

Supplementary Information

to

**Facile and creative design of hierarchical
vanadium oxides@graphene nanosheets
patterns**

Jiucun Chen,^{*ab} Wenjun Li,^{ab} Jian Jiang,^{ab} Chao Wu,^{ab} Yinqin Liu^{ab}

^a *Institute for Clean Energy & Advanced Materials, Faculty of Materials and Energy,
Southwest University,*

^b *Chongqing Key Laboratory for Advanced Materials & Technologies of Clean Energies,
Chongqing 400715, P.R. China*

Correspondence: chenjc@swu.edu.cn

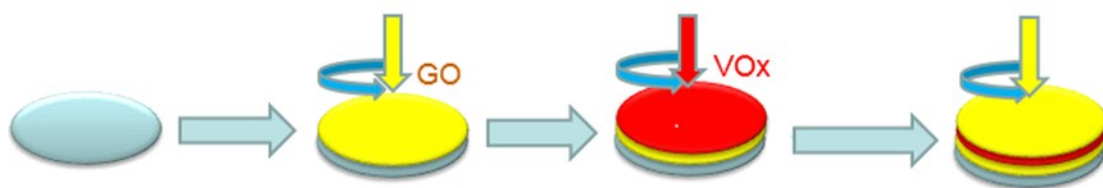


Fig S1. The procedure of synthesis the multi-layer GNS/VO_x cathode materials by spin coating briefly.

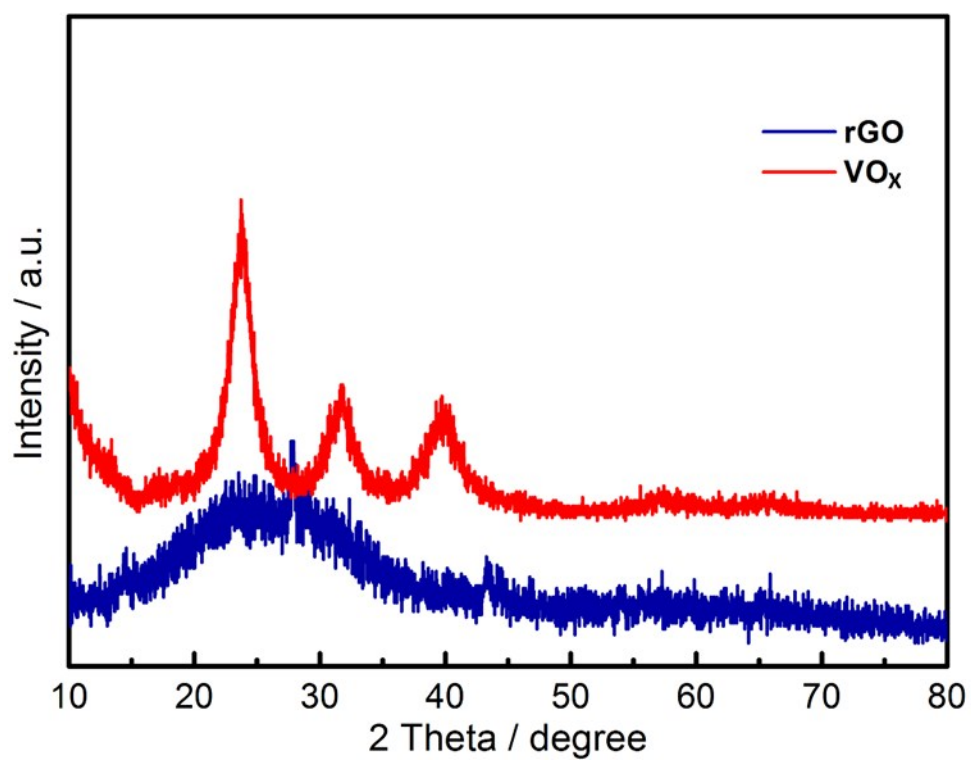


Fig. S2 XRD patterns of VO_x without annealing and reduced GO which annealed at 500 °C.

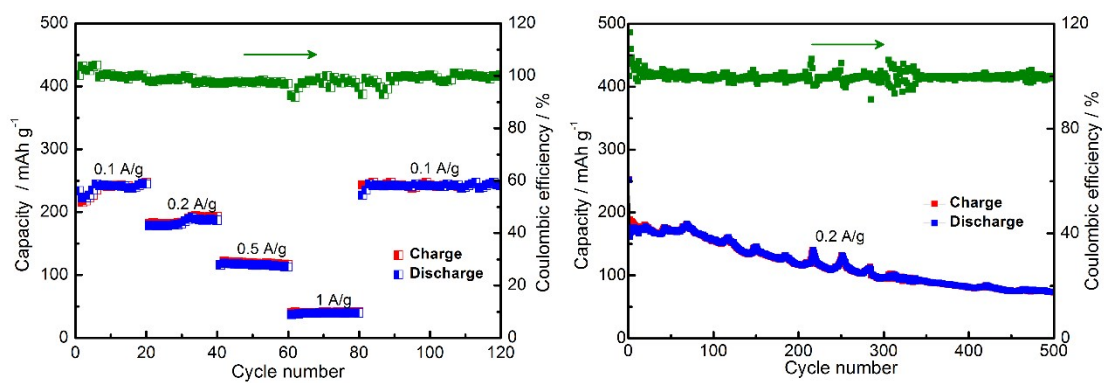


Fig. S3 Performance of 3-layer VO_x without GNS cathode materials. (a) Rate performance of 3-layer VO_x in the voltage range of 2.0-4.5 V versus Na/Na⁺; (b) Long-term cycling performance of 3-layer VO_x electrode at a current density of 0.2 A/g in the voltage range of 2.0-4.5 V versus Na/Na⁺.

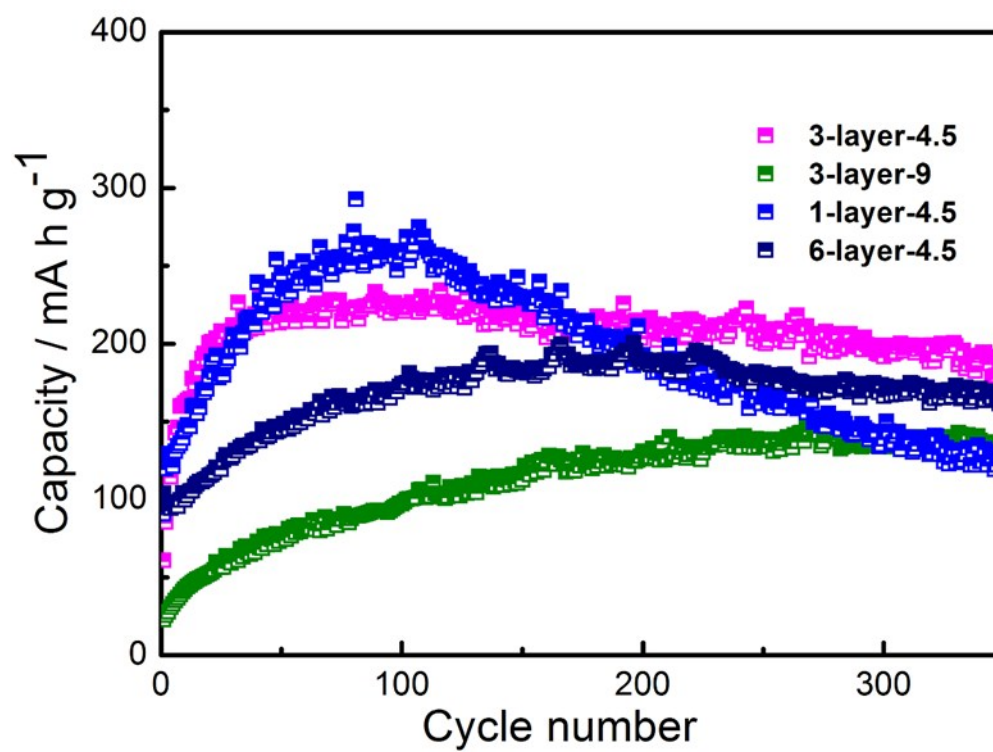


Fig. S4 Cycling performance for four types of multi-layer electrode with different GO concentrate in the voltage range of 2.0-4.5 V versus Na/Na⁺.

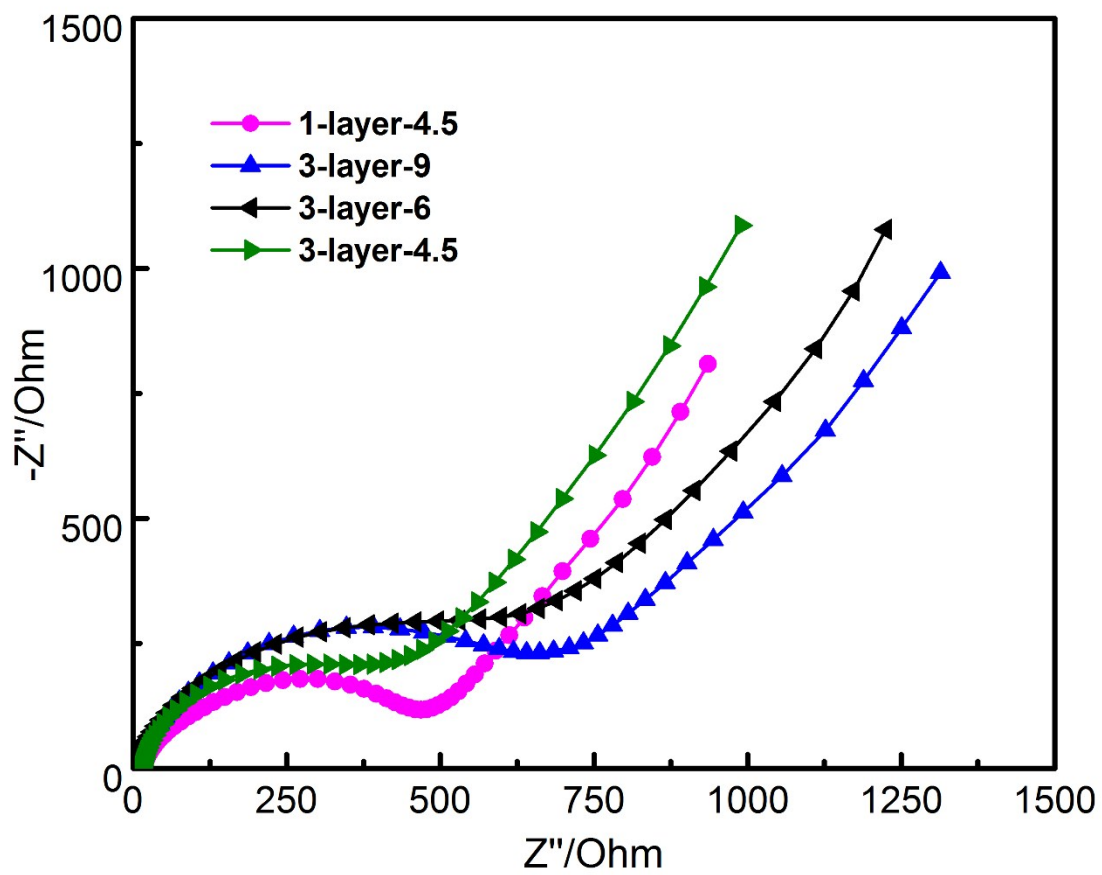


Fig. S5 Electrochemical impedance spectroscopy of multi-layer electrodes with different GO's concentration.

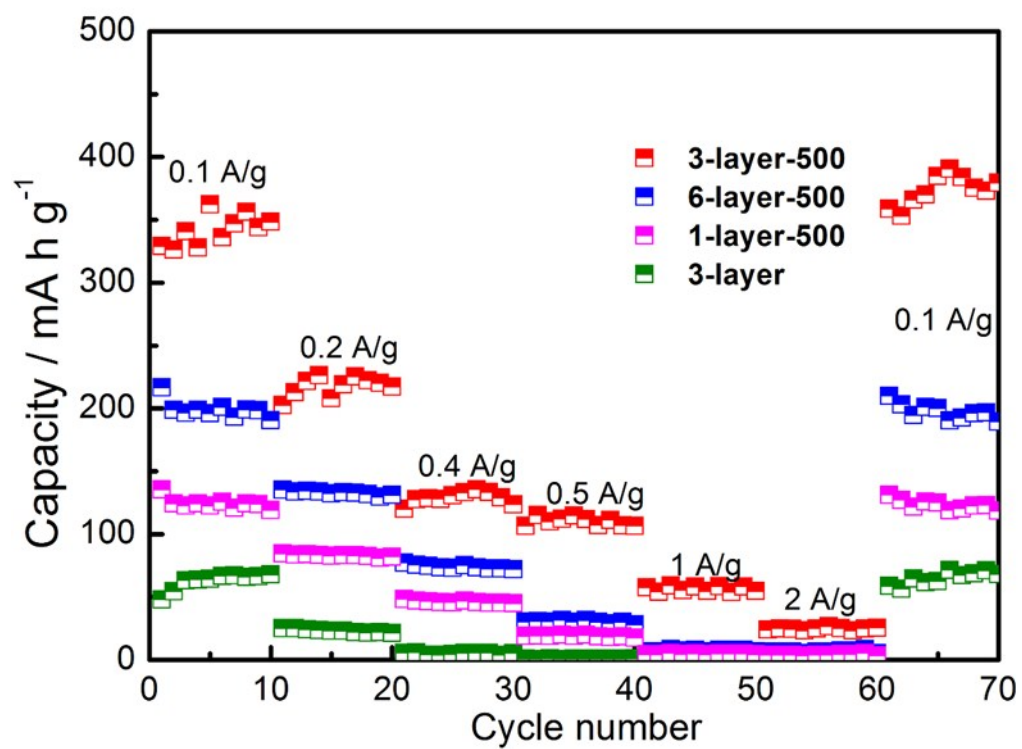


Fig. S6 Rate performance for four types of multi-layer electrode with different layer in the voltage range of 2.0-4.5 V versus Na/Na⁺.