

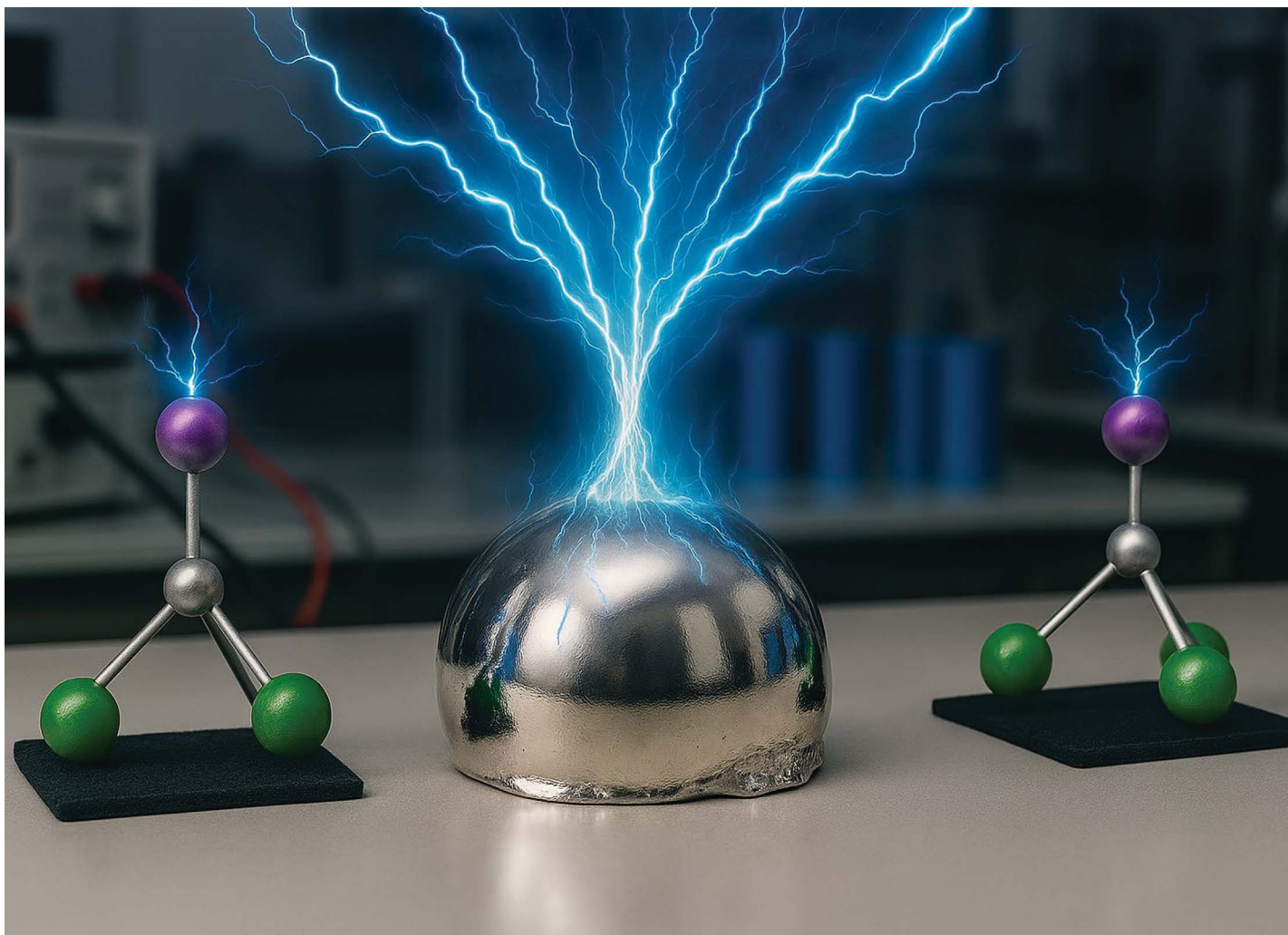
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Showcasing research from Sandia National Laboratories' (USA) Grid Scale Energy Storage Program.

A high power, low temperature molten sodium battery

Low temperature molten sodium batteries promise low-cost, grid-scale energy storage using earth-abundant materials. To be economically viable, they must demonstrate high current (power) at relevant discharge times. This work demonstrates up to a 100× increase in operating current, with charging currents as high as 250 mA cm^{-2} ($1,070 \text{ mW cm}^{-2}$). A key factor to improving performance is the ratio of graphite felt current collector to molten salt catholyte, consisting of NaI- AlCl_3 . Depicted are the key active materials – molten sodium and AlCl_3I^- molecules sitting atop pieces of graphite felt.

Image created with AI.

As featured in:



See Leo J. Small *et al.*,
RSC Sustainability, 2026, 4, 1846.