

Supporting information

Facile synthesis of uniform constitution three-dimensionally ordered macroporous TiO₂-carbon nanocomposites with hierarchical pores for lithium ion batteries

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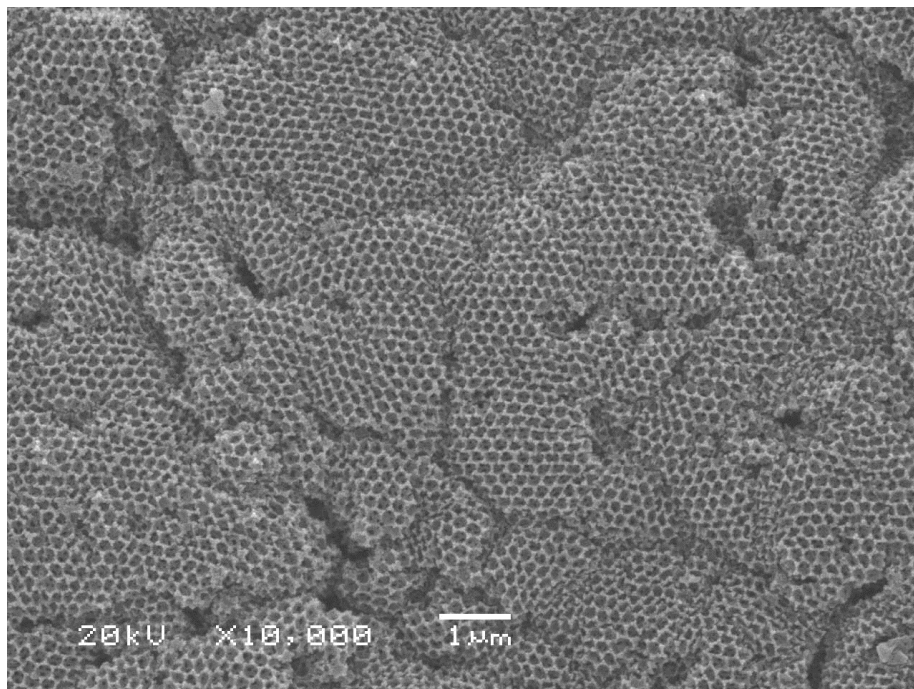


Fig. S1 SEM image of 3DOM TiO₂ nanocrystals synthesized by the CCTS with TBT-citric acid solution as the precursor.

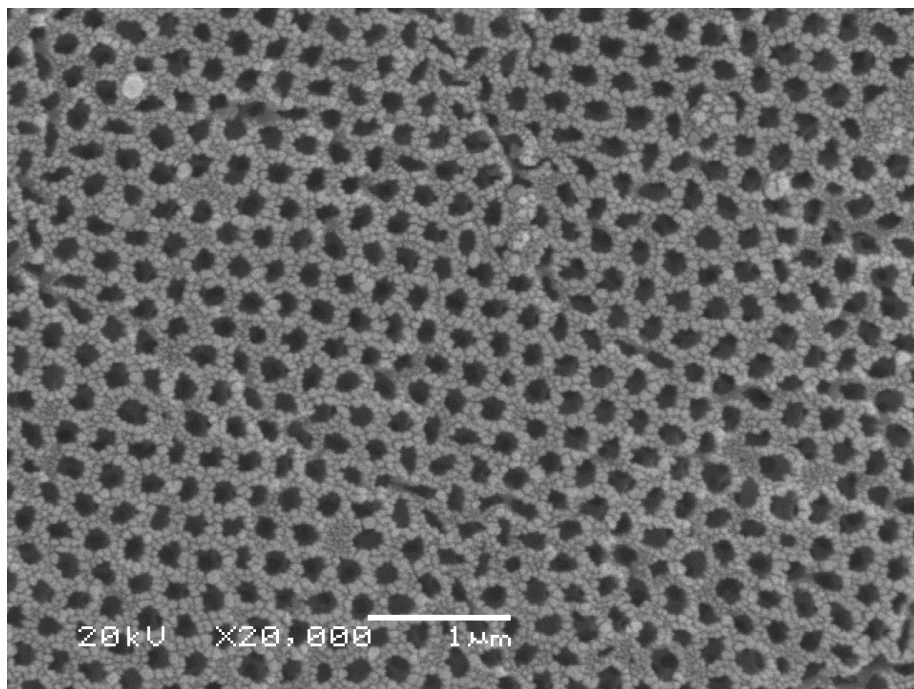


Fig. S2 SEM image of 3DOM carbon synthesized by the CCTS
with PF resol as the precursor.

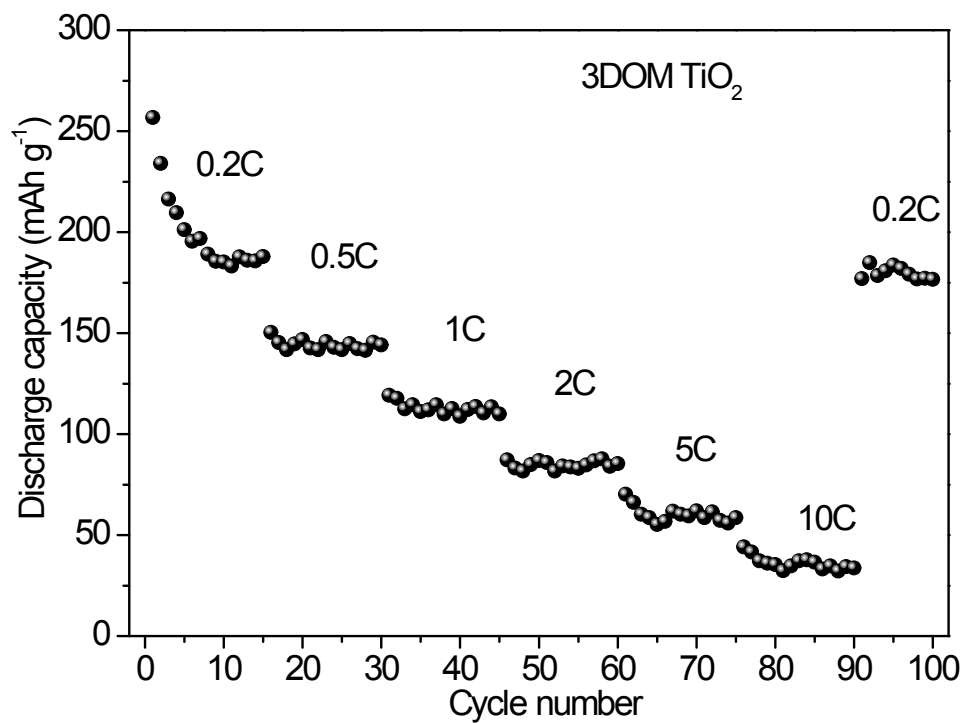


Fig. S3 Rate capability of the 3DOM TiO₂ electrode as a function of current density from 0.2C to 10C.

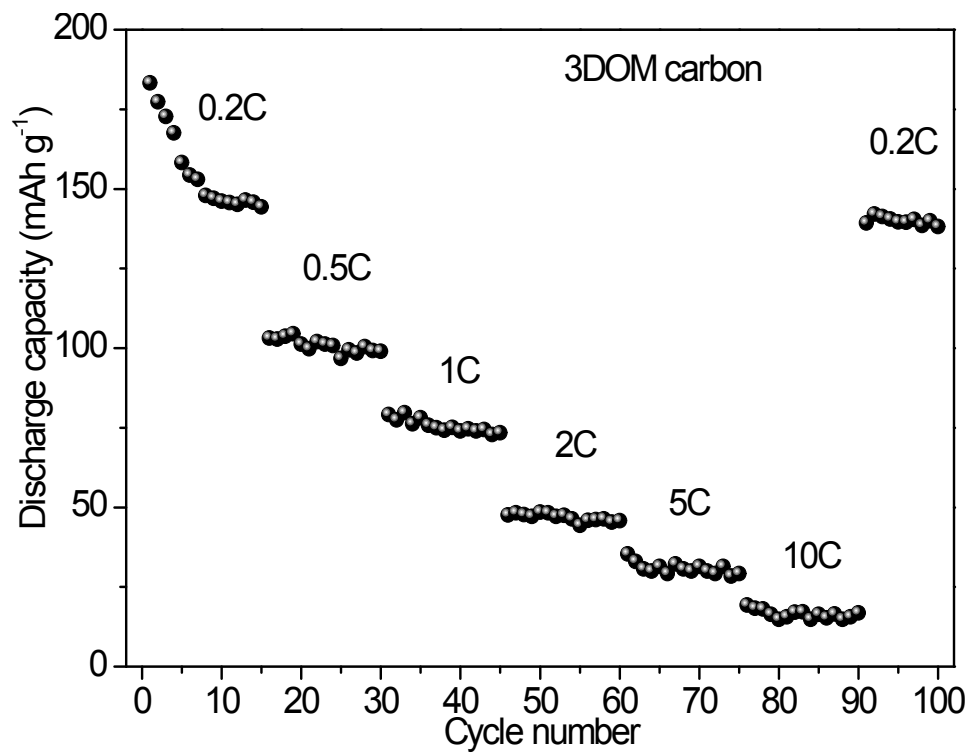


Fig. S4 Rate capability of the 3DOM carbon electrode as a function of current density from 0.2C to 10C.

Table S1 Comparison of the capacitive performances with other Ti-based porous anode materials reported previously

Samples	Specification	Current density (mA g ⁻¹)	Discharging capacity (mA h g ⁻¹)	Reference
TCN3	55.4 wt.% of TiO ₂ content	34 (0.2C)	625 (15 cycles)	This work
		170 (1C)	457 (15 cycles)	
		1700 (10C)	132 (15 cycles)	
3DOM Li ₄ Ti ₅ O ₁₂	75% void filling of PMMA templates	117.7	155 (10 cycles)	[S1]
Mesoporous Li ₄ Ti ₅ O ₁₂ /C nanocomposite	84 wt.% of Li ₄ Ti ₅ O ₁₂ content	175 (1C) 1750 (10C)	141 (5 cycles) 121.3 (5 cycles)	[S2]
Ordered mesoporous TiNb ₂ O ₇	Synthesized by EISA with NaOH etching	38.7 (0.1C)	289 (10 cycles)	[S3]
		193.5 (0.5C)	275 (10 cycles)	
		1935 (5C)	220 (10 cycles)	
C-TiNb ₂ O ₇	Synthesized by sol-gel method	38.7 (0.1C)	285 (30 cycles)	[S4]

References

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- S2 L. F. Shen, X. G. Zhang, E. Uchaker, C. Z. Yuan and G. Z. Cao, *Adv. Energy Mater.*, 2012, **2**, 691.
- S3 C. S. Jo, Y. Kim, J. K. Hwang, J. M. Shim, J. Y. Chun and J. W. Lee, *Chem. Mater.*, 2014, **26**, 3508.
- S4 J. T. Han, Y. H. Huang and J. B. Goodenough, *Chem. Mater.*, 2011, **23**, 2027.