Electronic Supplementary Material (ESI) for Catalysis Science & Technology

Supporting Information

Green, Low-Cost Synthesis of Photoluminescent Carbon Dots by Hydrothermal Treatment of Willow Bark and Their Application as An Effective Photocatalyst for Fabricating Au Nanoparticles/Reduced Graphene Oxide Nanocomposites for Glucose Detection

Xiaoyun Qin,[a] Wenbo Lu,[a] Abdullah M. Asiri,[b,c] Abdulrahman O. Al-Youbi,[b,c] and Xuping Sun[a,b,c]*

[a] State Key Lab of Electroanalytical Chemistry, Changchun Institute of Applied Chemistry, Chinese Academy of Sciences, Changchun 130022, Jilin, P. R. China

[b] Chemistry Department, Faculty of Science, King Abdulaziz University, Jeddah 21589, Saudi Arabia

[c] Center of Excellence for Advanced Materials Research, King Abdulaziz University, Jeddah 21589, Saudi Arabia

*Corresponding author. Tel/Fax: 0086-431-85262065. E-mail: sunxp@ciac.jl.cn (X. Sun).

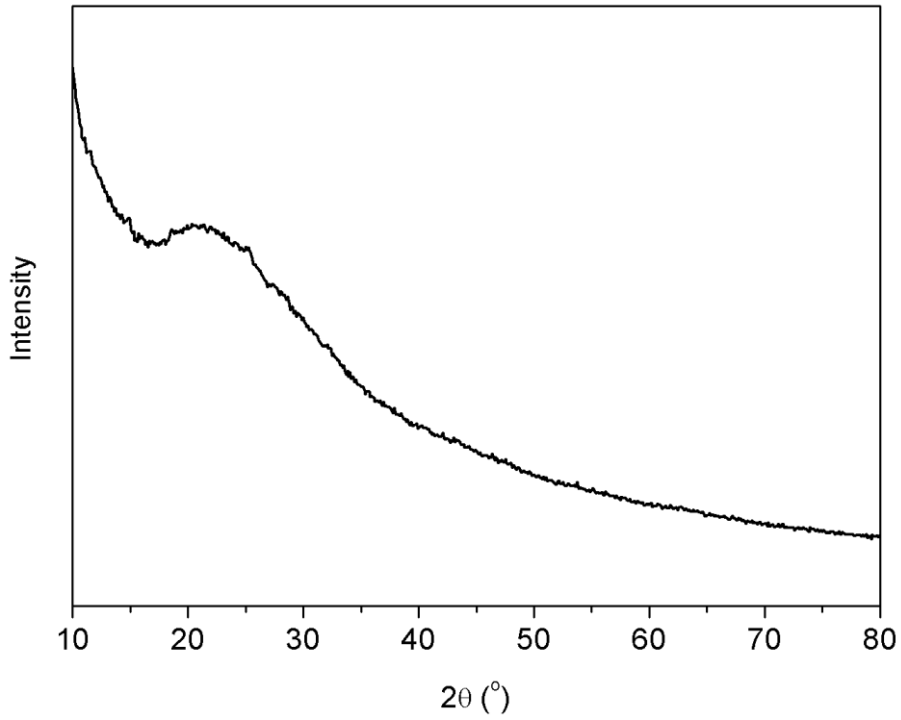

Figure S1 The XRD pattern of the obtained CDs.

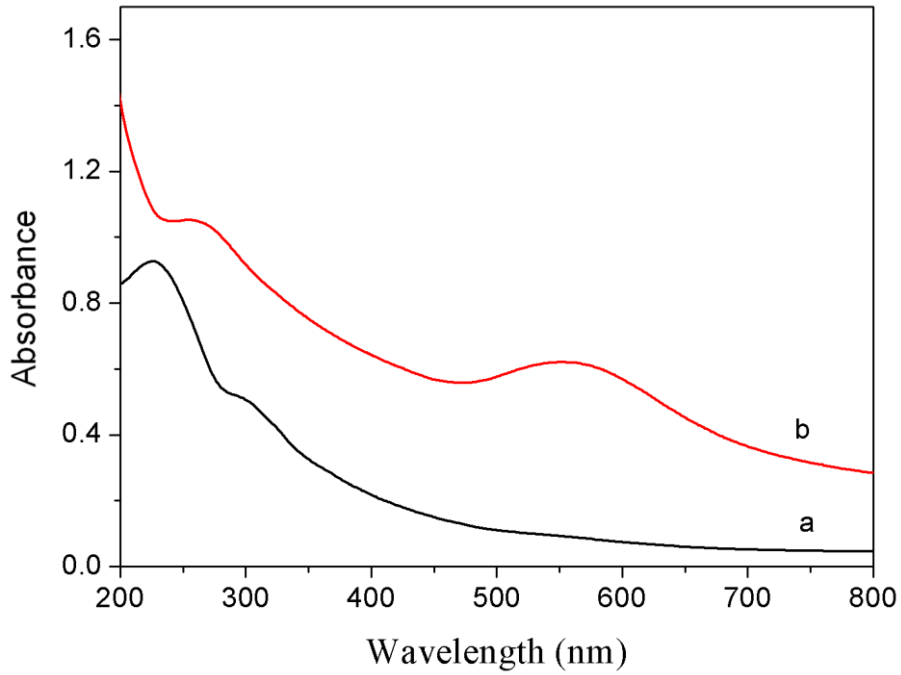

Figure S2 UV-vis spectra of the mixture of GO and $HAuCl_4$ aqueous solution in the presence of CDs before (curve a) and after (curve b) UV irradiation.

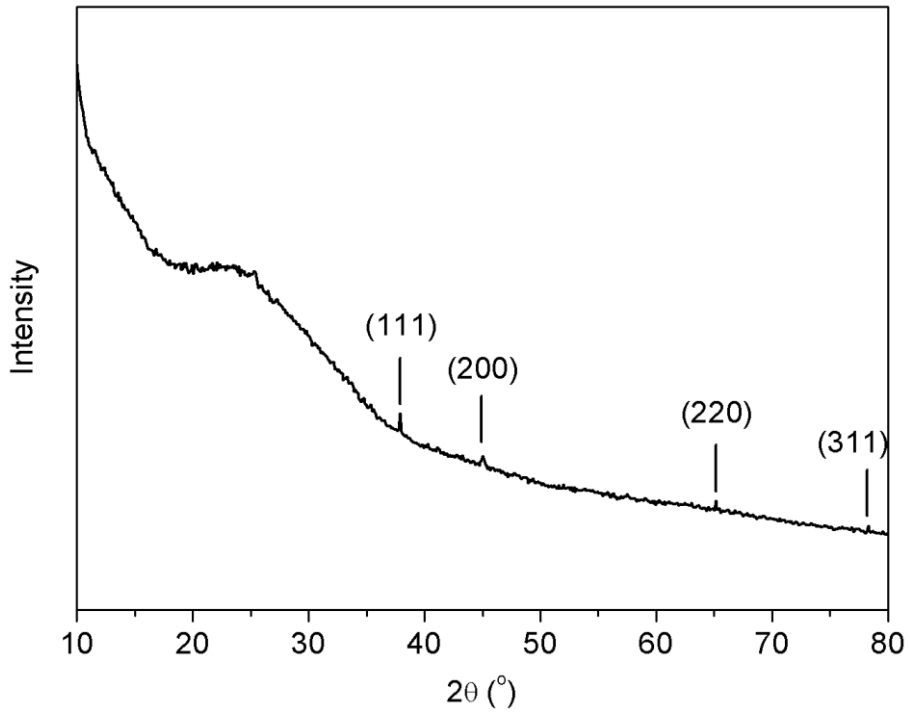

Figure S3 The XRD pattern of the mixture of GO and $HAuCl_4$ aqueous solution in the presence of CDs after UV irradiation.

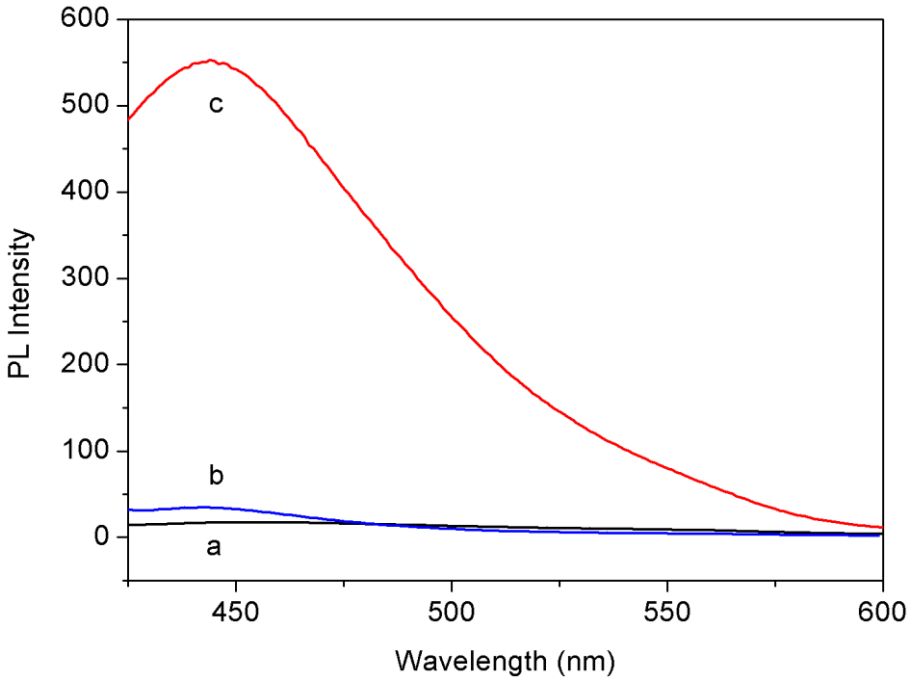

Figure S4 PL emission spectra of aqueous dispersion of GO (curve a), CDs-GO (curve b) and CDs (curve c) (excitation at 360 nm).

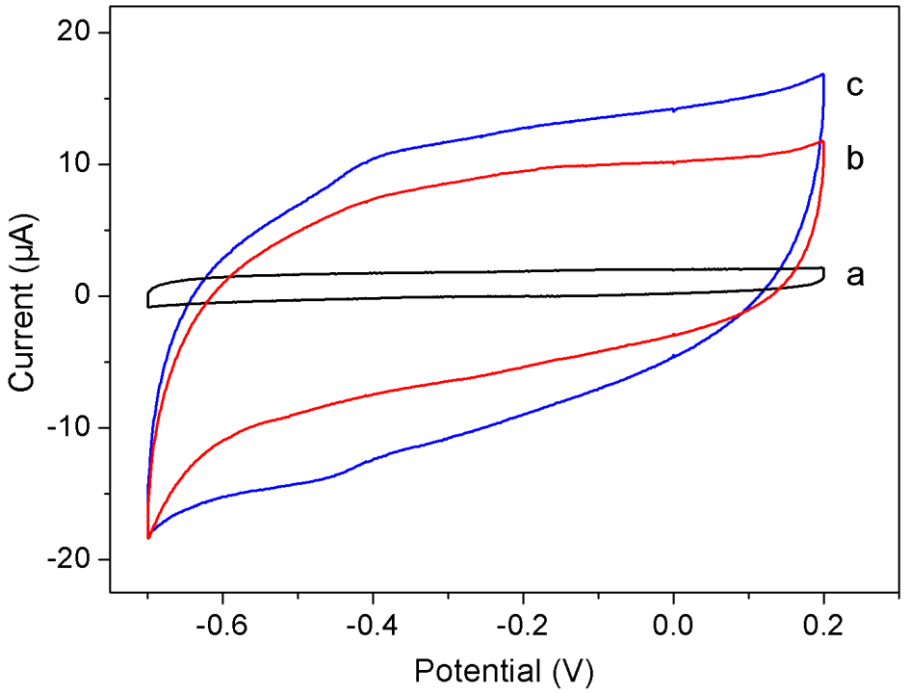

Figure S5 CVs of bare GCE (curve a), AuNPs/rGO/GCE (curve b) and GOx/AuNPs/rGO/GCE (curve c) in N_2 saturated 0.2 M PBS at pH 7.4 (scan rate: 0.3 V/s).