Electronic supplementary information

Electrochemical Properties of Stoichiometric CuS Coated on Carbon Fiber Paper and Cu Foil Current Collectors as Cathode Material for Lithium Batteries

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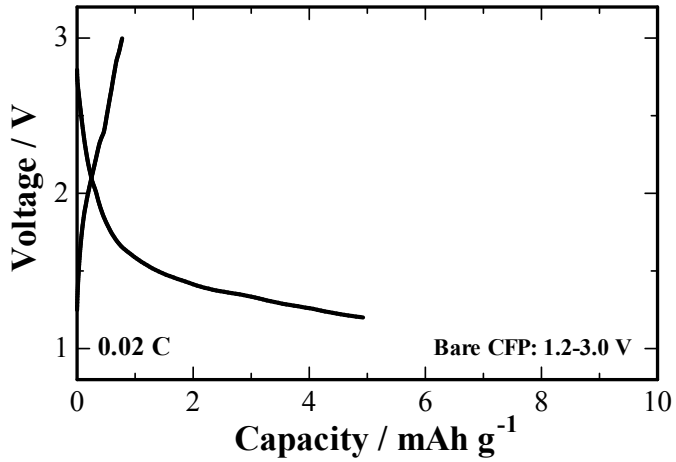

Fig. S1 1st charge-discharge profiles of bare CFP electrode at 0.02 C between 1.2-3.0 V.

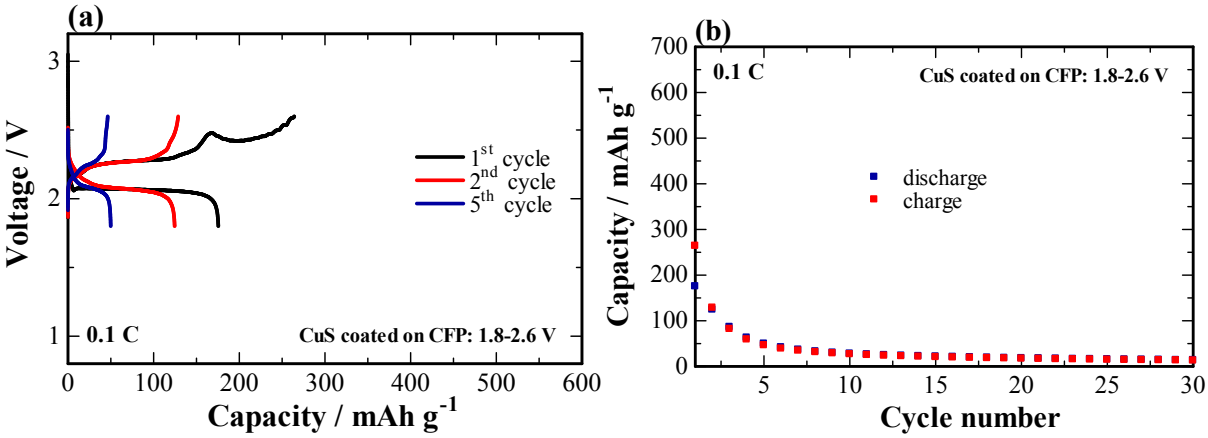

Fig. S2 (a) Charge-discharge profile of stoichiometric CuS coated on a CFP current collector and cycled at 0.1 C between 1.8-2.6 V at the 1st, 2nd, and 5th cycles. (b) Cycling performance at 0.1 C for 30 cycles.

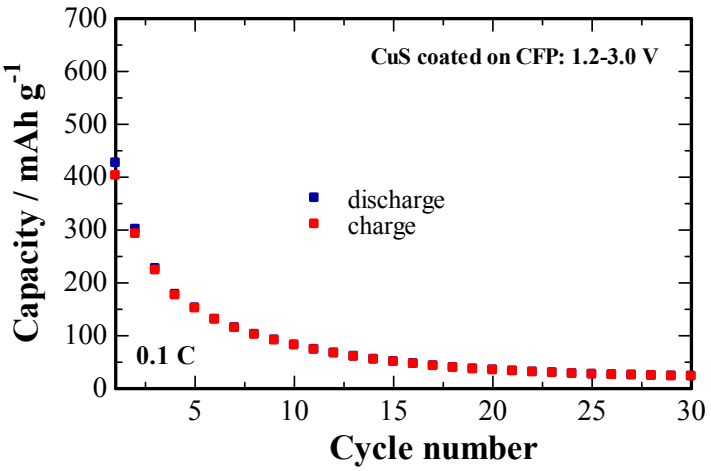

Fig. S3 Cycling performance of stoichiometric CuS coated on a CFP current collector at 0.1 C for 30 cycles.

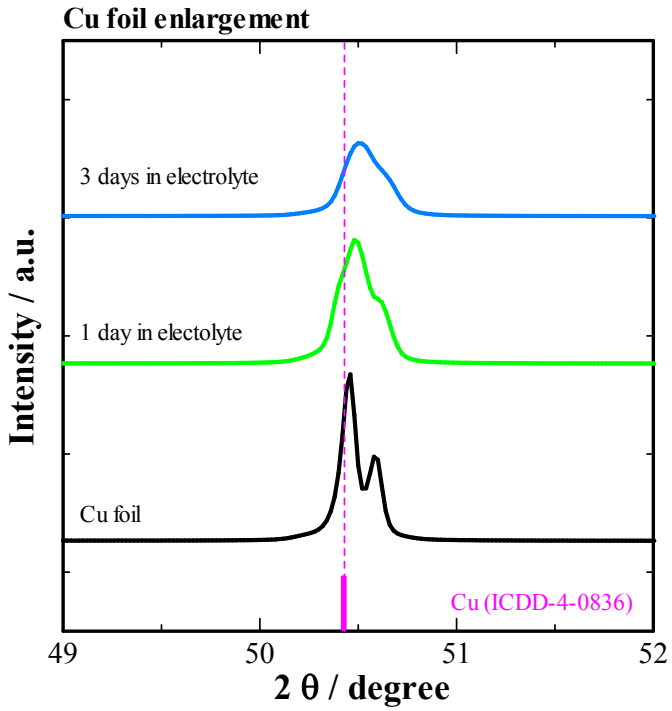

Fig. S4 An enlargement of the XRD patterns (49-52 °) of the bare Cu foil and the Cu foil after soaking in the electrolyte for 1 and 3 days.

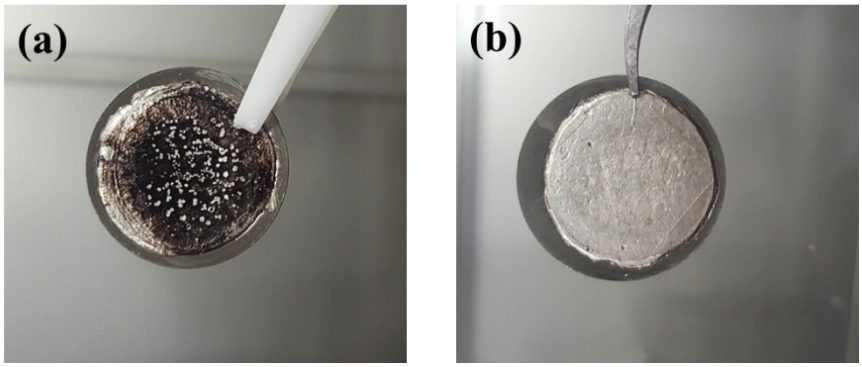

Fig. S5 Recovered lithium metals after the 1st charge at 0.02 C of the cells with stoichiometric CuS coated on (a) a CFP current collector, (b) a Cu foil current collector.

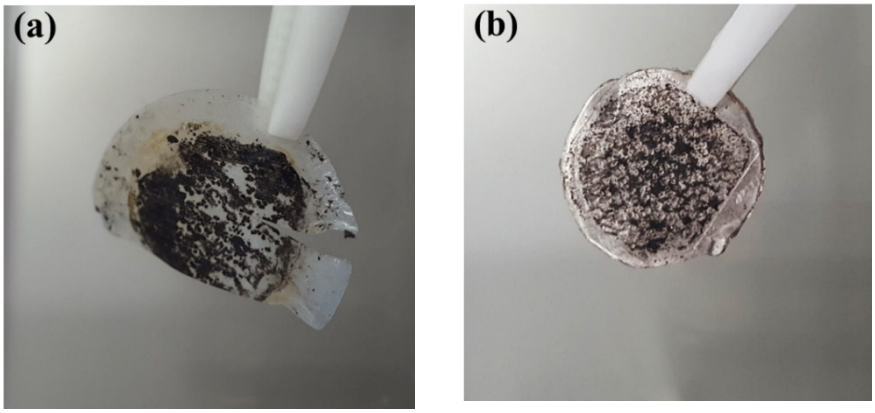

Fig. S6 Recovered separator and lithium metal after the 20th charge at 0.1 C from the cell with stoichiometric CuS electrode coated on a Cu foil current collector.

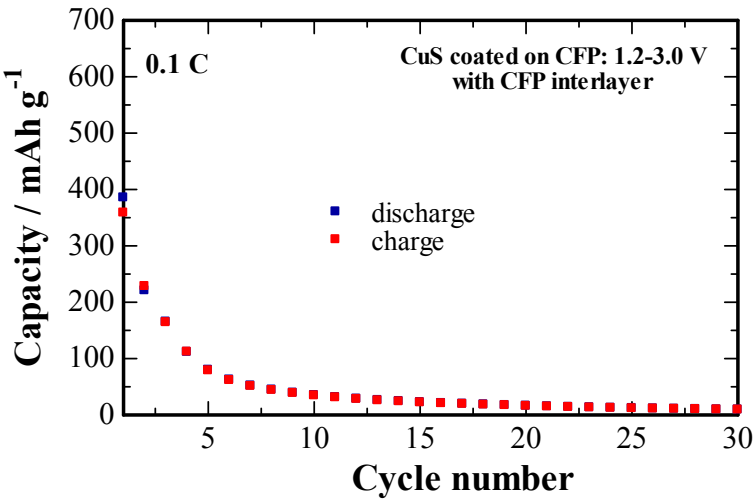

Fig. S7 Cycling performance of stoichiometric CuS coated on a CFP current collector with a CFP interlayer at 0.1 C for 30 cycles.