Electronic supplementary information

Cooperatively Exfoliated Fluorinated Graphene with Full-Color Emission

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1. HRTEM micrographs of the prepared FGS

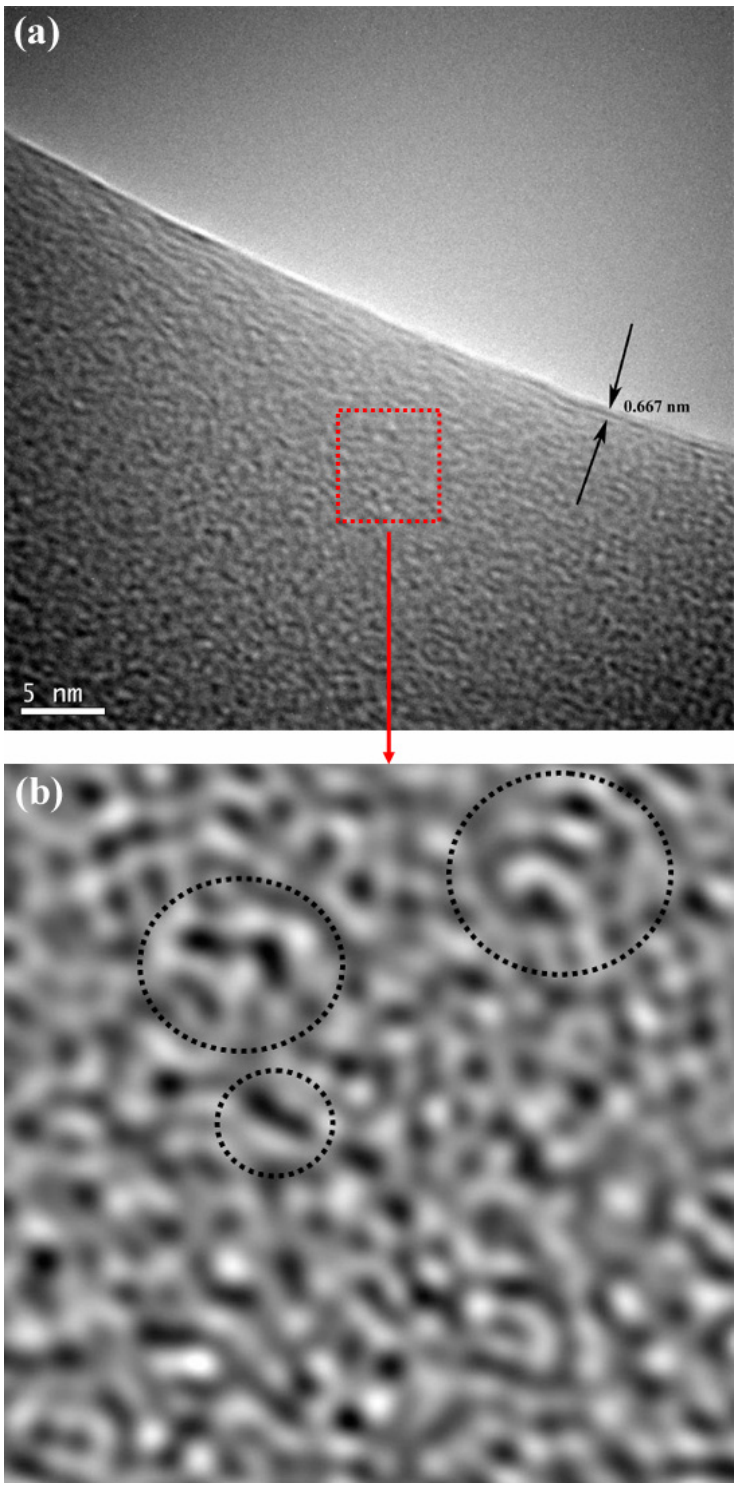

Figure S1. (a) HRTEM micrograph of the prepared FGS; (b) magnified image of the red region in (a).

2. Distribution of the sp^2 C and sp^3 C in FGR

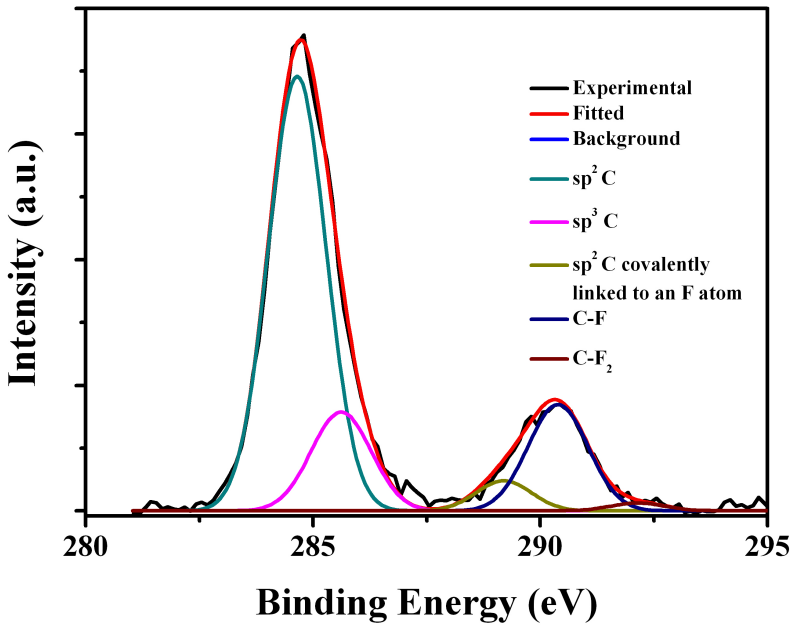

Figure S2. Gaussian fitting results of the C1s core line of FGR.

3. Optical photographs of the prepared samples

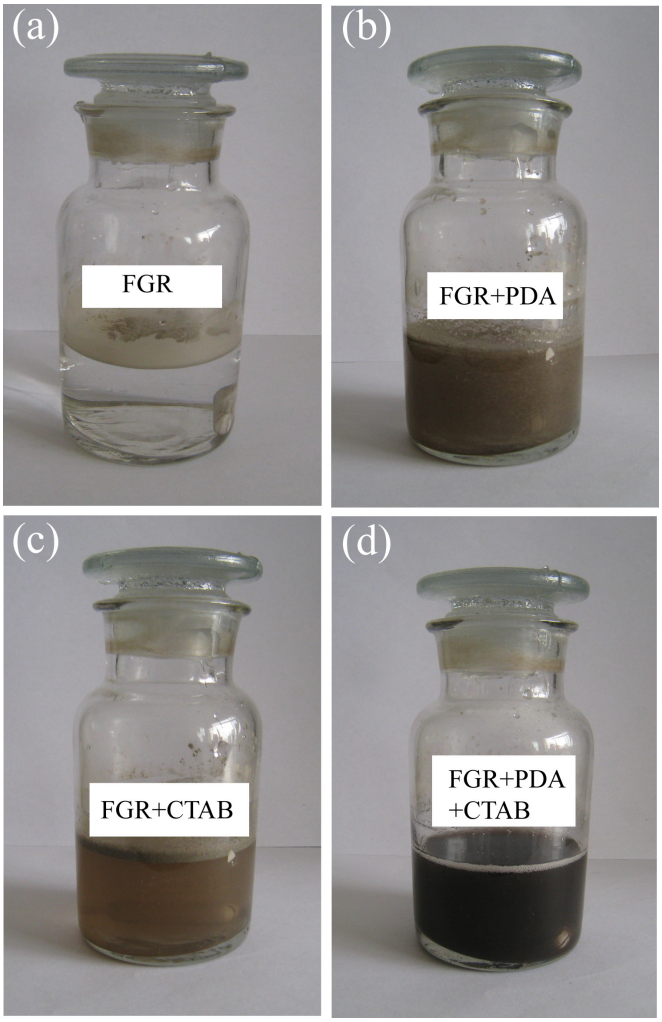

Figure S3. Optical photographs of the samples dispersed in Tris-HCl solution: (a) FGR, (b) FGR with PDA, (c) FGR with CTAB; (d) FGR with PDA and CTAB. It is observed that FGR is hydrophobic and it can be dispersed well when PDA is introduced which could facilitate the further exfoliation process. The dispersiblity of FGR can also be enhanced by the addition of CTAB. However, the dispersibility of the sample using CTAB only is inferior to that of the combination one (PDA+CTAB).

4. TEM micrographs of samples exfoliated by PDA or CTAB only

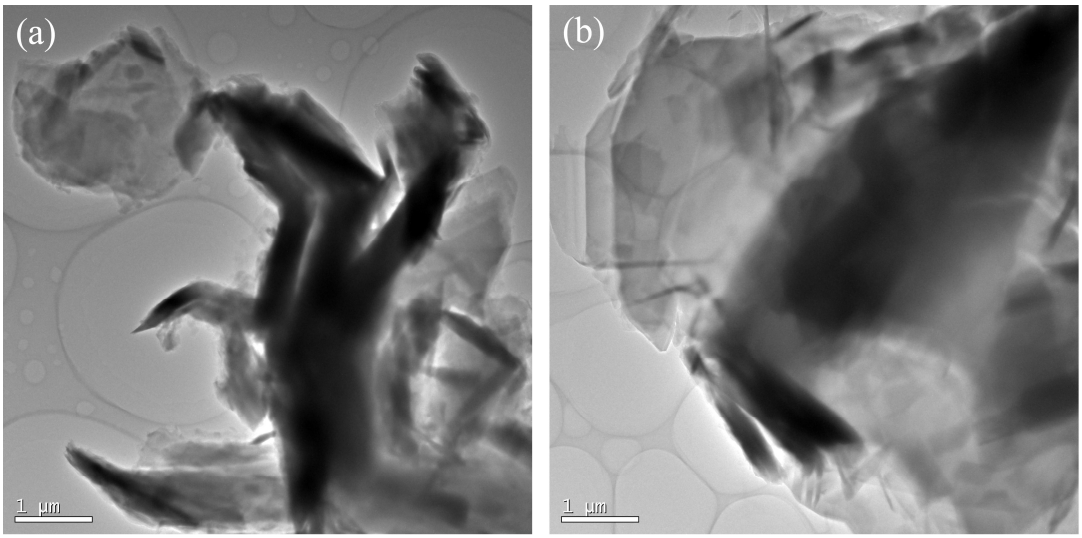

Figure S4. TEM micrographs of the samples prepared by different processes: (a) FGR with PDA only; (b) FGR with CTAB only.

5. Emission color in CIE-1931

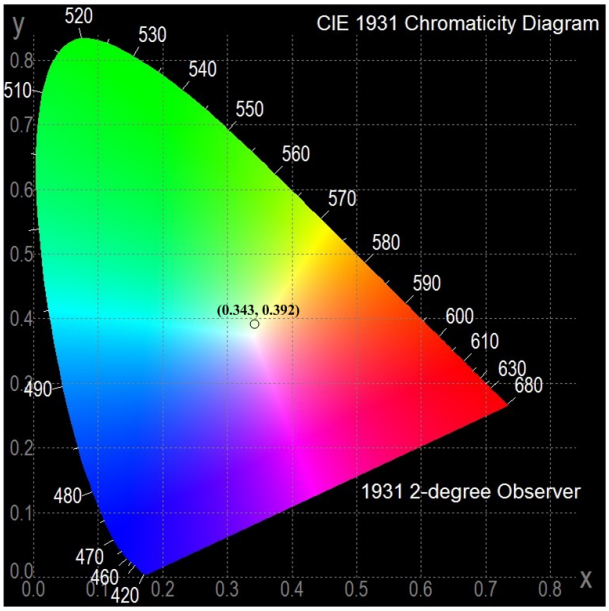

Figure S5. Emission color of the as-prepared FGS excited by 365 nm in CIE chromaticity diagram.