Electronic Supplementary Material (ESI) for RSC Advances.

Investigating the reinforcing mechanism and optimized dosage of pristine graphene for enhancing mechanical strengths of cementitious composites

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Supporting information

This section includes the schematic mechanism of an electrochemical exfoliation process and typical TGA-DTG curves of graphene oxide (GO) and reduced graphene oxide (rGO).

1. The schematic illustration of an electrochemical exfoliation process of PRG materials

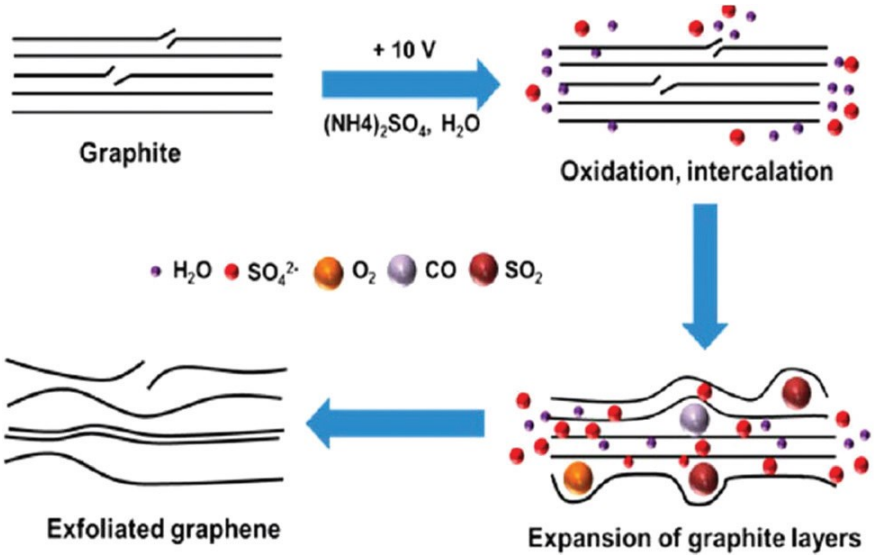

Fig. S1. The general schematic mechanism of PRG materials produced by an electrochemical exfoliation process [1, 2].

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2. Thermogravimetric analysis diagrams of GO and rGO

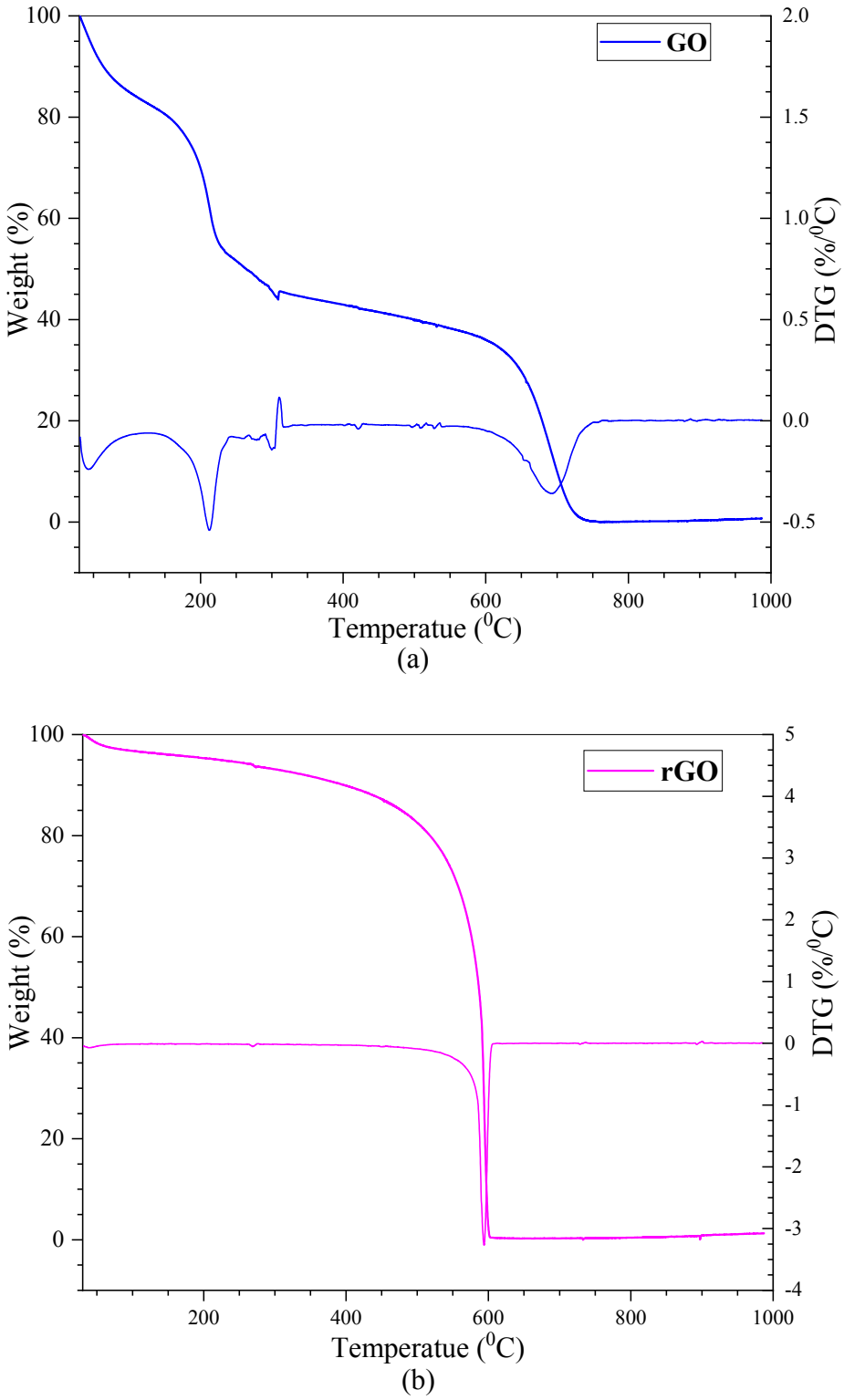

Fig. S2. Thermogravimetric curves and derivative thermogravimetric curves of GO (a) and rGO (b).

References

1. K. Parvez, Z.-S. Wu, R. Li, X. Liu, R. Graf, X. Feng and K. Mullen, *Journal of the American Chemical Society*, 2014, **136**, 6083-6091.
2. S. Yang, M. R. Lohe, K. Müllen and X. Feng, *Advanced materials*, 2016, **28**, 6213-6221.