Electronic supplementary information

Ce^{3+}-ion, Surface Oxygen Vacancy, and Visible Light-induced Photocatalytic Dye Degradation and Photocapacitive Performance of CeO_2-Graphene Nanostructures

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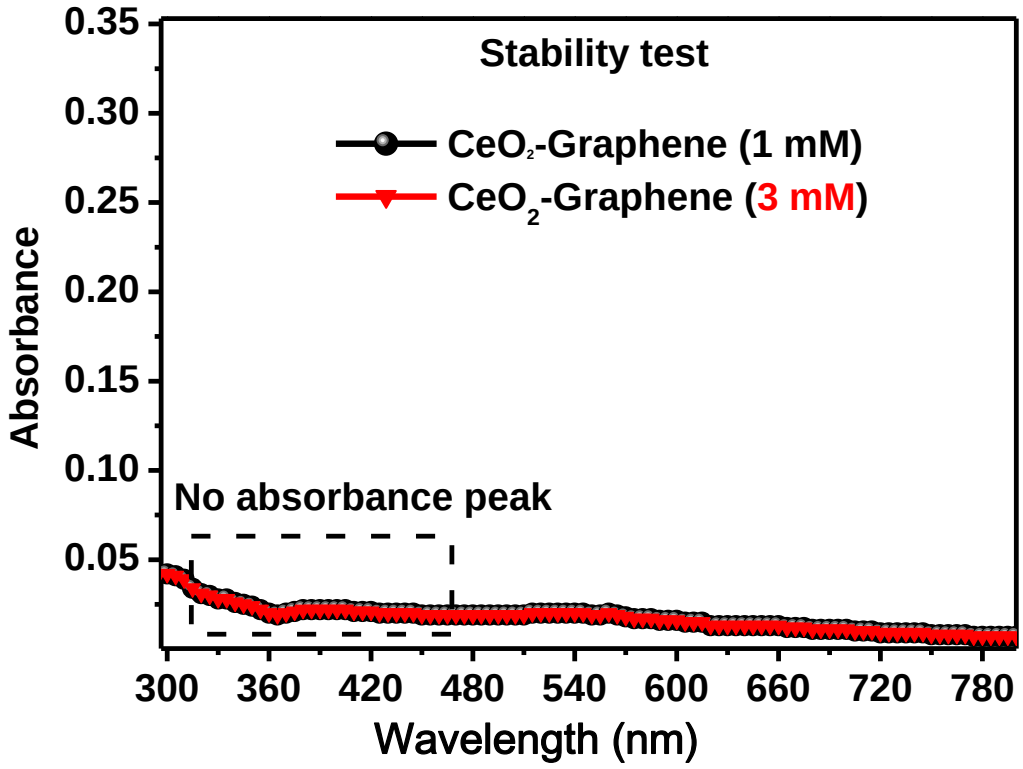

Fig. S1 Stability test of 1 mM and 3 mM CeO_2-Graphene nanostructures.

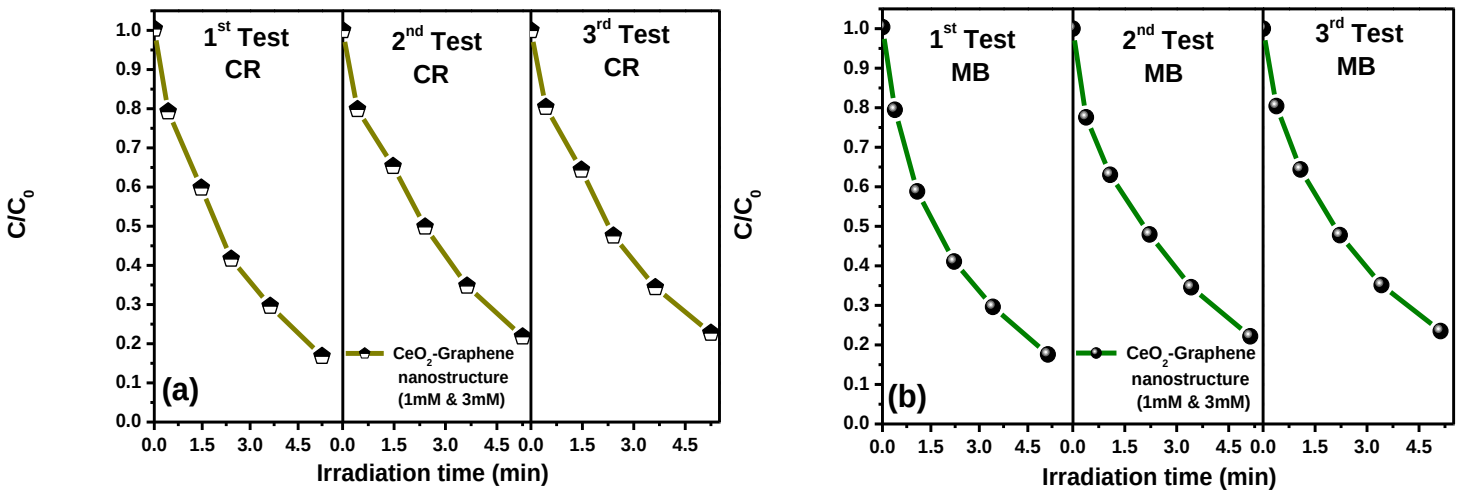

Fig. S2 (a and b) CR and MB reusability test spectra of 1 mM and 3 mM CeO_2-Graphene nanostructures.

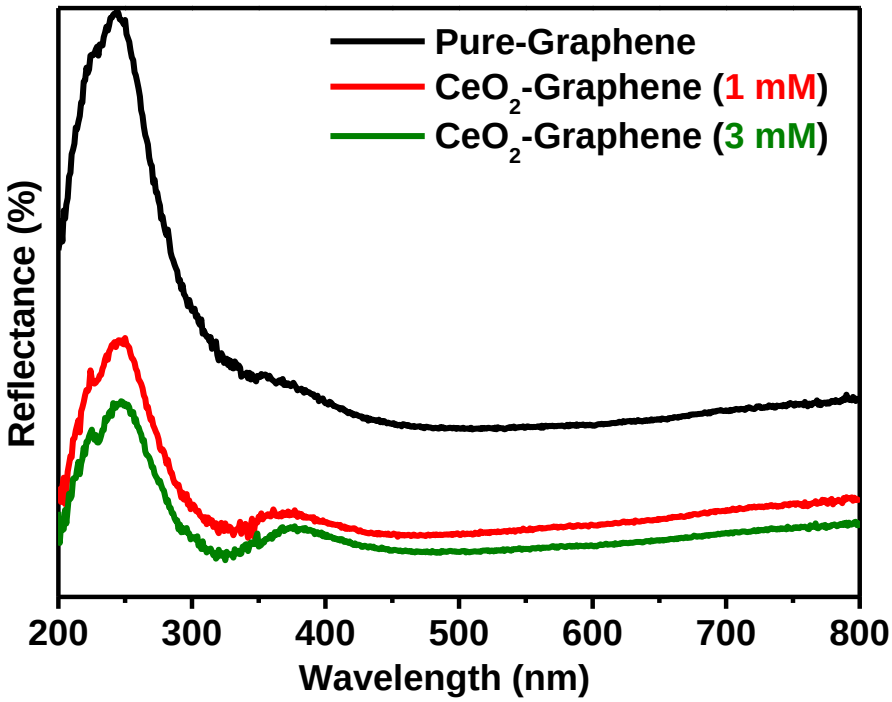

Fig. S3 UV-Vis reflectance spectra of pure-graphene, 1 mM and 3 mM CeO_2-Graphene nanostructures.

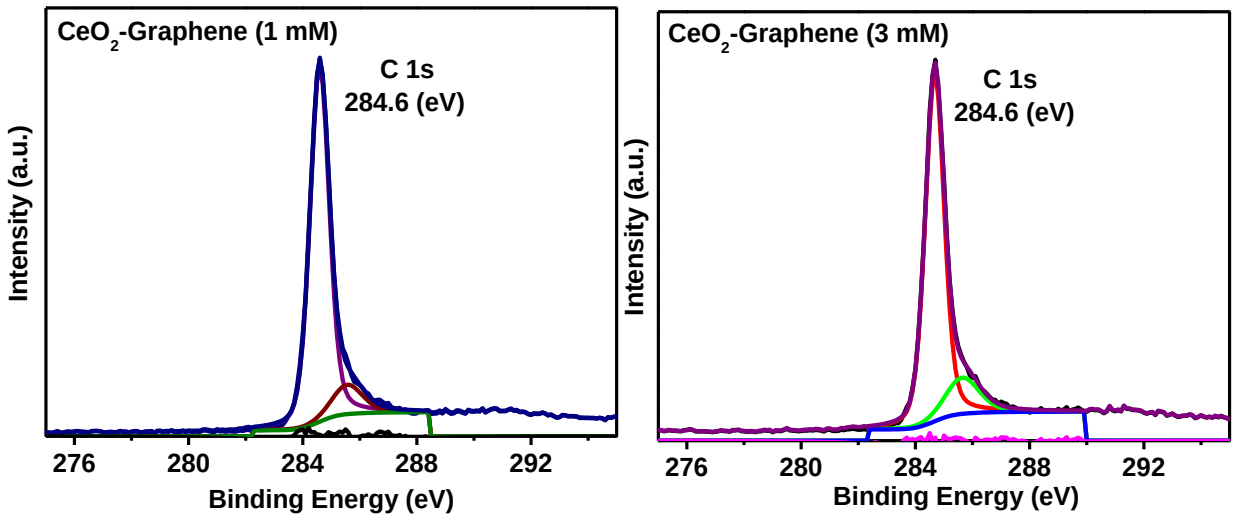

Fig. S4 (a and b) Fitted peak of C 1s corresponds to 1 mM and 3 mM CeO_2-Graphene nanostructure.

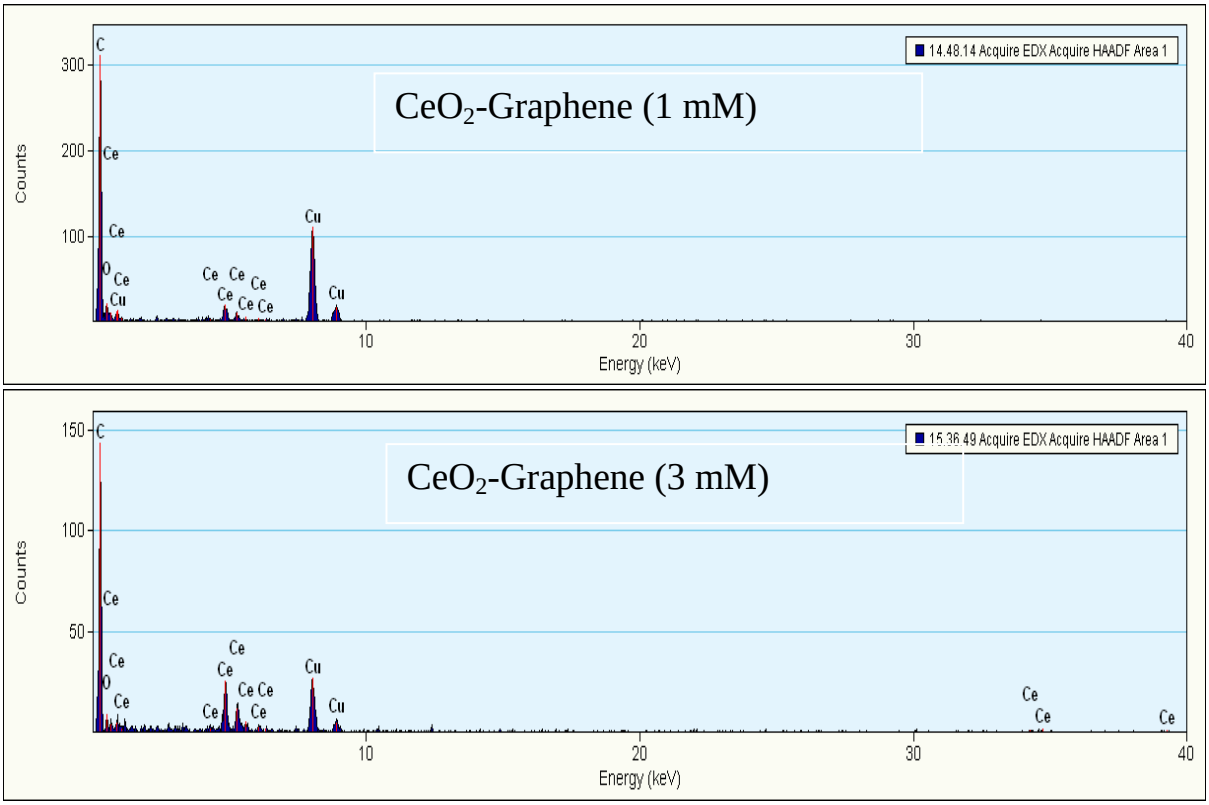

Fig. S5 (a and b) Elemental composition of 1 mM and 3 mM CeO_2-Graphene nanostructure.

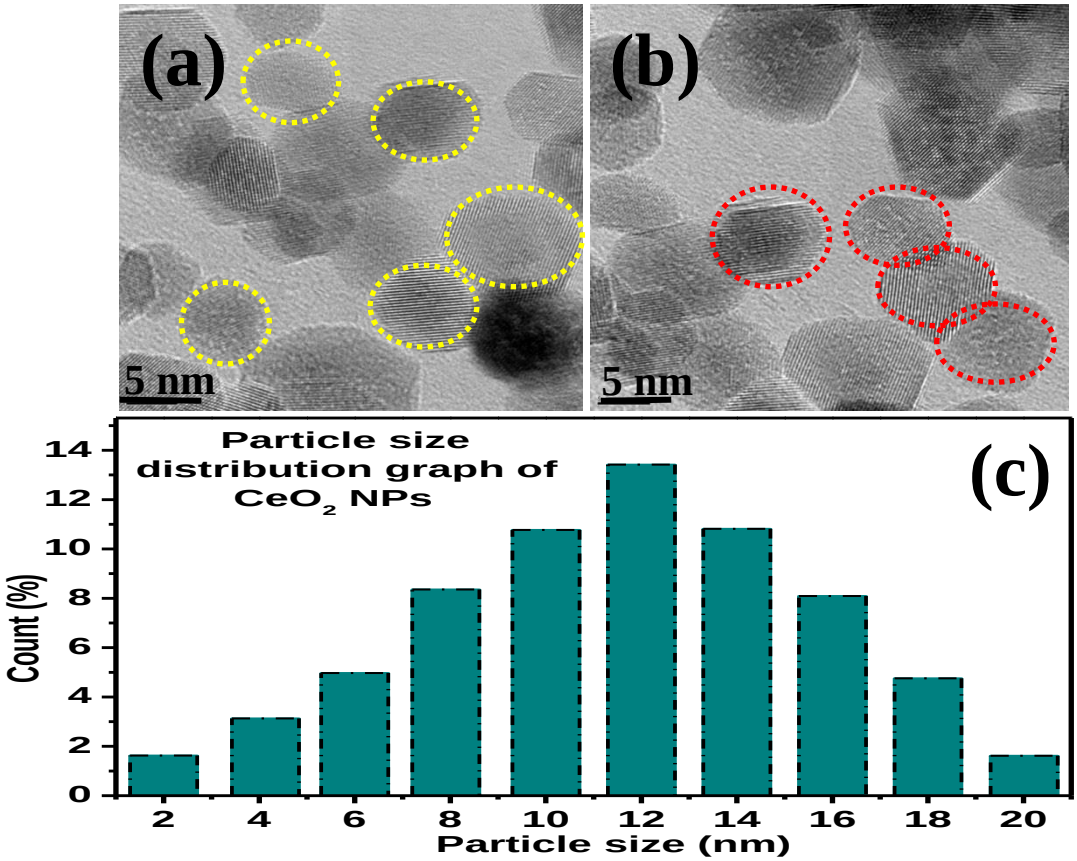

Fig. S6 (a and b) HR-TEM images of 1 mM and 3 mM CeO_2 NPs with high magnification values and visible lattice fringes **(c)** particle size distribution graph of CeO_2 NPs.