Electronic Supplementary Material (ESI) for RSC Advances.

Supporting Materials

Sweet Potato-derived Carbon Nanoparticles as Anode for Lithium Ion Battery

Peng Zheng, †* Ting Liu,† Jinzheng Zhang,† Lifeng Zhang,† Yi Liu,† Jianfeng Huang,† and Shouwu Guo,†‡*

† School of Materials Science and Engineering, Shaanxi University of Science and Technology, Xi'an 710021, P.R.China.

‡ Key Laboratory for Thin Film and Microfabrication of the Ministry of Education, Research Institute of Micro/Nano Science and Technology, Shanghai Jiao Tong University, Shanghai 200240, P.R.China.

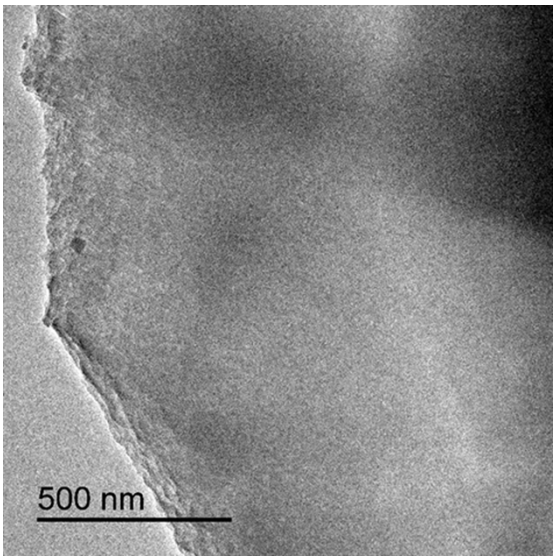

Figure S1. TEM image of DPC.

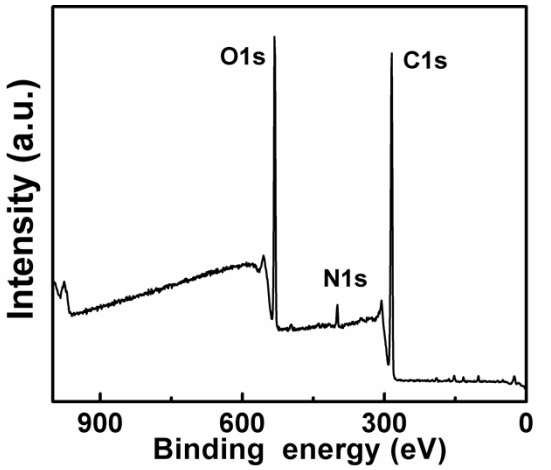

Figure S2. XPS general spectrum of pristine sweet potato powder.

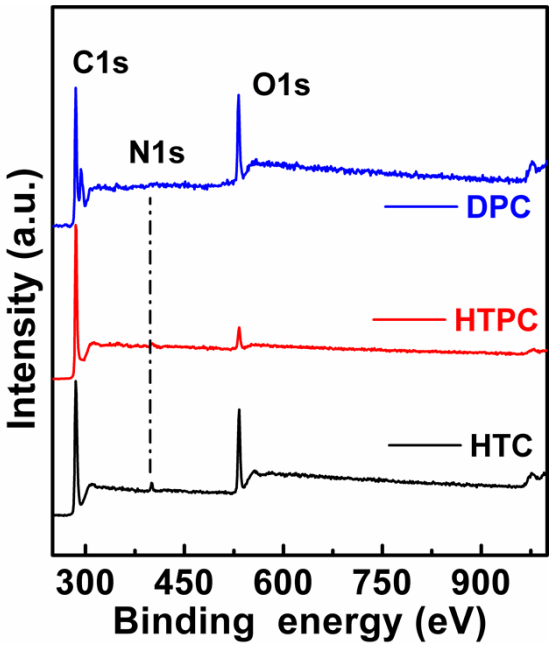

Figure S3. XPS general spectrum of HTC, HTPC and DPC.

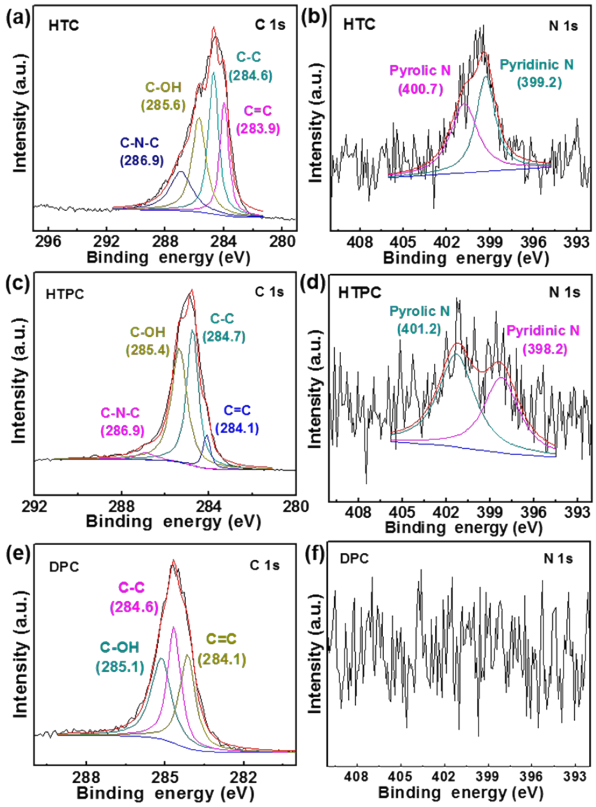

Figure S4. (a-b) high resolution C1s and N1s XPS spectra for HTC, (c-d) high resolution C1s and N1s XPS spectra for HTPC, (e-f) high resolution O1s XPS spectra for DPC.

Table S1: The yields of HTC, HTPC and DPC.

	Raw Material (g)	Product (g)	Productive Rate (%)
HTC	10	0.352	3.52
HPTC	10	0.12	1.20
DPC	10	0.984	9.84

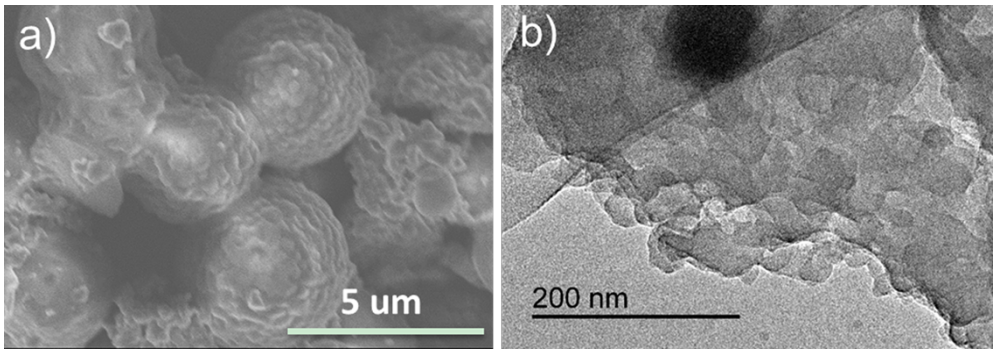

Figure S5. (a) SEM image of HTC, (b) TEM image of HTC.

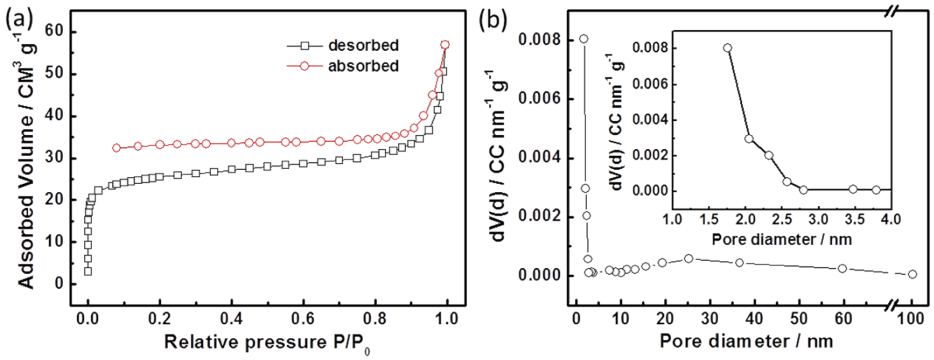

Figure S6. (a) Nitrogen adsorption-desorption isotherms and (b) the corresponding DFT pore size distributions of HTPC, the inset is the enlarged image of the DFT.