Electronic Supplementary Material (ESI) for RSC Advances.

Supporting Information

The electrochemical behavior of aluminum alloy anode for rechargeable Al-ion batteries using an $AlCl_3$-Urea liquid electrolyte

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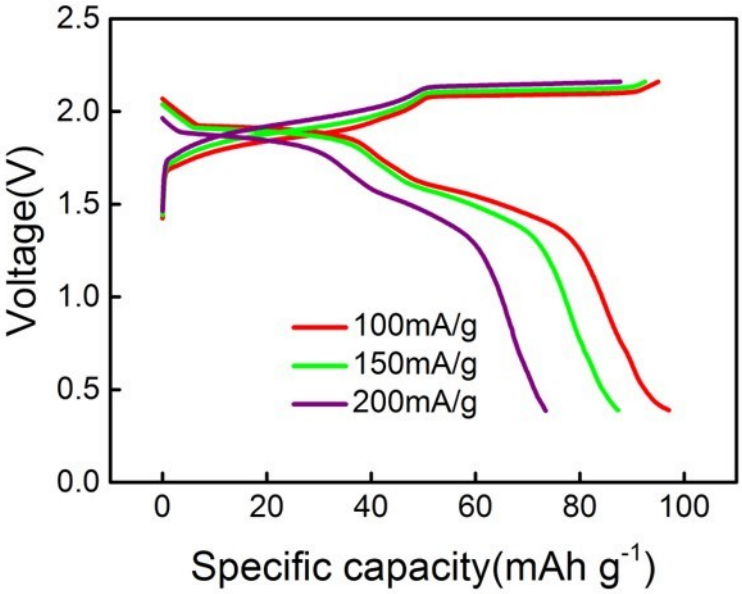

Fig. S1. Galvanostatic curves of Al alloy/PG cell with different current densities in an $AlCl_3$/Urea= 1.5 (by mole) ionic liquid electrolyte.

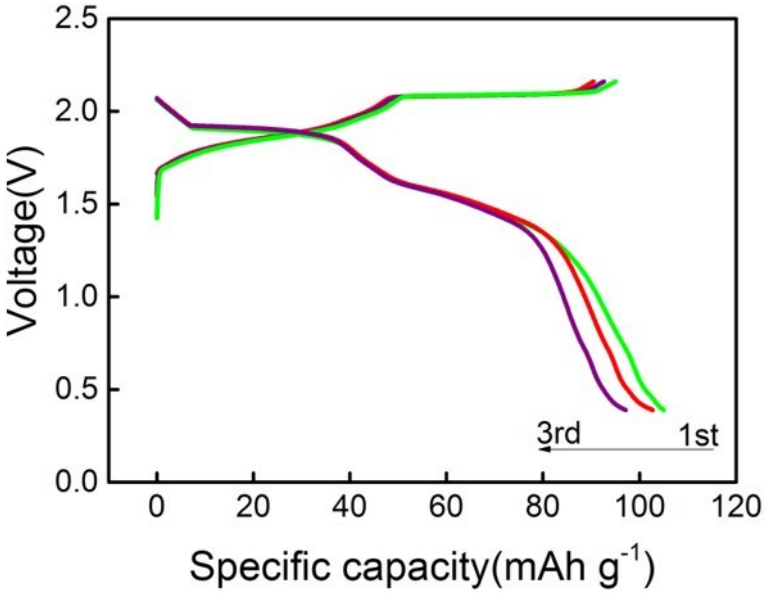

Fig. S2. Galvanostatic charge and discharge curves of an Al alloy/PG cell at a current density of 100 mA g^{-1}.

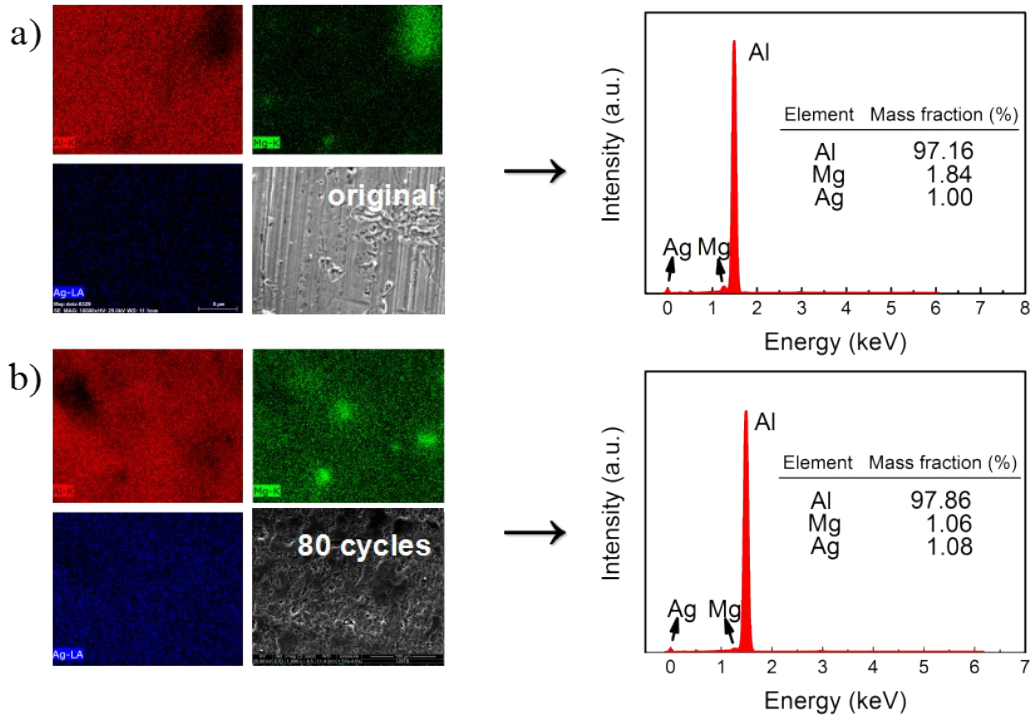

Fig. S3. a) The SEM and EDS images of the Al alloy before cycling, b) and after 80 cycles.

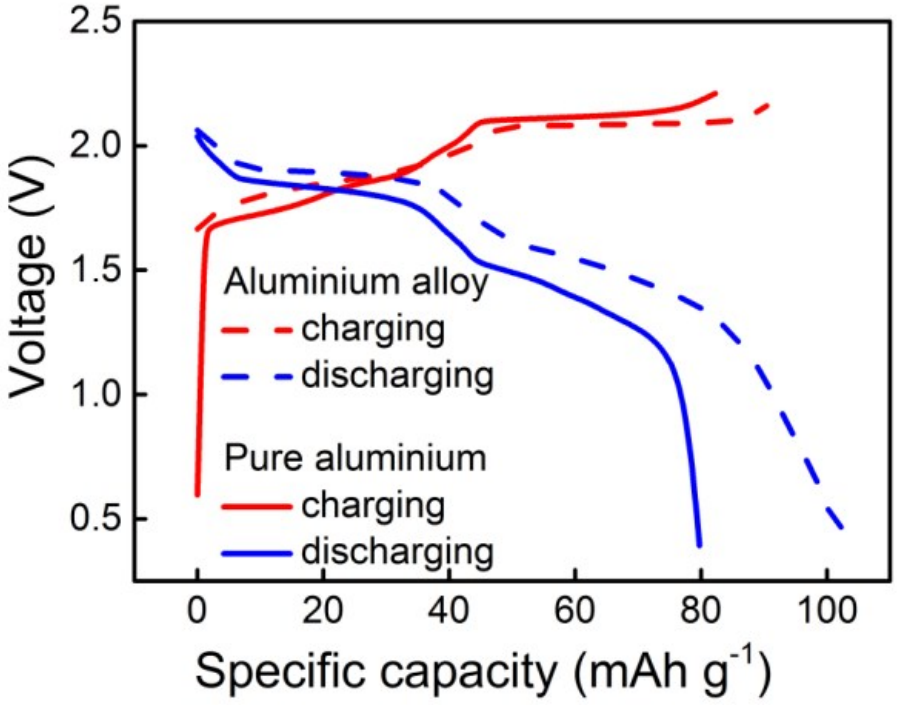

Fig. S4. Galvanostatic curves of Al alloy/PG and Al/PG cell in an $AlCl_3$/Urea= 1.5 (by mole) liquid electrolyte at a current density of 100 mA g^{-1}.

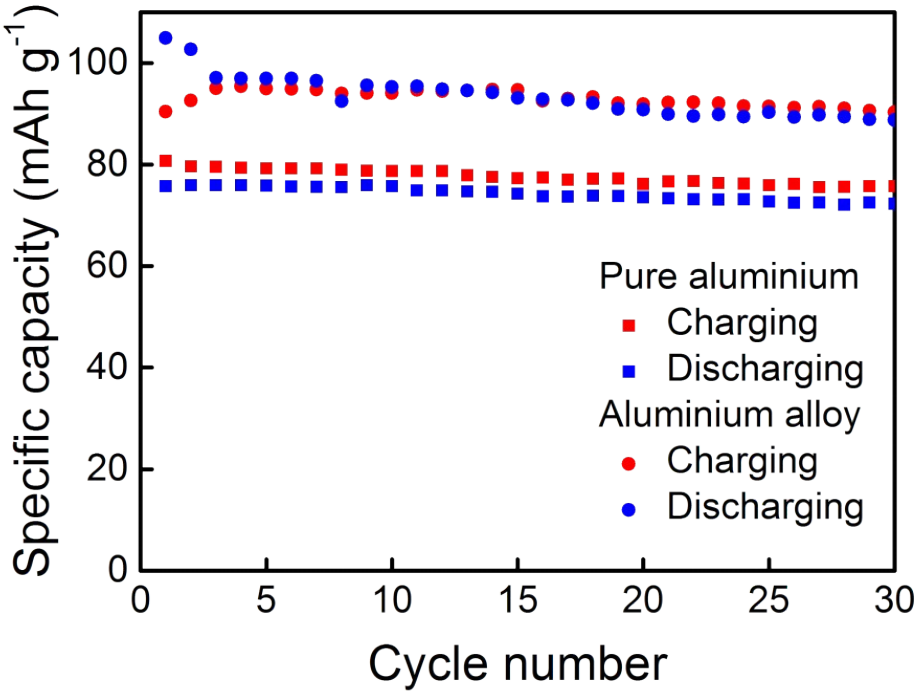

Fig. S5. The cycle stability of Al alloy/PG and Al/ PG cell at a current density of 100 mA g^{-1}.