Facile synthesis of hierarchical hollow MoS₂ nanotubes as anode

material for high-performance lithium-ion batteries

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Table S1. Cycling performance and capacity of pure MoS₂ reported in previous works.

| Typical materials | Current density | Cycle number | Remaining capacity | Ref. |
|-------------------|-----------------------|--------------|--------------------|------|
| | (mA g ⁻¹) | | $(mAh g^{-1})$ | |
| Nanorods | 200 | 100 | 776 | 1 |
| nanosheets | 100 | 60 | 698 | 2 |
| nanoparticles | 100 | 30 | 900 | 3 |
| Microspheres | 100 | 70 | 672 | 4 |
| Nanosheets | 100 | 30 | 530 | 5 |
| Nanosheets | 1C | 50 | 860 | 6 |
| Nanospheres | 100 | 30 | 706 | 7 |
| Nanosheets | 100 | 20 | 936 | 8 |
| Nanowires | 100 | 50 | 952 | 9 |
| Nanoparticles | 50 | 50 | 900 | 10 |
| Hollow nanotubes | 100 | 100 | 727 | This |
| | | | | work |
| Nanoflowers | 100 | 100 | 520 | This |
| | | | | work |

[1] ACS appl. Mater. Interfaces, 2012, 4, 3765.

[2] Chem. Eur. J., 2011, 17, 13142.

[3] Chem. Commun., 2013, 49, 1823.

[4] Nanoscale, 2012, 4, 95.

[5] Dalton Trans., 2013, 42, 2399.
[6] Inorg. Chem., 2013, 52, 9807.
[7] CrystEngComm, 2012, 14, 8323.
[8] CrystEngComm, 2013, 15, 4998.
[9] Adv. Mater., 2013, 25, 1180.
[10] Chem. Mater., 2010, 22, 4522.



Fig. S1. N₂ adsorption-desorption of the (a) MoS₂ nanotubes and (b) nanoflowers.



Fig. S2. TEM images after 100 cycles: (a) MoS₂ nanotubes and (b) MoS₂ nanoflowers.