

Electronic supplementary information (ESI):

Carbon dot mediated trihybrid formation by reduction of GO and in situ gold nanocluster fabrication: Photo switching behaviour and degradation of Chemical Warfare Agent Stimulants

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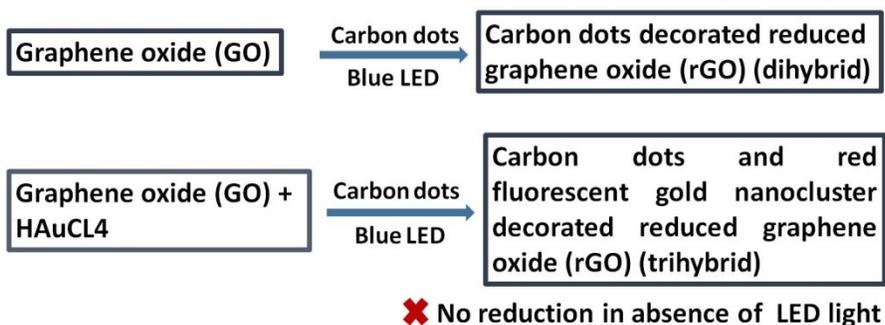


Figure S1. Schematic illustration of the dihybrid and trihybrid formation

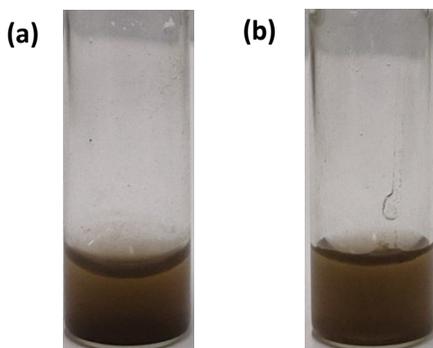


Figure S2. (a) Appearance of the reaction mixture of blue LED irradiated GO solution after 5 hours in absence of C dots. (b) Appearance of the reaction mixture containing GO and C-dots after 5 hours in absence of blue LED light.

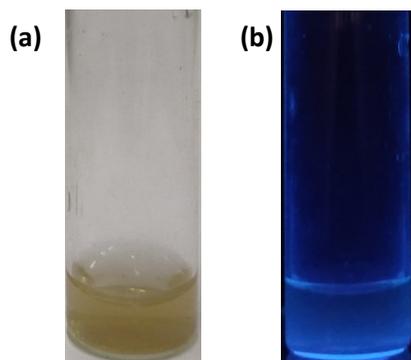


Figure S3. Appearance of the reaction mixture of carbon dots and Au salt (a) in daylight (b) under UV irradiation of a UV lamp (365 nm).



Figure S4. (a) Appearance of the reaction mixture of gold salt and the dihybrid system after blue LED irradiation of 5 hours.

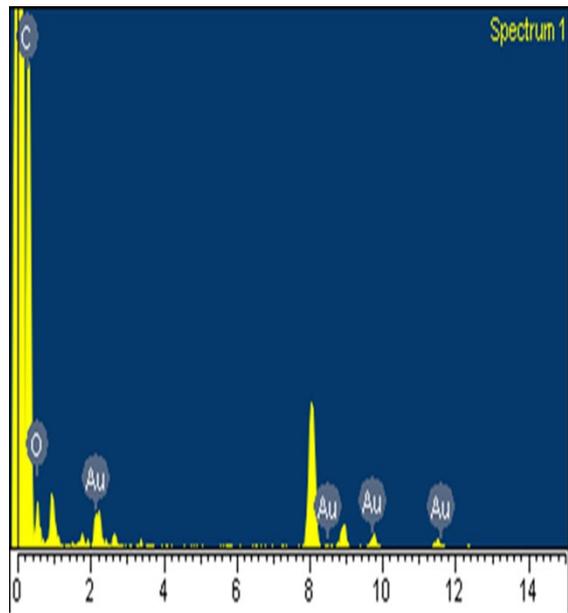


Fig.S5 EDS spectrum of Au cluster in trihybrid system

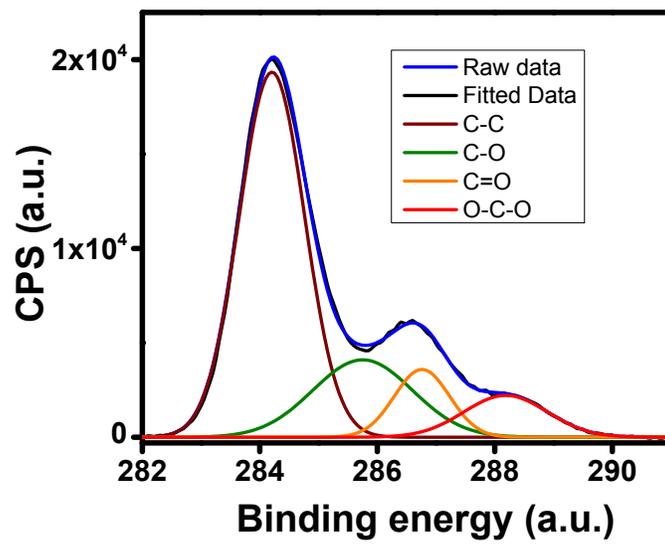


Fig.S6 C1s XPS spectra of the tri hybrid system

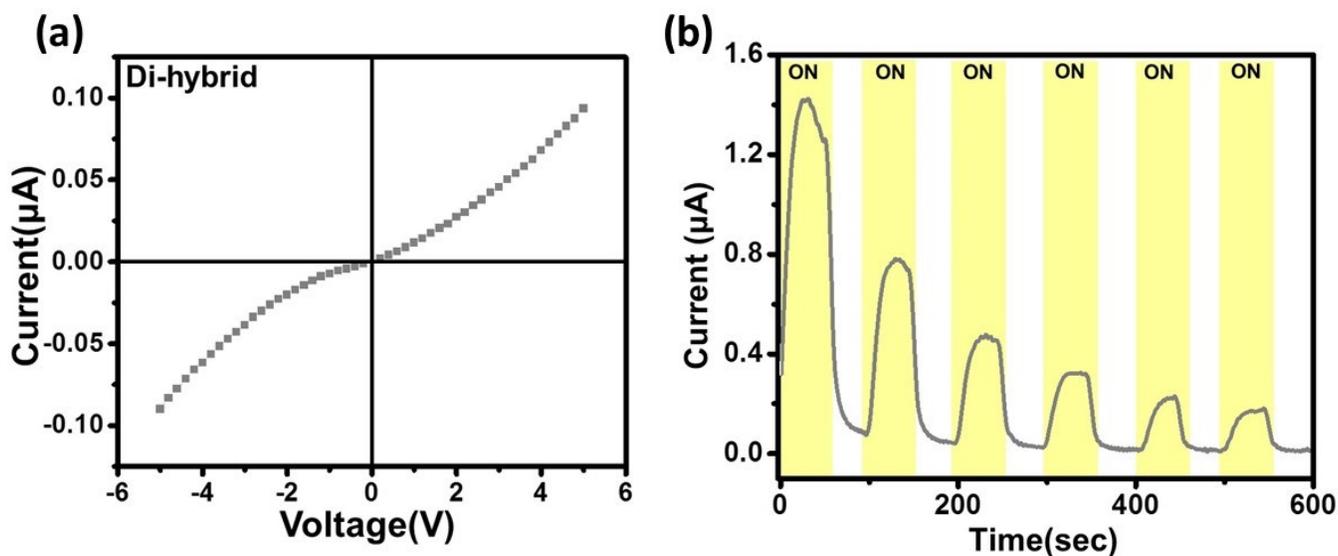


Figure.S7 (a) Current voltage curve and the (b) photoswitching behavior of the dihybrid system containing carbon dots and rGO.

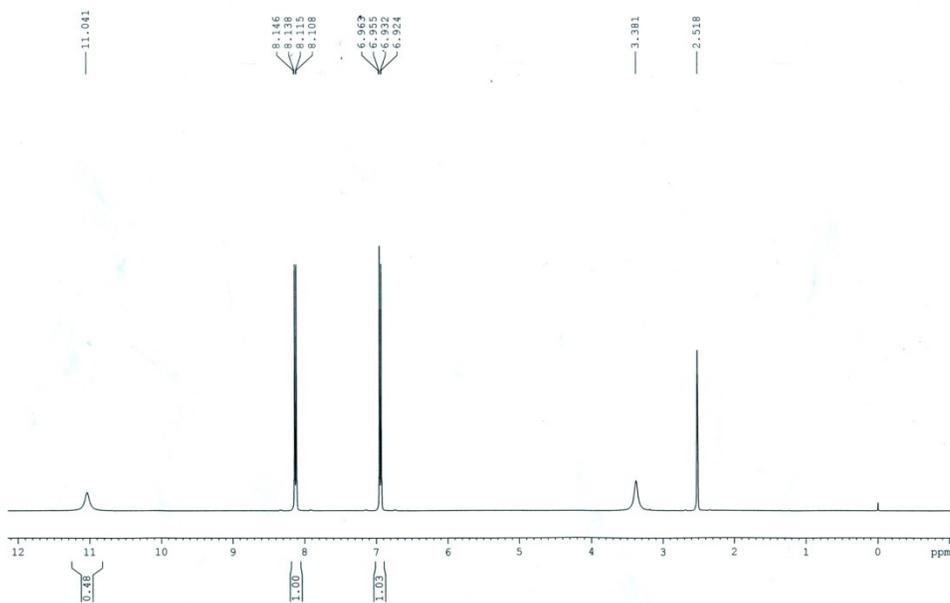


Fig. S8 ^1H NMR spectrum of the degradation product p-nitrophenol.

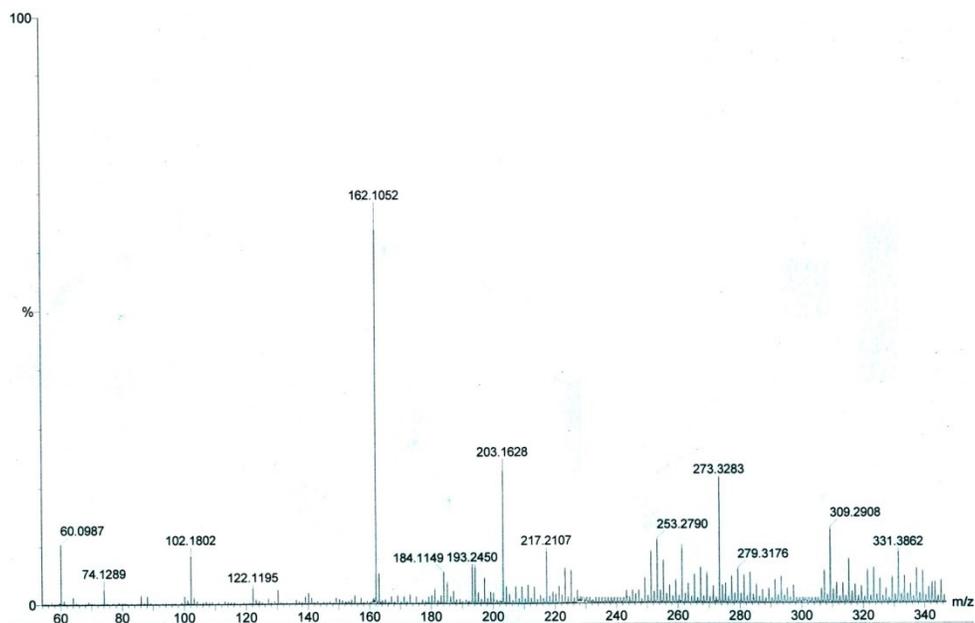


Fig. S9 HRMS spectrum of the degradation product p-nitrophenol

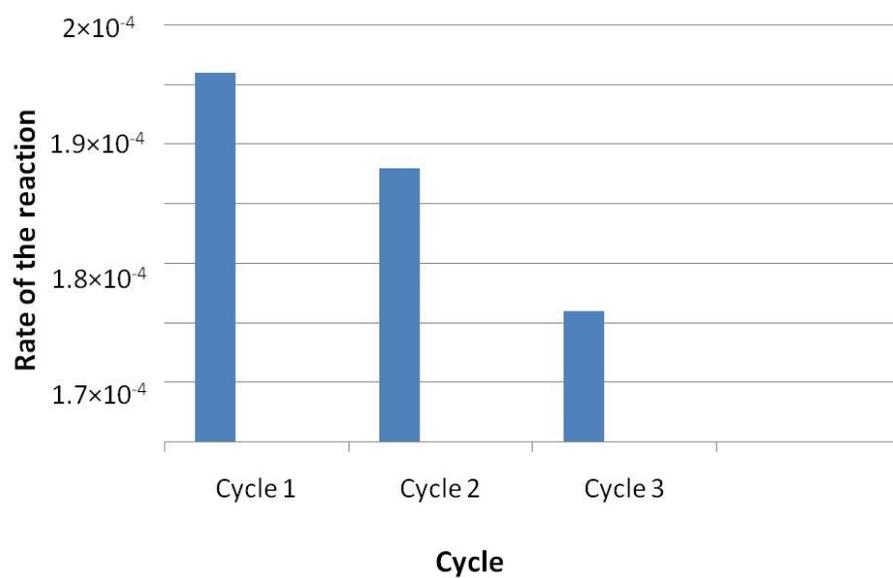


Fig. S10 Recyclability test of the catalyst.

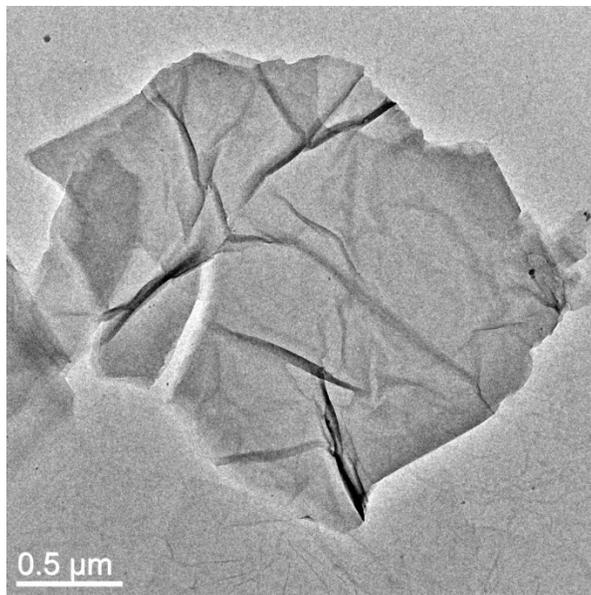


Fig.S11 FEG-TEM image of GO.