

Revisiting the Mechanism of Oxidative Unzipping of Multiwall Carbon Nanotubes to Graphene Nanoribbons—Supporting Information

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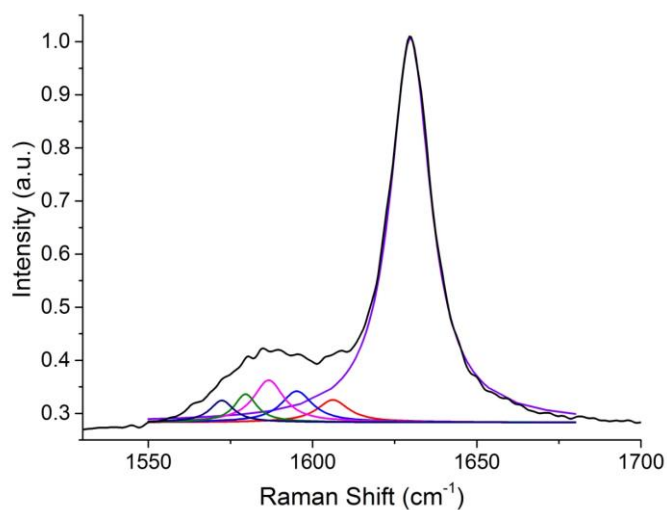


Figure S1. The G-band of the Raman spectrum of MWCNTs in the $\text{KMnO}_4/\text{H}_2\text{SO}_4$ solution at 0.06 wt equiv of KMnO_4 . Black line is the experimental envelop spectrum. Colored lines are the

constituent components. The purple peak centered at 1630 cm^{-1} is from the stage-1 H_2SO_4 -GIC. The red line component at 1608 cm^{-1} is assigned to the stage-2 GIC.

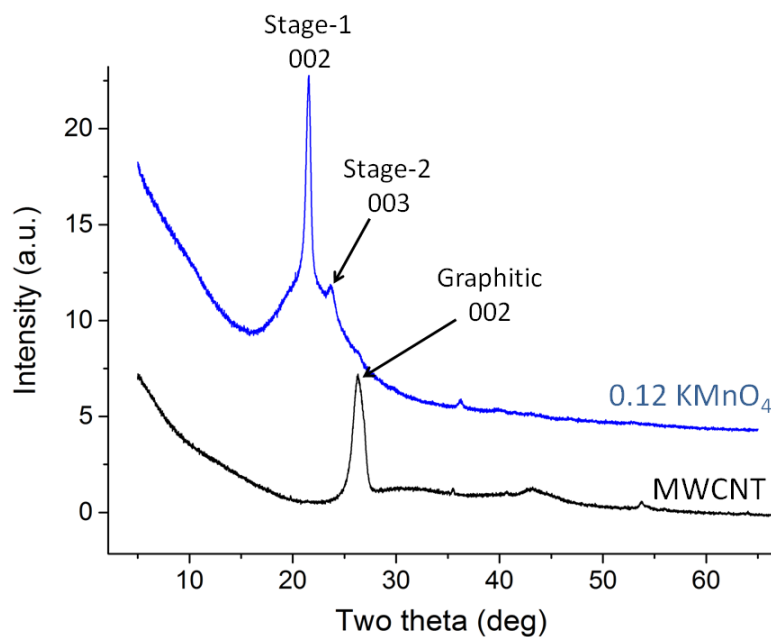


Figure S2. Powder X-ray diffraction pattern for MWCNTs while in the acidic mixture at the 0.12 $\text{KMnO}_4/\text{MWCNT}$ ratio.

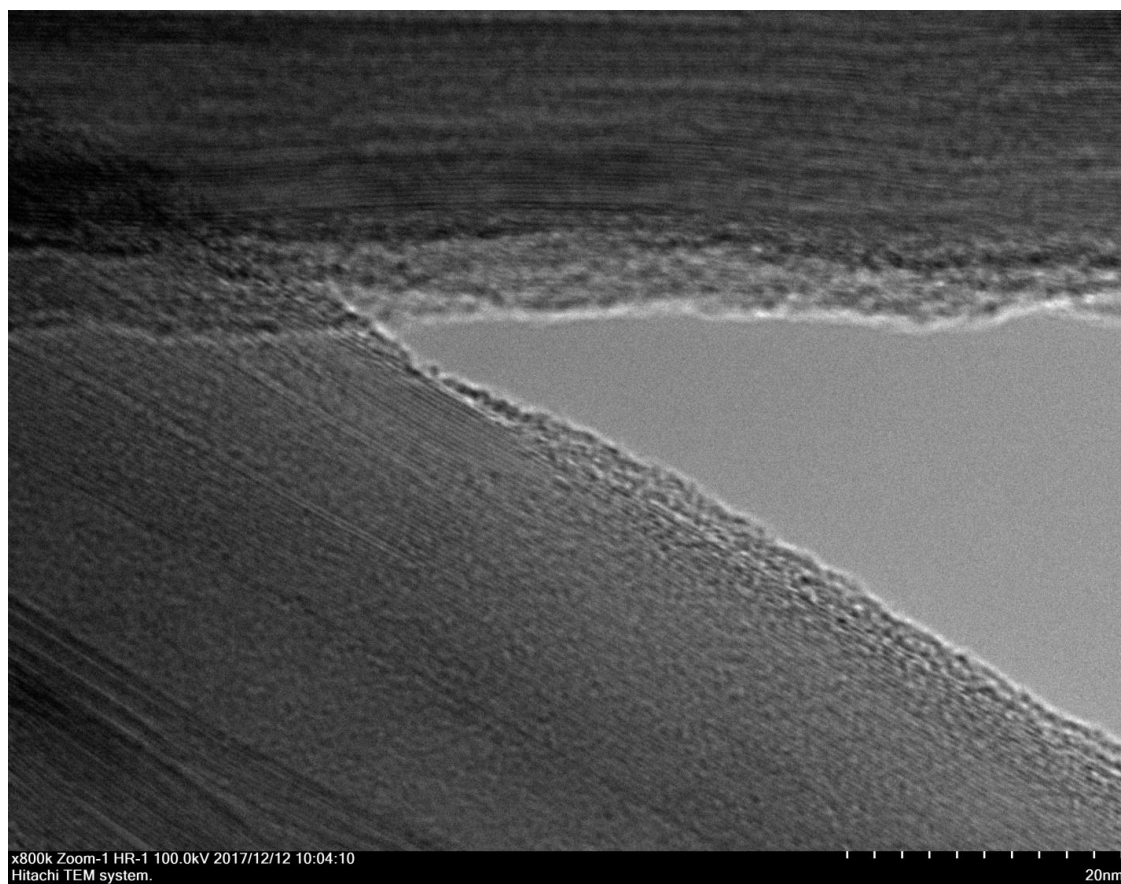


Figure S3. TEM image of pristine MWCNTs.

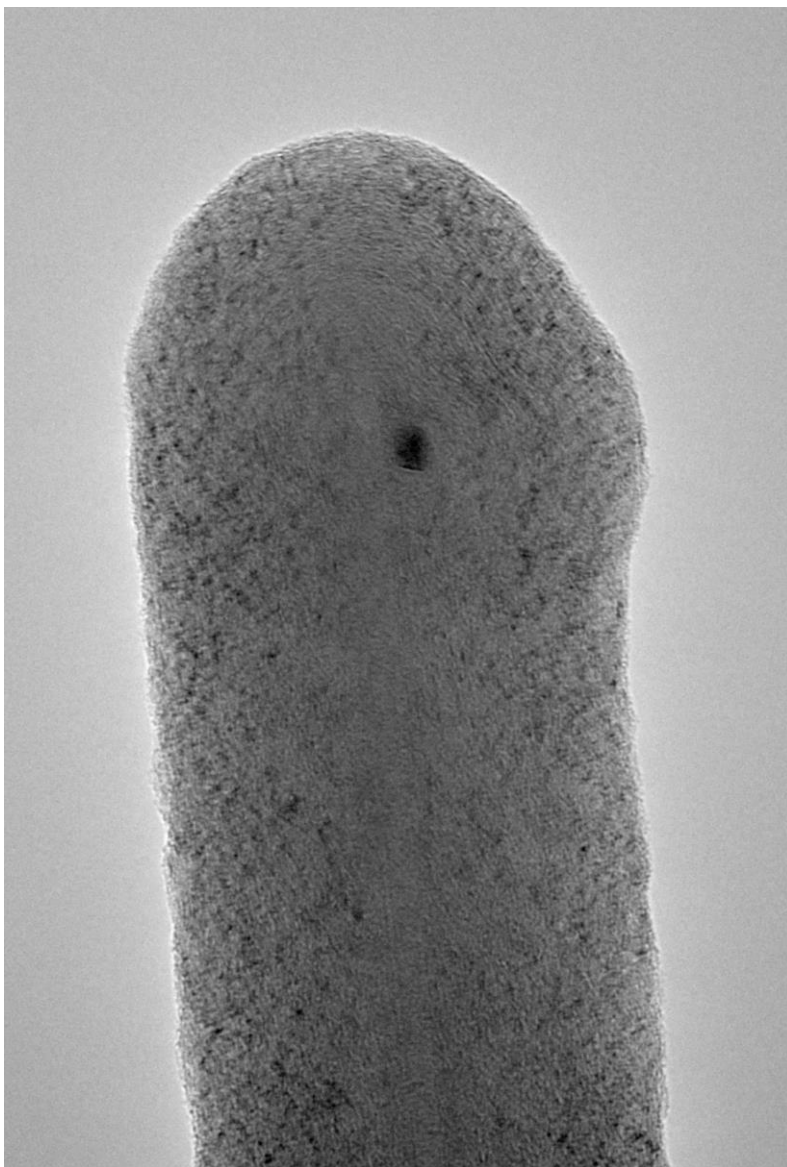


Figure S4. TEM image of the capped end of pristine MWCNT. Acquired at magnification 200k.

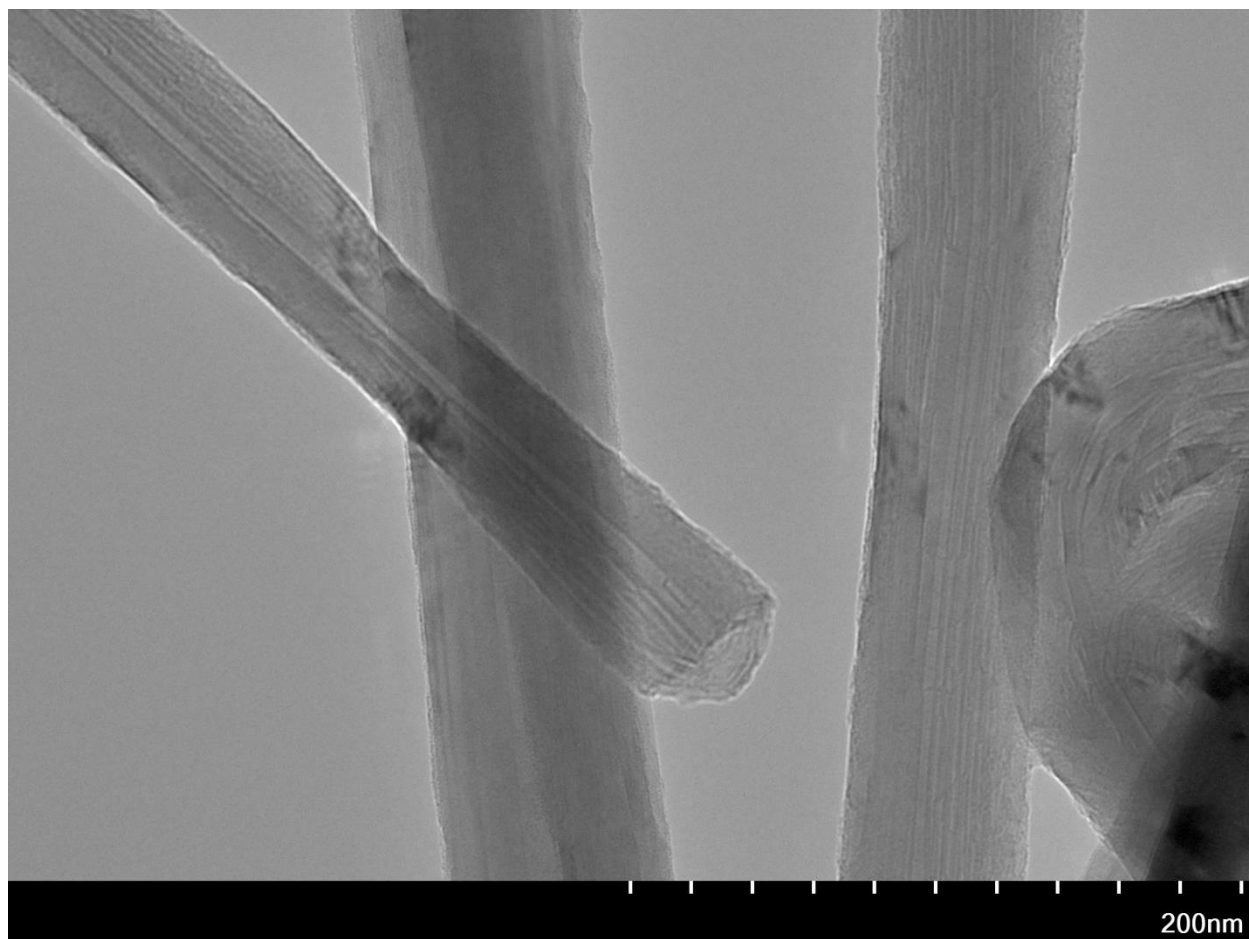


Figure S5. TEM image of the opened end of pristine MWCNT.

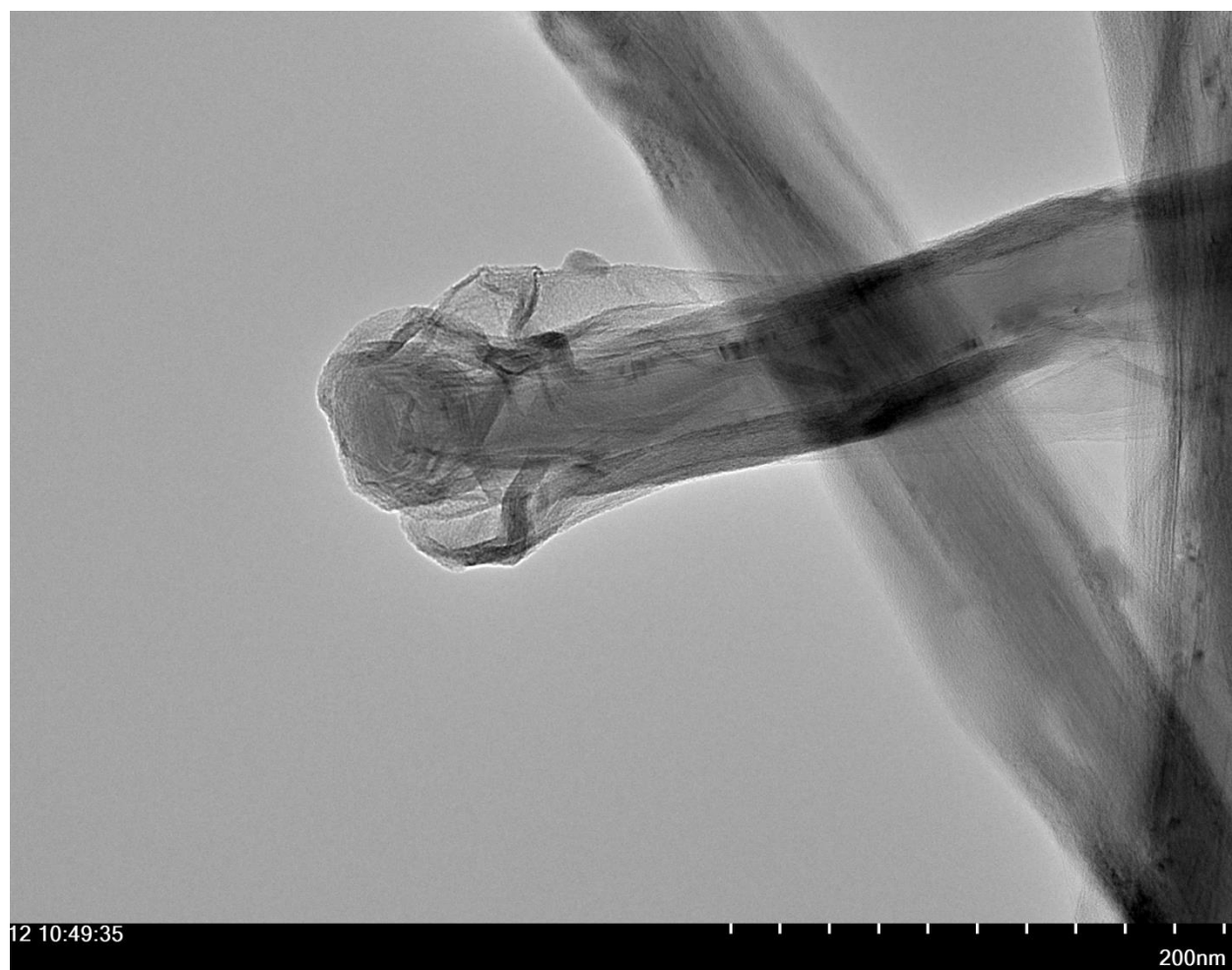


Figure S6. The TEM image of the uncapped end of the intercalated-unzipped MWCNT. Intercalation-unzipping begins from this end.