Electronic Supplementary Information (ESI)

Electrospun α -Fe₂O₃ Nanostructures for Supercapacitor Applications

G. Binitha,^{*a*} M. S. Soumya,^{*a*} Asha Anish Madhavan,^{*a*} P. Praveen,^{*a*} A. Balakrishnan,^{*a*} K. R. V. Subramanian,^{*a*} M. V.Reddy,^{*b*} Shantikumar V. Nair,^{*a*} A. Sreekumaran Nair,^{*a*,*} and N. Sivakumar^{*a*,*}

^aNanosolar Division, Amrita Centre for Nanoscience and Molecular Medicine, Ponekkara, Kochi, India.

Email: <u>nsivakumar@amrita.edu.sg</u> (N. Sivakumar); <u>sreekumarannair@aims.amrita.edu</u> (A. Sreekumaran Nair)

Fax: +91-484-2802020; Tel: +91-484-2802020

^bDepartment of Physics, National University of Singapore, Singapore 117542.

<u>ESI 1</u>



EDX spectra of α -Fe₂O₃ PF.

<u>ESI 2</u>



EDX spectra of α -Fe₂O₃ NG.

<u>ESI 3</u>



XPS spectrum (wide) of the α -Fe₂O₃ PFs (black) and NGs (red) nanostructures showing the elemental composition. The spectrum also indicates the presence of a small amount of adventitious C1s feature.

<u>ESI 4</u>



CV curves of PF electrode at different cycle number (a). CV curves of NG electrode at different cycle number (b).

<u>ESI 5</u>



A comparison of the CV traces of PF, NG and the Ni substrate at a scan rate of 100 mV/s. It is obvious from the traces that the electrochemical activity of the substrate is negligible in comparison to that of the metal oxides.