**Supporting Information**

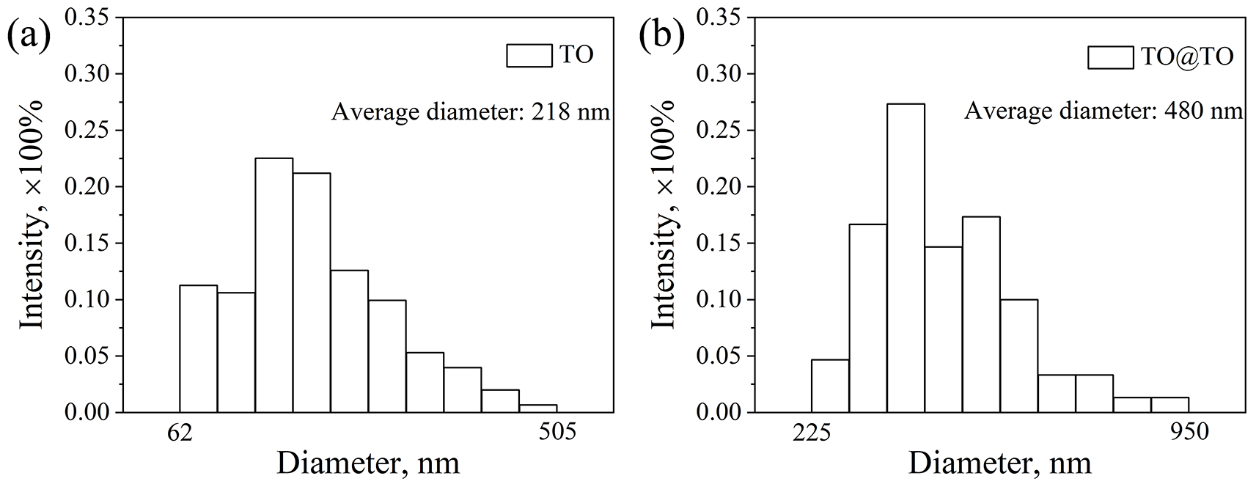
**Novel core-shell structured ironbark-like TiO2 as fillers for excellent discharged energy density of nanocomposites**

Zhijie Wu,1,2 Yafei Hou,1,2,\* Hui Chen,1,2 Peng Du,1,2 Laihui Luo,1,2 and Weiping Li1,2,\*

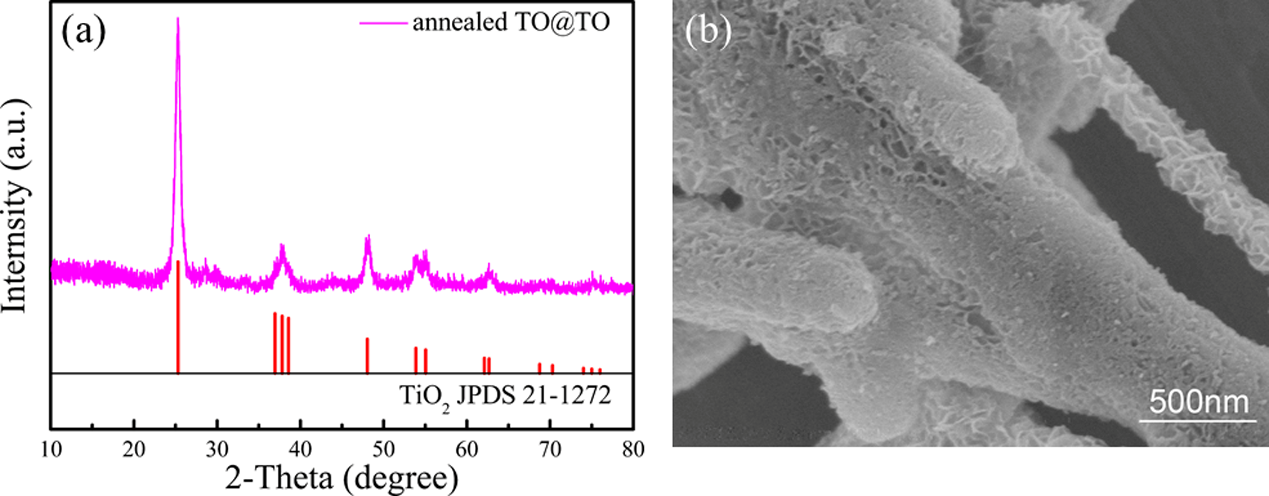
*1Department of Microelectronics Science and Engineering, School of Physical Science*

*2Laboratory of Clean Energy Storage and Conversion, Ningbo University, Ningbo, 315211, P.R. China*

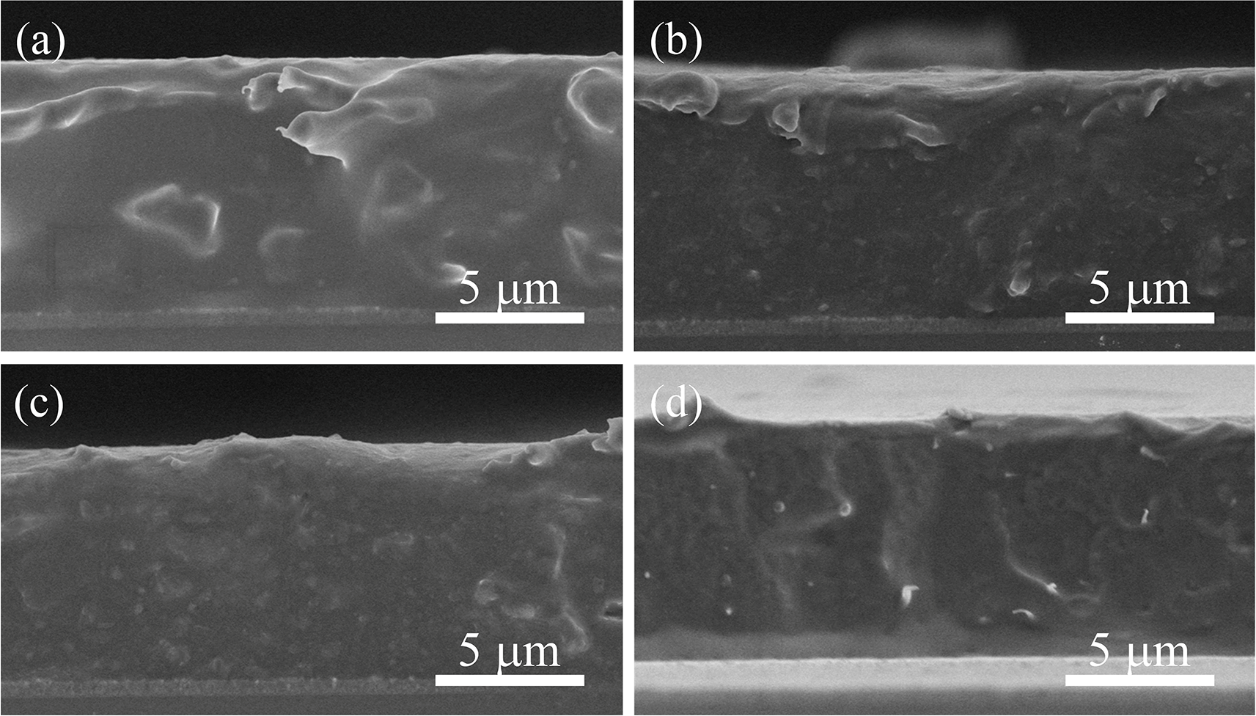
*\*Electronic mail: houyafei@nbu.edu.cn, liweiping@nbu.edu.cn*



**Fig. S1** Statistical analysis on the size distribution of **a** TO NWs, **b** ironbark-like TO@TO.

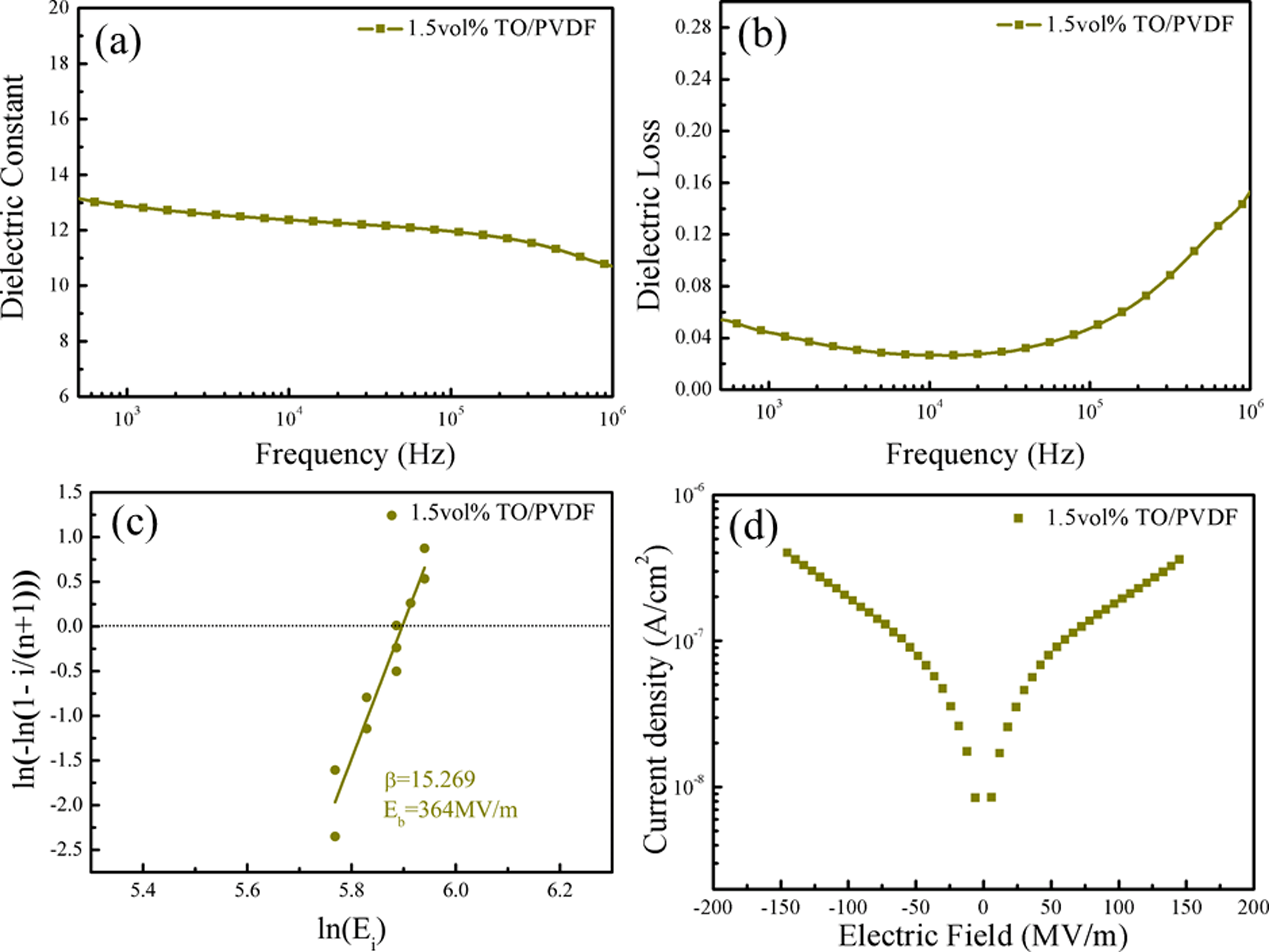


**Fig. S2** **a** The XRD pattern and **b** SEM images of annealed TO@TO

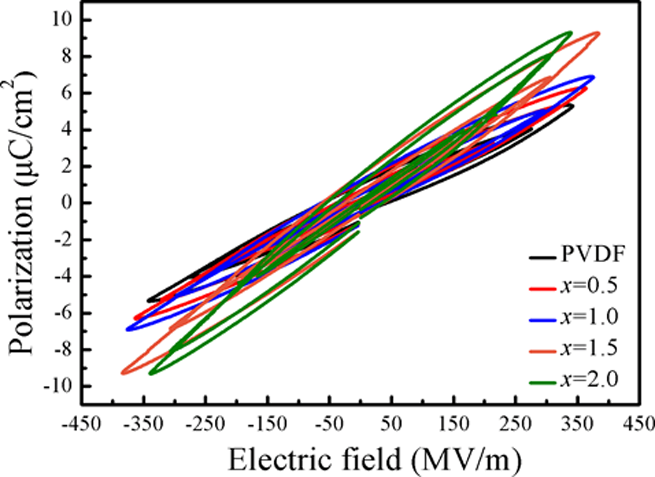


**Fig. S3** SEM images of freeze-fractured cross-sectional morphology for **a** pure PVDF, and (**b**-**d**) *x* vol%

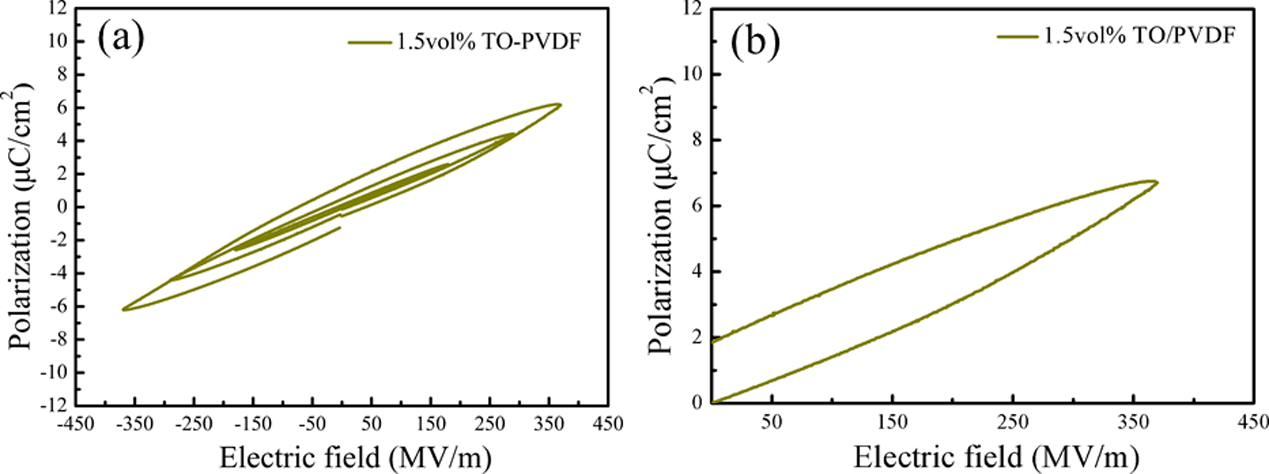
TO@TO/PVDF nanocomposite (*x*=0.5, 1 and 2)



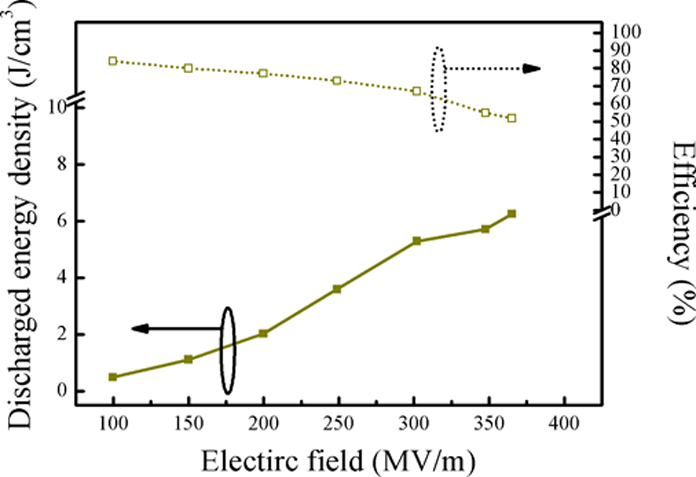
**Fig. S4** Frequency dependence of **a** dielectric constant, **b** dielectric loss, **c** Weibull distribution, and **d** leakage currents of of 1.5 vol.% TO/PVDF composite film



**Fig. S5** *P*−*E* curves of pure PVDF and *x* vol.% TO@TO/PVDF composite films under different applied fields at room temperature



**Fig. S6** **a** *P*−*E* curves of 1.5 vol.% TO/PVDF nanocomposite films under different applied fields, **b** *P*−*E* curves of 1.5 vol.% TO/PVDF nanocomposite films at the maximum applied field



**Fig. S7** Discharged energy density and discharged efficiency of 1.5 vol.% TO NWS /PVDF nanocomposite films as a function of the breakdown strength