

Electronic Supplementary Information for

Iridescent Graphene/Cellulose Nanocrystal Film with Water Response and Highly Electrical Conductivity

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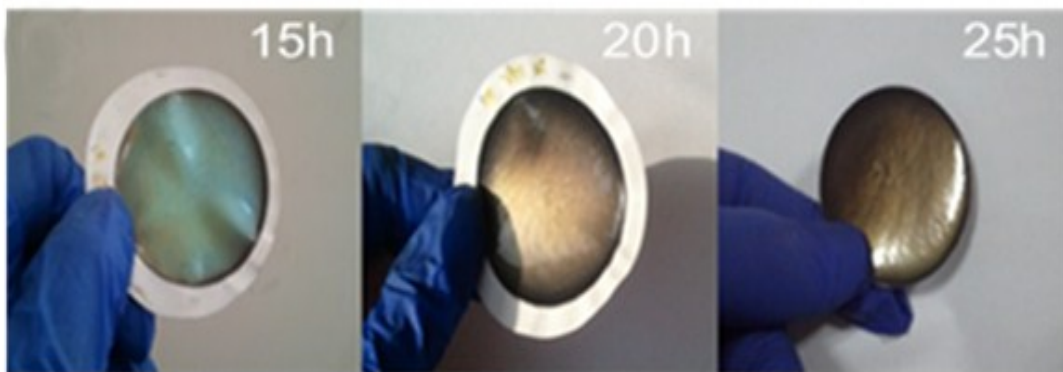


Figure S1. Optical photos of 0.3 wt% TRG/CNC composite films obtained after ultrasonic pretreatment of TRG/CNC solution for the various period.

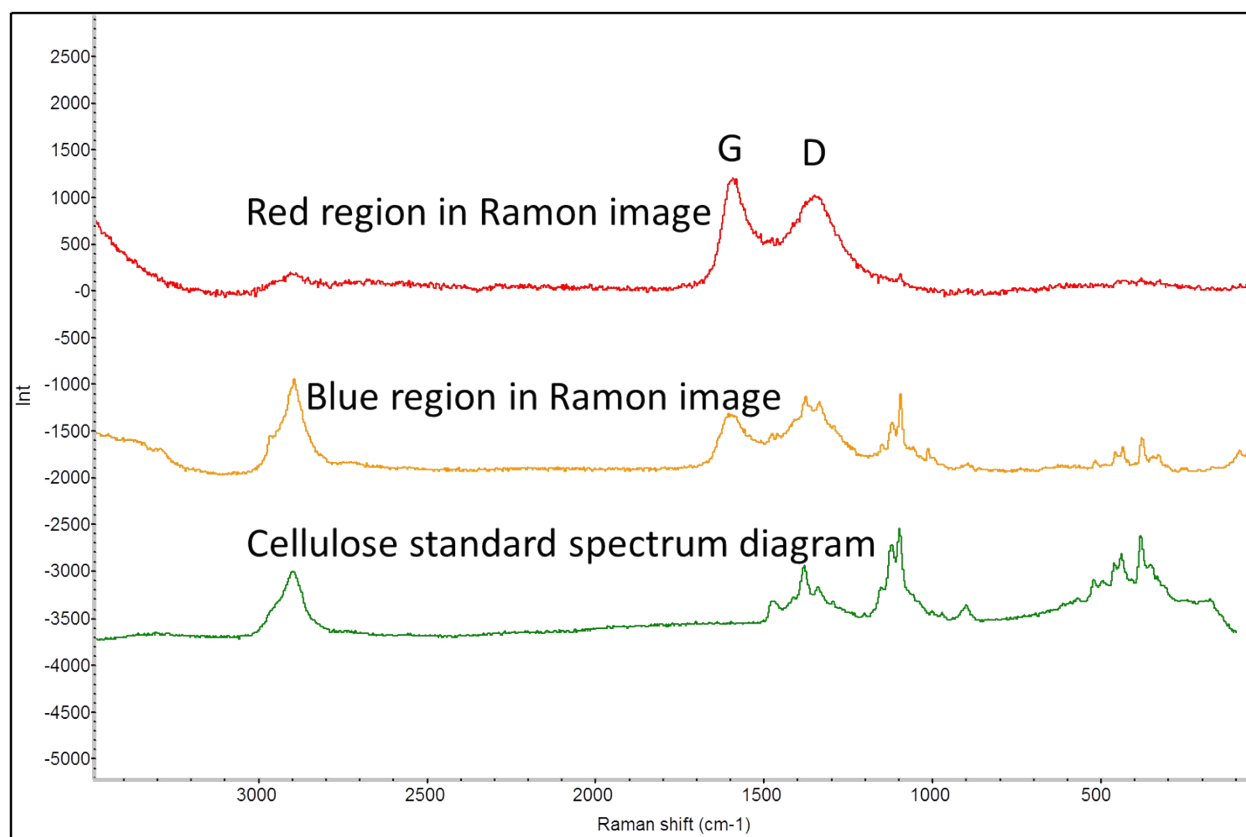


Figure S2. The Raman spectra of the independent components shown in Figure 2b prove that the blue region and the red region in the Raman image respectively represent CNC and TRG.

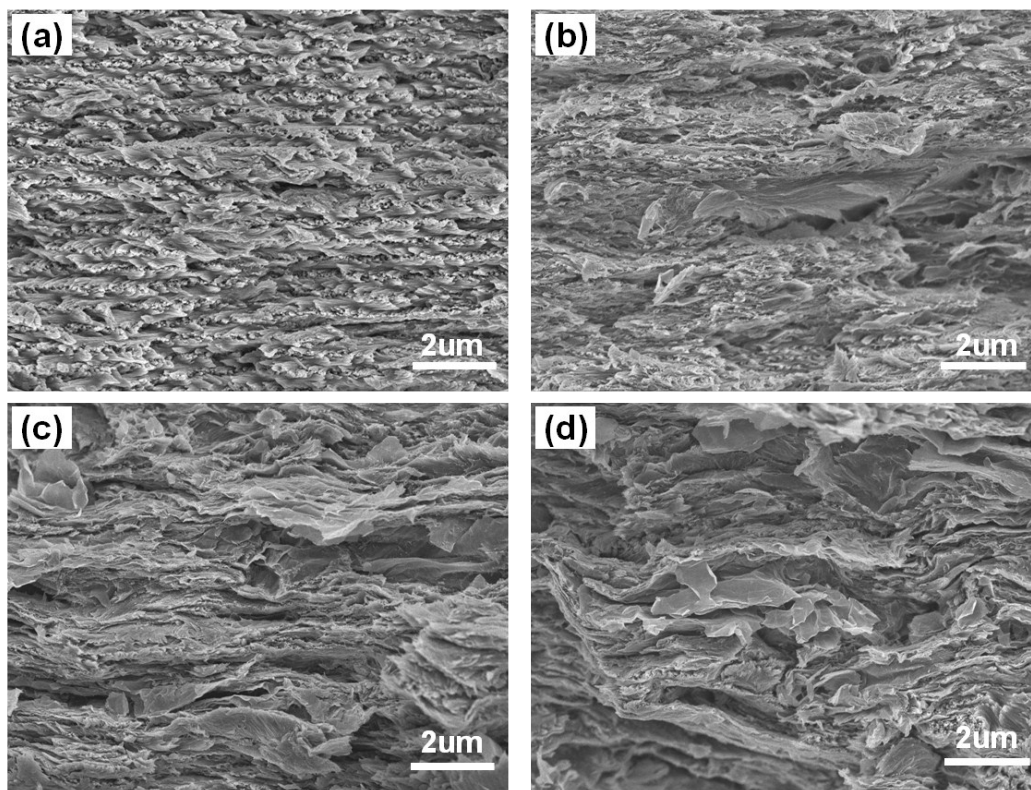


Figure S3. SEM images of fracture surface of composite films obtained via VASA technique with TRG content of 0.5% (a), 1.0% (b), 2.0% (c) and 5.0 % (d).

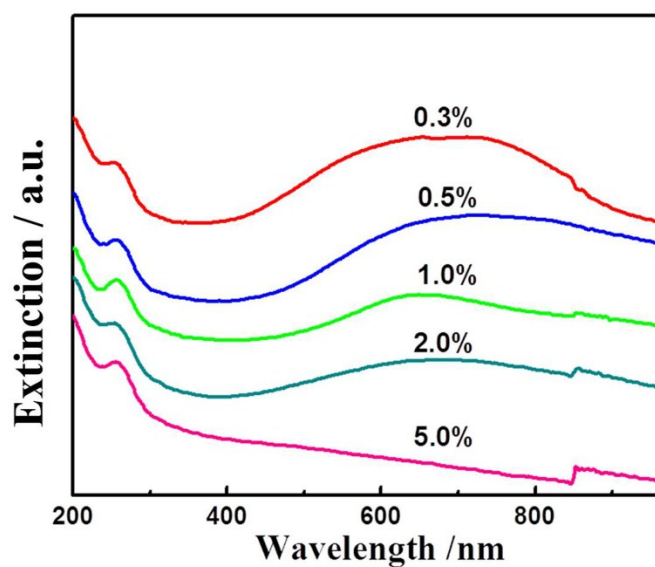


Figure S4. UV-vis spectra of CNC/TRG composite films produced via VASA technique with TRG content of 0.3%, 0.5%, 1.0%, 2.0% and 5.0%.

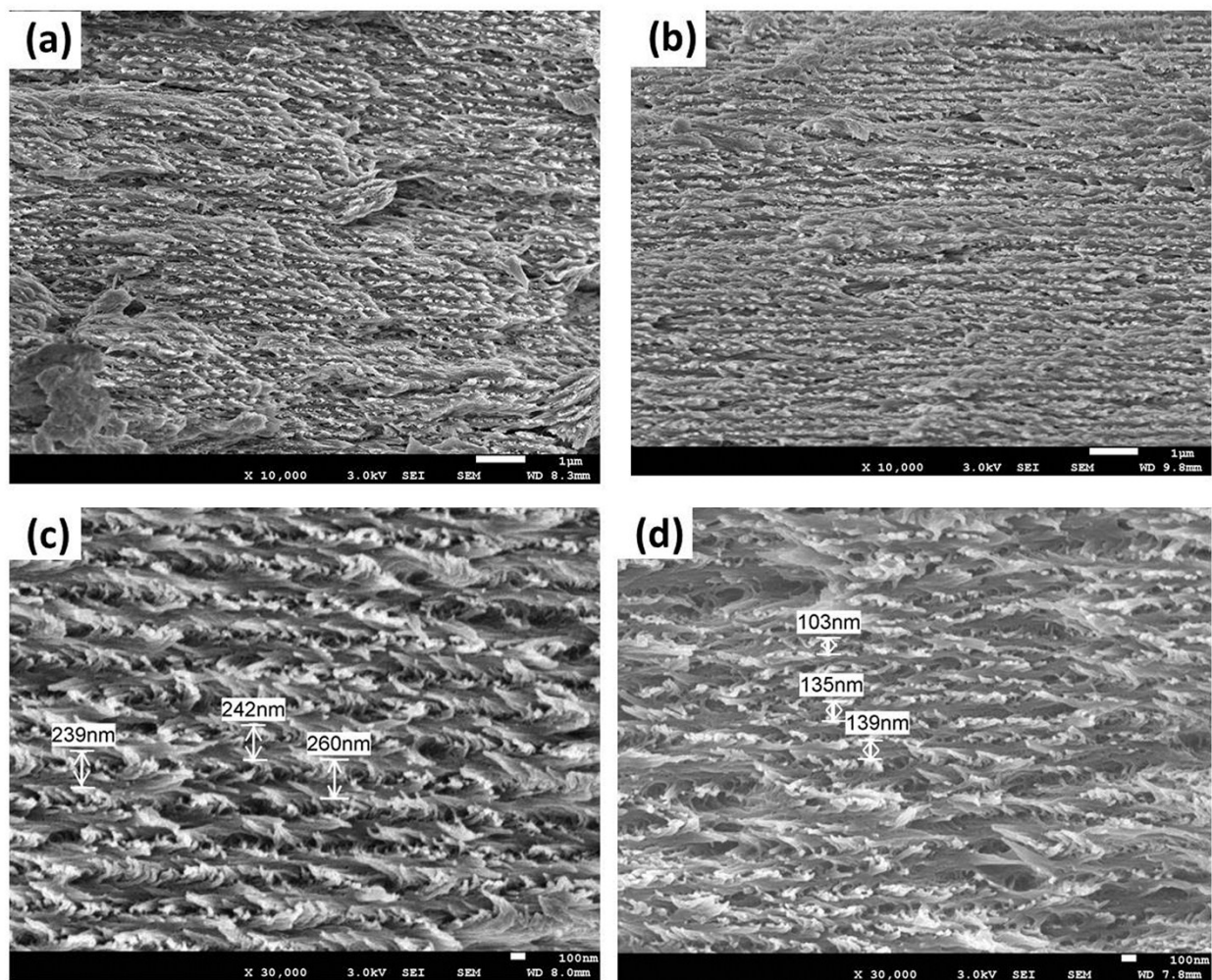


Figure S5. SEM images of the fracture surface of (a), (c) 0.3 wt% TRG/CNC iridescent composite film and (b), (d) pure CNC iridescent film via VASA technique. White lines in figures (c), (d) show the interlayer separation corresponding to the half pitch of CNC liquid crystal self-assembling structure.