

Fig. S1. FTIR spectra of (a) Graphene oxide. (b) ZnO/CdO/reduced graphene oxide

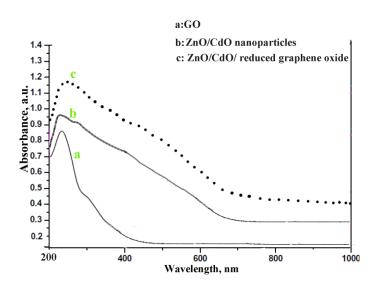


Fig. S2. UV-Vis spectra of a) graphene oxide, b)ZnO/CdO nanoparticles and c)ZnO/CdO/reduced graphene oxide

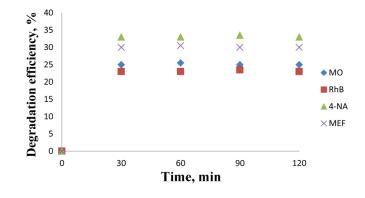


Fig. S3. Percentage removal of the organic pollutants at first 30 min without ultrasonic (adsorption study)

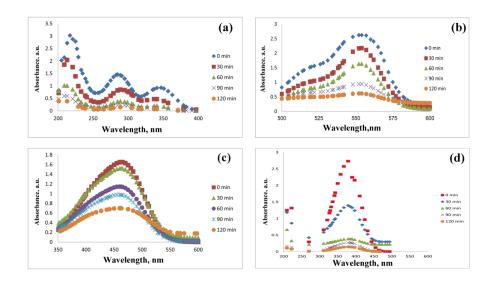


Fig. S4. UV-Vis spectra of (a) MEF, (b) RhB, (c) MO and 4-NA Reaction condition: catalyst: 1.2g/L, initial concentration of MEF,4-NA and azo dyes 10 mg/L, ultrasonic power 1200W/L

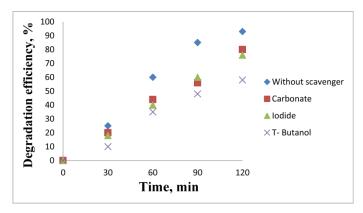


Fig. S5. Effect of inorganic and organic scavengers on the sonocatalytic degradation of MEF in the presence of ZnO/CdO/reduced graphene oxide (experimental conditions: [ZnO/CdO/reduced graphene oxide (10/100)]= 1.2 g/L, [MEF] = 10 mg/L, [Scavenger] = 10 mg/L and US power = 1200 W/L, US time:120 min). pH=7.5, systemic temperature = 25±0.2°C

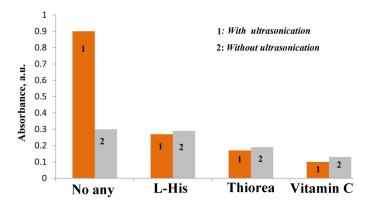




Fig. S6. Absorbance of DPCO in DPCI + as-prepared nanocomposites solutions in the presence of various quenching reagents. Experimental condition: with and without ultrasonic irradiation, ([DPCI] =  $10^{-2}$ M, [ZnO/CdO/reduced graphene oxide (10/100)] = 1.2g /L, [His] = [VC] = [Thiourea] =  $5.0 \times 10^{-3}$ M and US power = 1200 W/L Ultasounic time: 45min