Seminar/Talk

Electrochemical energy storage beyond the horizon: materials and mechanism

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Host: Maria Ibanez

Energy storage will become far more important in the future than in any time in the past and is one of todays foremost societal challenges. Going beyond the limitations of current battery technology in terms of energy, power, sustainability, and cost requires new, potentially game changing approaches beyond intercalation chemistries. This is where my research interests are focussed with the development of new concepts and materials, and the fundamental scientific understanding. This involves making redox active and charge transport materials with new sets of properties and investigating indepth their interfacial electrochemical reactions. Particular chemistries include metal-O2, metal-S, alloying, and capacitive materials. To understand the processes, we develop in-situ spectroscopic, microscopic, and diffractive methods. Here, I address recent advances with soft and liquid mixed electron/ion conductors as well as pioneering research into the highly reactive singlet oxygen in batteries, which is decisive for performance and lifetime of most future battery materials.

Wednesday, January 9, 2019 09:00am - 10:00am
Mondi Seminar Room 3, Central Building

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