Electronic Supplementary Material (ESI) for Journal of Materials Chemistry A.

Supporting Information

Dandelion-shape TiO_2/Multi-layer Graphene Composed of TiO_2(B) Fibrils and Anatase TiO_2 Pappi Utilizing Triphase Boundaries for Lithium Storage

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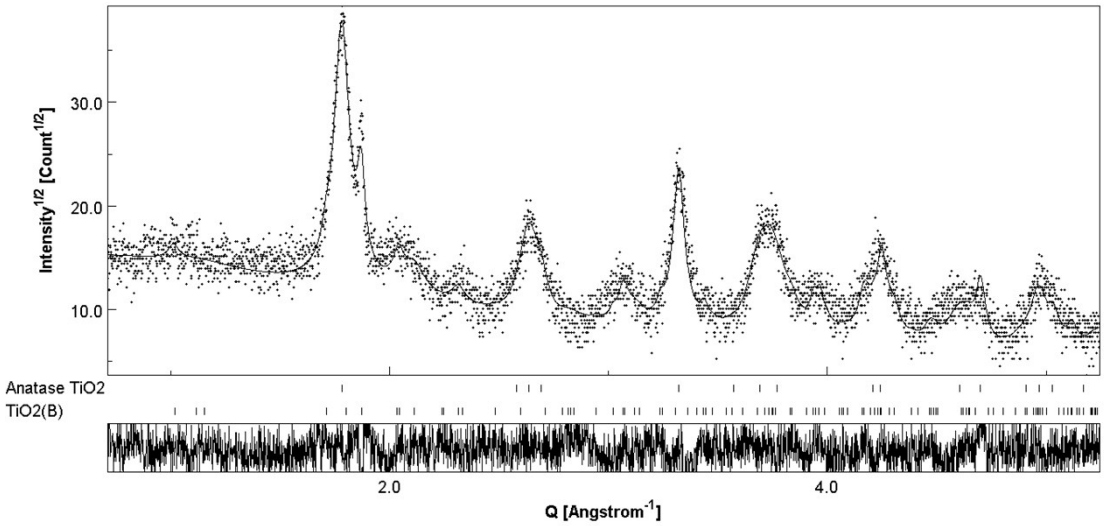

Figure S1. Rietveld refinement of the as-prepared TiO_2/FLG based on two-phase model with the R factor of 16.1.

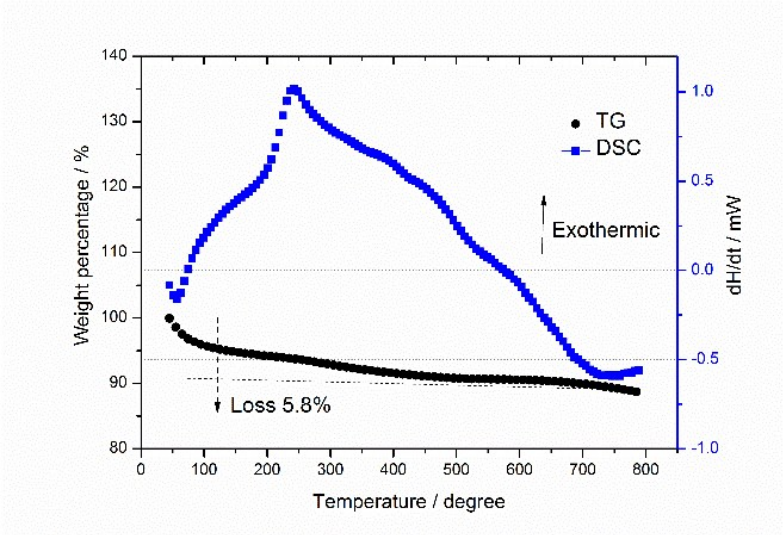

Figure S2. TGA/DSC of the as-prepared sample in air atmosphere.

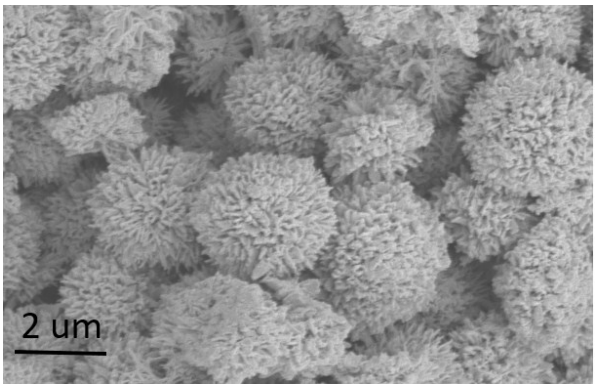

Figure S3. SEM image of TiO_2/MLG.

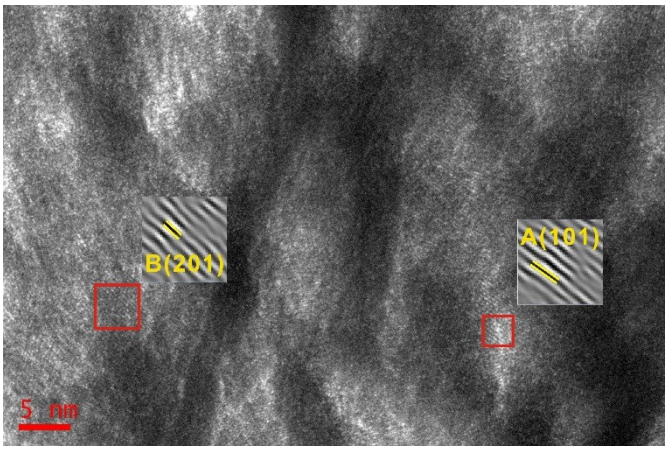

Figure S4. HRTEM of TiO_2/MLG with imaging TiO_2(B) fibrils and anatase TiO_2 pappi structures.

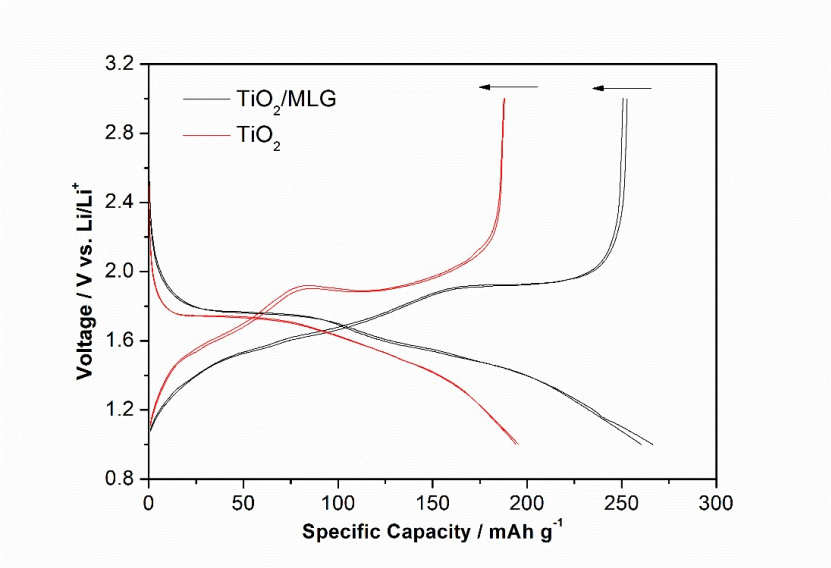

Figure S5. Galvanostatic charge/discharge profiles of a) TiO_2/MLG and b) TiO_2 of the second and third cycles at a current density of 50 mA g^{-1}.

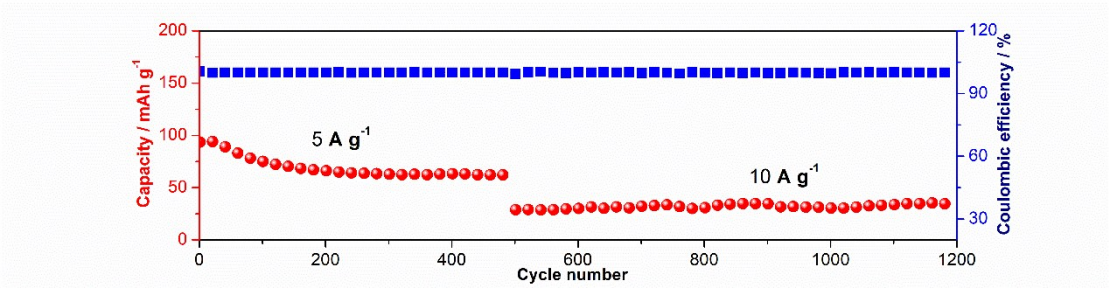

Figure S6. Cycling profiles of TiO_2/MLG at 5 and 10 A g^{-1}.

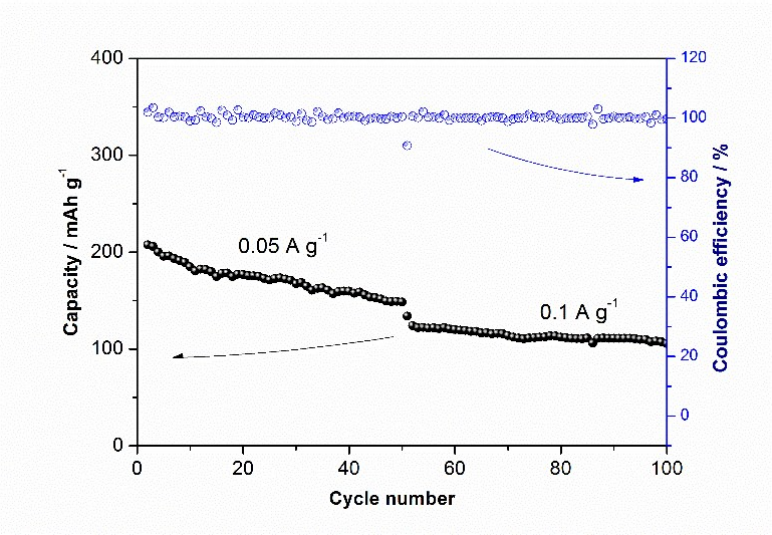

Figure S7. Cycling profiles of TiO_2 at 0.05 and 0.1 A g^{-1}.

Table S1 Impedance parameters from the fitting equivalent circuit model in Figure 5(c) with chi-square function ($\varkappa$) of 2.418×10^{-4}

	R1/Ω	R2/Ω	CPE1/(S s^n)	n1	CPE2/(S s^n)	n2
0-cycled	17.65	85.25	4.797×10^{-5}	0.74	3.865×10^{-6}	0.882
$Error_0$ / %	1.008	0.567	3.264	0.585	0.317	0.187

Table S2 Impedance parameters from the fitting equivalent circuit model in Figure 5(d) with chi-square function ($\varkappa$) of 8.66×10^{-4}

	R1/Ω	R2/Ω	CPE1/(S s^n)	n1	CPE3/(S s^n)	n3	CPE2/(S s^n)	n2	R3/Ω
1000-cycled	6.55	3.828	0.0126	1	0.091	0.5	0.091	0.5	7.735
$Error_{1000}$ / %	1.146	10.93	8.45	N/A	6.373	N/A	6.373	N/A	2.279