Supporting Information

Encapsulation of sulfur inside micro-nano carbon/molybdenum carbide by in-situ chemical transformation for high-performance Li-S batteries

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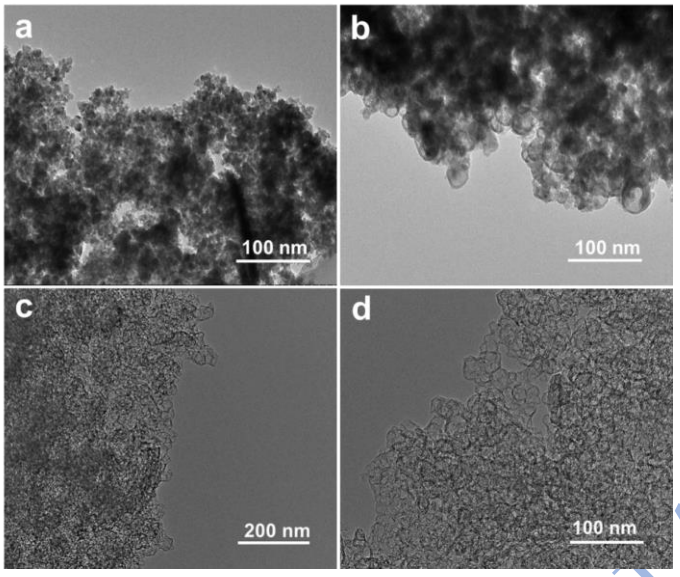

Fig. S1 TEM images of (a) ZnS, (b) ZnS@C/Mo_2C composite and (c,d) S@MC composite.

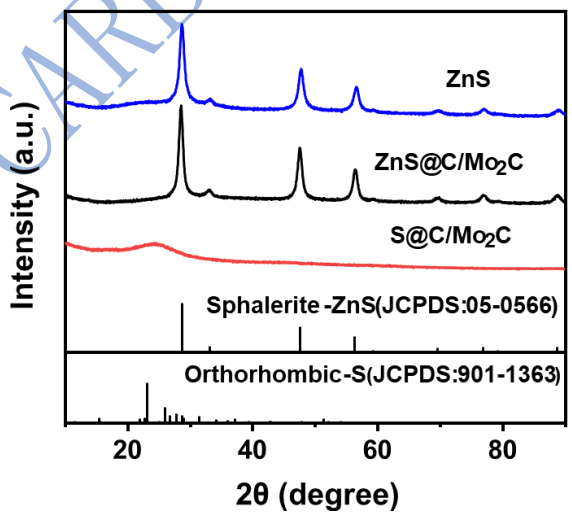

Fig. S2 XRD patterns of ZnS, ZnS@C/Mo_2C and S@C/Mo_2C.

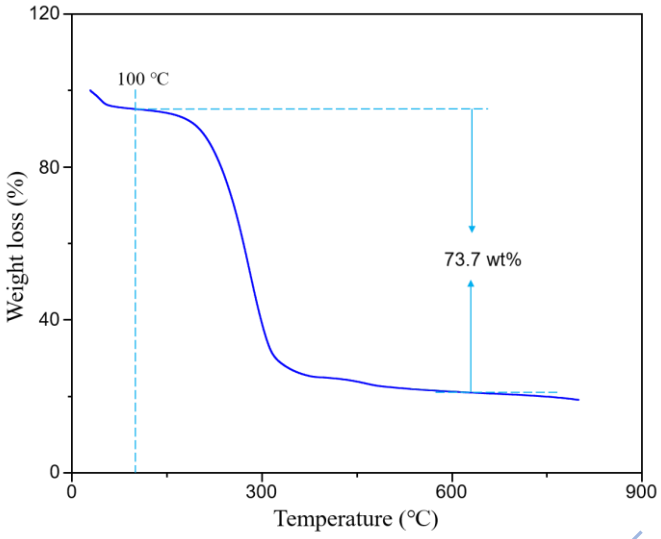

Fig. S3 Thermogravimetric analysis curves of S@C/Mo_2C in the nitrogen atmosphere.

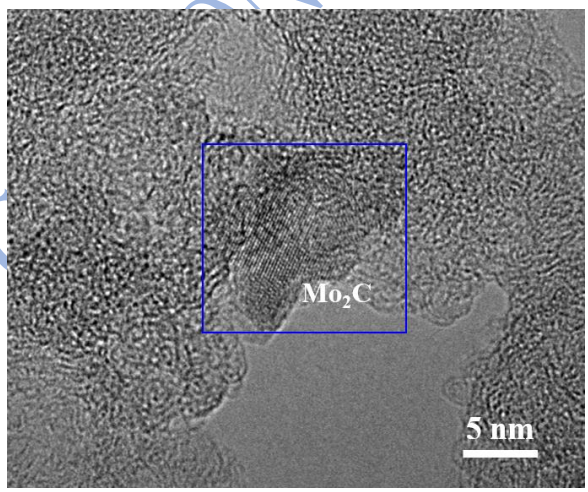

Fig. S4 High resolution TEM image of C/Mo_2C.

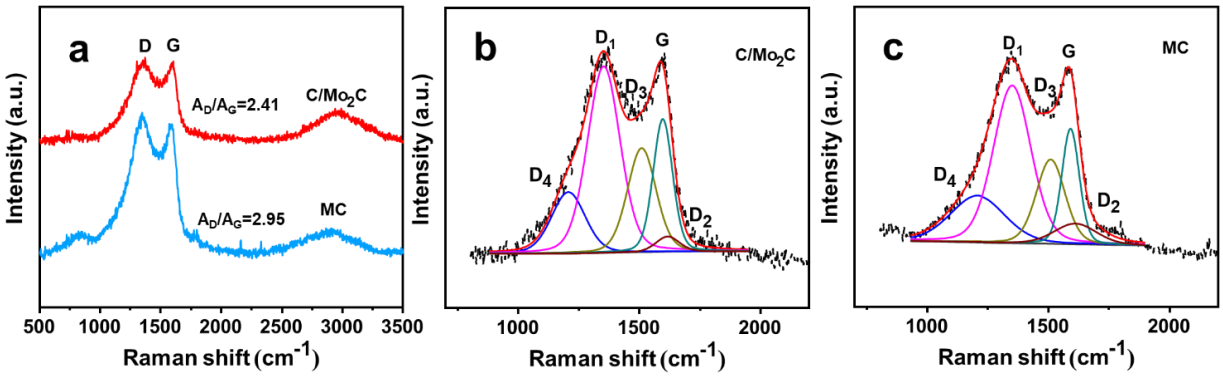

Fig. S5 (a) Raman spectra of the C/Mo_2C and MC. Curve fitting with band combination for the Raman spectra of (b) C/Mo_2C, (c) MC.

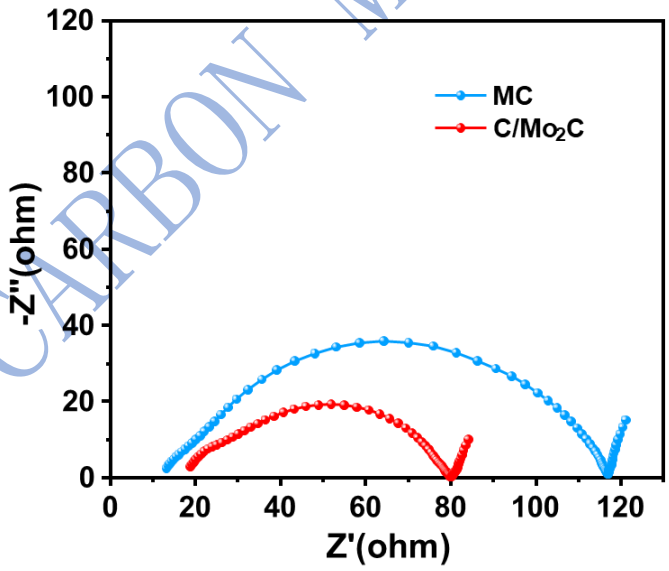

Fig. S6 EIS spectra of symmetric cells for C/Mo_2C and MC.

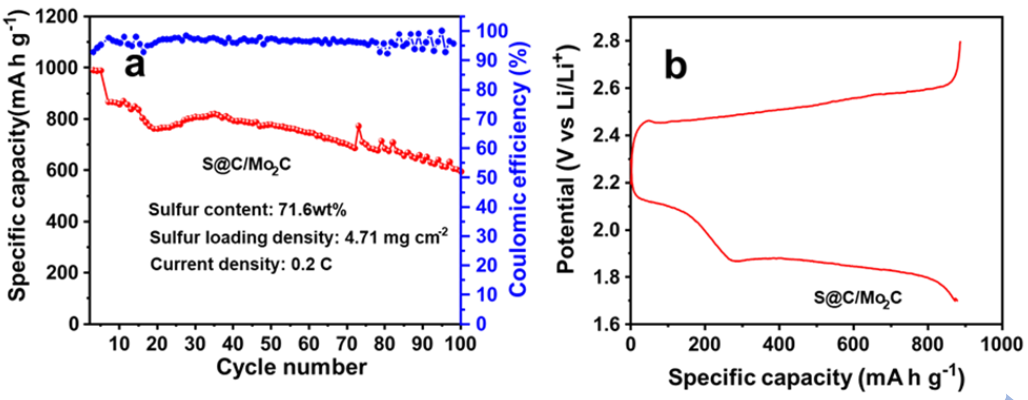

Fig. S7 (a) Cycling performance, (b) discharge/charge voltage profiles of S@C/Mo_2C with the sulfur loading of 4.71 mg cm^{-2} at 0.2 C.

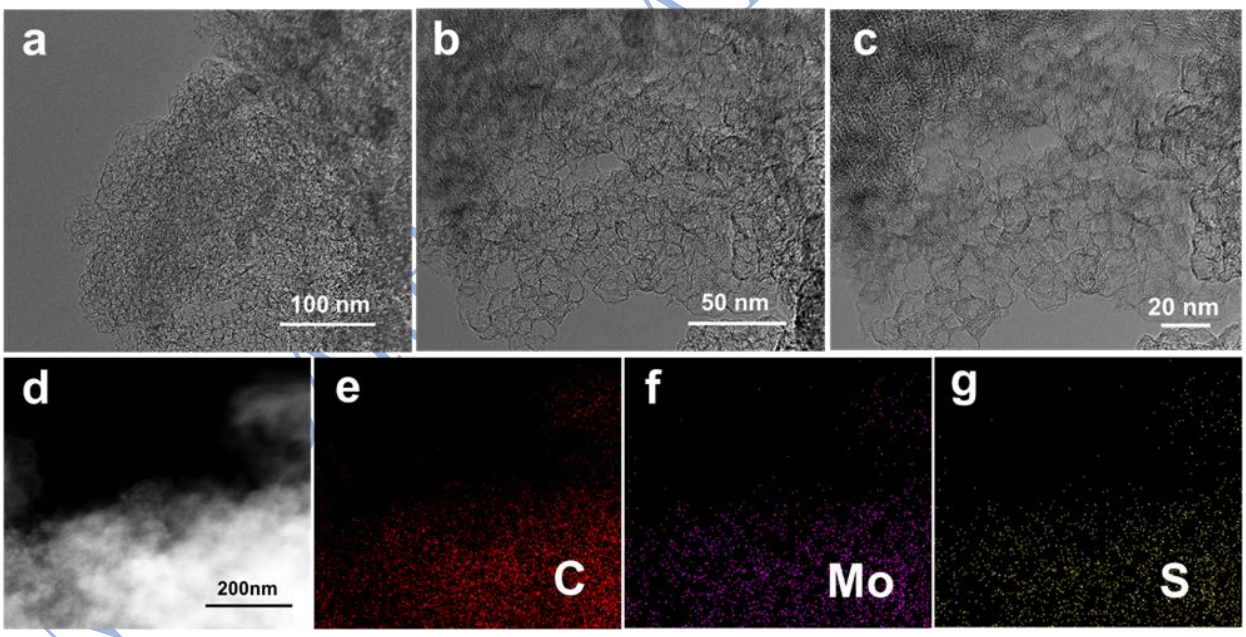

Fig. S8 (a-c) TEM images (d) STEM, EDS element mappings of (h) sulfur, (i) molybdenum, and (j) carbon of the S@C/Mo_2C composite after 60 cycles.