



Currently, energy storage is a major challenge for a variety of applications. Batteries with higher energy density, better safety, and lower cost will be needed to continue the deployment of vehicles in the transportation sector that rely on electrical energy to drive their motors. In addition, energy storage is needed to provide energy for intermittent renewable energy sources such as wind and solar when weather conditions limit energy generation. Improving battery performance will require new innovations in battery materials, chemistries, and architectures. Our research investigates the design of new materials and materials' chemistries. This research involves the synthesis, characterization, and evaluation of materials' properties using a variety of techniques. The primary area of application that we focus on is rechargeable battery electrode materials.

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*"Tailoring synthesis of new materials at multiple length scales."*



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