Electronic Supplementary Material (ESI) for RSC Advances.

Supplementary Information

Novel in situ synthesis of copper nanoparticles supported on reduced graphene oxide and its application as a new catalyst for the decomposition of composite solid propellants

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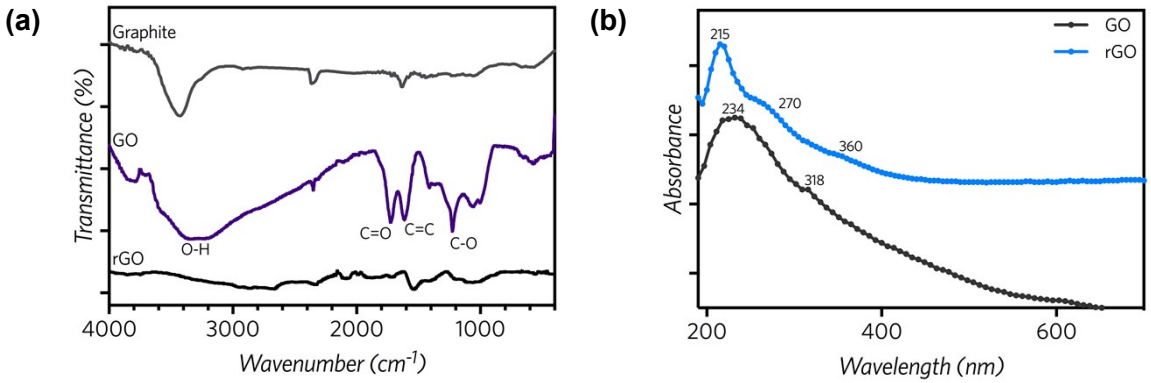

Figure S1: (a) FT-IR spectra of graphite, GO and rGO and **(b)** UV-vis spectra of GO and rGO in water.

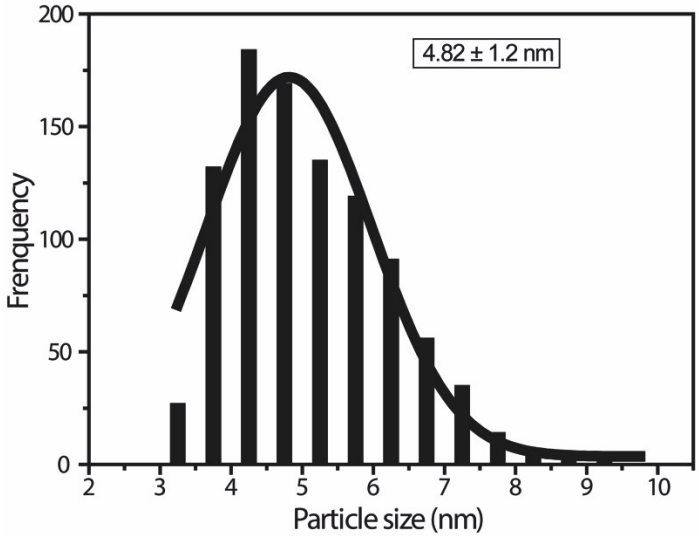

Figure S2: Mean Cu particle size, being calculated over a range of 100 particles with HAADF-STEM.

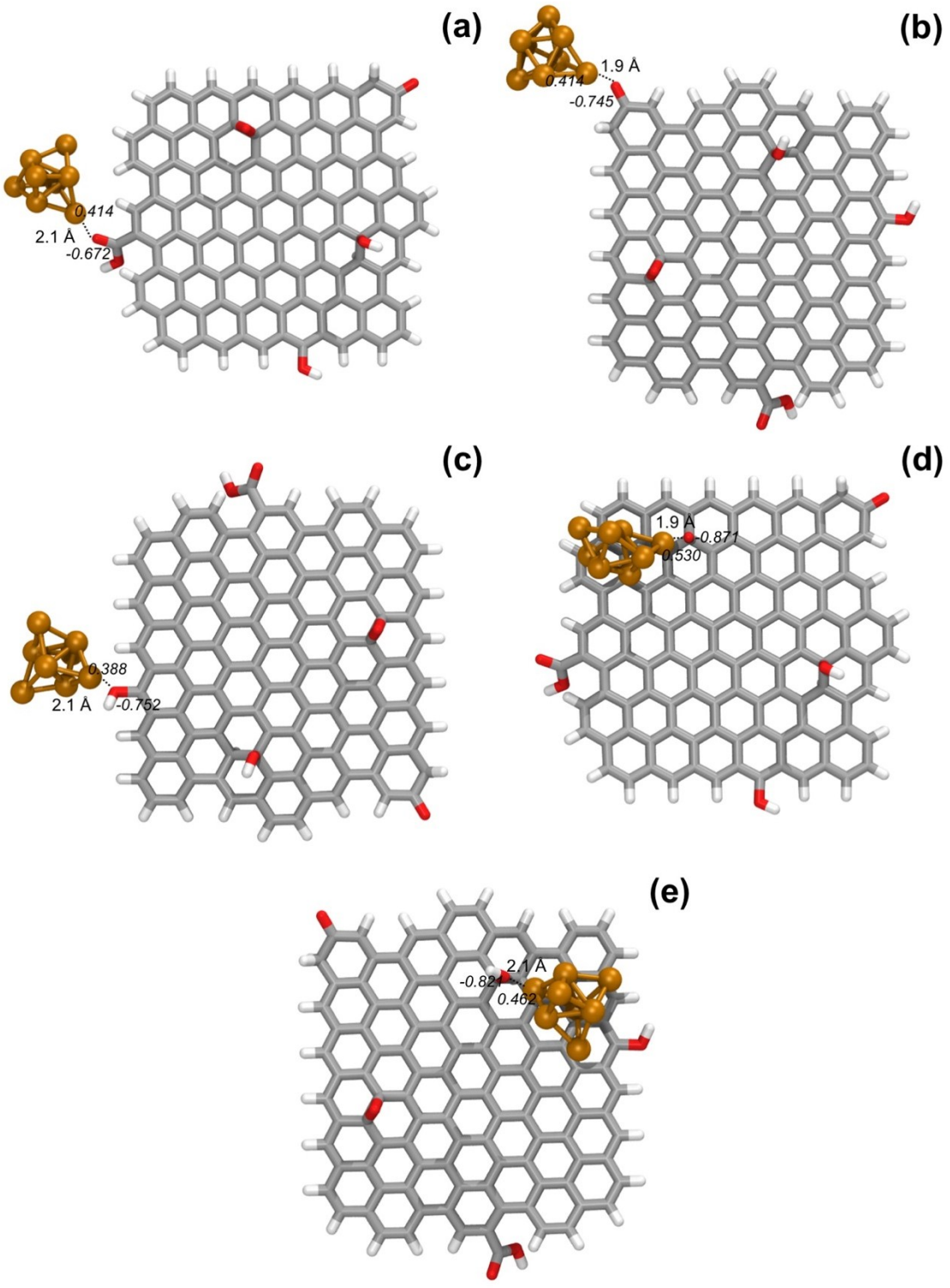

Figure S3: Optimized complexes of rGO|Cu_8 at coordination site (a) carboxylic (II), (b) carbonyl (II), (c) hydroxyl (III), (d) surface -O- (IV), and (e) surface -OH (IV). NPA charges (a.u.) for selected atoms are displayed in italics, and bond lengths in Å.

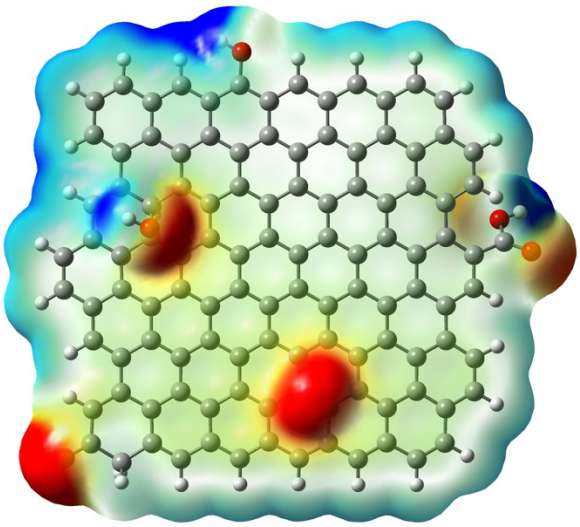

Figure S4: Electrostatic potential surface (EPS) of the optimized structure of rGO.