

**Supplementary Information for**

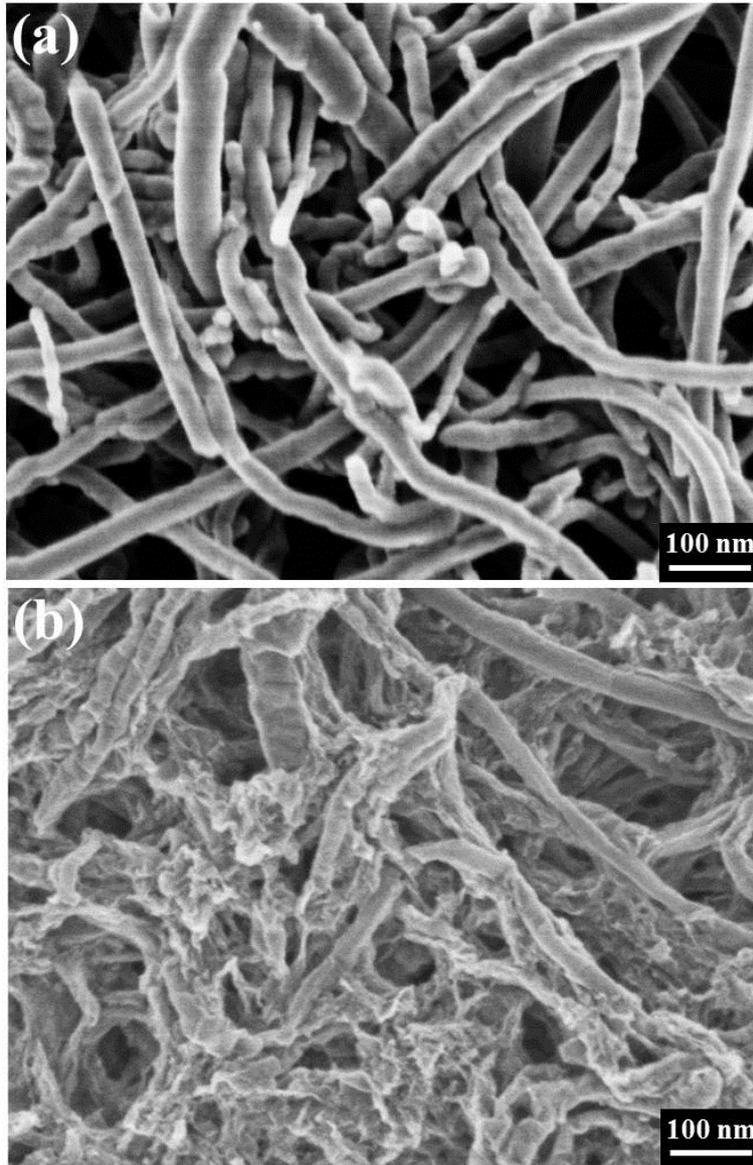
**Anisotropic Conductive Films Based on Highly Aligned Polyimide Fibers  
Containing Hybrid Materials of Graphene Nanoribbons and Carbon Nanotubes**

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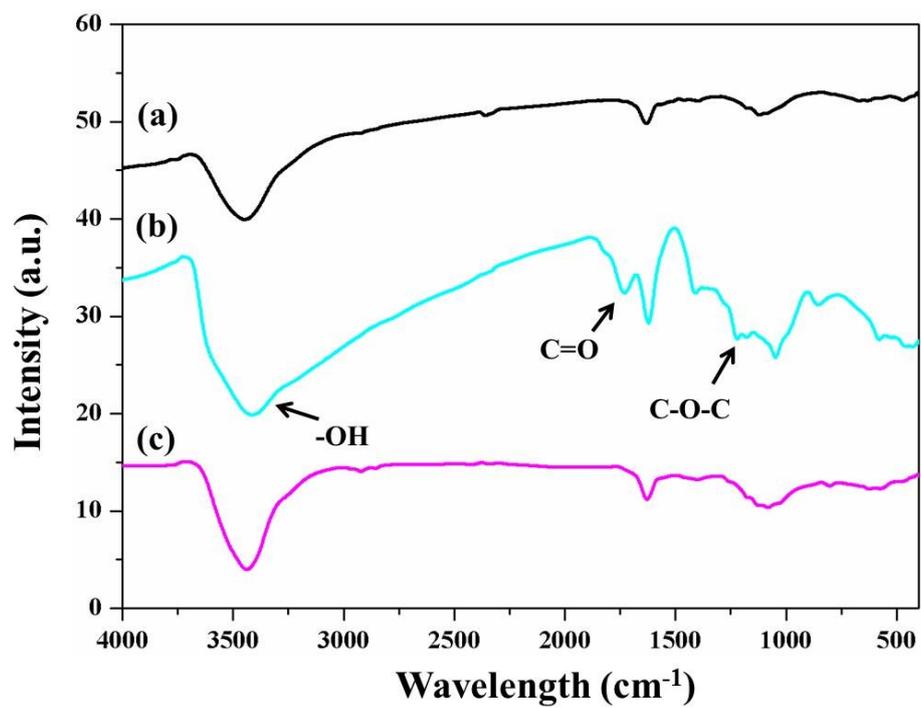
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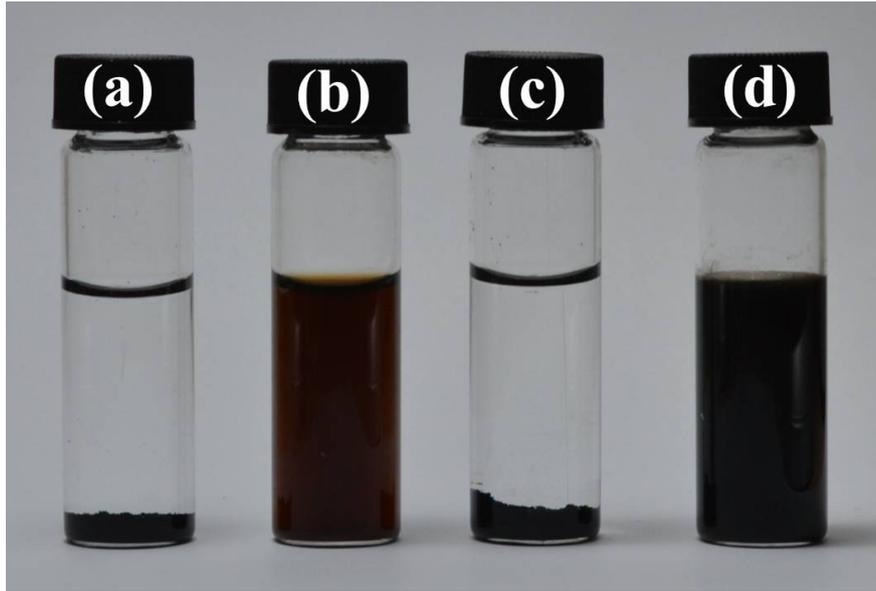
<sup>c</sup> Institute of Materials Research and Engineering, A\*STAR (Agency for Science, Technology and Research), 3 Research Link, Singapore, 117602, Singapore.



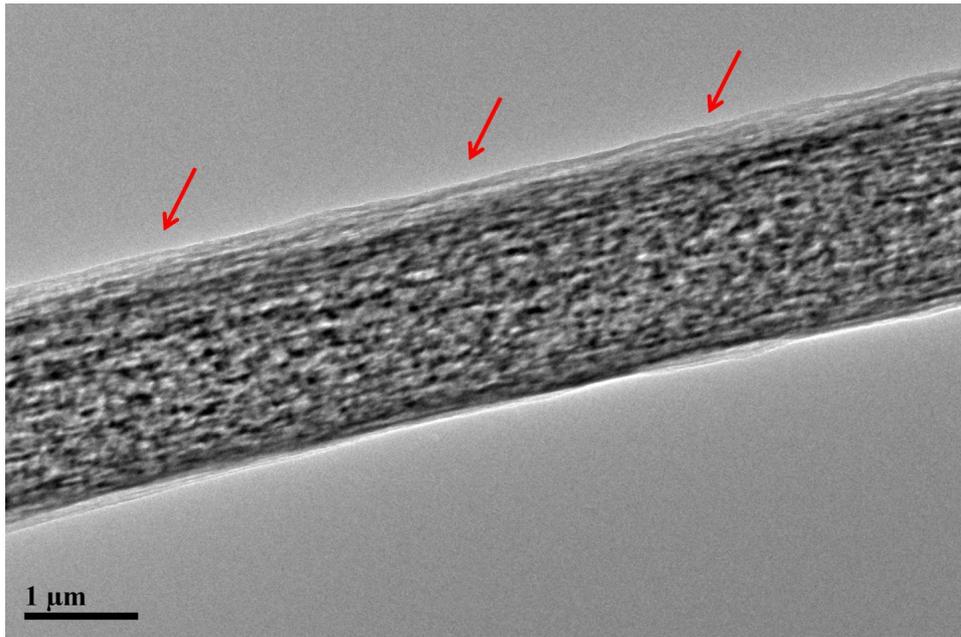
**Figure S1.** SEM images of (a) pristine CNTs and (b) GNR/CNT hybrid.



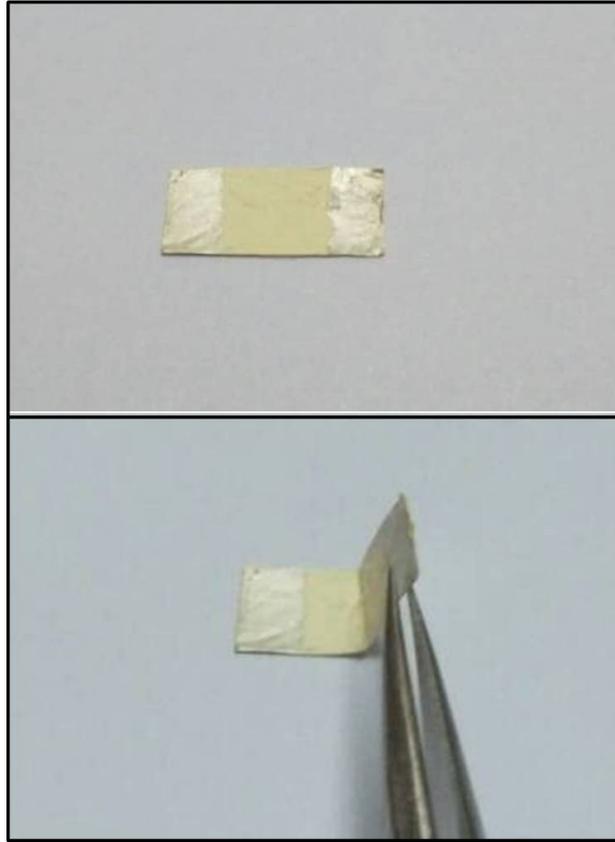
**Figure S2.** FTIR spectra of (a) pristine CNTs, (b) oxidized GNR/CNT and (c) GNR/CNT hybrid.



**Figure S3.** Digital picture showing the dispersion stability of (a) pristine CNTs, (b) oxidized GNR/CNT hybrid, (c) GNR/CNT hybrid in water, as well as GNR/CNT hybrid in DMAc.



**Figure S4.** TEM image of single PI-GNR/CNT composite fiber (9 wt% GNR/CNT hybrid) at high magnification.



**Figure S5.** Digital photograph of flexible PI-GNR/CNT (9 wt %) composite film upon bending.