

Supporting Information

Dissolution of Zero-valent Al and its Structural Transformation in Chloride Molten Salts

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Figure S1. Crystal structure of KAlCl_4 .

Figure S2. ^{27}Al NMR spectra of Al powder and LiCl-KCl-Al salt system.

Figure S3. Full-scale XPS (a) and High-resolution Al 2p (b) results of three area salt. High-resolution Li 1s (c), and K 2p (d) of Al-M.

Figure S4. Optical graph of (a) graphite crucible and (b) quartz crucible after reaction.

Figure S5. ^{35}Cl high-temperature NMR spectra of LiCl-KCl and LiCl-KCl-Al salt systems.

Figure S6. ICP-OES results of the content of Al in molten salt system with different temperature.

Figure S1. Crystal structure of KAlCl_4 .

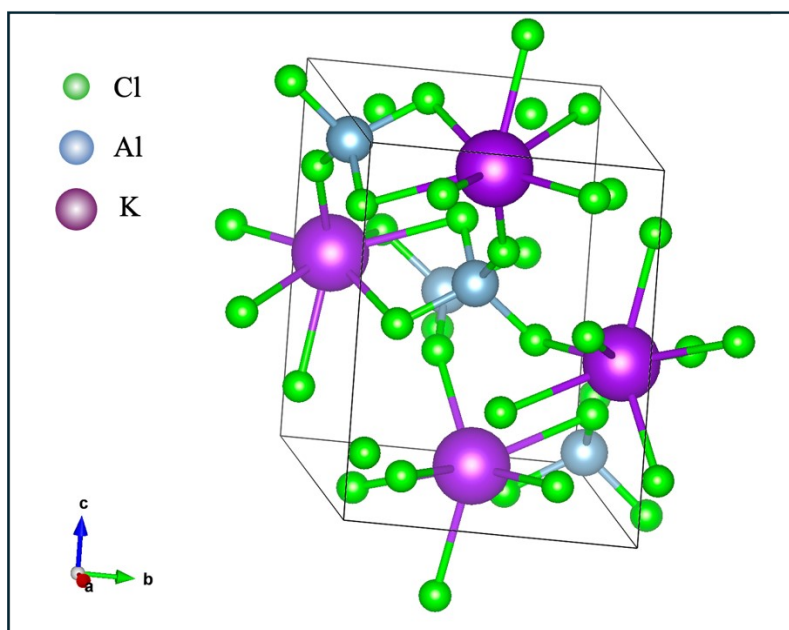


Figure S2. ^{27}Al NMR spectra of Al powder and LiCl-KCl-Al salt system.

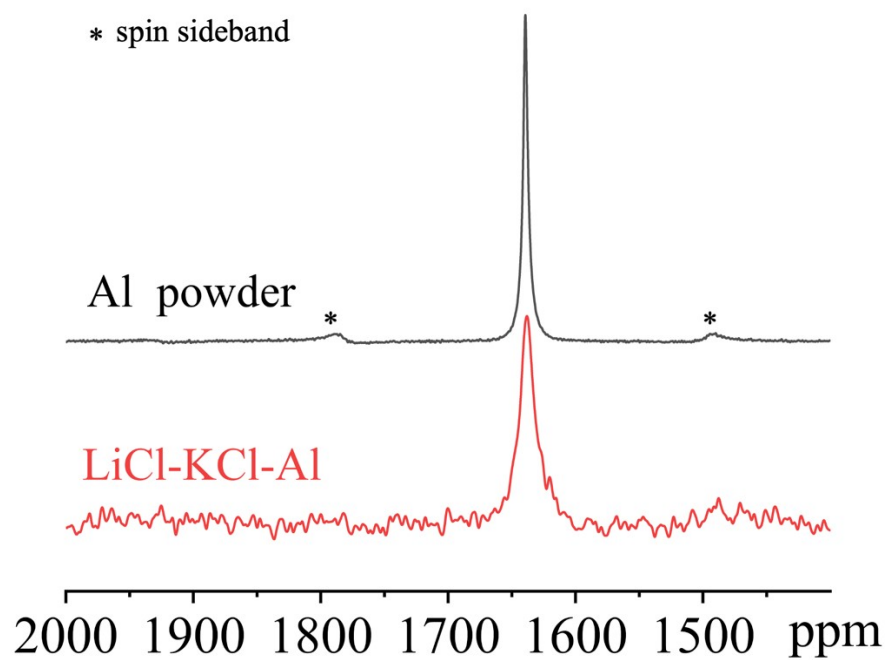


Figure S3. Full-scale XPS (a) and High-resolution Al 2p (b) results of three area salt.

High-resolution Li 1s (c), and K 2p (d) of Al-M.

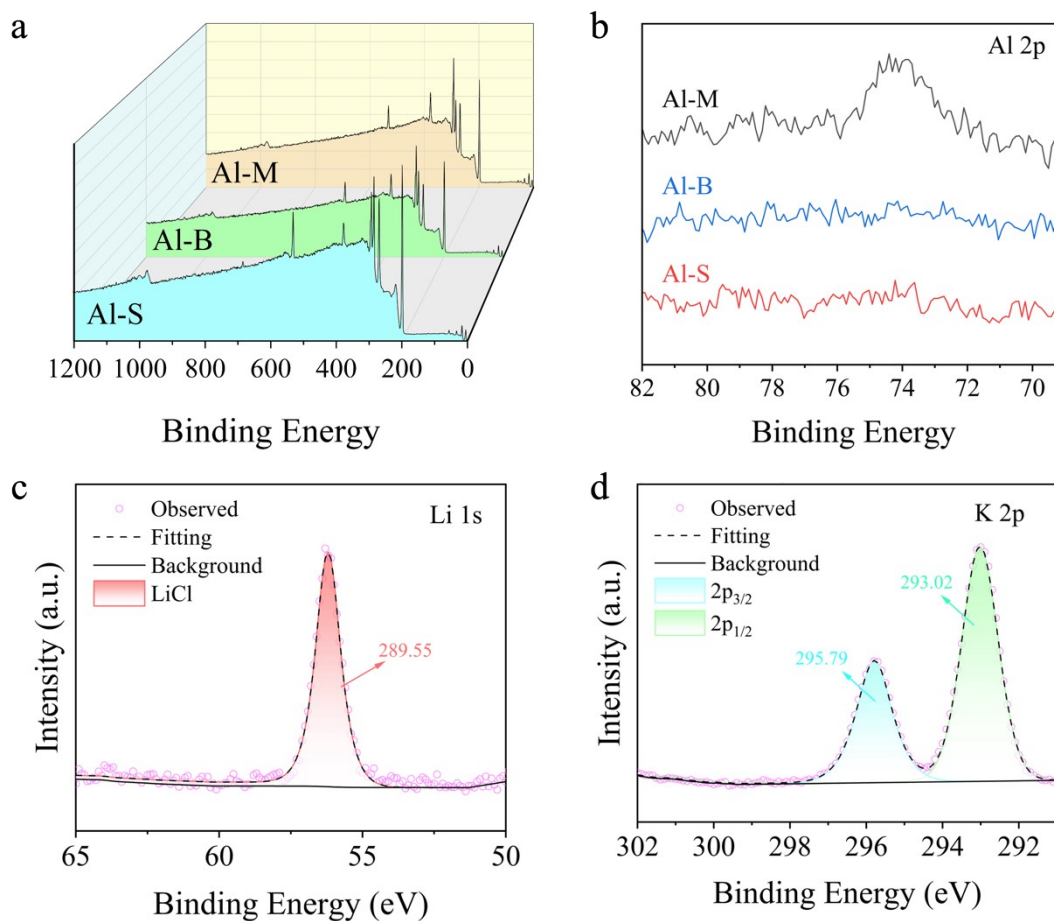
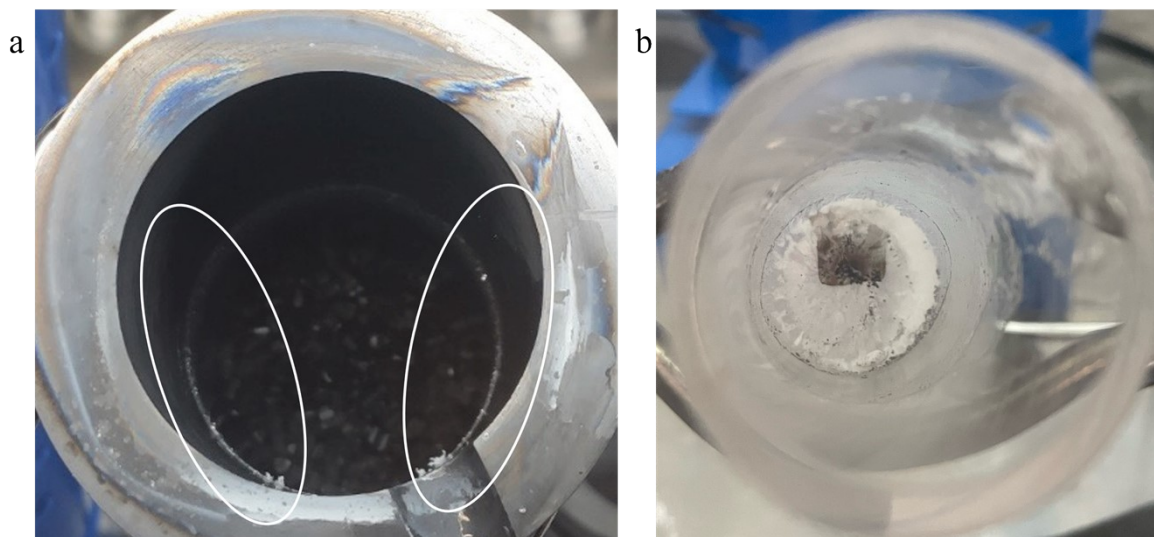


Figure S4. Optical graph of (a) graphite crucible and (b) quartz crucible after reaction.



The Al precipitation on the graphite crucible is observed in the white circle, and the quartz crucible did not exist the precipitation of Al.

Figure S5. ^{35}Cl high-temperature NMR spectra of LiCl-KCl and LiCl-KCl-Al salt systems.

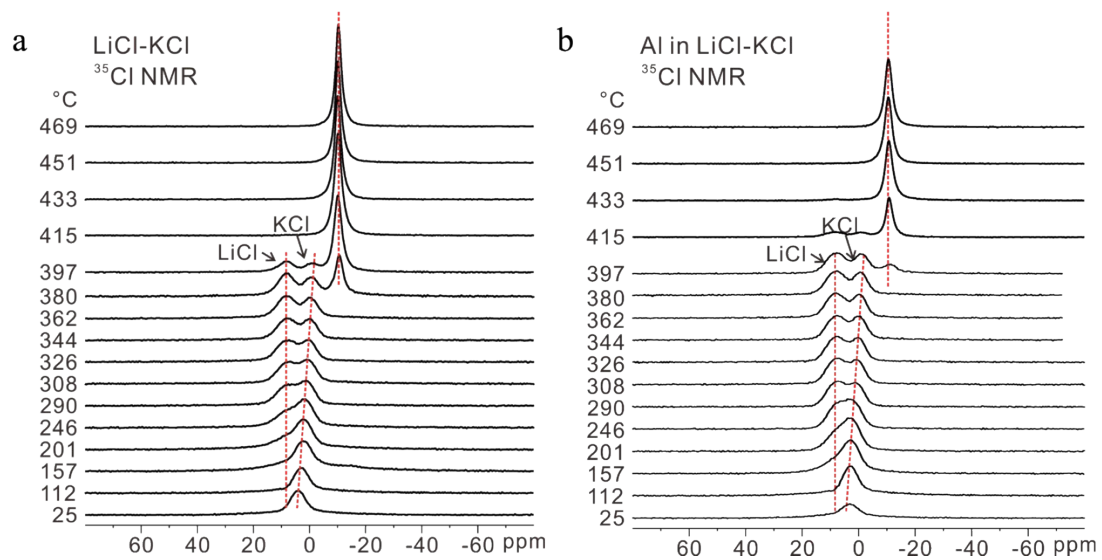


Figure S6. ICP-OES results of the concentration of Al in molten salt system with different temperature.

