

## Supporting Information for

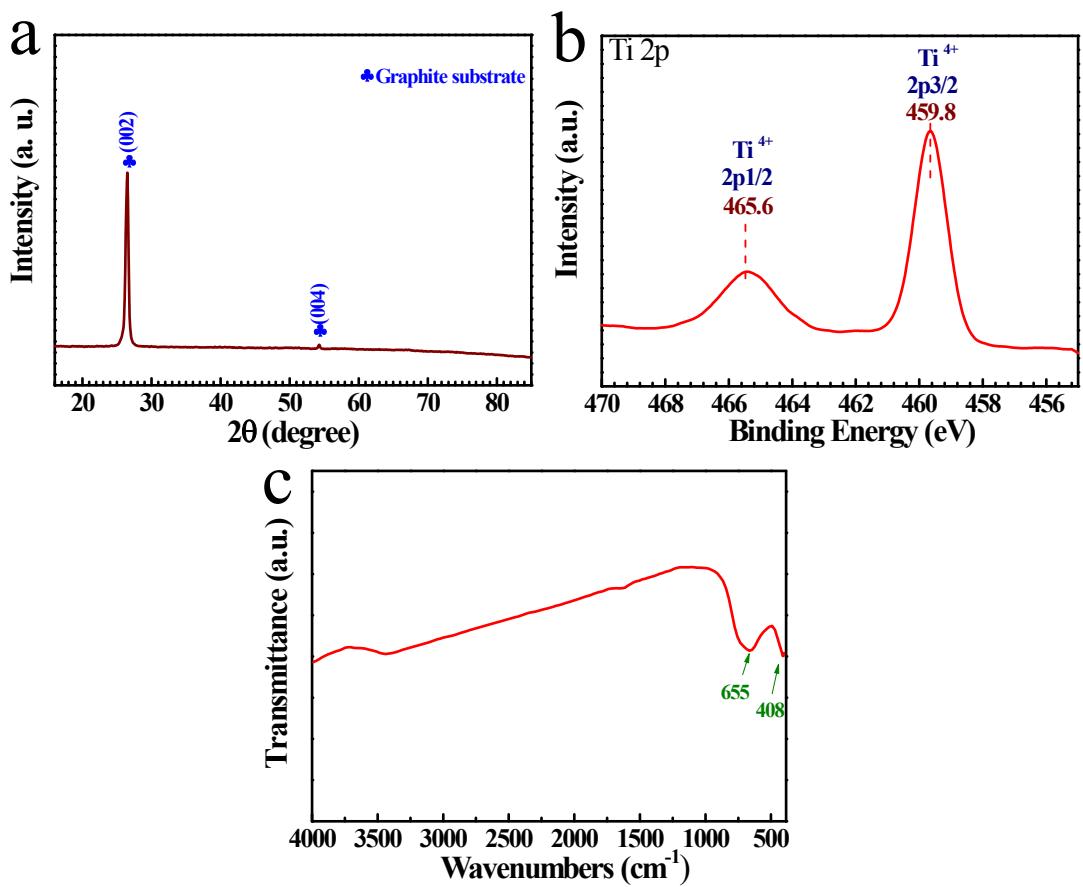
# Monolayer titanium carbide hollow spheres arrays formed via atomic layer deposition assisted method and their excellent high- temperature supercapacitor performance

Yu Zhong<sup>a</sup>, Xinhui Xia<sup>a\*</sup>, Jiye Zhan<sup>a</sup>, Yadong Wang<sup>b</sup>, Xiuli Wang<sup>a</sup>, Jiangping Tu<sup>a</sup>

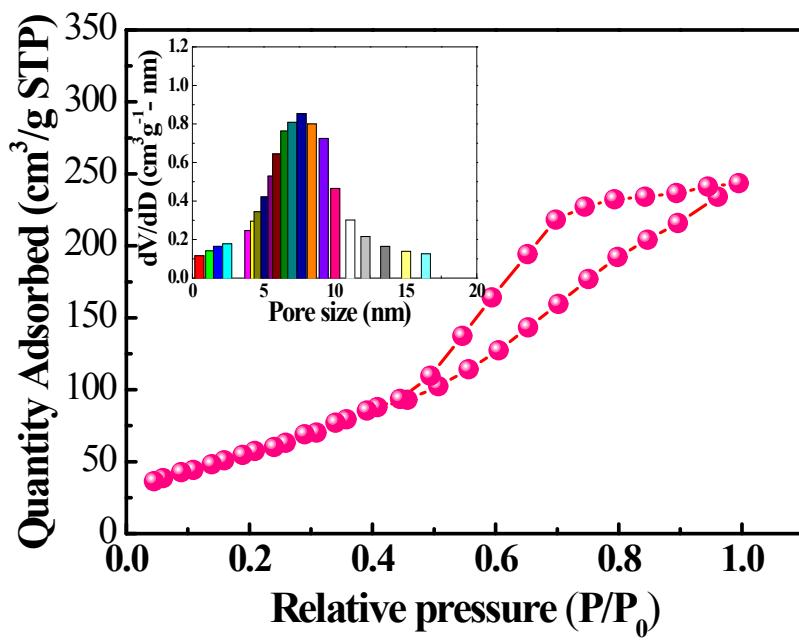
<sup>a</sup> State Key Laboratory of Silicon Materials, Key Laboratory of Advanced Materials and Applications for Batteries of Zhejiang Province, and School of Materials Science and Engineering, Zhejiang University, Hangzhou 310027, P. R. China

<sup>b</sup> School of Engineering, Nanyang Polytechnic, 569830, Singapore

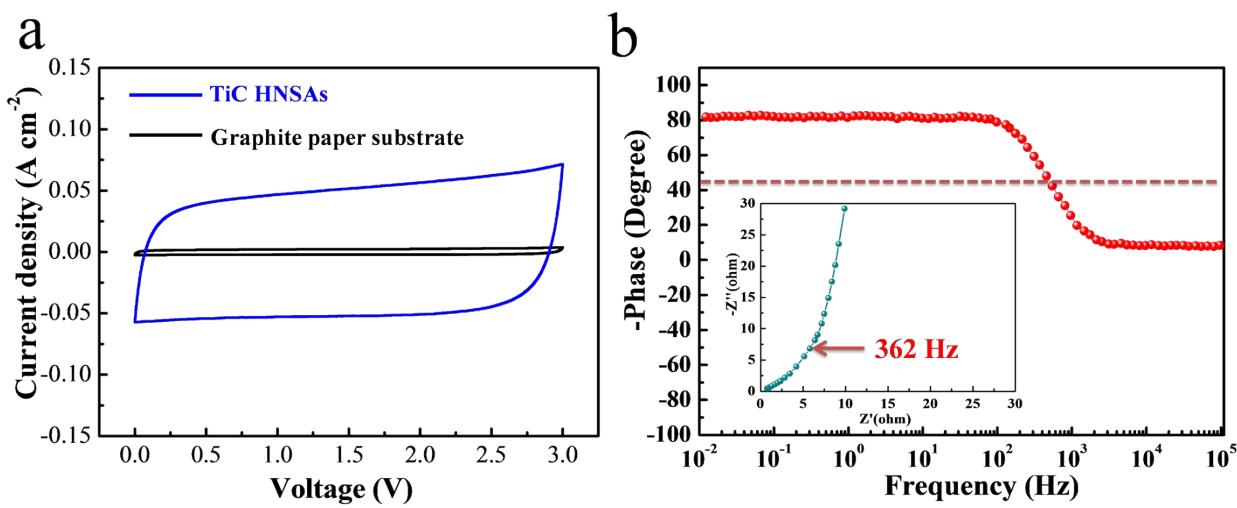
\* Address correspondence to helloxxh@zju.edu.cn (X. H. Xia)



**Fig. S1. Structural and morphological characterizations of AlD-TiO<sub>2</sub> monolayer sphere arrays: (a) XRD pattern; (b) XPS analysis: Ti 2p spectrum; (c) FTIR spectrum.**



**Figure S2.** BET measurements of TiC HNSAs (pore distribution in inset).



**Fig. S3.** (a) CV comparison between TiC HNSAs and graphite paper substrate at scan rate of 500  $\text{mV s}^{-1}$  at 65  $^{\circ}\text{C}$ . (b) Bode plots (Impedance phase angle vs. frequency) for TiC HNSAs at 65  $^{\circ}\text{C}$  (Nyquist plots in inset)