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Graphene quantum dots decorated $SrRuO_3$ mesoporous film as an efficient counter electrode for high-performance dye-sensitized solar cells

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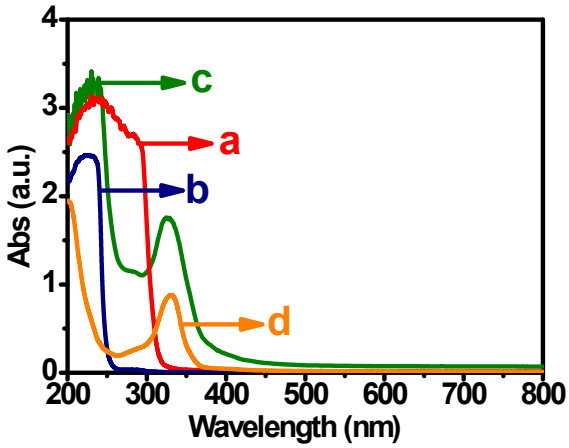

Fig. S1 UV/Vis absorption spectra of different samples dissolved in aqueous solutions. (a) thiourea, (b) citric acid, GQDs (c) before and (d) after dialysis treatment.

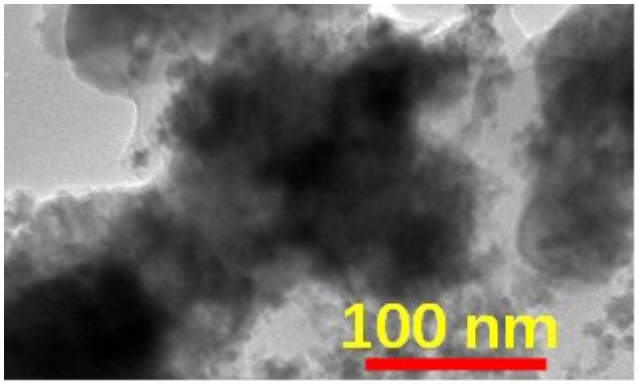

Fig. S2 TEM image of SRO-GQD hybrid consisting of GQDs decorated on $SrRuO_3$ nanoparticles.

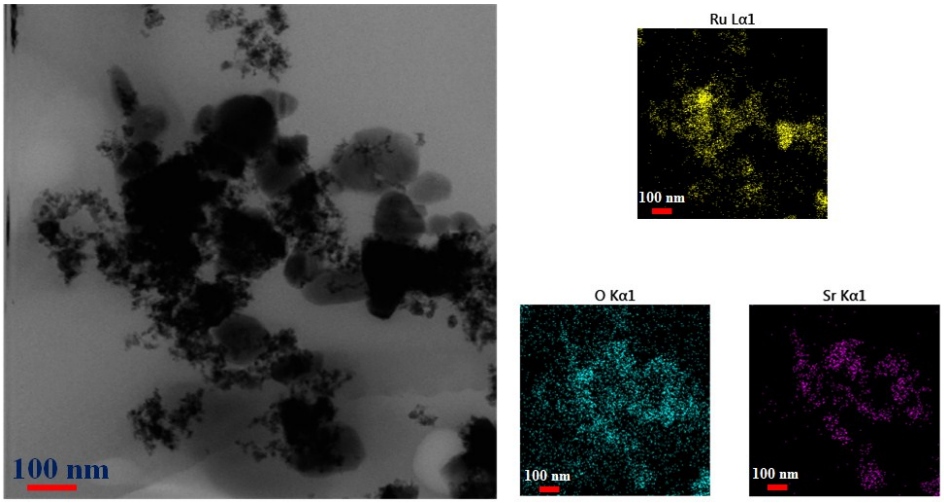

Fig. S3 TEM and EDS mapping of SRO-GQD hybrid.

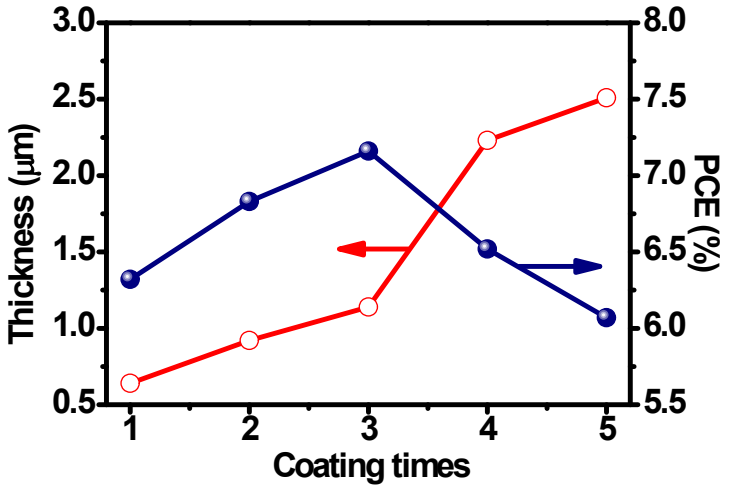

Fig. S4 The dependence of thickness and corresponding PCE on spin coating times for $SrRuO_3$ CE

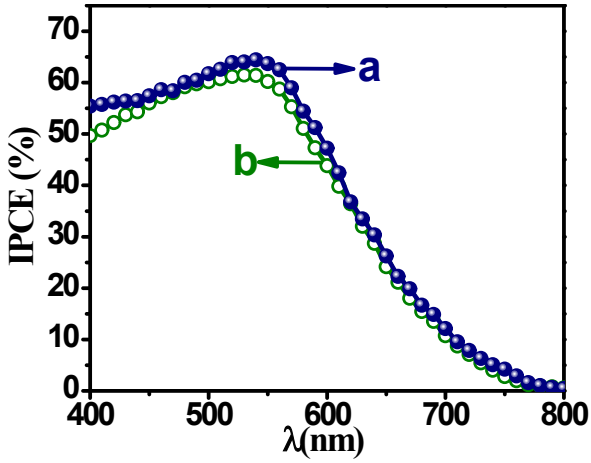

Fig. S5 IPCE spectra of DSSCs based on (a) SRO-GQD CE and (b) $SrRuO_3$ CE.