Chemically reduced graphene oxide–P25–Au nanocomposite materials and their photoelectrocatalytic and photocatalytic applications

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Supporting Information:

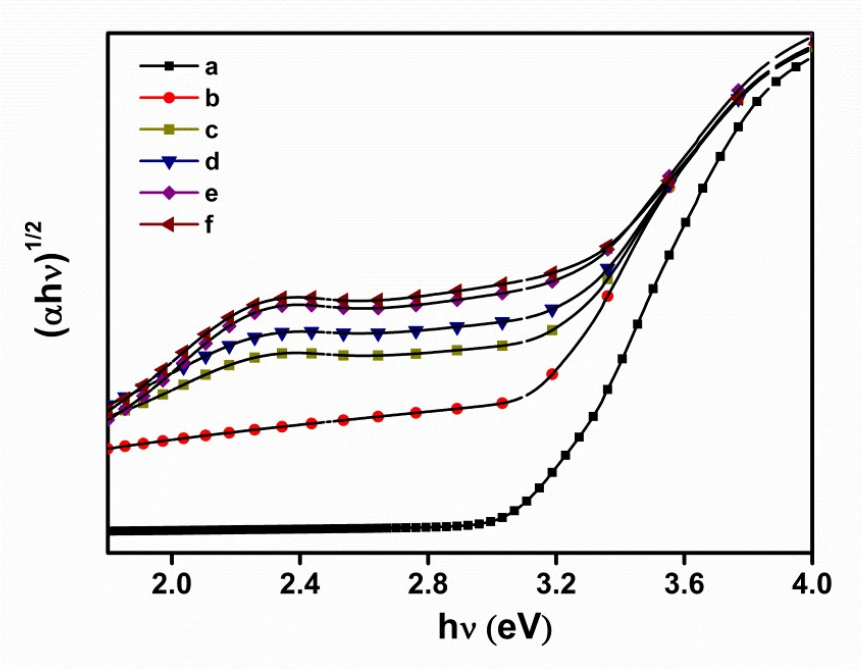

Figure S1. *Tauc`s* plots $((\alpha h\nu)^{1/2}$ *vs* hν) obtained for P25 (a), CRGO–P25 (b), CRGO–P25–Au(0.5) (c), CRGO–P25–Au(1) (d), CRGO–P25–Au(2) (e) and CRGO–P25–Au(3) (f) NCMs.

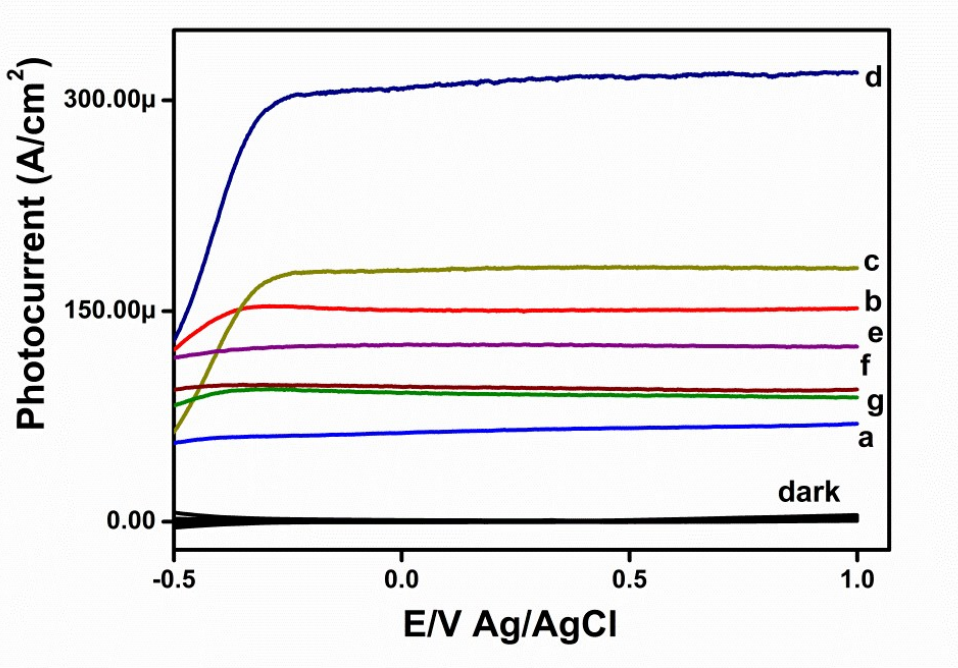

Figure S2. LSV of P25 (a), CRGO–P25 (b), CRGO–P25–Au(0.5) (c), CRGO–P25–Au(1) (d), CRGO–P25–Au(2) (e) and CRGO–P25–Au(3) (f) NCMs modified photoelectrodes under light irradiation and dark condition in a mixture of 0.1 M CH_3OH in 0.1 M Na_2SO_4.

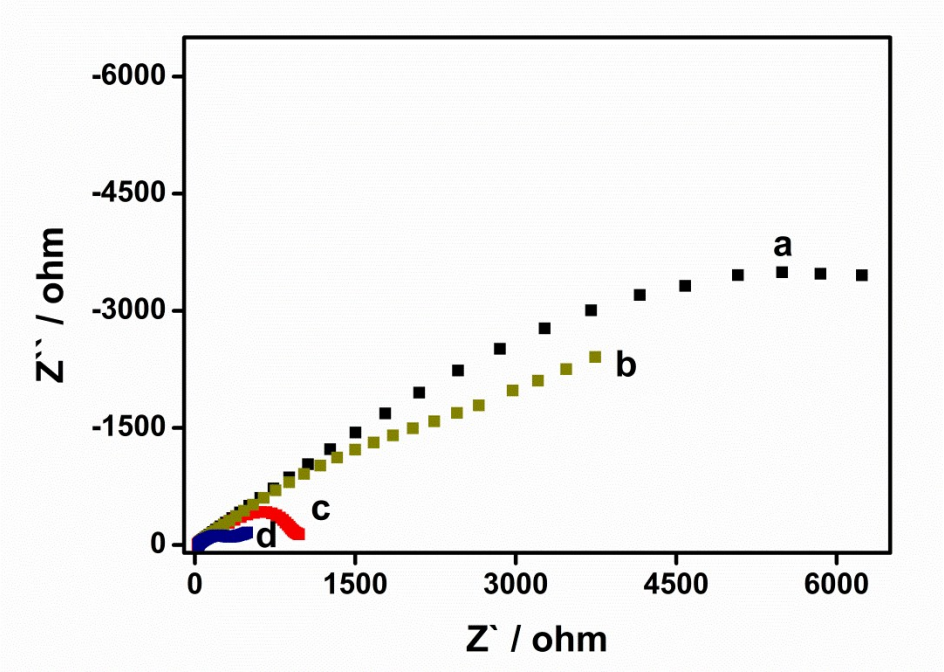

Figure S3. EIS Nyquist plots recorded for P25 (a) and CRGO–P25 (b) modified photoelectrodes under dark and P25 (c), CRGO–P25 (d) under light irradiation condition.

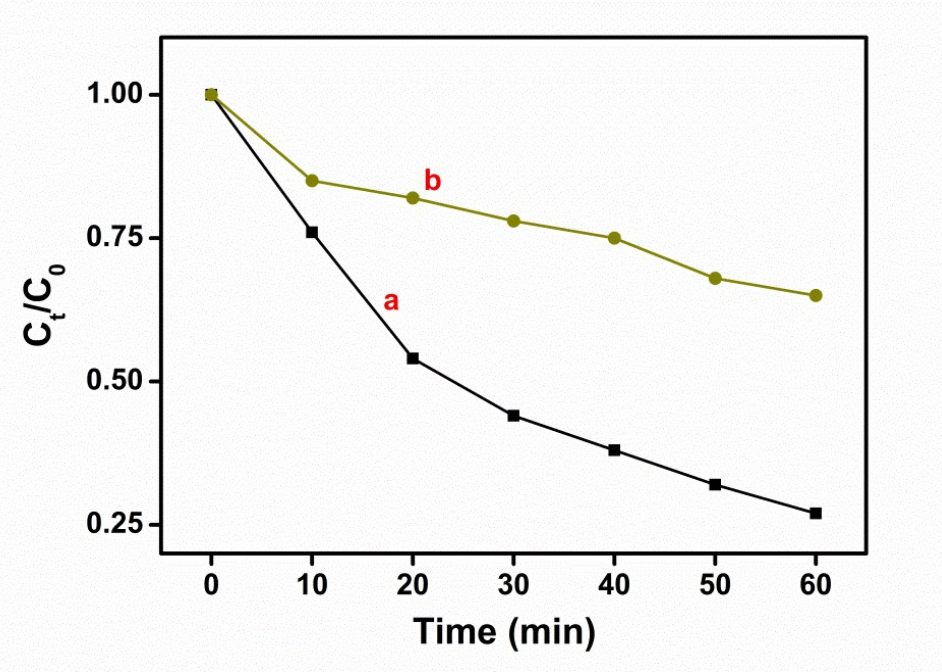

Figure S4. Photocatalytic reduction Cr(VI) ions at CRGO–P25–Au(3) (a) and P25–Au(3) NCMs (b) under light irradiation. Concentration of Cr(VI) ions and OA were 0.4 mM and 4 mM, respectively.