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An Odyssey Through the Uncharted Waters of Post Lithium-Ion Batteries

Advanced energy storage technologies such as lithium-ion batteries have enabled the development of ubiquitous portable electronic devices and are critical to the development and widespread adoption of practical electric vehicles. While lithium-ion batteries represent the most advanced energy storage technology currently available commercially, the desire for significant improvement in energy density and cost has led to a strong interest in so-called "beyond lithium-ion" batteries such as sodium, lithium-air, lithium-sulfur, multivalent batteries and solid-state batteries. In this talk, I will guide you on an odyssey toward post li-ion batteries. In particular, we will travel through the peaks and valleys of multivalent1-4, lithium-sulfur5-8, and all-solid-state batteries9-12.

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