Supporting Information

Flexible Reduced Graphene Oxide/Polyacrylonitrile Dielectric Nanocomposite Films for High-Temperature Electronics Applications

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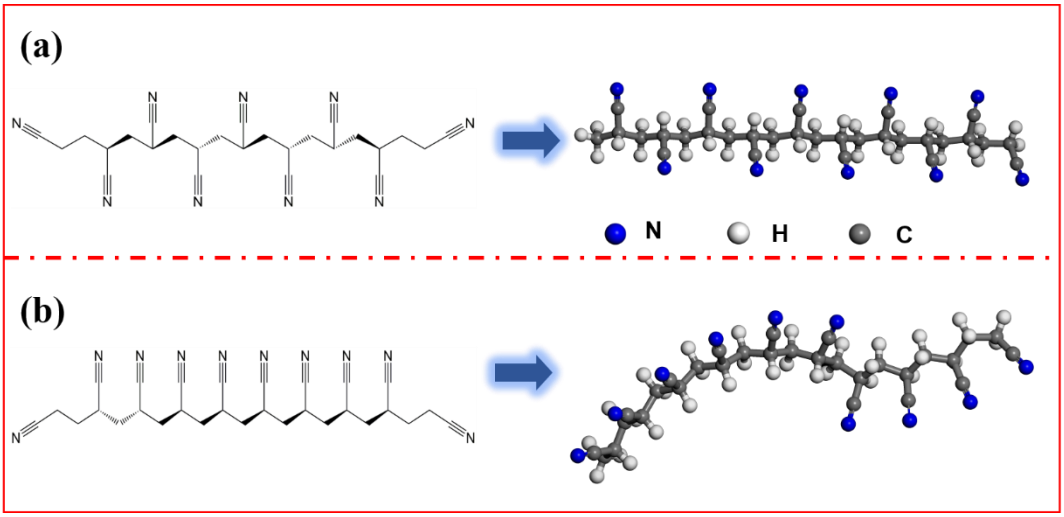

Fig S1. (a) Planar zig-zag conformation of PAN and (b) 3^1-helical conformation of PAN.

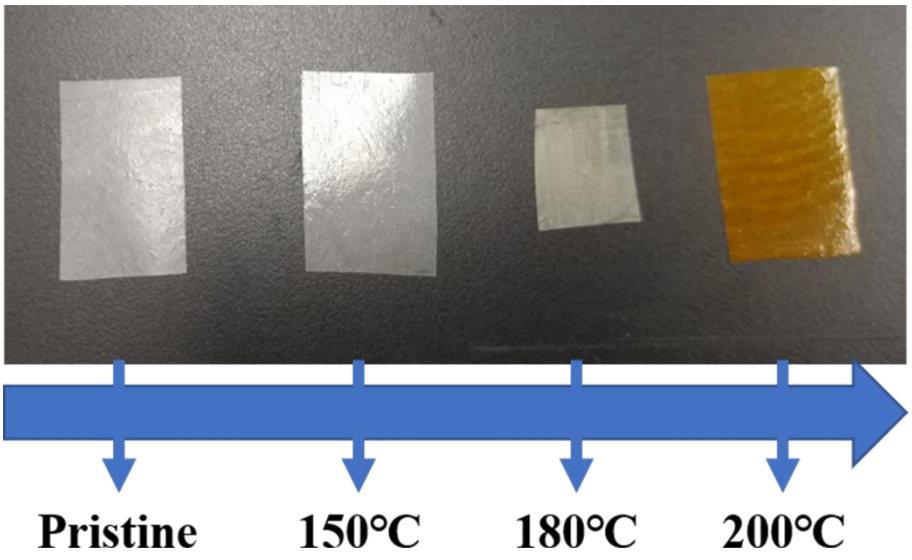

Fig S2. PAN films heat-treated under different temperature.

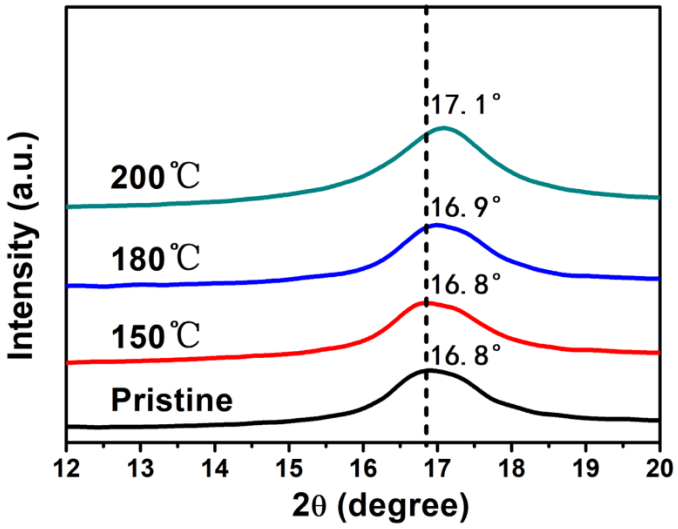

Fig S3. Magnified XRD patterns around 2θ=17°.

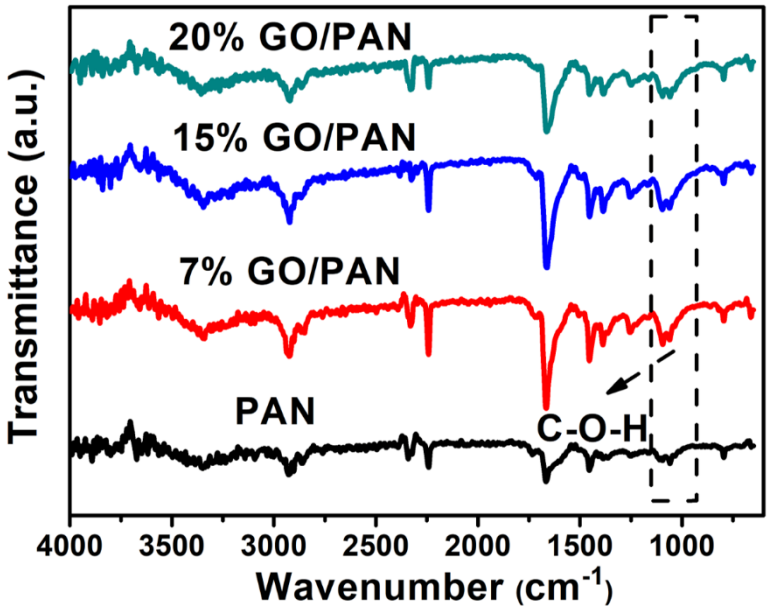

Fig S4. ATR-FTIR spectrum of electro-spun nanofiber mats with different GO content.

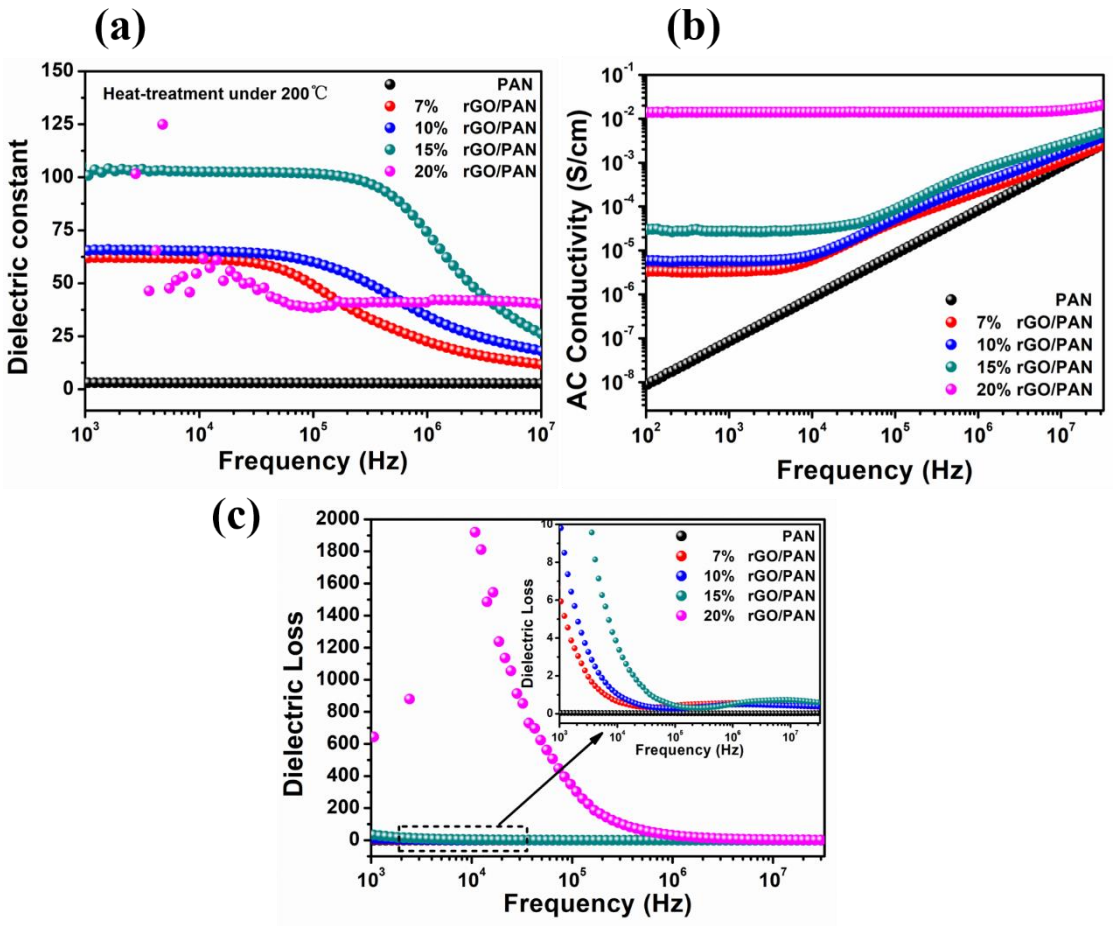

Fig S5. Dielectric constant(a), AC conductivity (b) and dielectric loss (c) of rGO/PAN solution-cast composite films with different content of rGO after heat-treatment under 200℃.

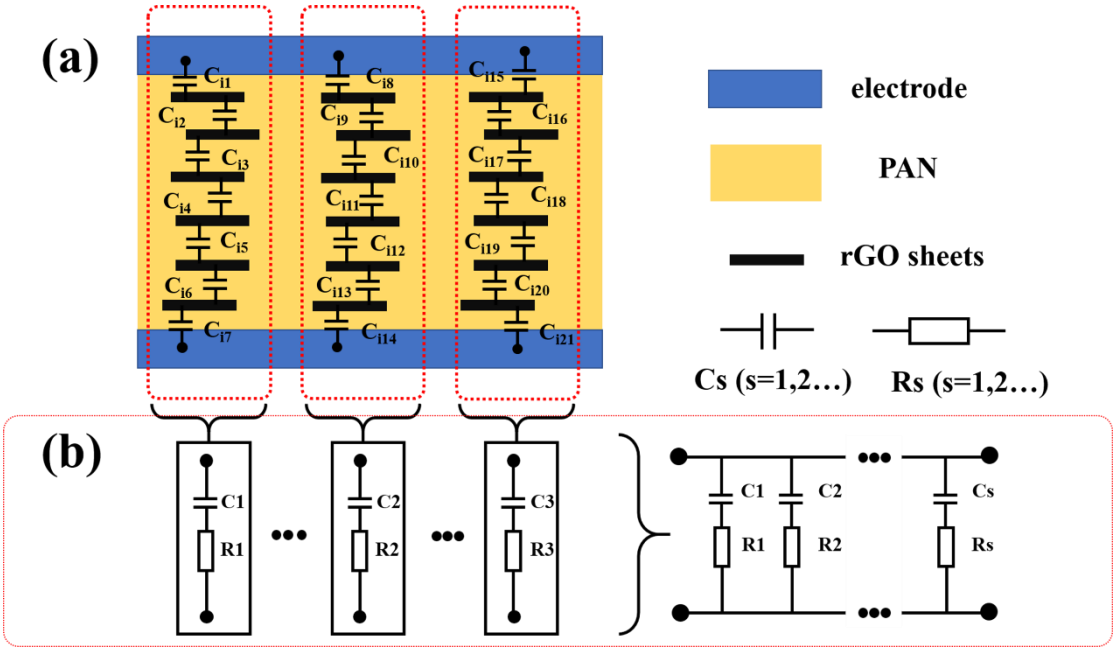

Fig S6. Schematic illustration of the microcapacitors: (a) graphene sheet + polymer model; (b) equivalent circuit.

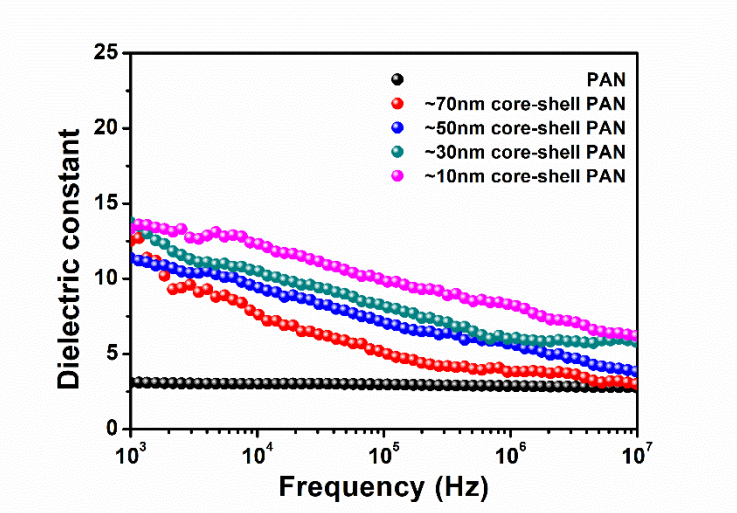

Fig S7. Dielectric constant of core-shell structured rGO/PAN composite films containing 15 wt% content of rGO with different PAN shell thickness after heat-treatment under 200℃.