Are sodium ion batteries safe



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This review summarizes the safety issues plaguing sodium ion batteries and the research progress of safety improvement strategies, providing guidance and assistance for designing highly safe sodium ion batteries.

A new X-ray technique developed by Cornell engineers has revealed the cause of a long-identified flaw in sodium-ion batteries; a discovery that could prove to be a major step toward making sodium-ion as ubiquitous as lithium-ion.

Sodium-ion batteries have several advantages over competing battery technologies. Compared to lithium-ion batteries, sodium-ion batteries have somewhat lower cost, better safety characteristics (for the aqueous versions), and similar power delivery characteristics, but also a lower energy density (especially the aqueous versions). [51]

Although lithium-ion batteries have dominated the rechargeable battery market for decades, new and emerging battery chemistries may soon challenge that dominance. One of the most promising contenders is the sodium-ion battery, an option that could mean cheaper EV batteries with similar power storage properties if the technology reaches its hoped-for potential. Because they are so new, however, sodium-ion batteries had not previously been addressed in the quality or safety regulations that apply to similar batteries, like lithium-ion batteries.

Battery regulation is changing rapidly as new chemistries emerge and as new use cases uncover potential weaknesses in battery design. If you are a manufacturer with questions about what regulations apply to your batteries or battery-powered products, reach out to the experts at Element for guidance. We provide battery safety testingacross a range of industries and regions, which requires our testing experts to remain constantly up-to-date on how regulations and standards are applied in practice. Contact usfor more information.

Element stays up-to-date with the latest industry trends, including automotive, medical, and technology. We offer comprehensive battery testing services for a wide variety of batteries and cells.

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