

# LITHIUM-ION BATTERY RECYCLING PRIZE



U.S. DEPARTMENT OF ENERGY

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**Submission Title:** Battery Sorting With Voltammetry & Impedance Data

**Submission Track:** Track 2 – Separation and Sorting

**Abstract:** (<100 Word)

We propose designing a high-throughput device programmed to perform electrochemical measurements called Cyclic Voltammetry and Electrochemical Impedance Spectroscopy in an automated fashion. The data generated by this Electrochemical Battery Sorting System (EBSS) will constitute the three key conclusions all battery recyclers care about during sorting, namely 1) Battery cell chemistry, 2) State of Charge (SOC), and 3) State of Health (SOH) as expressed on an A-F grading scale. If a customer had a 24 hour per day recycling operation operating 7 days per week, they could sort approximately 2.6 million batteries per month with a single EBSS module in operation (\$0.003 per battery).



Lithium-Ion Battery Recycling Prize

Supported by the U.S. Department of Energy Vehicle Technologies Office and Advanced Manufacturing Office;  
Administered by the National Renewable Energy Laboratory