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Abstract for an Invited Paper
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Physics of Materials for Sodium-Ion Batteries

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Sodium is used as a functional ionic species in a variety of electrochemical energy storage devices. This talk will examine several manifestations of sodium ion use, and will focus deeply on a novel class of aqueous electrolyte sodium ion batteries that have been developed over the past 5 years. While these new systems are typically lower in energy density, they are very robust and low in cost, making them appealing for a number of stationary energy storage applications. Specific topics to be covered include: sodium ion intercalation compounds, sodium/carbon interaction at potentials below 0V vs NHE, the behavior of porous thick electrodes in different electrolyte solutions, and the future outlook for sodium ion battery research.