

## ***Supporting information***

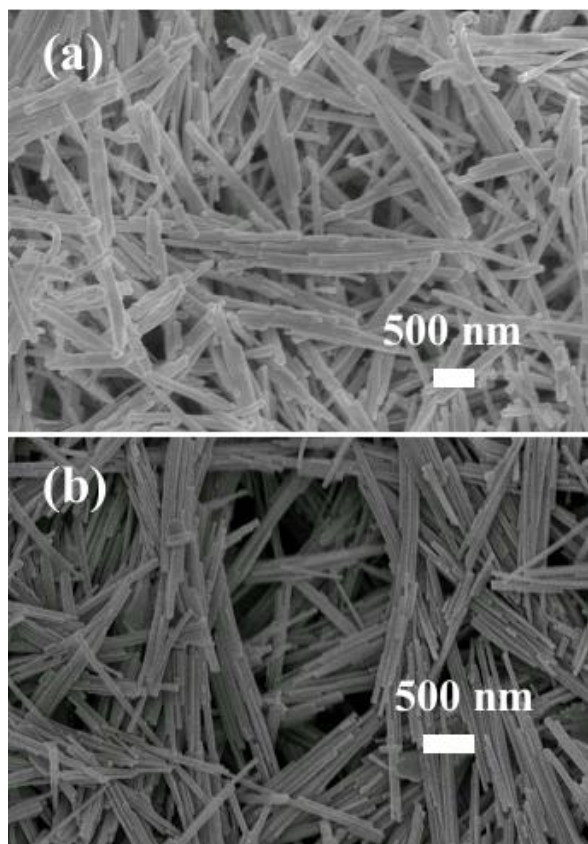
### **Cadmium Sulfide/Graphitic Carbon Nitride Heterostructure Nanowires Loading with Nickel Hydroxide Cocatalyst for Highly Efficient Photocatalytic Hydrogen Production in Water under Visible Light**

Zhiping Yan, Zijun Sun, Xiang Liu, Hongxing Jia, Pingwu Du\*

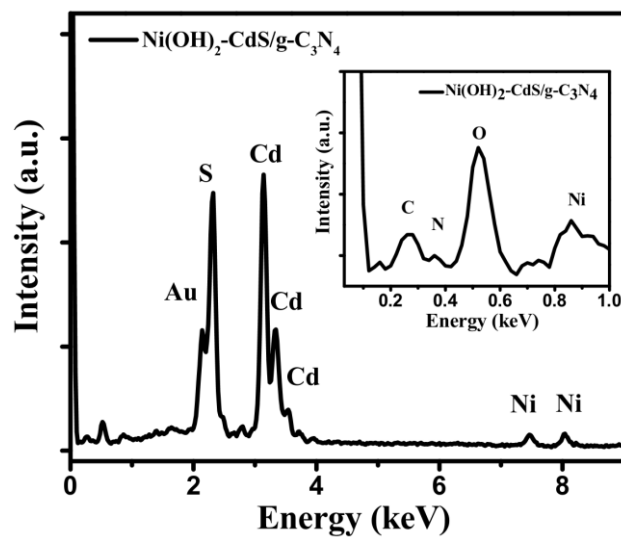
Key Laboratory of Materials for Energy Conversion, Chinese Academy of Sciences,  
Department of Materials Science and Engineering, *iChEM* (Collaborative Innovation  
Center of Chemistry for Energy Materials), University of Science and Technology of  
China (USTC), Hefei, 230026, China

\*Corresponding author: [dupingwu@ustc.edu.cn](mailto:dupingwu@ustc.edu.cn)

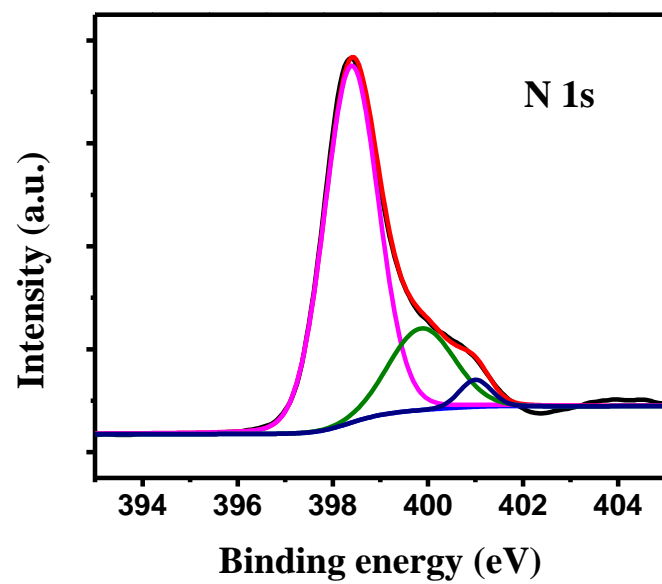
Tel/Fax: 86-551-63606207



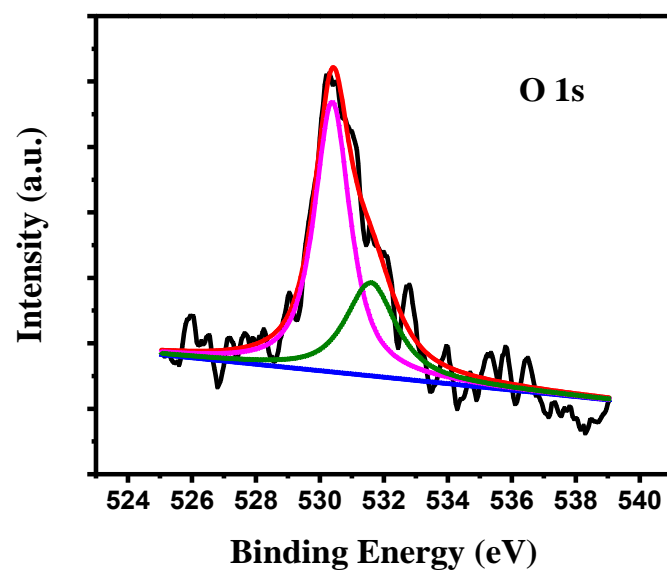
**Figure S1.** SEM images of (a) CdS/g-C<sub>3</sub>N<sub>4</sub>, (b) Ni(OH)<sub>2</sub>-CdS/g-C<sub>3</sub>N<sub>4</sub> (4.76 wt% Ni(OH)<sub>2</sub>).



**Figure S2.** EDX spectra of  $\text{Ni(OH)}_2\text{-CdS/g-C}_3\text{N}_4$  sample.



**Figure S3.** High resolution XPS spectra of N 1s in Ni(OH)<sub>2</sub>-CdS/g-C<sub>3</sub>N<sub>4</sub> sample.



**Figure S4.** High resolution XPS spectra of O 1s in Ni(OH)<sub>2</sub>-CdS/g-C<sub>3</sub>N<sub>4</sub> sample.