn_{0.22}S_{0.94}$) was added to 200 mL methylene blue solution (20 mg/L) in a 500 mL glass beaker. Acetic acid (CH_3COOH) was used to adjust pH of the solution to 5. Prior to irradiation, the suspensions were magnetically stirred in dark for 30 min to ensure the equilibrium of the working solution. The visible light source was an iodine tungsten lamp (300 W) positioned on the top of a reactor. In particular, the entire catalytic reaction process was recorded by a video, where the color of the solutions changed from green to yellow, confirming the reaction finished.