

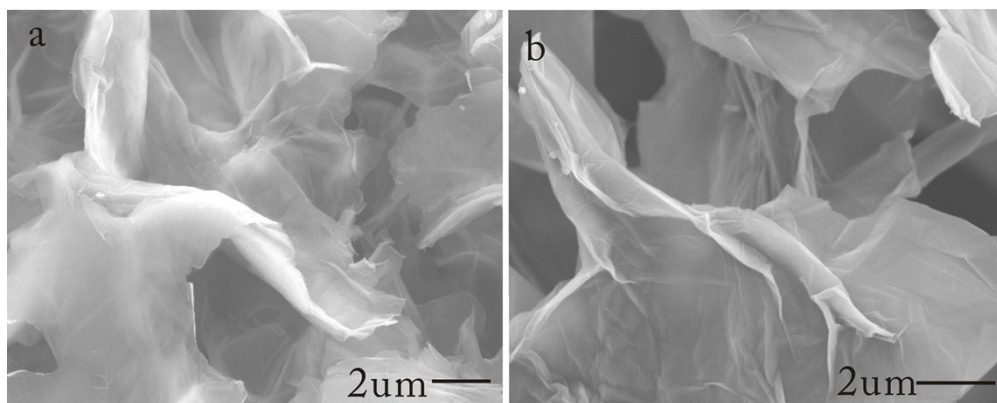
# **Biomaterials Functionalized Graphene Oxides with Tunable Work Function for High Sensitive Organic Photodetectors**

**Zhimei Hu,<sup>a</sup> Chi Li,<sup>b</sup> Riming Nie,<sup>a</sup> Yan-Qing Li,<sup>b</sup> Jian-Xin Tang,<sup>\*,b</sup> and Xianyu Deng<sup>\*,a</sup>**

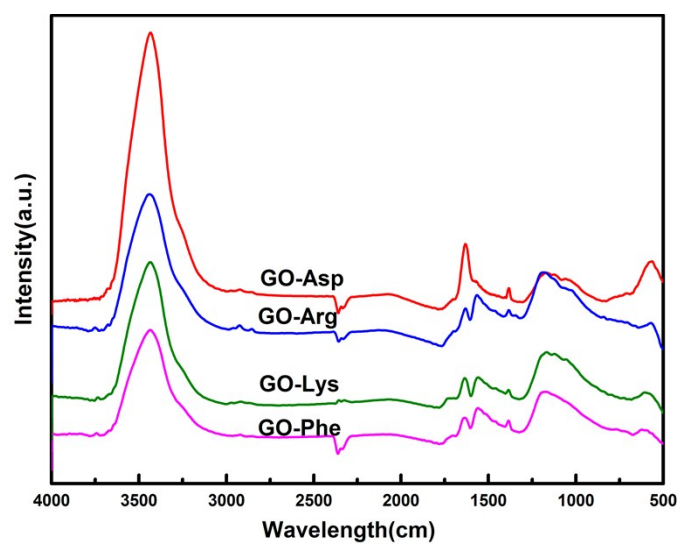
<sup>a</sup> Research Center for Advanced Functional Materials and Devices, Shenzhen Key Laboratory of Advanced Materials, School of Materials Science and Engineering, Shenzhen Graduate School, Harbin Institute of Technology, Shenzhen 518055, PR China.

<sup>b</sup>Jiangsu Key Laboratory for Carbon-Based Functional Materials and Devices, Institute of Functional Nano & Soft Materials (FUNSOM), Soochow University, Suzhou 215123, PR China.

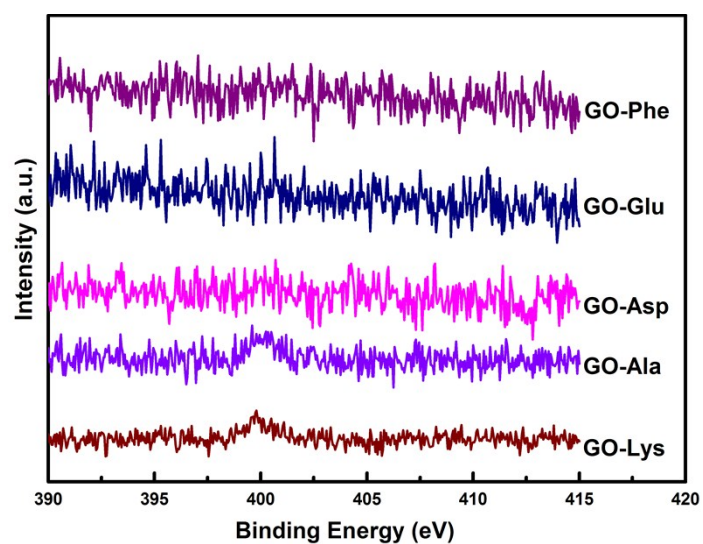
\* Address correspondence to [jxtang@suda.edu.cn](mailto:jxtang@suda.edu.cn), [xydeng@hitsz.edu.cn](mailto:xydeng@hitsz.edu.cn)



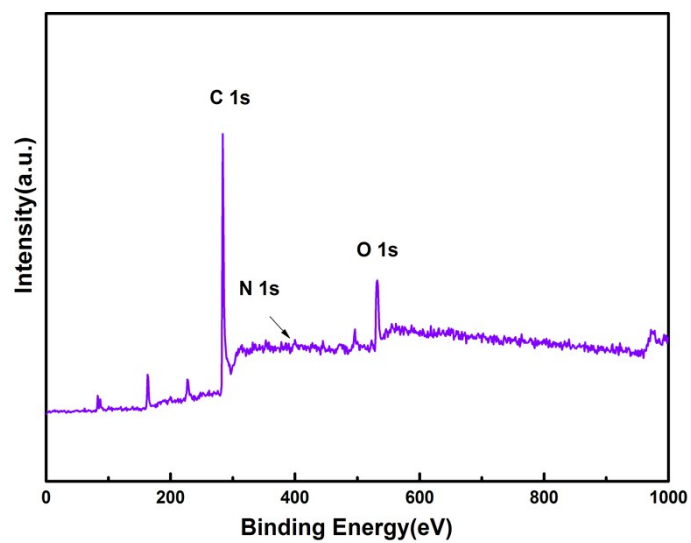
**Figure S1.** SEM images of graphite oxide (a) and graphene oxide (b).



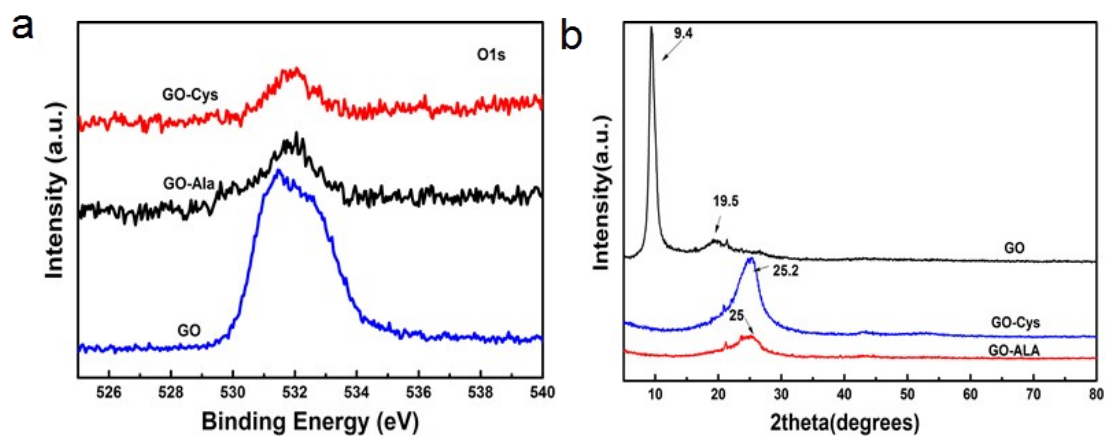
**Figure S2.** FI-IR spectra of graphene oxide functionalized by various amino acids.



**Figure S3.** XPS N1s spectra of various functionalized GOs.



**Figure S4.** The survey spectrum of GO-Cys.



**Figure S5.** XPS O1s spectra (a) and XRD patterns (b) of GO, GO-Cys and GO-Ala.