Electronic Supplementary Material (ESI) for Environmental Science: Nano.
This journal is © The Royal Society of Chemistry 2018

Reduction pathway-dependent cytotoxicity of reduced graphene oxide†

Qiurong Zhang,[a] Xiaolei Liu,[a] Hongyan Meng,[a] Sijin Liu,[b] and Chengdong Zhang*[ca]

[a] *College of Environmental Science and Engineering, Nankai University, Tianjin 300350, China.*
[b] *State Key Laboratory of Environmental Chemistry and Ecotoxicology, Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences, Beijing 100085, China.*
[c] *School of Environment, Beijing Normal University, Beijing 100857, China. E-mail: zhangchengdong@bnu.edu.cn*

† Electronic supplementary information (ESI) available. See DOI:

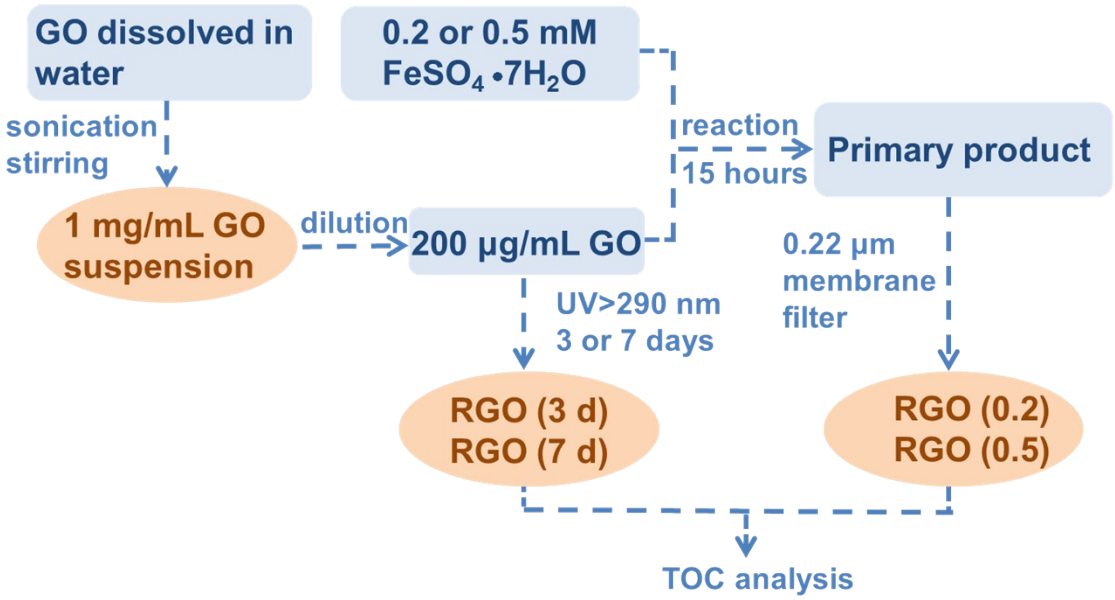

Fig. S1 Scheme of reduction procedures.

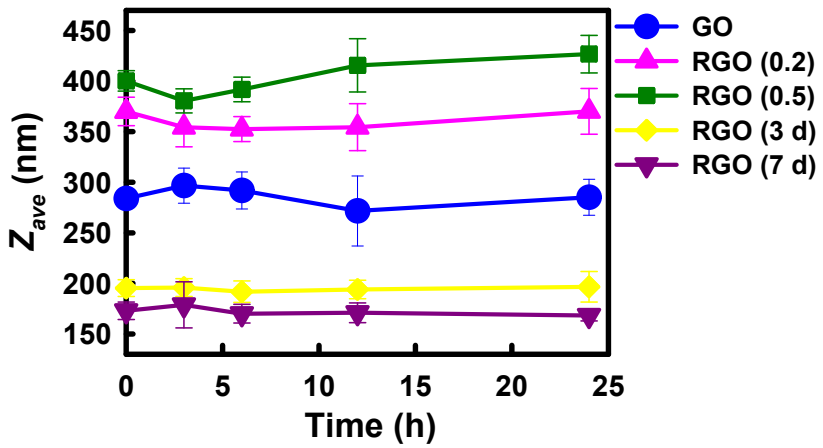

Fig. S2 The change of nanoparticle size with time. Twenty μg/mL
of GO/RGOs was incubated in culture medium and the size was analyzed by DLS (n=3).

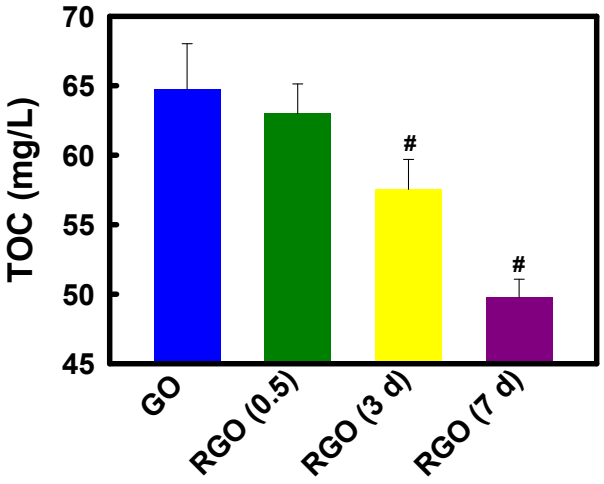

Fig. S3 Changes of TOC concentration in GO/RGOs colloidal solution after transformation (n=3). The suspension was sonicated for 30 min before analysis to ensure no precipitation occurring. $^{\#}$, $p < 0.05$ compared to initial GO concentration.

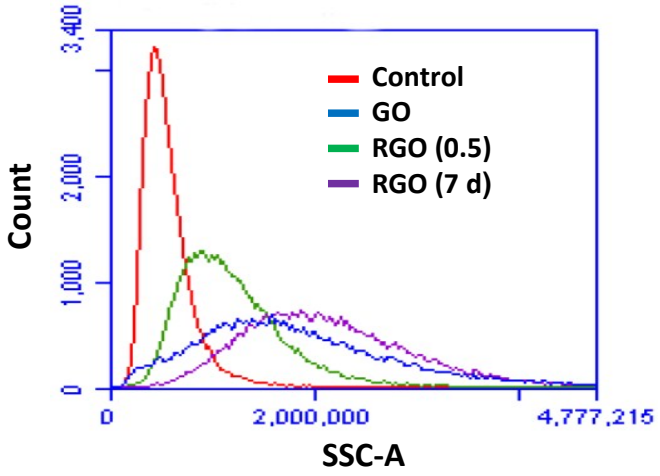

Fig. S4 Representative side-scatter histogram profile of cells after exposure to 20 μg/mL GO/RGOs for 24 h

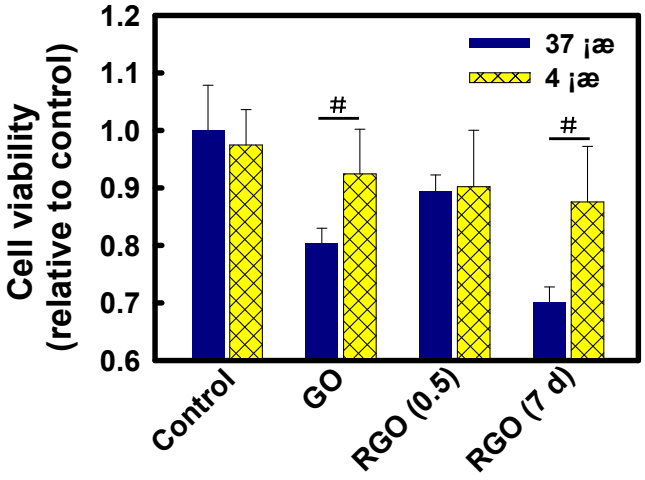

Fig. S5 The effects of temperature on cell viability in the presence of GO/RGOs. Cells were exposed to 20 μg/mL GO/RGOs for 24 h at indicated temperature (n=5). $^{\#}$, $p < 0.05$ relative to the same treatment at 37 °C.

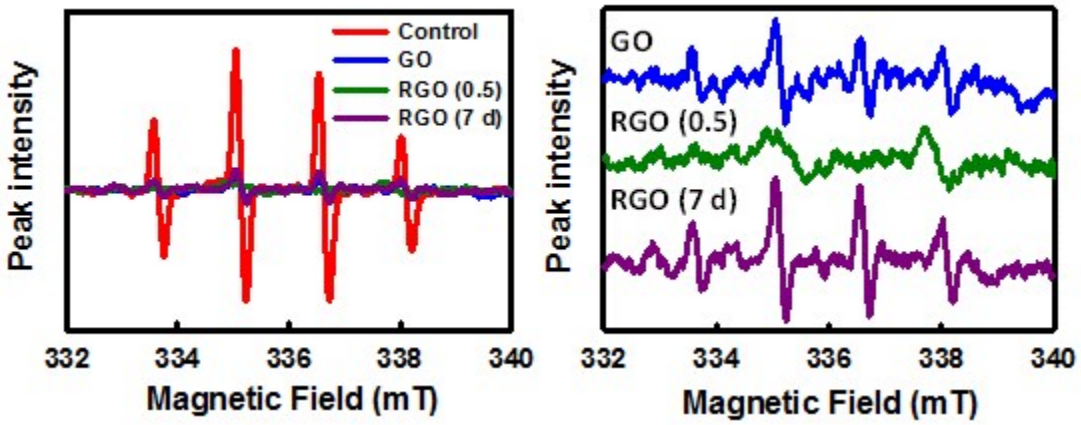

Fig. S6 EPR spectra showing the radical scavenging activity of GO/RGOs. The left panel shows the overall EPR spectra, and the right panel enlarges the differences among three nanoparticles.