**Carbon-based Electrode Materials for Metal-ion Batteries**

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Energy storage is an important problem to realize low carbon society and there have been many challenges. Metal-ion batteries have attracted remarkable attention recently due to the high energy storage demands. The requirement of feasible electrode materials with high capacity and good cycling stability has promoted the exploration of various electrode materials for metal ion batteries. Materials engineering plays a key role in the field of battery research. In particular, engineering materials at the nanoscale offers unique properties resulting in high performance electrodes in various energy storage devices. Consequently, considerable efforts have been made in recent years to fulfil the future requirements of electrochemical energy storage devices. Various multi-functional hybrid nanostructured materials are currently being studied to improve energy and power densities of next generation batteries. In this talk, I will present some of our recent progress in the synthesis of different types of hybrid nanostructures to enhance the electrochemical energy storage properties of metal-ion battery[1-6].

Keywords: Rechargeable batteries, anode, high energy density, long cycle life

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