

## Electronic Supplementary Information

### Hybrids of Mo<sub>2</sub>C nanoparticles anchored on graphene sheets as anode materials for high performance lithium-ion batteries

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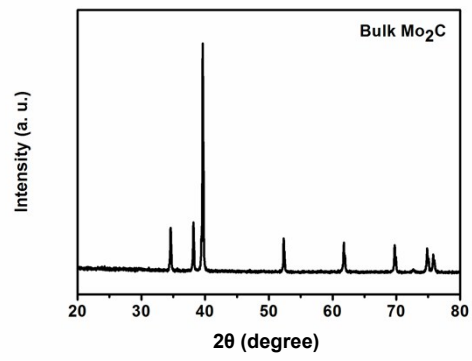
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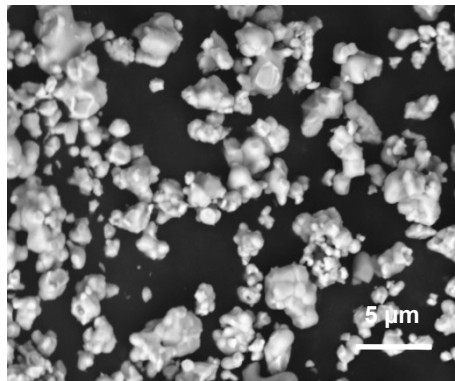
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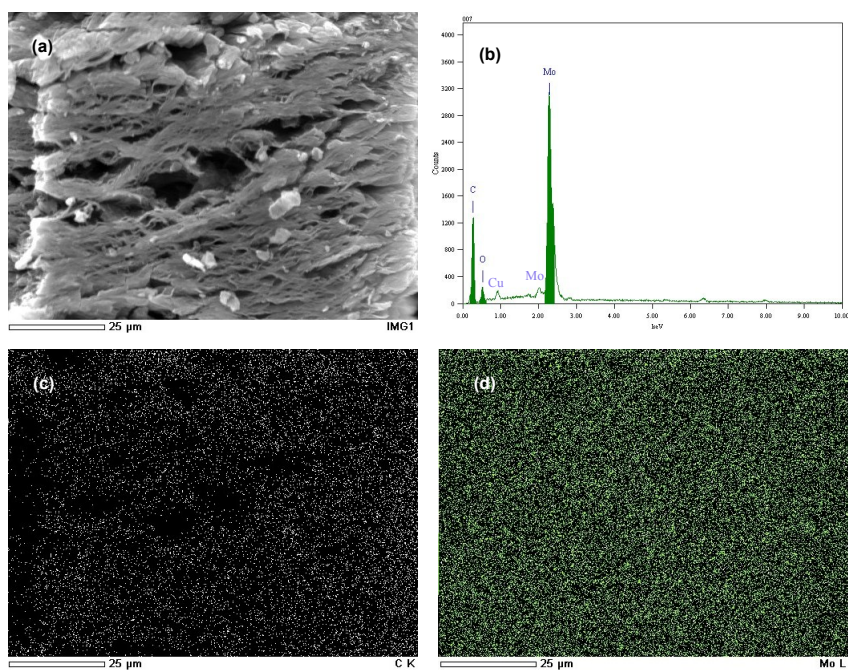
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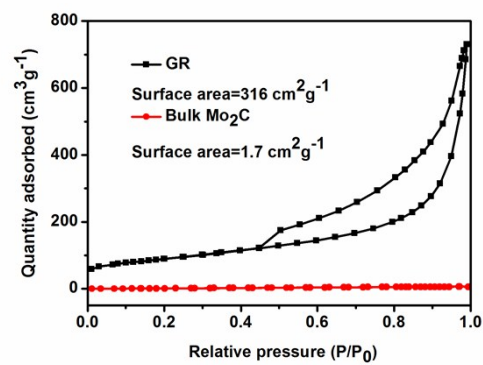
**Figure S1** XRD pattern of bulk Mo<sub>2</sub>C.



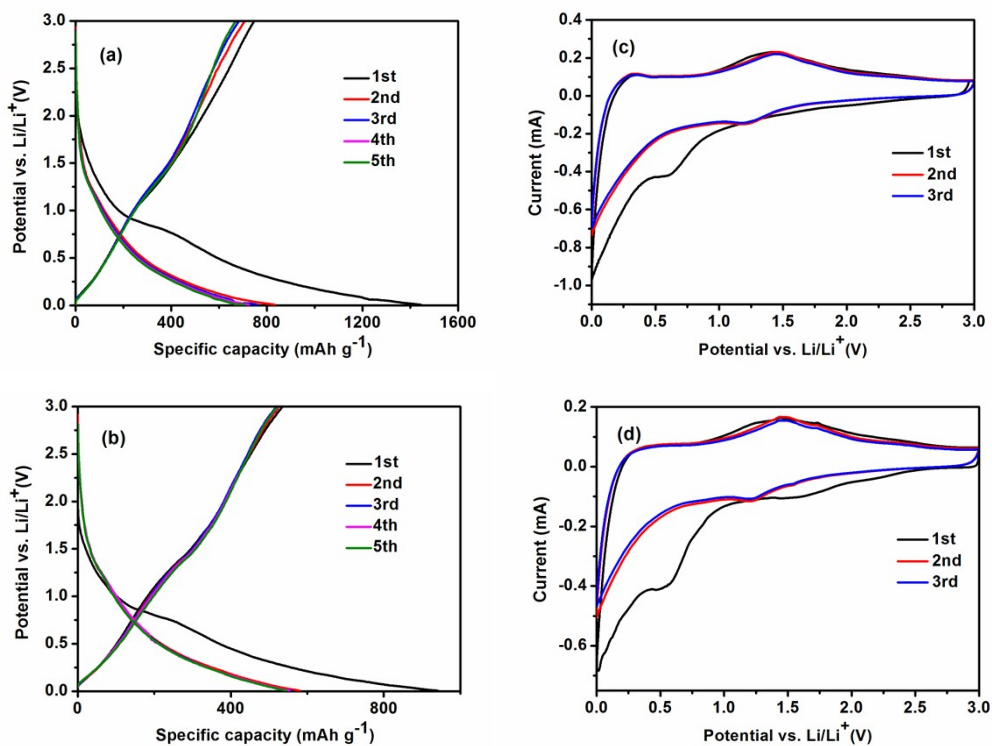
**Figure S2** SEM image of bulk Mo<sub>2</sub>C.



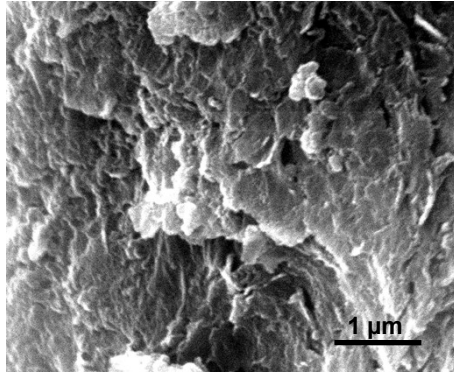
**Figure S3** (a) A low magnification SEM image of Mo<sub>2</sub>C(52.6%)/GR hybrid. (b) A typical EDS spectrum of Mo<sub>2</sub>C(52.6%)/GR hybrid. (c-d) C and Mo elemental mappings.



**Figure S4** Nitrogen adsorption/desorption isotherm of pure GR and bulk Mo<sub>2</sub>C.



**Figure S5** Voltage profiles of (a) Mo<sub>2</sub>C(38.7%)/GR and (b) Mo<sub>2</sub>C(62.4%)/GR electrodes. CV curves of (c) Mo<sub>2</sub>C(38.7%)/GR and (d) Mo<sub>2</sub>C(62.4%)/GR electrodes at a scan rate of 0.1 mV s<sup>-1</sup> in the range of 0-3 V.



**Figure S6** SEM image of Mo<sub>2</sub>C(52.6%)/GR hybrid after 100 discharge/charge cycles at the current density of 100 mA g<sup>-1</sup>.