

LITHIUM-ION BATTERY RECYCLING PRIZE



U.S. DEPARTMENT OF ENERGY

Team Name:	
Primary Submitter Name:	Lauren Crandon
City and State:	Bend, OR
Member Names (including partners and affiliates):	Steve Sloop, Lauren Crandon, OnTo Technology, Oregon State University
Submission Title:	Safety in Numbers for the Next Generation of Battery Recycling
Submission Track:	Storage & Transportation

A Public Document



Concept

- Eliminate hazardous characteristics present in damaged, defective, or end-of-life lithium-ion batteries.
- Demonstrate the technology with
 - Points of generation of end-of-life batteries.
 - Collection hubs.
 - US Department of Transportation stakeholders with the aim of defining deactivated material that is free of Class-9 requirements.

Approach

- The technical approach uses patented and proprietary methods to remove flammable hazards.
- **Benign chemical processing with environmentally friendly materials.**
- **Introducing automation features**
- **Blanket-Process applicable to the many types of lithium-ion chemistries and geometries.**
 - **Consumer Electronic**
 - **Electric Vehicle**
 - **Alkaline**
- A successful Prize will accelerate the commercialization of federally funded technical development through SBIR awards to OnTo Technology.

Potential Impact

- Eliminate 40% of the cost liability in recycling of lithium-ion due to transportation of Class-9 Hazards
- Improve the safety of the recycling industry by essentially eliminating the risk of fire in storage or transportation of lithium-ion.
- Provide the technical basis for infrastructure critical for the next generation of safe, efficient lithium-ion battery recycling.