## Design and Synthesis of Dodecahedral Carbon Nanocages Incorporated with Fe<sub>3</sub>O<sub>4</sub>

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**Table S1.** Elemental analysis of Fe<sub>3</sub>O<sub>4</sub>/C NCs.

Elements The weight percent	
С	36.1
Ν	2.8
Н	1.5

**Table S2.** ICP results of Fe<sub>3</sub>O<sub>4</sub>/C NCs.

Elements	Concentration /ppm	The weight percentage /% (Characterizaiton)	The weight percentage /% (Calculation)
Zn	30.9	30.0	37.4 (ZnO)
Fe	5.0	4.9	20.3 (Fe <sub>3</sub> O <sub>4</sub> )



**Figure S3 TEM** images of  $Fe_3O_4/ZIF-8$  nanostructure with different quantity of  $Fe_3O_4$  NPs with 1mg (A), 2mg (C), and 5 mg (E) and the corresponding  $Fe_3O_4/C$  NCs (B, D and F). The insets are the TEM images of corresponding  $Fe_3O_4/ZIF-8$  nanostructure and  $Fe_3O_4/C$  NCs with high magnification.



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