Electronic Supplementary Information

Intercalation and Delamination Behavior of $Ti_3C_2T_x$ and $MnO_2/Ti_3C_2T_x$/RGO Flexible Fiber with High Volumetric Capacitance

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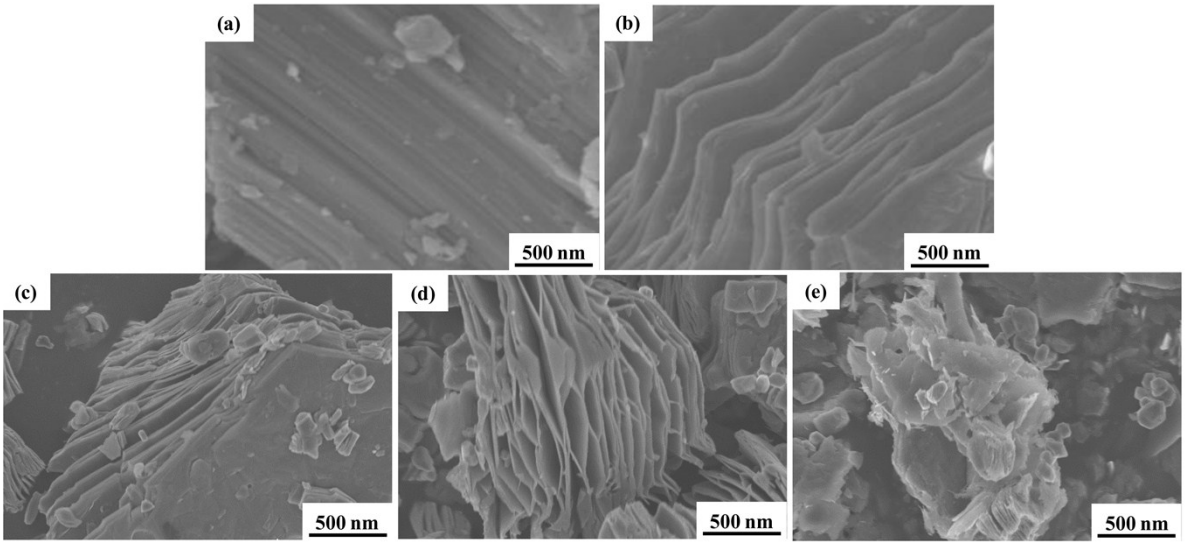

Figure S1. FE-SEM images of Ti_3AlC_2 (a) and the obtained $Ti_3C_2T_x$ materials etched with 30 % HF solution for different times: (b) 24 h, (c) 48 h, (d) 96 h, and (e) 120 h.

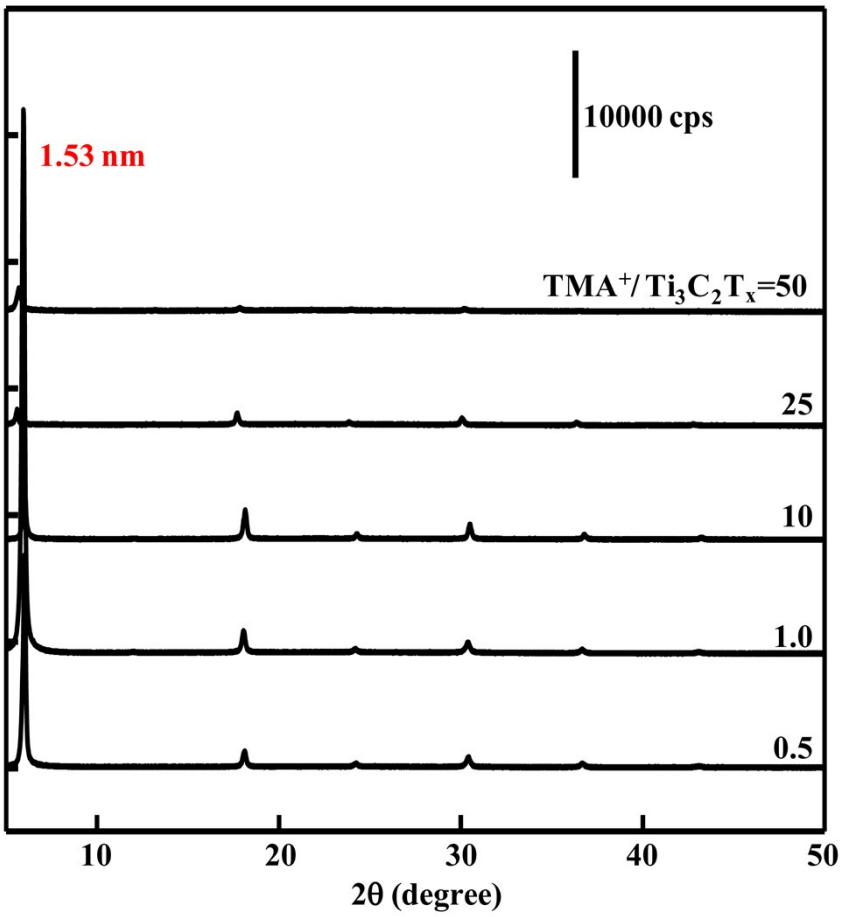

Figure S2. XRD patterns of TMA^+-intercalated $Ti_3C_2T_x$ with different $TMA^+/Ti_3C_2T_x$ molar ratios by drying in vacuum at 70 °C for 24 h.

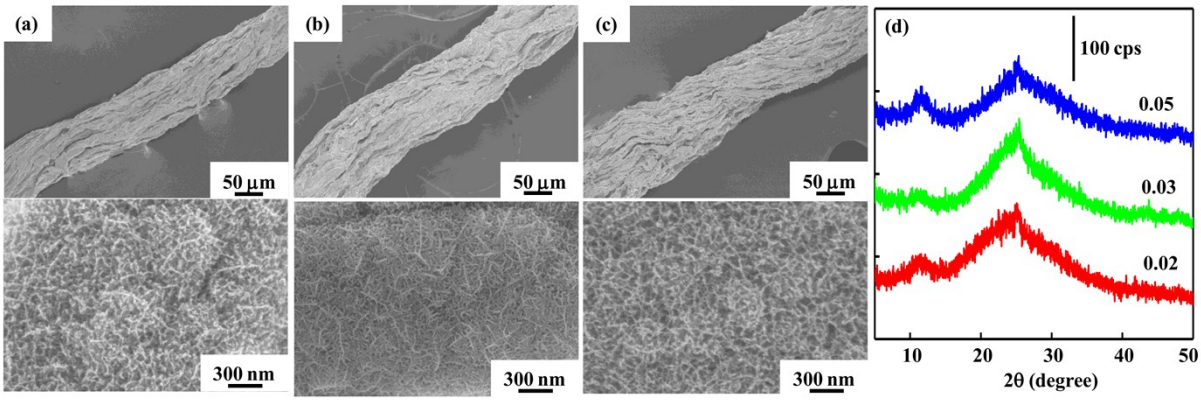

Figure S3. FE-SEM images (a-c) and XRD patterns (d) of $MnO_2/Ti_3C_2T_x$/RGO hybrid fiber with different $KMnO_4$ concentrations for 1.5 h: MnO_2(0.02)/$Ti_3C_2T_x$/RGO (a), MnO_2 (0.03)/$Ti_3C_2T_x$/RGO (b), and MnO_2 (0.05)/$Ti_3C_2T_x$/RGO (c).

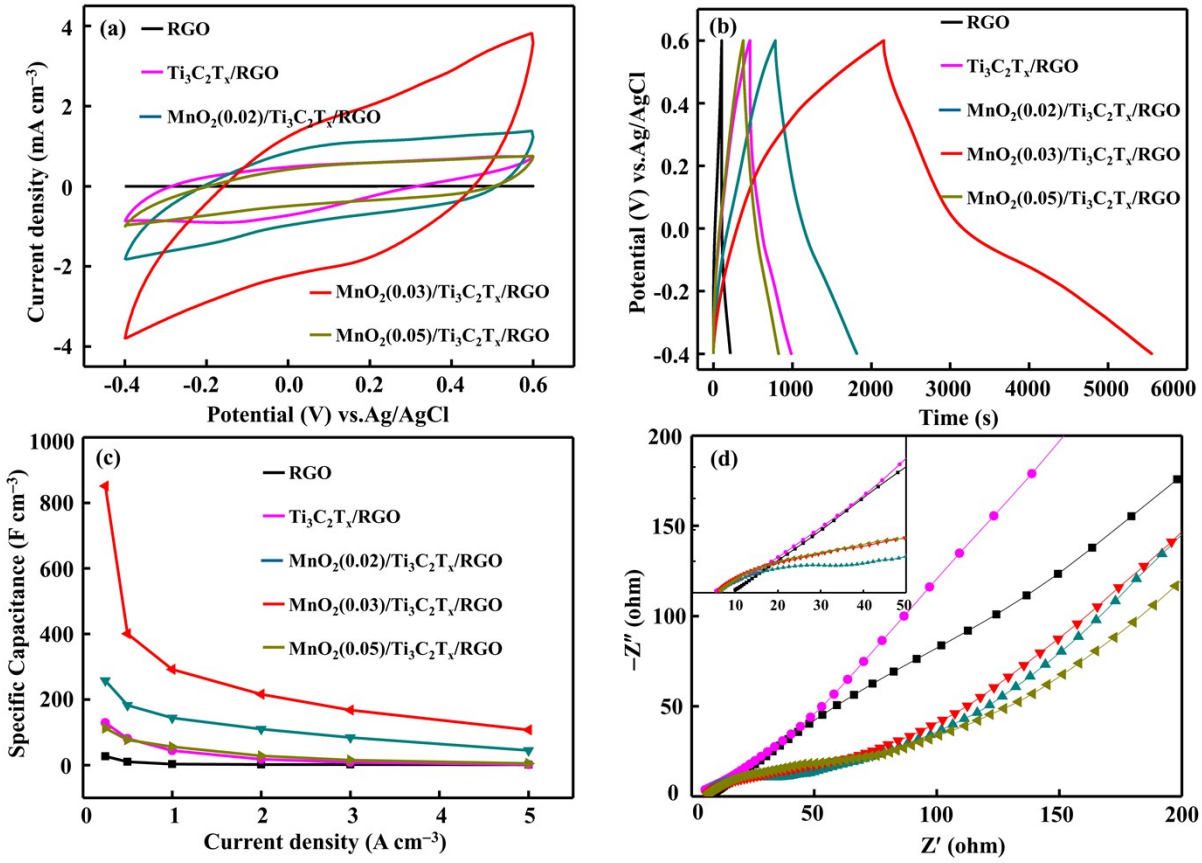

Figure S4. Electrochemical performances of RGO, $Ti_3C_2T_x$/RGO, and MnO_2/$Ti_3C_2T_x$/RGO hybrid fibers reacted with different $KMnO_4$ concentrations for 1.5 h: CV curves in 1 M Na_2SO_4 a scan rate of 5 mV s^{-1} (a), galvanostatic charge and discharge curves at 0.25 A cm^{-3} (b), specific capacitance at different current densities (c), and Nyquist plots over the frequency range of 0.01 Hz-100 kHz (d).