

Supplementary Videos

Supplementary Video 1. Optical imaging of CPL/acetamide eutectic solvent catholyte with carbon cloth current collector during the discharging process of a K-Na/S coin cell.

Supplementary Video 2. Optical imaging of TEGDME catholyte with carbon cloth current collector during the discharging process of a K-Na/S coin cell.

Supplementary Video 3. Optical imaging of CPL/acetamide eutectic solvent catholyte with carbon cloth current collector at the final stage of discharging in a K-Na/S coin cell.

Supplementary Video 4. Optical imaging of TEGDME catholyte with carbon cloth current collector at the final stage of discharging in a K-Na/S coin cell.

Supplementary Video 5. Flammability test of 1.2 mol L⁻¹ [S] Na₂S and Na₂S₈ CPL/acetamide eutectic solvent solution.

Supplementary Video 6. Flammability test of polypropylene/polyethylene separators soaked with CPL/acetamide eutectic solvent and commercial liquid electrolyte