Electronic Supplementary Information

In_3Se_4 and S-Doped Nano/Micro-Structures as New Anode Materials for Li-Ion Batteries

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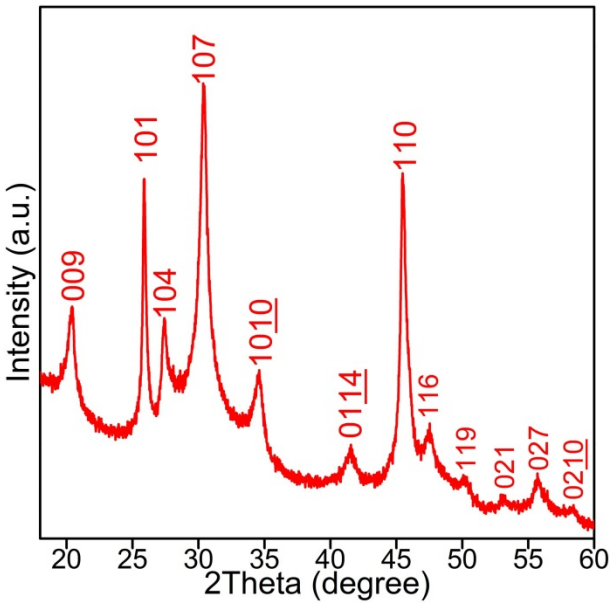

Figure S1 A representative XRD pattern of the annealed In_3Se_4 nano/micro-structures.

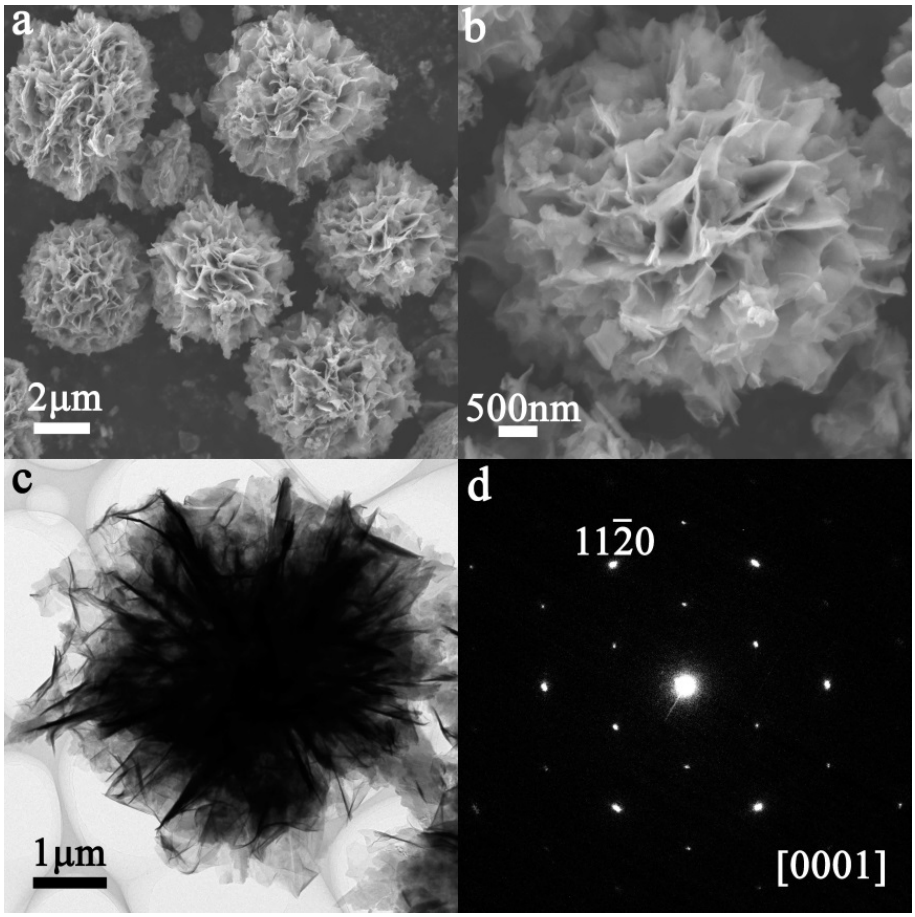

Figure S2 Characterization of the annealed In_3Se_4 nano/micro-structures: (a-b) SEM images, (c) a TEM image, and (d) a typical SAED pattern along [0001] zone axis of In_3Se_4.

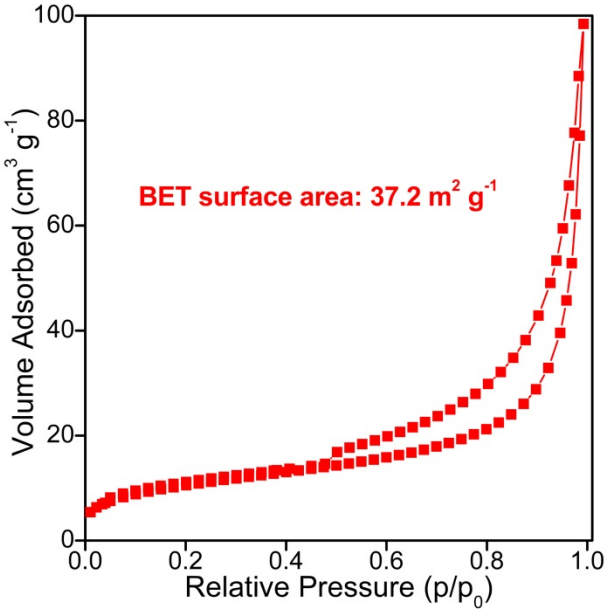

Figure S3 N_2 adsorption-desorption isotherm of the annealed In_3Se_4 nano/micro-structures.

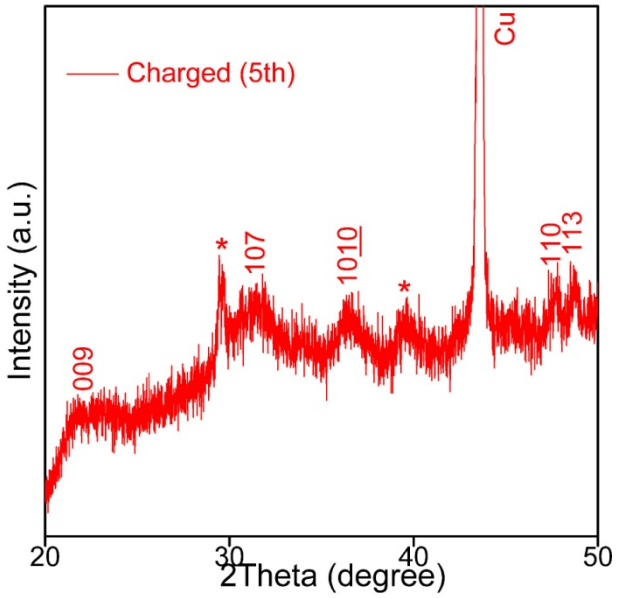

Figure S4 A representative XRD pattern of the In_3Se_4 electrode (i.e. nano/micro-structures on Cu foil) after the 5th charge process (the peaks indicated by * could be due to the oxidation of Cu foil).

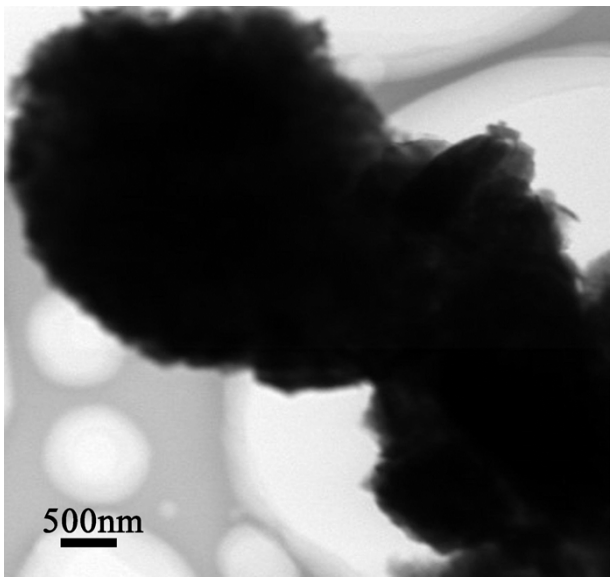

Figure S5 TEM image showing the morphology of the minority In_3Se_4 nano/micro-structures detected in the electrode after the 5th charge process.

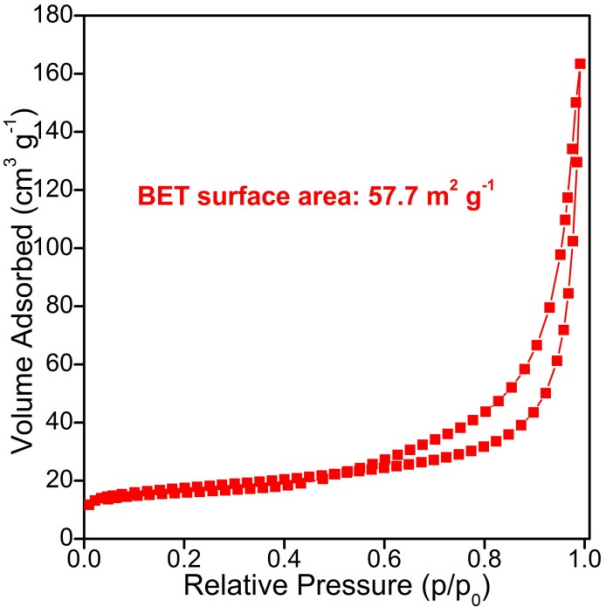

Figure S6 N_2 adsorption-desorption isotherm of the S-doped In_3Se_4 nano/micro-structures.

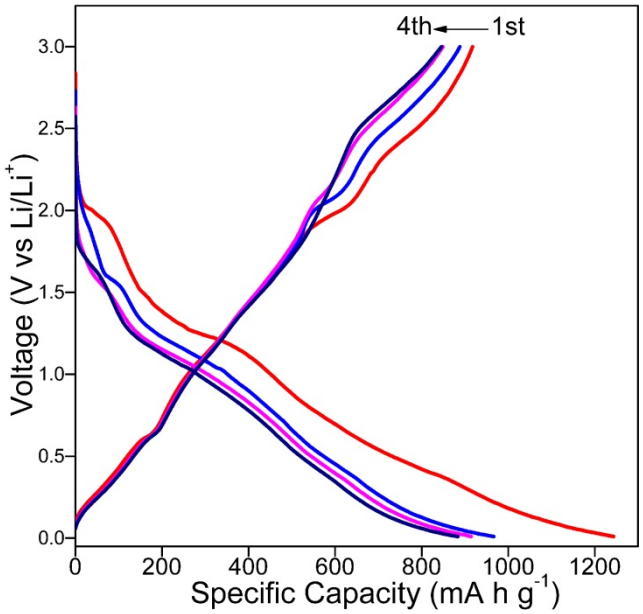

Figure S7 Discharge/charge voltage curves of the S-doped In_3Se_4 electrode for the first four consecutive cycles tested in a voltage range of 0.01-3.0 V (*vs.* Li^+/Li) and at a current density of 50 mA g^{-1}.

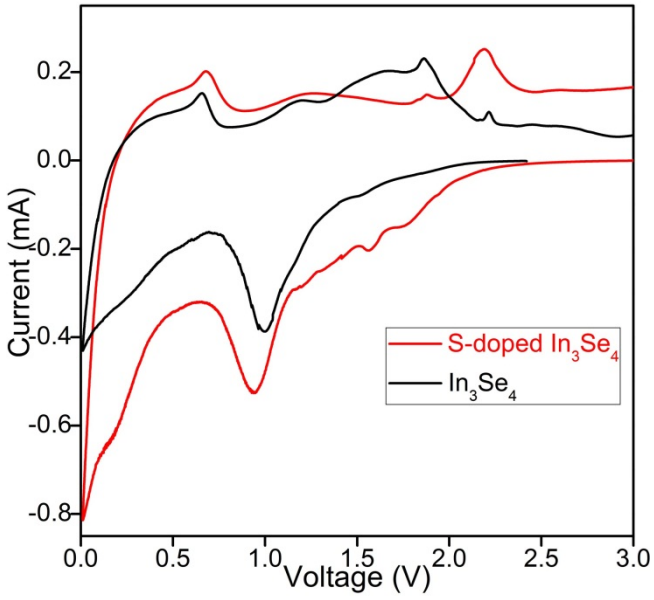

Figure S8 CV curves of S-doped and undoped In_3Se_4 nano/micro-structures in the first discharge/charge cycle.

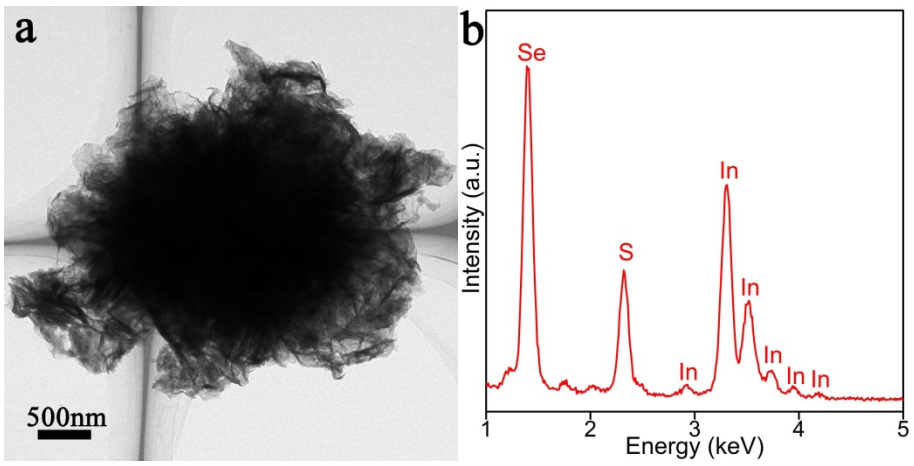

Figure S9 TEM characterization of S-doped In_3Se_4 nano/micro-structures at de-lithiated state after the 5th cycle: (a) a representative TEM image, (b) an EDS spectrum of the nano/micro-structures.