

## Supporting Information

### **In situ synthesis of graphene/titanium nitride hybrid material with highly improved performance for lithium storage**

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Fig. S1 shows the initial charge/discharge profiles for the different amounts of isopropyl titanate served as titanium source. The initial charge/discharge capacities of 0.5 mL and 2 mL isopropyl titanate served as titanium source at the initial cycle are 519/873 and 589/775 mAh g<sup>-1</sup>, corresponding to the initial coulombic efficiency of 59% and 76%, respectively. The sample with 0.5 mL titanium source shows a relatively lower reversible capacity and initial coulombic efficiency than that of 1.0 mL titanium source, which maybe ascribe to the insufficient cover of TiN on G. As for the sample with 2.0 mL titanium source, it presents nearly the same initial coulombic efficiency as 1.0 mL. But its reversible capacity of 589 mAh g<sup>-1</sup> is lower than that of 646 mAh g<sup>-1</sup> of 1.0 mL. The excess inactive TiN on G decreased the reversible capacity.

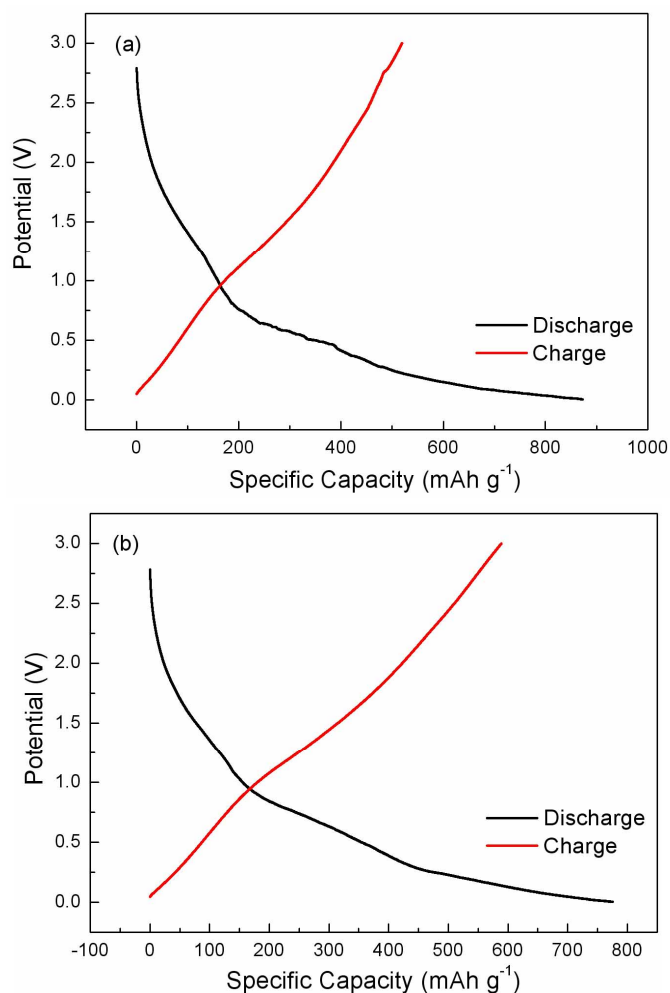


Fig. S1 Initial charge/discharge profiles for the different amounts of isopropyl titanate served as titanium source: (a) 0.5 mL; (b) 2 mL.