

Sustainable Recycling of Critical Materials in Lithium-ion Batteries

A Webinar Hosted by the Chemical Sciences Roundtable

March 2, 2023

3:00 – 4:30 PM ET

Lithium-ion batteries are used for energy storage in many applications including electronic vehicles, cell phones, and clean energy. As their use has increased over the past several decades, concerns about their life cycle remain, including raw material extraction and disposal. Production of new batteries requires mining metals such as lithium and cobalt, which is costly and hazardous. Furthermore, improper disposal can have negative consequences on the environment. Recycling reclaims spent batteries for separation and chemical processing that results in useful source material for the creation of new batteries. This ultimately decreases cost of production and demand for unsafe mining practices. However, ongoing research is essential to increase efficiency and scale battery recycling to reach the growing demand. This webinar, hosted by the Chemical Sciences Roundtable, will provide a technical overview on the process of battery recycling, discuss the critical materials needs to improve recycling strategy, and present innovative chemistry research in the industry.

AGENDA

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| 3:00 PM | Welcome and Introductions
<i>Ayanna Lynch, Research Assistant</i> |
| 3:05 PM | Recycling of Lithium-Ion Batteries - an Introduction
Hans Eric Melin
Founder
<i>Circular Energy Storage</i> |
| 3:25 PM | Environmental Impacts of Battery Recycling
Rebecca Ciez
Assistant Professor of Mechanical Engineering,
and Environmental and Ecological Engineering
<i>Purdue University</i> |
| 3:45 PM | The Future of Lithium-ion Battery Recycling
Bryant Polzin
Deputy Director
<i>ReCell Center for Advanced Battery Recycling</i> |
| 4:05 PM | Discussion
Co-Moderated by
Mark Jones, <i>Chemical Sciences Roundtable Member</i>
Ian Rowe, <i>Chemical Sciences Roundtable Member</i> |
| 4:30 PM | Webinar Concludes |

