

1 **Influence of functional groups on toxicity of carbon nanomaterials:**
2 **implication for toxicological evolution during atmospheric relevant**
3 **aging of black carbon**

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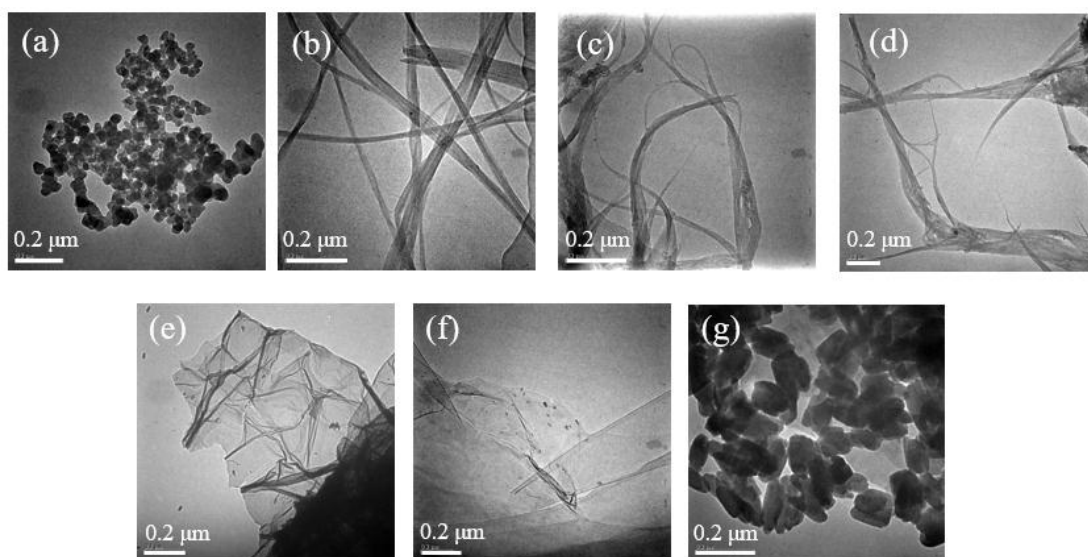
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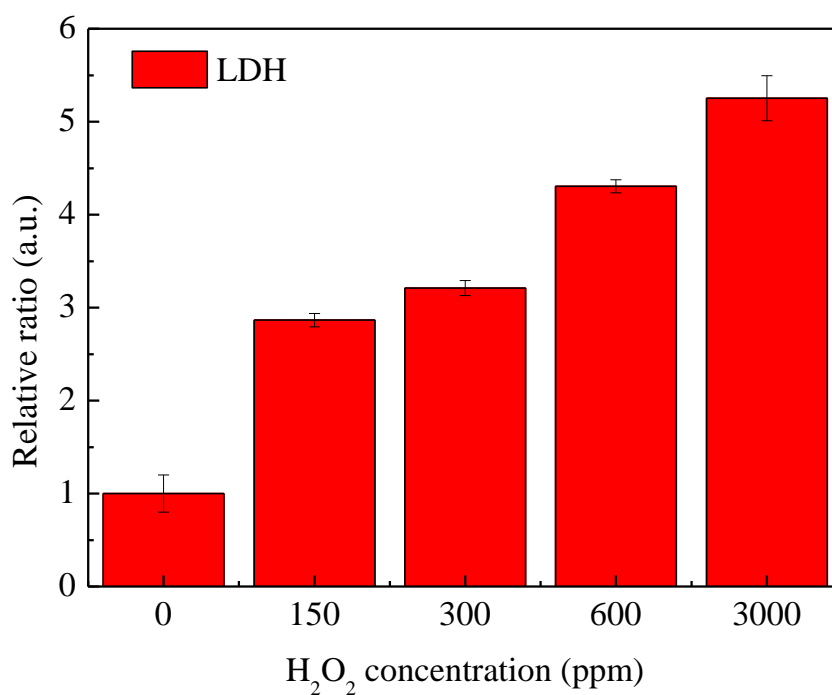
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15 Figure S1. Morphology of (a) SB4A, (b) SWCNT, (c) SWCNT-OH, (d) SWCNT-COOH, (e)

16 graphene, (f) graphene oxide and (g) thermally treated graphene oxide at 200 °C in nitrogen.



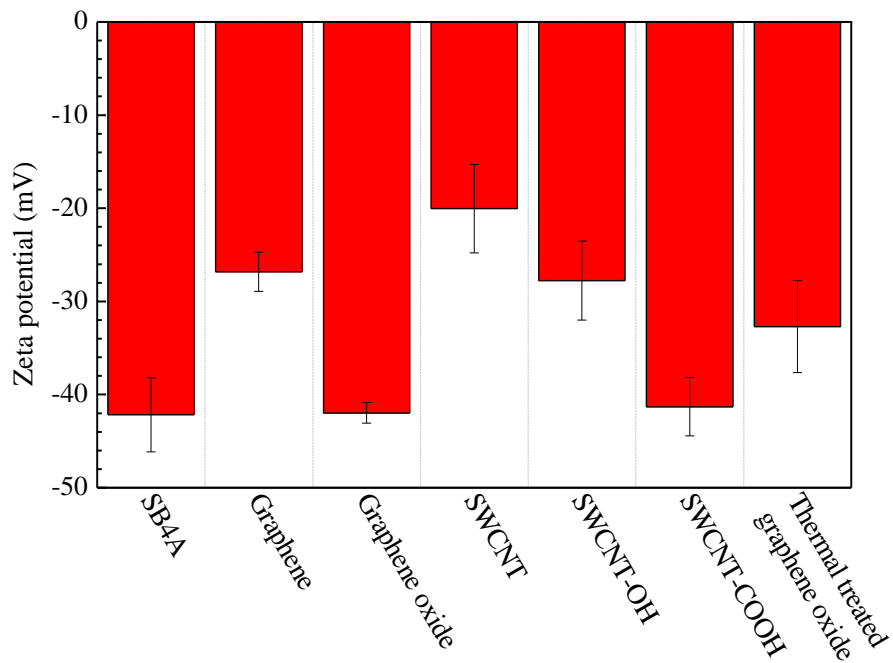
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18 Figure S2. Positive control experiment results for LDH assay using different concentration of

19 H₂O₂.

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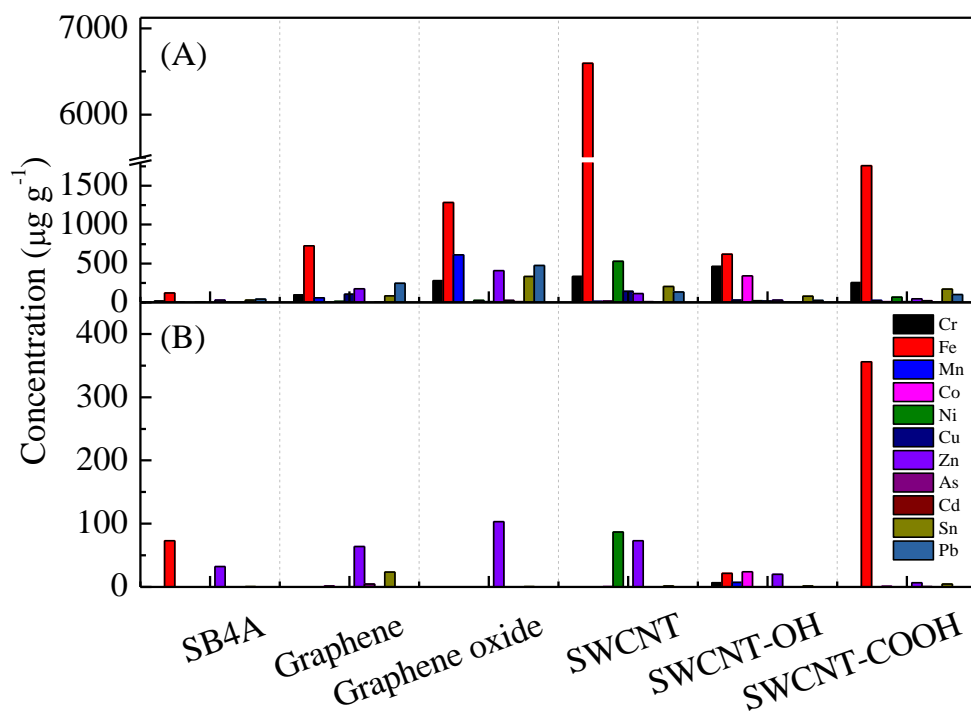
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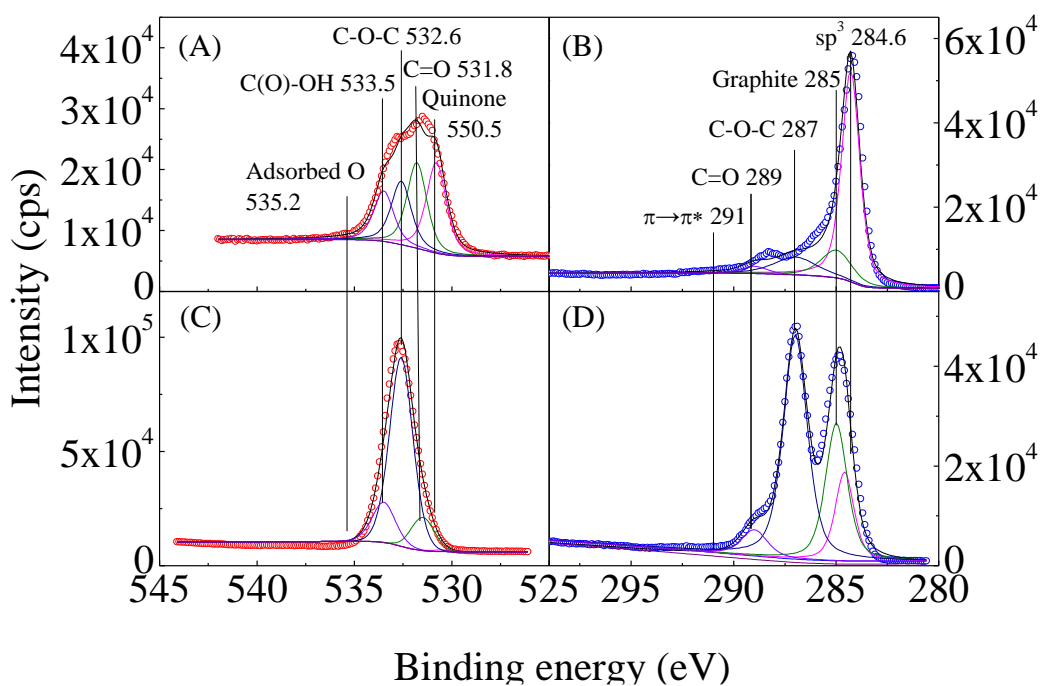
Fig. S3. Zeta potentials of carbon different nanomaterials.



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25 Figure S4. Content of metals in carbon nanomaterials (A) after digested with HNO_3 , (B)

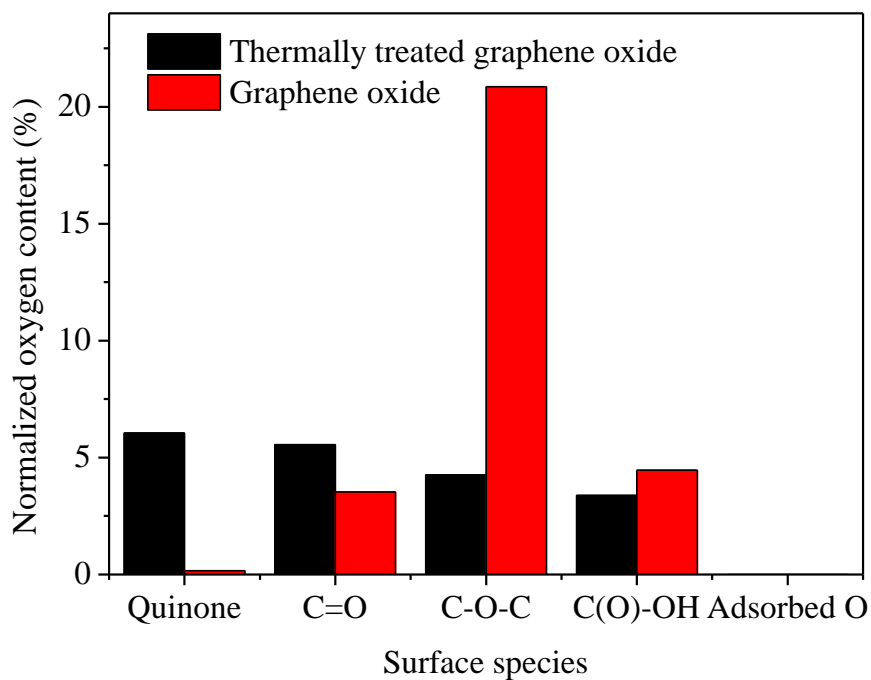
26 after sonicated for 30 min in water.



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28 Figure S5. O1s and C1s XPS spectra of (A) and (B) for thermally treated graphene oxide in N₂

29 flow at 200 °C; (C) and (D) for graphene oxide.



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31 Figure S6. Species distribution of thermally treated graphene oxide in N₂ flow at 200 °C and

32 graphene oxide.