Electronic supplementary information for: Enhanced Li\textsuperscript{+} Charge Storage in Naphthalene Diimide/Vanadium Pentoxide Intercalates.

Francisco de Araújo Silva,\textsuperscript{a} Renato Salviato Cicolani,\textsuperscript{a} Gilberto Lima,\textsuperscript{a} Fritz Huguenin and Grgoire Jean-François Demets\textsuperscript{a} \textsuperscript{*}

Received Xth XXXXXXXXXX 2013, Accepted Xth XXXXXXXXX 201X
First published on the web Xth XXXXXXXXXX 201X
DOI: 10.1039/b000000x

1 NDI-ph caracterization

![1H-NMR spectrum of NDI-ph.](image)

Fig. 1 $^1$H-NMR spectrum of NDI-ph.

\textsuperscript{*Laboratório de Materiais e Interfaces Moleculares, DQ-FFCLRP Universidade de São Paulo. Av Bandeirantes 3900 CEP 14040-901; Ribeirão Preto, S.P., Brazil. Fax: 5516 36024861; Tel: 5516 36024860; E-mail: greg@usp.br}
Fig. 2 FTIR spectrum of NDI-ph.

Fig. 3 Maldi-TOF for NDI-ph.
Fig. 4 Electronic spectrum of NDI-ph in DMF

2 Composites characterization

Fig. 5 Gels containing NDI-ph, and the control sample, before drying.
Fig. 6 FTIR spectra of the composites and VXG.

Fig. 7 Thermogravimetric analysis of the composites and VXG.
Fig. 8 afm

Fig. 9 Cyclic voltammograms of VXG. at 20mV/s (LiClO$_4$/MeCN).
Fig. 10 Cyclic voltammograms of VXG at 20mV/s (LiClO$_4$/MeCN).

Fig. 11 Cyclic voltammograms of VXG at 20mV/s (LiClO$_4$/MeCN).
Fig. 12 (a) Lithium ion inserted/extracted in the films as a function of discharge/charge current (cutoff E 4.47 V to 2.07 vs Li+/Li, j = 0.2 mA) per mol of V$_2$O$_5$; (b) Lithium ion inserted/extracted in the films as a function of discharge/charge current (cutoff E 4.47 V to 2.07 vs Li+/Li, j = 0.2 mA) per mol of V$_2$O$_5$ - after 30th cycles.