Better than lithium-ion technology? - Materials aspects of alternative battery concepts

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The rising demand for rechargeable batteries for electric vehicles and grid storage applications sparks a lot of interest on alternatives to “standard Li-ion battery technology”. The size of these markets is so large that great efforts are currently undertaken towards using more cost-effective materials that will not run into supply and/or resource risks. At the same time, researchers are seeking for safer batteries and batteries with even higher energy content. Can we have it all at once? This talk will give a brief introduction into chances and challenges of sodium-ion, metal-sulfur and solid-state batteries – three emerging alternatives to “Li-ion technology”.

Some recent literature: