



Dienstag, 24.10.2017, 16.15 Uhr in W0 0-001

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### **Battery Electrodes and Design for Off-grid Energy Storage**

The performance demands placed on batteries are growing rapidly due to the increasing adoption of technologies such as off-grid storage for photovoltaic power stations and battery packs for electric vehicles. Currently, lithium-ion batteries and their derivatives have the highest voltage and power/energy density of any commercial battery, however, there are downsides to lithium-ion batteries, such as safety concerns, high fabrication cost, electrolyte toxicity, and the relative global scarcity of lithium. Recently, much progress has been made in the use of alternative battery chemistries. In this talk, recent research at the University of Southampton into metal-air and aluminium-ion batteries will be presented, with discussion of their chemistry and the advantages and limitations of these batteries for application in off-grid energy storage.