

## Supplementary Information

# Flowerlike Cu<sub>2</sub>Te architectures constructed with ultrathin nanoflakes as superior dye adsorbents for wastewater treatment

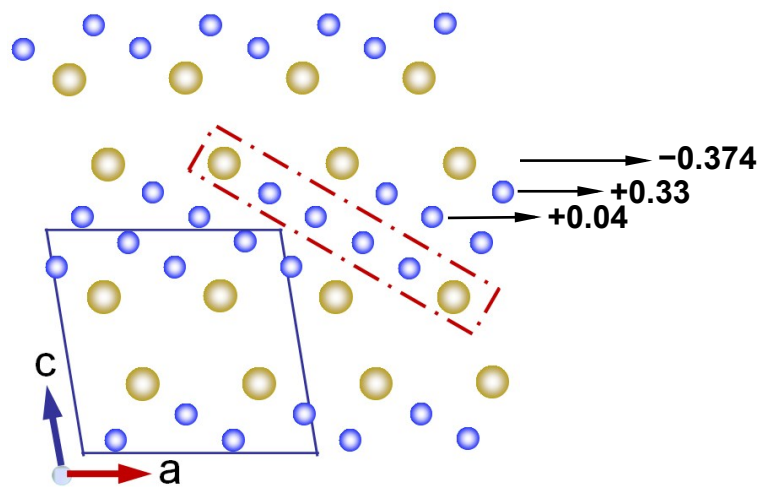
Lijuan Cheng<sup>a</sup>, Miao Wang<sup>a</sup>, Cuijin Pei<sup>a</sup>, Bin Liu<sup>a</sup>, Hua Zhao<sup>a</sup>, Hui Zhao<sup>b</sup>, Congjie Zhang<sup>b</sup>,

Heqing Yang<sup>a,\*</sup>, Shengzhong (Frank) Liu<sup>c</sup>

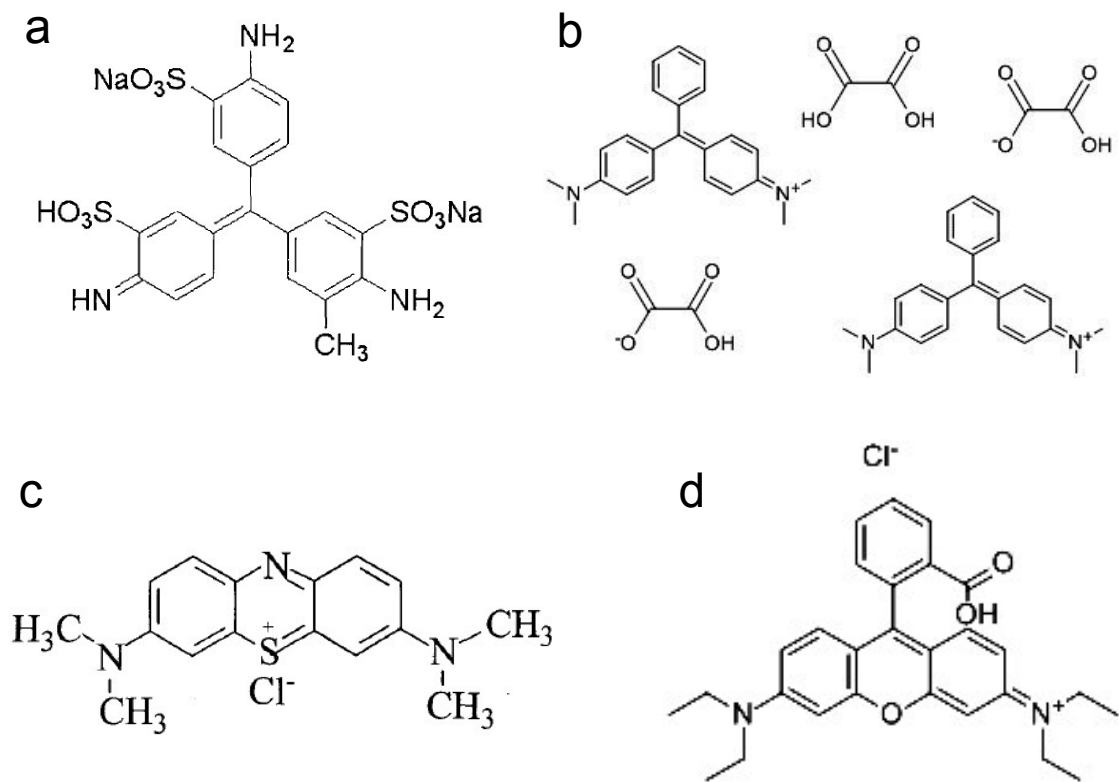
<sup>a</sup> Shaanxi Engineering Laboratory for Advanced Energy Technology and Key Laboratory of Macromolecular Science of Shaanxi Province, School of Materials Science and Engineering, Shaanxi Normal University, Xi'an, 710119, China.

<sup>b</sup> Key Laboratory of Macromolecular Science of Shaanxi Province, School of Chemistry and Chemical Engineering, Shaanxi Normal University, Xi'an 710119, China.

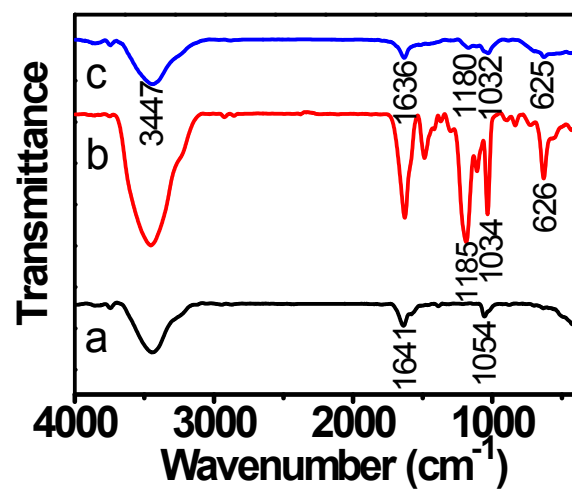
<sup>c</sup> Shaanxi Engineering Laboratory for Advanced Energy Technology and Key Laboratory of Applied Surface and Colloid Chemistry, Ministry of Education School of Materials Science and Engineering, Shaanxi Normal University Xi'an, 710119, China



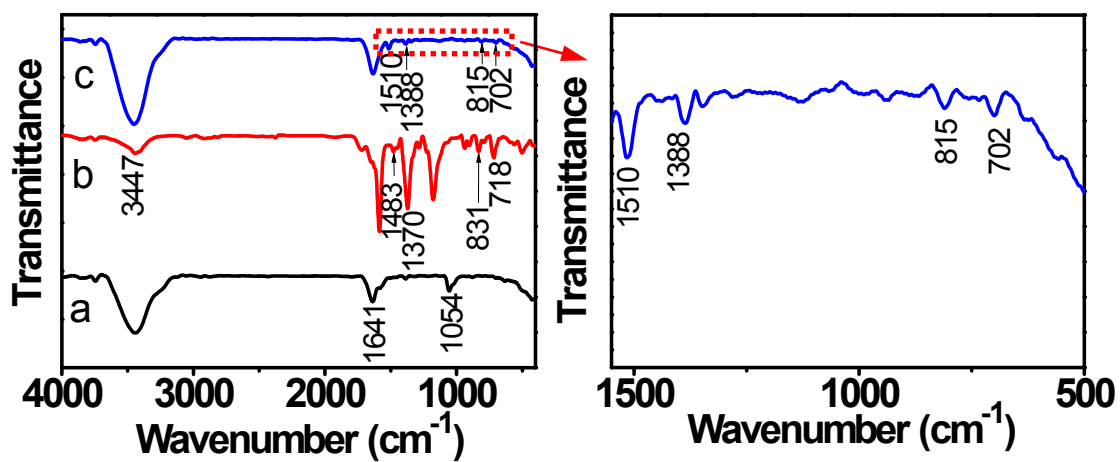
**Fig. S1** The lowest energy structures of  $\text{Cu}_2\text{Te}$ . The larger (golden) spheres are the Te atoms, and the smaller (blue) spheres are the Cu atoms ( *Phy. Rev. Lett.*, 2013, **111**, 165502). Copyright. 2007, American Physical Society.



**Fig. S2** The molecule structures of AF (a), MG (b), MB (c) and RhB (d).



**Fig. S3** IR spectra of  $\text{Cu}_2\text{Te}$  samples (a), AF (b) and  $\text{Cu}_2\text{Te}$  samples after adsorption for AF (c).



**Fig. S4** IR spectra of Cu<sub>2</sub>Te samples (a), MG (b) and Cu<sub>2</sub>Te samples after adsorption for MG (c).