Supporting information

Synthesis of nitrogen doped graphene films for lithium battery application

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Figure S1: Raman spectra of the single layer pristine graphene grown on Cu foil using hexane precursors.

Figure S2: XPS spectra of the pristine graphene clearly show the presence of C1s and O1s spectra.

Figure S3: Voltage vs time profile of nitrogen doped graphene films grown on Cu foil, galvanostatically cycled in Li-half cells at a current rate of $5 \mu\text{A}/\text{cm}^2$ between 3.2 V and 0.02 V vs Li/Li^+ using 1M solution of LiPF_6 in 1:1 (v/v) mixture of ethylene carbonate (EC) and dimethyl carbonate (DMC) as the electrolyte.

Figure S4: Electrochemical performance of pristine graphene films grown on Cu foil, galvanostatically cycled in Li-half cells at a current rate of 5 $\mu\text{A}/\text{cm}^2$ between 3.2 V and 0.02 V vs Li/Li⁺ using 1M solution of LiPF₆ in 1:1 (v/v) mixture of ethylene carbonate (EC) and dimethyl carbonate (DMC) as the electrolyte.