Supporting Information:

Fig. SI 1 FESEM images of RGO nanosheets-polyanilineNFs composites.



In Fig. SI 1 It is shown that the polyaniline NFs are coated on the surface of RGO nanosheets.¹

Fig. SI-2: (a) XRD Pattern of PANI NFs



The formation of NFs is characterised by XRD where $2\theta = 6.34^{\circ}$ is the **characteristic of polyaniline nanofibers presented by #.** The peaks at 19.0° and 20.0° indicates the nanofibers of PANI which are partially crystalline.¹

Fig.SI 3: EIS study and charge –discharge curves of RGO and hierarchical composites (Nyquist plot).



EIS of **a** (a) Honeycombs of RGO-PANI NFs (b) flower bouquet (c) Nanosheets of RGO-PANI

NFs NCs and (d) RGO, (**b**) Charge/discharge cycling curves of different electrodes at a current density of 1 A/g. honeycombs of RGO- PANI NFs composite (a) flower bouquet (b) RGO Nanosheets – PANI NFs composites (c) RGO (d).¹

S4: BET Surface area measurements:

Sample of Honeycomb RGO-polyaniline composites

Single Point Surface Area at P/Po 0.20070523: 31.2685 m²/g, BET Surface Area: 33.4253 m²/g BJH Adsorption Cumulative Surface Area of pores between 1.700000 and 300.000000 nm Diameter: 32.2481 m²/g. BJH Desorption Cumulative Surface Area of pores between 1.700000 and 300.000000 nm Diameter: **34.2679 m²/g.**¹

Summary Report

Area

Single Point Surface Area at P/Po 0.20070523 : 31.2685 m²/g BET Surface Area: 33.4253 m²/g BJH Adsorption Cumulative Surface Area of pores between 1.700000 and 300.000000 nm Diameter: 32.2481 m²/g BJH Desorption Cumulative Surface Area of pores between 1.700000 and 300.000000 nm Diameter: 34.2679 m²/g Volume Single Point Adsorption

Total Pore Volume of pores less than 67.5988 nm Diameter at P/Po 0.97052428: 0.101096 cm³/g Pore Size Adsorption Average Pore Diameter (4V/A by BET): 12.0982 nm BJH Adsorption Average Pore Diameter (4V/A): 27.0747 nm, BJH Desorption Average Pore Diameter (4V/A): 25.1631 nm



S5 Liquid graphene (Mesogenic state)

1. X. Zhang, W. J. Goux, S. K. Manohar J. Am. Chem. Soc., 2004, 126, 4502-4503

S-6 : Begning of nanorose flower of RGO

