Electronic Supplementary Material (ESI) for RSC Advances.

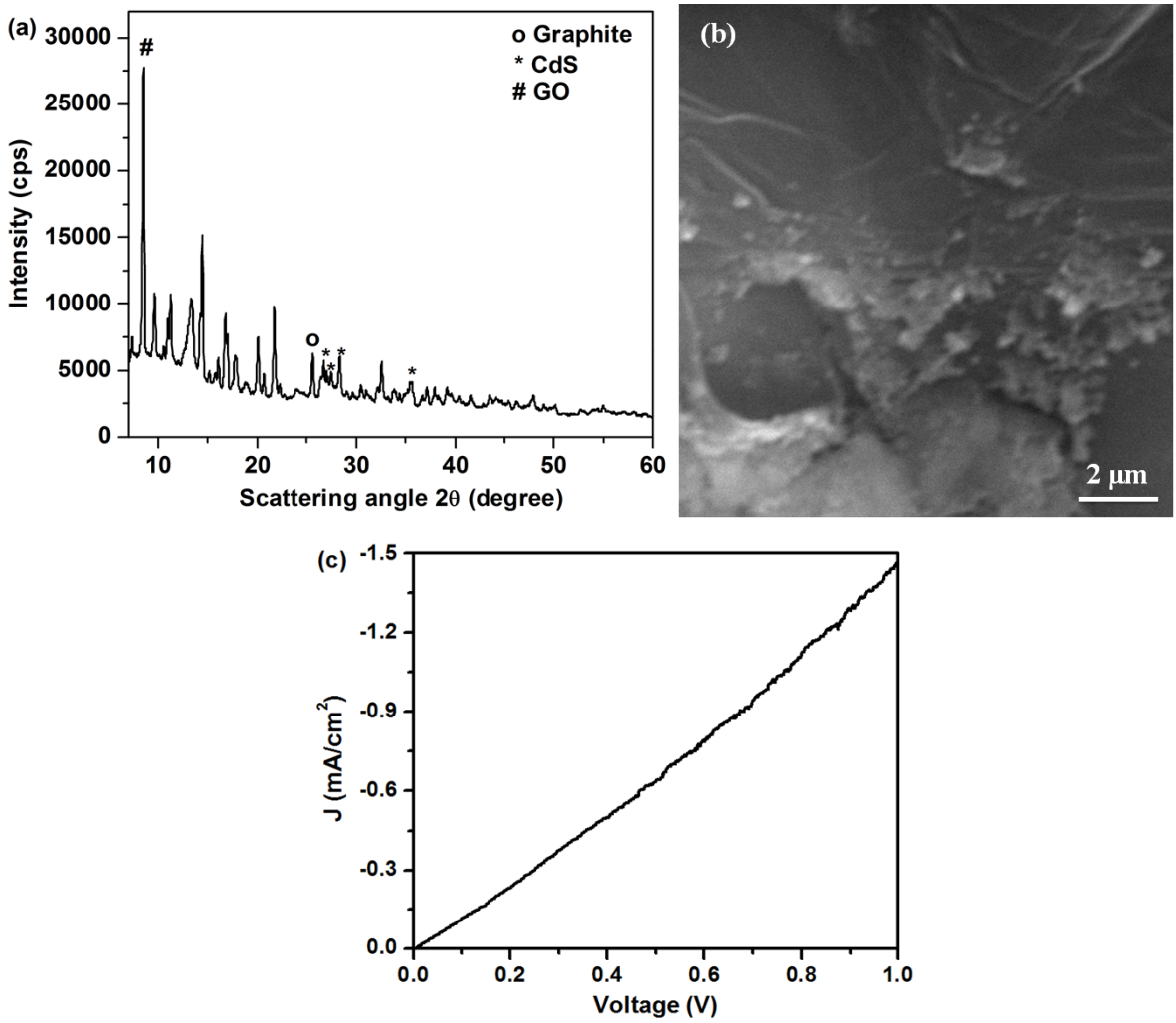
Quantum confined CdS inclusion in graphene oxide for improved electrical conductivity and facile charge transfer in hetero-junction solar cell

N. Rajeswari Yogamalar[a], K. Sadhanandam[a], A. Chandra Bose[b] and R. Jayavel[*,a]

[a]*Centre for Nanoscience and Technology, Anna University, Chennai 600025, India.* Email: rjvel@annauniv.edu

[b]*Nanomaterials Laboratory, Department of Physics, National Institute of Technology, Tiruchirappalli 620015, India*

(ESI†) S1 (a) The XRD pattern, (b) SEM morphology and (c) Current density and voltage characteristics of CdS blended GO composition AM1.5 (100 mW/cm^2) solar illumination



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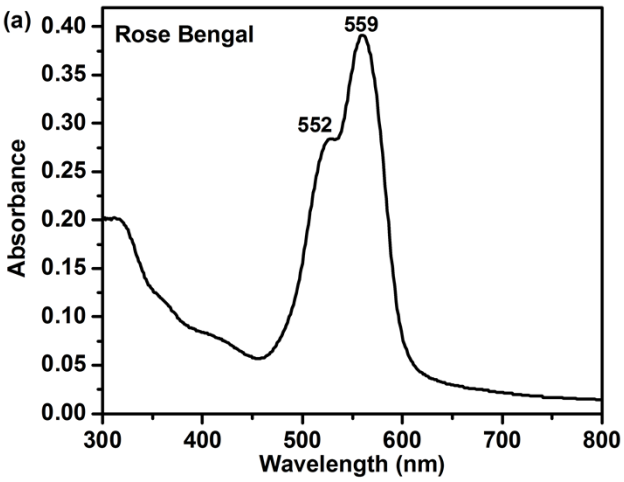
(ESI†) S2 (a) The absorbance spectra of RB



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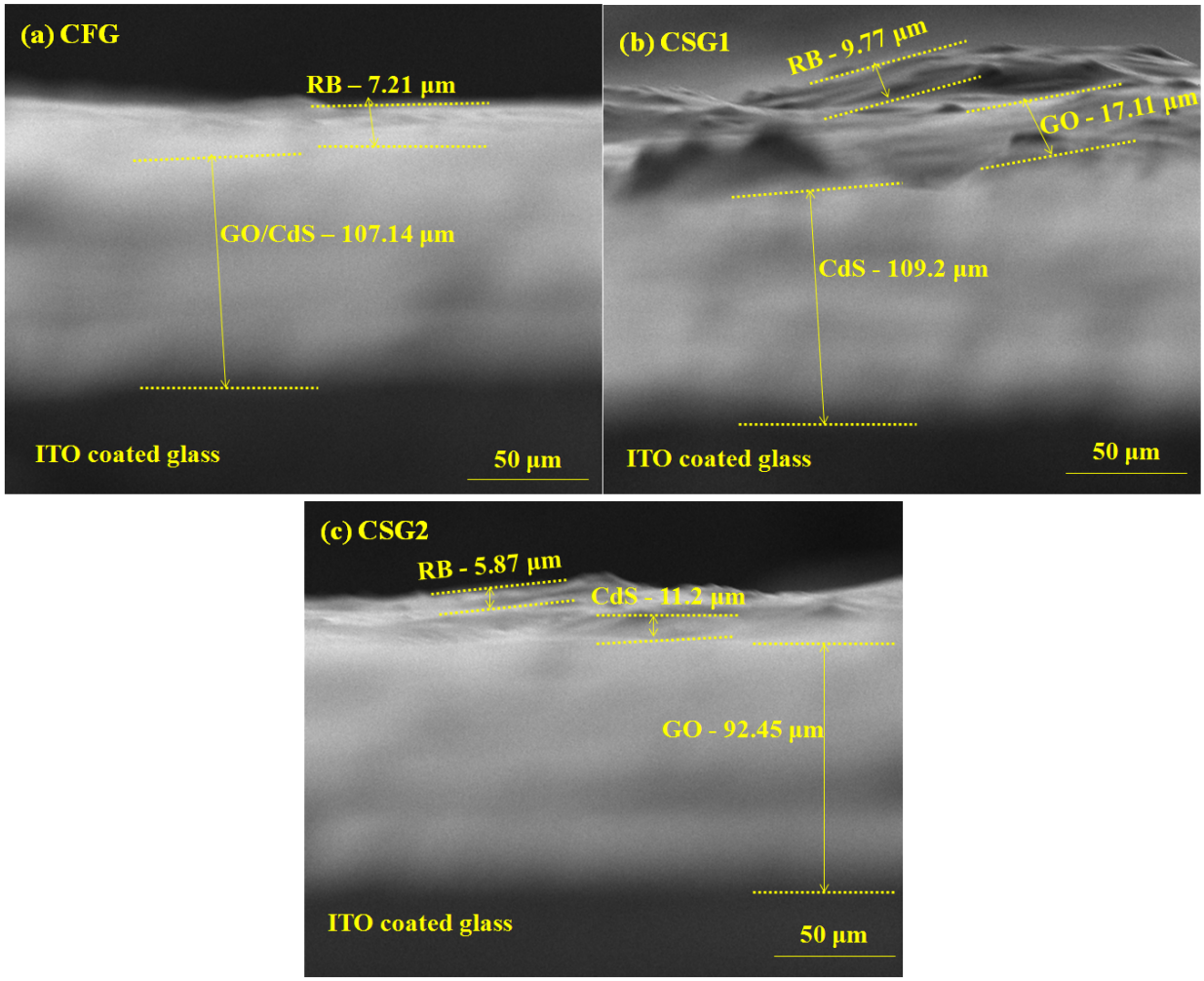
(ESI†) S3 The cross-sectional images and the approximate thickness measurement of (a) CFG, (b) CSG1, and (c) CSG2



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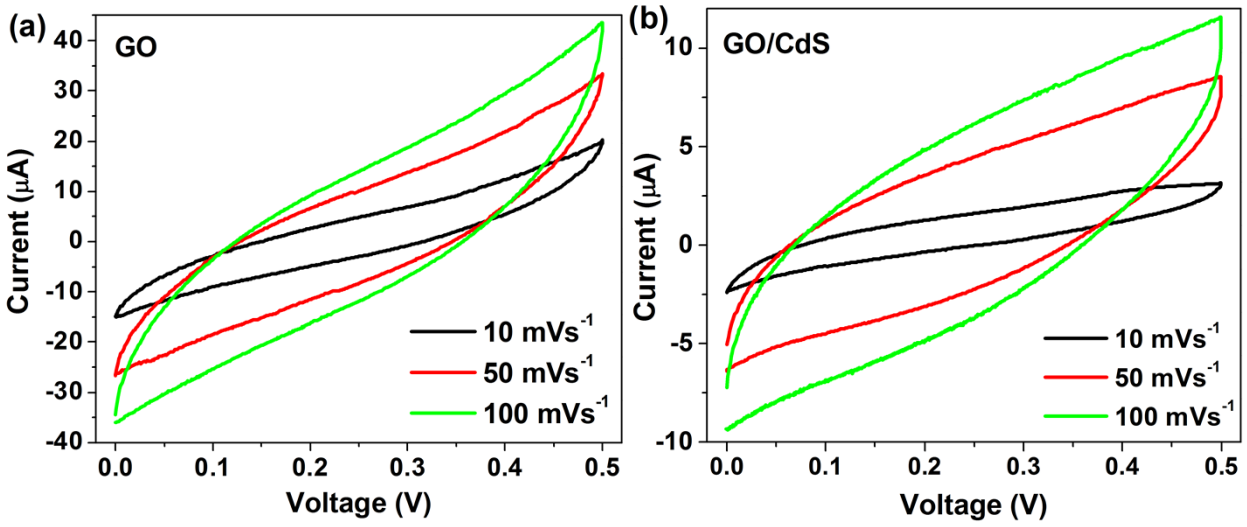
(ESI†) S4 The CV curves for (a) pure GO sheet and (b) GO/CdS nanocomposites under different scan rates (10 mV/s, 50 mV/s and 100 mV/s).



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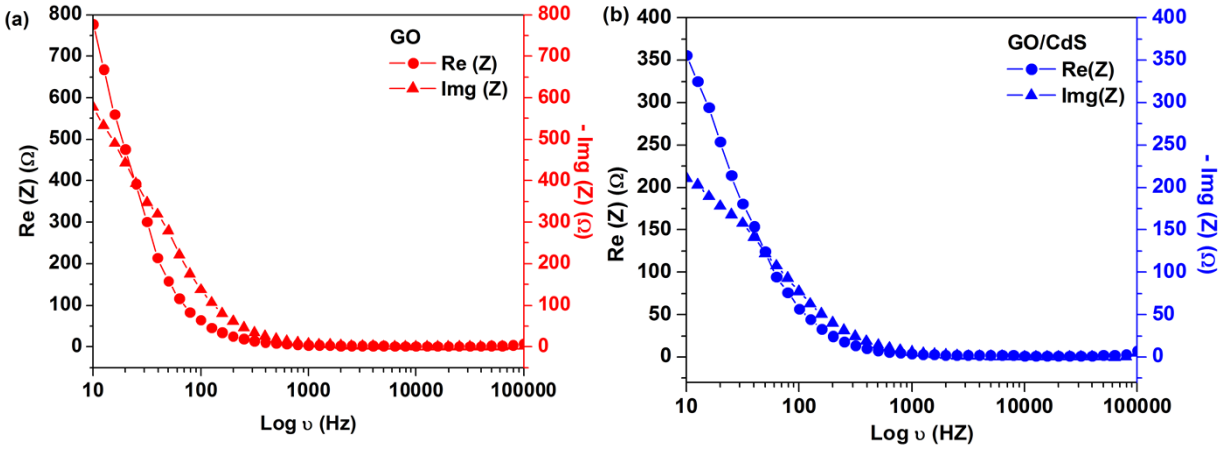
(ESI†) S5 The real and imaginary value of impedance as a function of frequency for (a) pure GO sheet and (b) GO/CdS nanocomposites.



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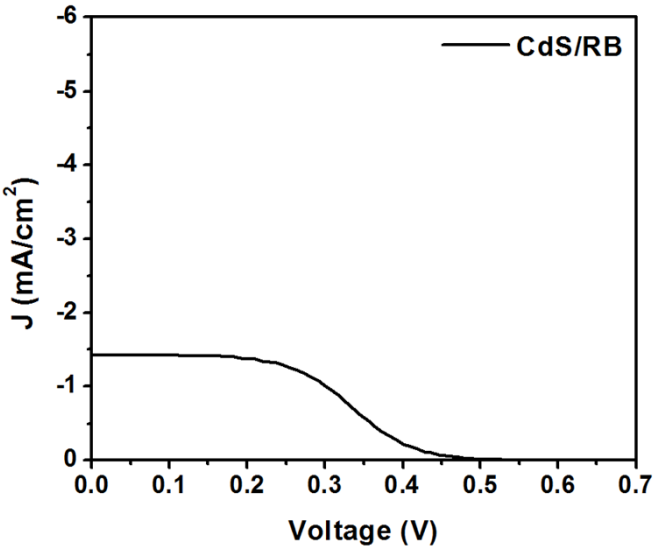
(ESI†) S6 The Current density and voltage characteristics of CdS/RB solar cells under AM1.5 (100 mW/cm^2) solar illumination



Photovoltaic devices	V_{oc} **(mV)**	J_{sc} **(mA/cm^2)**	FF **(%)**	η **(%)**
ITO/CdS/RB/Au	510	1.422±0.023	45	0.32±0.019