Batteries beyond Li-ion

Abstract

Although today's Li-ion technology has conquered the portable electronic markets and is still improving, it falls short of meeting the demands dictated by both ERN and EV's applications. There is room for optimism as long as we pursue paradigm shifts while keeping in mind the concept of sustainability. This class will touch on a few of new recent approaches enlisting new chemistries beyond Li-ion such as i) the Li-O2 or LiS technologies for reaching high energy densities, ii) exploring the Na-ion chemistry to combat fears related to possible shortage in Li resources and lastly iii) redox-flow systems for low cost mass storage.