

BATTERIES AND BEYOND:

ADVANCES TO ADDRESS
CRITICAL CHALLENGES IN
ENERGY & SUSTAINABILITY

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In this lecture, key advances in research centered at the interface of renewable energy systems and atmospheric carbon capture and conversion technologies will be described. First, broad and ongoing challenges in the design and development of next-generation battery technology will be discussed and a new class of sodium batteries developed from earth abundant materials will be highlighted. Next, technology adapted to capture atmospheric carbon dioxide in molten carbonate salts and transform CO_2 using energy-efficient electrochemistry into technology-valuable carbon materials such as carbon nanotubes will be described. In addition, the transition from research to a commercial venture to manufacture stable carbon materials from atmospheric CO_2 for a range of applications will be discussed. The lecture will conclude with a sharing of perspectives about the science and technology challenges and opportunities ahead to realize a truly sustainable future.

WEDNESDAY, MARCH 30

7:00 PM

LANG HALL AUDITORIUM

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