Electronic Supplementary Material (ESI) for RSC Advances. This journal is © The Royal Society of Chemistry 2016

## $Nb_2O_5$ nanoparticles encapsulated into ordered mesoporous carbon matrix as advanced anode materials for Li ion capacitors

Jingjie Wang, Hongsen Li, Laifa Shen, Shengyang Dong, and Xiaogang Zhang\*

Jiangsu Key Laboratory of Materials and Technology for Energy Conversion, College of Material Science & Engineering, Nanjing University of Aeronautics and Astronautics, Nanjing, 210016, P.R.

China. Email: <u>azhangxg@nuaa.edu.cn</u>

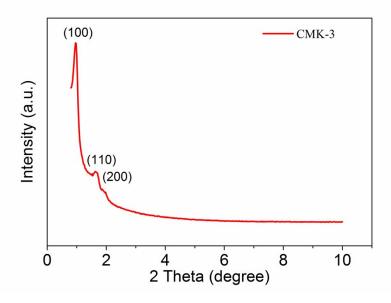


Fig. S1 Small angle X-ray diffraction (SAXRD) patterns of the CMK-3 carbon template.

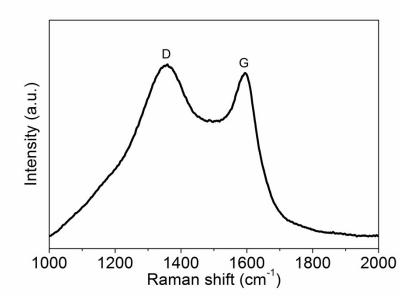


Fig. S2 Raman spectrum of the original CMK-3 carbon template.

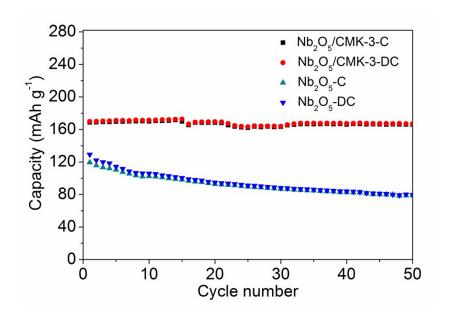


Fig. S3 Cycle performances of bulk  $Nb_2O_5$  and  $Nb_2O_5/CMK$ -3 nanocomposite at 1 C.

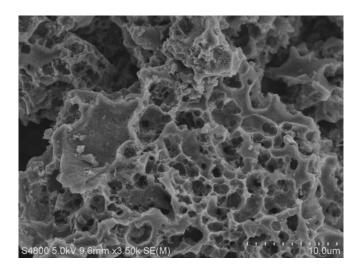
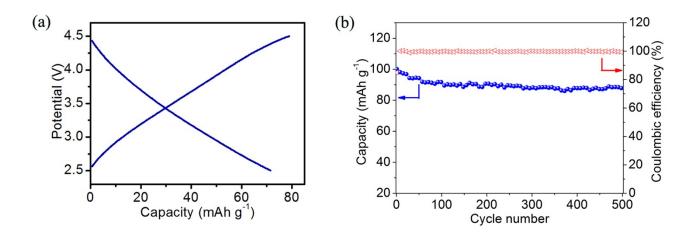


Fig. S4 SEM image of Peanut shell carbon (PSC).



**Fig. S5** a) galvanostatic charge-discharge curve of PSC at 0.2 C. b) Cycle performance and coulombic efficiency of PSC at 0.1 C.

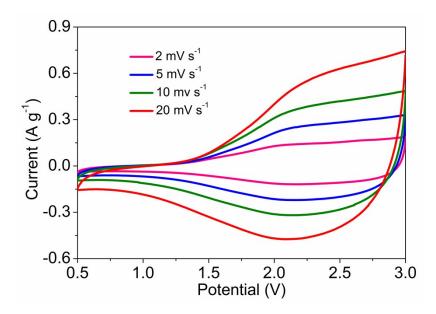


Fig. S6 The cyclic voltammetry curves of the Nb<sub>2</sub>O<sub>5</sub>/CMK-3//PSC hybrid device.