

Supporting Information

**Electrodeposition of Aluminium Foils on Carbon Electrodes in Low
Temperature Ionic Liquid**

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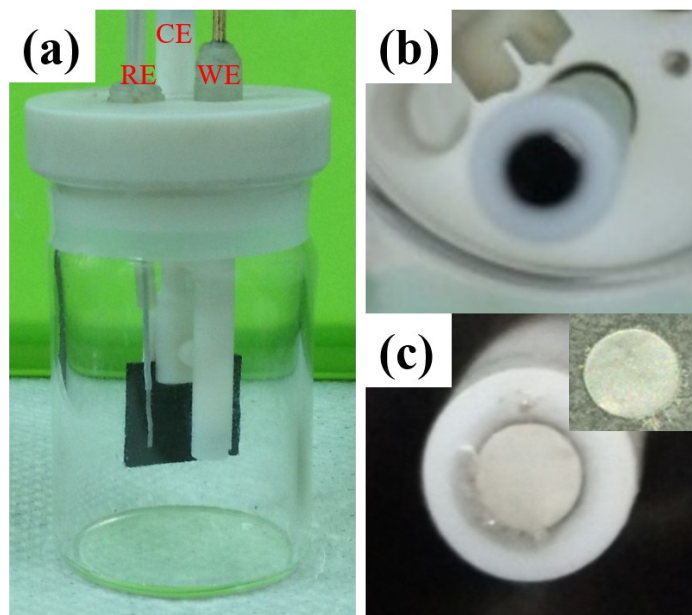


Fig. S1 (a) aluminium electrodeposit cell, (b) the photography of GC electrode before deposition, (c) the photography of GC electrode after deposition (The inset photography show the peeling aluminium foil)



Fig. S2 EDS analysis of electrodeposited aluminium foils.

EDS analysis of the electrodeposits show only the peaks of aluminium (**Fig. S2**), which indicate that the deposits are composed of high purity aluminium (~99 %). Sometimes, trace amounts (<1 %) Cl was detected from the ionic liquid.

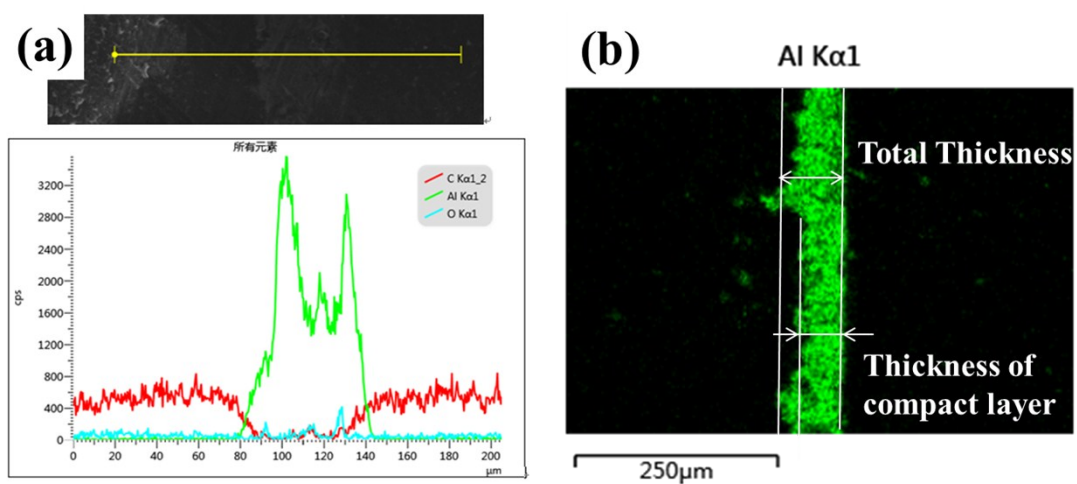


Fig. S3 (a) EDS elemental (C, Al, O) line scanning image of the cross-section form of

Al foil and (b) EDS elemental (Al) mapping image of the cross-section of Al foil.(

Current density = $32 \text{ mA}\cdot\text{cm}^{-2}$, deposit time = 0.5 h, temperature = $50 \text{ }^{\circ}\text{C}$)

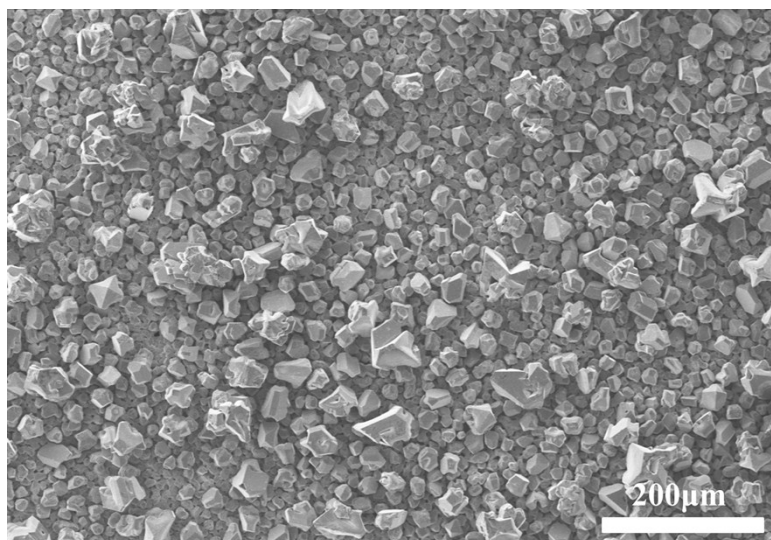


Fig. S4 SEM image of aluminium foil on graphite electrode (Current density=25 $\text{mA}\cdot\text{cm}^{-2}$, temperature = 50 °C).