Supporting Information

Stable Cu$_2$O nanocrystals grown on functionalized graphene sheets and room temperature H$_2$S gas sensing with ultrahigh sensitivity
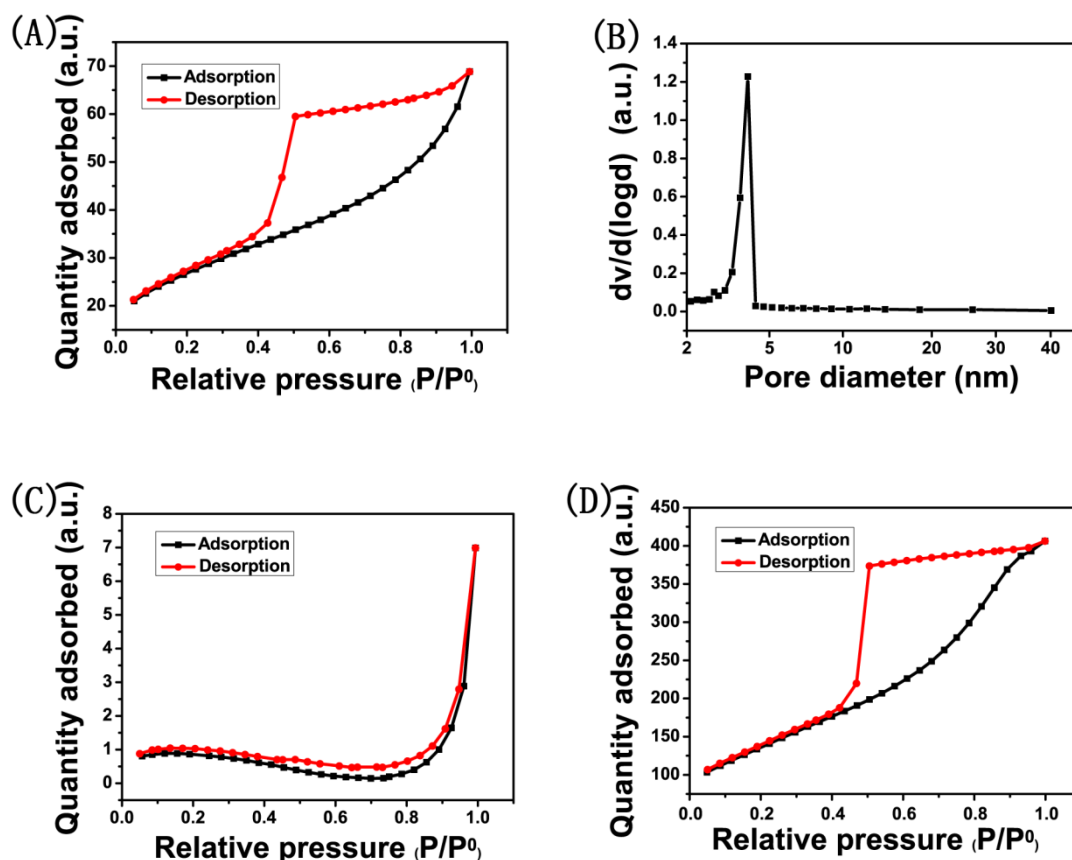
Lisha Zhou[a,b], Fangping Shen[a], Xike Tian[b], Donghong Wang[a], Ting Zhang[a]*, Wei Chen[a]*

[a] i-Lab, Suzhou Institute of Nano-Tech and Nano-Bionics

Chinese Academy of Sciences, Suzhou, 215123, China.

E-mail: wchen2006@sinano.ac.cn; tzhang2009@sinano.ac.cn

[b] Faculty of Material Science and Chemical Engineering, China University of Geosciences, Wuhan 430074, PR China

Fig.S1 (A) N$_2$ adsorption-desorption isotherms and (B) corresponding BJH pore size distribution curve determined from the N$_2$ desorption isotherm of as-prepared

Cu$_2$O/FGS nanocomposite. (C) N$_2$ adsorption-desorption isotherms of bulk Cu$_2$O with BET surface of 2.18 m^2/g and pore volume of 0.01 cm^3/g, (D) N$_2$ adsorption-desorption isotherms of pure FGS with BET surface of 477.33 m^2/g and pore volume of 0.63 cm^3/g.
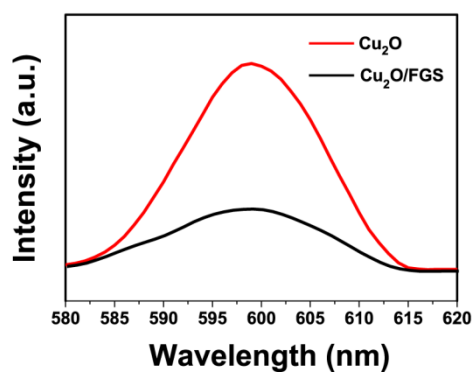
Fig.S2 Photoluminescence spectra of pure Cu$_2$O and Cu$_2$O /FGS nanocomposite.