



U.S. DEPARTMENT
of **ENERGY**

Office of Critical Minerals
and Energy Innovation



2025 Annual Merit Review Vehicle Technologies Office

Results Report

December 2025

1. Battery R&D

The Vehicle Technologies Office (VTO) funds research and development (R&D) of engines, batteries, power electronics, motors, materials, and transportation systems. VTO leverages the unique capabilities and world-class expertise of the national laboratory system to innovate new vehicle technologies. VTO is uniquely positioned to accelerate innovative transportation technologies due to strategic public-private research partnerships with industry (e.g., the U.S. DRIVE Partnership, the 21st Century Truck Partnership) that leverage relevant expertise. These partnerships prevent duplication of effort, focus U.S. Department of Energy (DOE) research on critical R&D barriers, and accelerate progress.

The Batteries program supports early-stage R&D of high-energy and high-power battery materials, cells, and battery development that can enable industry to significantly reduce the cost, weight, volume, and charge time of electric vehicle (EV) batteries. This activity is organized into three sub-activities: advanced battery materials research, advanced battery cell R&D, and battery recycling R&D. Advanced battery materials research is coordinated with the Critical Minerals Initiative and includes: early-stage research of new lithium-ion (Li-ion) cathodes, anodes, and electrolyte materials (currently accounting for 50% to 70% of the automotive battery cost) and the development of “beyond Li-ion” technologies, such as lithium (Li) metal anodes, solid-state electrolytes (SSEs), sulfur-based cathodes, and sodium-ion batteries; that have the potential to significantly reduce weight, volume, and cost reduction of over 80% from their 2008 baseline, with a target of \$60/kWh.

Advanced battery cell R&D includes early-stage R&D of new battery cell technology that contains new materials and electrodes that can reduce the overall battery cost, weight, and volume while improving energy, life, safety, and fast charging. Battery recycling R&D includes the development of innovative battery materials recycling and reuse technologies, and the Lithium-Ion Battery Recycling Prize, both of which aim to assure sustainability and domestic supplies of key battery materials and minerals.

Project Feedback

In this merit review activity, each reviewer was asked to respond to a series of questions, involving multiple-choice responses, expository responses where text comments were requested, and numeric score responses (on a scale of 1.0 to 4.0). In the pages that follow, the multiple choice and numeric score questions will be presented in graph form for each project. A table presenting the average numeric score for each question for each project is presented below.

Table 1-1 – Project Feedback

Presentation ID	Presentation Title	Principal Investigator (Organization)	Page Number	Approach	Technical Accomplishments	Collaboration	Future Research	Weighted Average
BAT028	Materials Benchmarking Activities for Cell Analysis, Modeling, and Prototyping (CAMP) Facility	Wenquan Lu (Argonne National Laboratory)	1-13	3.50	3.10	3.30	3.30	3.13
BAT054	Modeling of Amorphous Solid-State Conductors	Gerbrand Ceder (Lawrence Berkeley National Laboratory)	1-14	3.75	3.50	3.00	3.17	3.40
BAT085	Interfacial Processes-Diagnostics: Characterization and Modeling of Lithium-Metal Batteries	Robert Kostecki (Lawrence Berkeley National Laboratory)	1-15	3.33	3.75	3.75	3.25	3.69
BAT091	Characterization and Modeling of Li-Metal Batteries, First Principles Modeling and Machine Learning	Kristin A. Persson (Lawrence Berkeley National Laboratory)	1-16	3.83	3.50	3.50	3.33	3.44
BAT167	Process Development and Scale-Up of Advanced Active Battery Materials	Ozge Kahvecioglu (Argonne National Laboratory)	1-17	3.63	3.58	3.83	3.50	3.67

Presentation ID	Presentation Title	Principal Investigator (Organization)	Page Number	Approach	Technical Accomplishments	Collaboration	Future Research	Weighted Average
BAT168	Process Development and Scale-Up of Critical Battery Materials - Continuous Flow-Produced Materials	Trevor Dzwiniel (Argonne National Laboratory)	1-18	3.67	3.50	3.75	3.25	3.53
BAT225	Model System Diagnostics for High-Energy Cathode Development†	Guoying Chen (Lawrence Berkeley National Laboratory)	1-19	3.50	3.83	3.50	3.17	3.67
BAT280	Novel Chemistry Lithium-Selenium and Selenium-Sulfur Couple	Khalil Amine (Argonne National Laboratory)	1-20	3.75	3.50	3.38	3.25	3.45
BAT282	Development of High-Energy Lithium-Sulfur Batteries†	Dongping Lu (Pacific Northwest National Laboratory)	1-21	3.25	3.75	3.50	3.50	3.69
BAT285	Investigation of Sulfur Reaction Mechanisms	Enyuan Hu (Brookhaven National Laboratory)	1-22	3.50	3.50	3.00	3.25	3.34
BAT309	Mathematical Modeling of Beyond Lithium-Ion Batteries	Venkat Srinivasan (Argonne National Laboratory)	1-23	2.90	3.70	3.50	3.60	3.61
BAT315	Process R&D for Droplet-Produced Powdered Materials	Joe Libera (Argonne National Laboratory)	1-24	3.50	2.80	2.70	2.90	2.83
BAT360	Cathodes Beyond Lithium Nickel Manganese Cobalt Oxide (NMC) 811†	Arumugam Manthiram (University of Texas at Austin)	1-25	3.25	3.50	3.50	3.38	3.48

Presentation ID	Presentation Title	Principal Investigator (Organization)	Page Number	Approach	Technical Accomplishments	Collaboration	Future Research	Weighted Average
BAT362	High-Capacity S Cathode Materials†	Prashant Kumta (University of Pittsburgh)	1-26	3.75	3.00	3.25	3.38	3.14
BAT367	Multiscale Characterization Studies of Lithium Metal Batteries†	Peter Khalifah (Brookhaven National Laboratory)	1-27	3.63	3.75	3.75	3.50	3.72
BAT377	ReCell – Overview and Update	Jeffrey Spangenberg (Argonne National Laboratory)	1-28	3.58	3.50	3.88	3.38	3.56
BAT470	Process R&D Using Supercritical Fluid Reactors	Youngho Shin (Argonne National Laboratory)	1-29	3.25	3.42	3.50	3.33	3.46
BAT496	Silicon Consortium Project: Advanced Characterization of Silicon Electrodes†	Robert Kostecki (Lawrence Berkeley National Laboratory)	1-30	3.38	3.25	3.75	3.38	3.33
BAT497	Silicon Consortium Project: Electrochemistry of Silicon Electrodes†	Christopher Johnson (Argonne National Laboratory)	1-31	3.50	3.38	3.75	3.13	3.39
BAT498	Silicon Consortium Project: Next-Gen Materials for Silicon Anodes†	Nathan Neale (National Renewable Energy Laboratory)	1-32	3.38	3.63	3.75	3.25	3.56
BAT499	Silicon Consortium Project: Mechanical Properties of Silicon Anodes†	Katharine Harrison (National Renewable Energy Laboratory)	1-33	3.63	3.50	3.63	3.13	3.44

Presentation ID	Presentation Title	Principal Investigator (Organization)	Page Number	Approach	Technical Accomplishments	Collaboration	Future Research	Weighted Average
BAT501	Integrated Modeling of Electrolyte Properties and Machine Learning of Calendar Lifetime Prediction of Si Anode Batteries†	Kristin A. Persson (Lawrence Berkeley National Laboratory)	1-34	3.60	3.38	3.63	3.50	3.48
BAT523	Development of Long-Life Lithium and Sulfurized Polyacrylonitrile (SPAN) Cells†	Ping Liu (University of California San Diego)	1-35	3.50	3.70	4.00	3.80	3.73
BAT524	Advanced Electrolytes for Lithium Metal Batteries†	Chunsheng Wang (University of Maryland, College Park)	1-36	3.60	3.50	3.50	2.75	3.41
BAT555	Advanced Polymer Materials for Batteries	Zhenan Bao (SLAC National Accelerator Laboratory/ Stanford University)	1-37	3.63	3.40	3.70	3.60	3.51
BAT569	Earth-Abundant Cathode Active Materials for Li-Ion Batteries	Jason Croy (Argonne National Laboratory)	1-38	3.75	3.25	3.75	3.25	3.41
BAT570	Cation-Disordered Cathode Materials (DRX+) - Overview and Progress Update	Gerbrand Ceder (Lawrence Berkeley National Laboratory)	1-39	3.40	3.50	3.63	3.50	3.58
BAT571	ReCell Center-Direct Recycling of Materials	Albert Lipson (Argonne National Laboratory)	1-40	3.30	3.40	3.40	3.20	3.38

Presentation ID	Presentation Title	Principal Investigator (Organization)	Page Number	Approach	Technical Accomplishments	Collaboration	Future Research	Weighted Average
BAT572	ReCell Center-Advanced Resource Recovery	Yaocai Bai (Oak Ridge National Laboratory)	1-41	3.67	3.20	3.10	3.20	3.21
BAT573	ReCell Center-Design for Sustainability	Kandler Smith (National Renewable Energy Laboratory)	1-42	3.63	3.50	3.33	3.50	3.52
BAT574	ReCell Center-Modeling and Analysis	Sabine Gallagher (Argonne National Laboratory)	1-43	3.38	3.50	3.50	3.63	3.55
BAT576	Solid State Batteries with Long Cycle Life and High Energy Density	Haegyum Kim (Lawrence Berkeley National Laboratory)	1-44	3.00	3.50	3.63	3.38	3.47
BAT577	Low-Pressure All-Solid-State Cells	Tony Burrell (National Renewable Energy Laboratory)	1-45	3.63	2.63	3.38	3.00	2.86
BAT578	Stable Solid-State Electrolyte and Interface for High-Energy Density Lithium-Sulfur Battery	Dongping Lu (Pacific Northwest National Laboratory)	1-46	3.50	3.50	3.25	3.25	3.47
BAT579	Multifunctional Gradient Coatings for Scalable High-Energy Density Sulfide-Based Solid-State Batteries	Justin Connell (Argonne National Laboratory)	1-47	3.50	3.38	3.38	3.38	3.41

Presentation ID	Presentation Title	Principal Investigator (Organization)	Page Number	Approach	Technical Accomplishments	Collaboration	Future Research	Weighted Average
BAT580	Thick Selenium-Sulfur Cathode Supported Ultra-thin Sulfide Electrolytes for High-Energy All-Solid-State Batteries	Guiliang Xu (Argonne National Laboratory)	1-48	3.00	3.50	3.50	3.50	3.50
BAT581	Precision Control of Lithium Surfaces for Solid-State Batteries	Andrew Westover (Oak Ridge National Laboratory)	1-49	2.88	3.08	3.08	2.92	3.04
BAT582	Inorganic-Polymer Composite Electrolytes with Architecture Design for Lithium Metal Solid-State Batteries	Enyuan Hu (Brookhaven National Laboratory)	1-50	3.33	3.13	2.88	3.00	3.02
BAT583	Development of All-Solid-State Battery Using Anti-Perovskite Electrolyte	Zonghai Chen (Argonne National Laboratory)	1-51	3.33	3.50	3.50	3.17	3.42
BAT584	Integrated Atomic-, Meso-, and Micro-Scale Diagnostics of Solid-State Batteries†	William Chueh/Yi Cui (SLAC National Accelerator Laboratory/Stanford University)	1-52	3.70	3.17	3.00	3.00	3.17
BAT605	Silicon Consortium Project: Next Generation Electrolytes for Silicon Anodes†	Gabe Veith (Oak Ridge National Laboratory)	1-53	3.50	3.50	3.70	3.20	3.54

Presentation ID	Presentation Title	Principal Investigator (Organization)	Page Number	Approach	Technical Accomplishments	Collaboration	Future Research	Weighted Average
BAT606	VTO High-Performance Computing Cluster†	Ray Grout (National Renewable Energy Laboratory)	1-54	3.00	3.63	3.75	3.50	3.59
BAT607	Processing and Scale-Up of High Energy Density Cobalt-Free Cathodes	Ilias Belharouak (Oak Ridge National Laboratory)	1-55	3.63	3.00	2.79	3.21	3.00
BAT608	Cathode-Electrolyte Interphase (CEI) Consortium (Thrust 1): Model Cathode Materials for Next-Generation Li-Ion Batteries†	Jie Xiao (Pacific Northwest National Laboratory)	1-56	3.50	3.50	3.63	3.25	3.52
BAT609	Cathode-Electrolyte Interphase (CEI) Consortium (Thrust 2): Electrolytes and CEI at High Voltages†	Jordi Cabana (Argonne National Laboratory)	1-57	3.50	3.63	3.50	3.50	3.56
BAT610	Cathode-Electrolyte Interphase (CEI) Consortium (Thrust 3): Characterization and Modeling to Understand CEI†	Amy Marschilok (Brookhaven National Laboratory)	1-58	2.83	3.63	3.50	3.38	3.55

Presentation ID	Presentation Title	Principal Investigator (Organization)	Page Number	Approach	Technical Accomplishments	Collaboration	Future Research	Weighted Average
BAT619	The Role of Thermodynamics and Kinetics on the Coulombic Efficiency of Lithium Metal Batteries with FEC and DME-based Electrolytes	Yang Shao-Horn (Massachusetts Institute of Technology)	1-59	3.63	3.00	3.17	3.00	2.98
BAT620	Lithium Metal Anode Stability Against Soft and Hard Solid Electrolytes	Nitash Balsara (Lawrence Berkeley National Laboratory)	1-60	3.50	3.50	3.63	3.50	3.55
BAT622	Thin Composite Solid Electrolyte for Li Metal Batteries	Chunsheng Wang (University of Maryland, College Park)	1-61	3.50	3.83	3.33	3.50	3.65
BAT623	Optimizing Cathode Architecture for Solid-State Li Metal-Sulfur Batteries	Eric Wachsman (University of Maryland, College Park)	1-62	3.63	3.50	3.17	3.50	3.46
BAT624	Scalable Noble-metal-free Interlayer Design for Sheet-type Dendrite-free Solid-state Lithium Metal Batteries	Yan Yao (University of Houston)	1-63	3.50	3.50	3.88	3.50	3.58
BAT625	Development of High Energy Density All Solid-State Li Batteries Enabled through Optimized Electrochemical Interface and Engineering Cell Designs	Deyang Qu (University of Wisconsin, Milwaukee)	1-64	3.63	3.38	3.25	3.38	3.39

Presentation ID	Presentation Title	Principal Investigator (Organization)	Page Number	Approach	Technical Accomplishments	Collaboration	Future Research	Weighted Average
BAT626	Development of Thin, Robust, Lithium-Impenetrable, High-Conductivity, Electrochemically Stable, Scalable, and Low-Cost Glassy Solid Electrolytes	Steve W. Martin (Iowa State University)	1-65	3.50	3.38	3.63	3.38	3.47
BAT627	Developing Materials to Enable High-Energy-Density Cathode and Stable Li Anode for Solid-State Li-S Batteries	Donghai Wang (Southern Methodist University)	1-66	3.67	3.67	3.67	3.67	3.63
BAT628	Molecular Ionic Composite Solid Electrolytes for Long-Cycling and High Voltage Li-Metal Batteries	Louis Madsen (Virginia Polytechnic Institute)	1-67	3.33	3.67	3.33	3.67	3.63
BAT629	Stable Sulfide-based Anode-Free and Anode-Limited All-Solid-State Lithium Battery	Puru Jena (Virginia Commonwealth University)	1-68	3.50	3.33	3.67	3.33	3.38
BAT630	Blocking Li Metal Dendrites In Solid Electrolytes With Ion-Exchange Induced Residual Stresses	Brian W. Sheldon (Brown University)	1-69	3.63	3.50	3.83	3.50	3.54
BAT634	A Novel Integrated End-to-end Processing of End-of-Life EV Batteries for Remanufacturing of New EV Cells†	Anthony Roger (Cirba Solutions)	1-70	3.50	3.50	3.75	3.50	3.56

Presentation ID	Presentation Title	Principal Investigator (Organization)	Page Number	Approach	Technical Accomplishments	Collaboration	Future Research	Weighted Average
BAT636	An Environmentally Sustainable Solution to Completely Recycle and Upcycle Lithium-Ion Battery Components†	Xiaofang Yang (Princeton NuEnergy)	1-71	3.75	3.75	3.75	3.50	3.66
BAT638	Supplying Refined Battery Materials into the U.S. EV Battery Supply Chain by Synergizing Lithium-Ion Battery Recycling with Mine Waste Reclamation†	Lei Pan (Michigan Technical University)	1-72	3.63	3.50	3.88	3.50	3.61
BAT639	Advanced Separation and Processing Technologies for an Integrated Lithium-Ion Battery Recycling System†	Ryan Melsert (American Battery Technology Company)	1-73	3.50	3.50	3.63	3.38	3.53
BAT (ELT303)	Second-Life Battery Solar and Storage Facility Demonstration Enabled by Advanced State of Health Tracking†	Joe Lacap (RePurpose Energy Inc.)	1-74	3.17	3.50	3.50	3.67	3.52
BAT (ELT304)	Low-Cost and Scalable Second Use Battery Demonstration in Central California for Equitable Domestic Manufacturing and Job Growth†	Antoni Tong (Smartville Inc.)	1-75	3.50	3.17	3.17	3.50	3.21

Presentation ID	Presentation Title	Principal Investigator (Organization)	Page Number	Approach	Technical Accomplishments	Collaboration	Future Research	Weighted Average
BAT (ELT305)	Second-life Battery in Mobile EV Charging Application for Rural Transportation (SMART)†	Pingen Chen (Tennessee Tech University)	1-76	3.75	3.75	3.50	3.75	3.66
BAT (ELT306)	Adaptive Second-Use Battery Utilization with Different Degradation Levels for EV Charging Stations and Power Grid†	Jaber Qahouq (University of Alabama)	1-77	3.75	3.50	3.50	3.75	3.59
BAT (ELT307)	13MW Pilot Second-Use Batteries Incorporating Module Level Power Conversion to Improve Battery Safety/ Performance†	Seth Kahn (Element Energy, Inc.)	1-78	3.47	3.50	2.00	3.75	3.41
Overall Average				3.48	3.45	3.47	3.37	3.45

† Denotes a poster presentation.

Presentation Number:

BAT028

Presentation Title:

Materials Benchmarking Activities for Cell Analysis, Modeling, and Prototyping (CAMP) Facility

Principal Investigator:

Wenquan Lu, Argonne National Laboratory

Presenter

Wenquan Lu, Argonne National Laboratory

Reviewer Sample Size

A total of five reviewers evaluated this project.

Project Relevance and Resources

100% of reviewers felt that the project was relevant to current DOE objectives, 0% of reviewers felt that the project was not relevant, and 0% of reviewers did not indicate an answer. 40% of reviewers felt that the resources were sufficient, 40% of reviewers felt that the resources were insufficient, 20% of reviewers felt that the resources were excessive, and 0% of reviewers did not indicate an answer.

Presentation Link:

https://www1.eere.energy.gov/vehiclesandfuels/downloads/2025_AMR/BAT028_Lu_2025_o.pdf

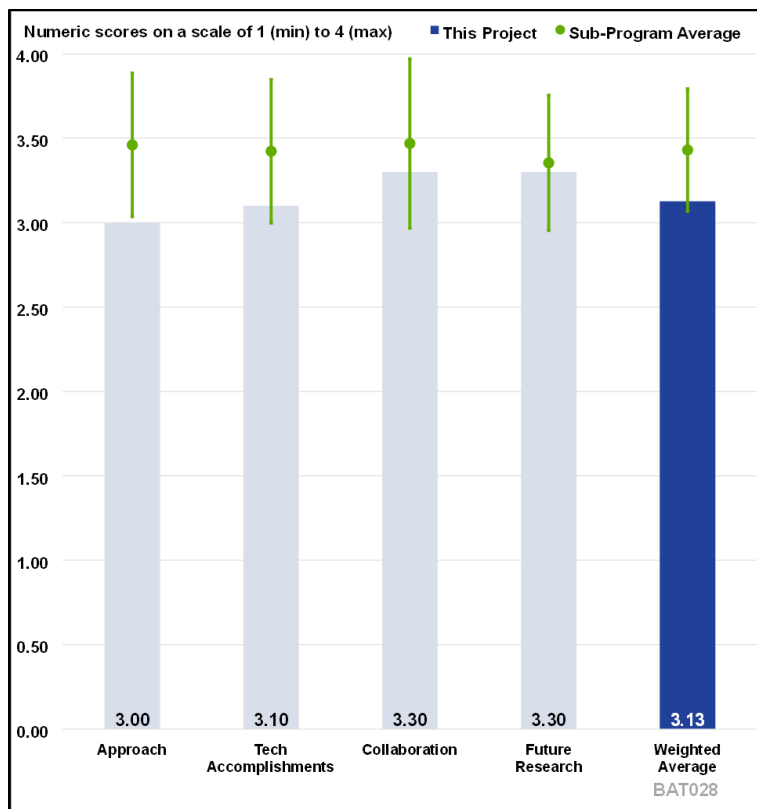


Figure 1-1 - Presentation Number: BAT028 Presentation Title: Materials Benchmarking Activities for Cell Analysis, Modeling, and Prototyping (CAMP) Facility Principal Investigator: Wenquan Lu, Argonne National Laboratory

Presentation Number:

BAT054

Presentation Title:

Modeling of Amorphous Solid-State Conductors

Principal Investigator:

Gerbrand Ceder, Lawrence
Berkeley National Laboratory

Presenter

Gerbrand Ceder, Lawrence
Berkeley National Laboratory

Reviewer Sample Size

A total of three reviewers evaluated this project.

Project Relevance and Resources

100% of reviewers felt that the project was relevant to current DOE objectives, 0% of reviewers felt that the project was not relevant, and 0% of reviewers did not indicate an answer. 100% of reviewers felt that the resources were sufficient, 0% of reviewers felt that the resources were insufficient, 0% of reviewers felt that the resources were excessive, and 0% of reviewers did not indicate an answer.

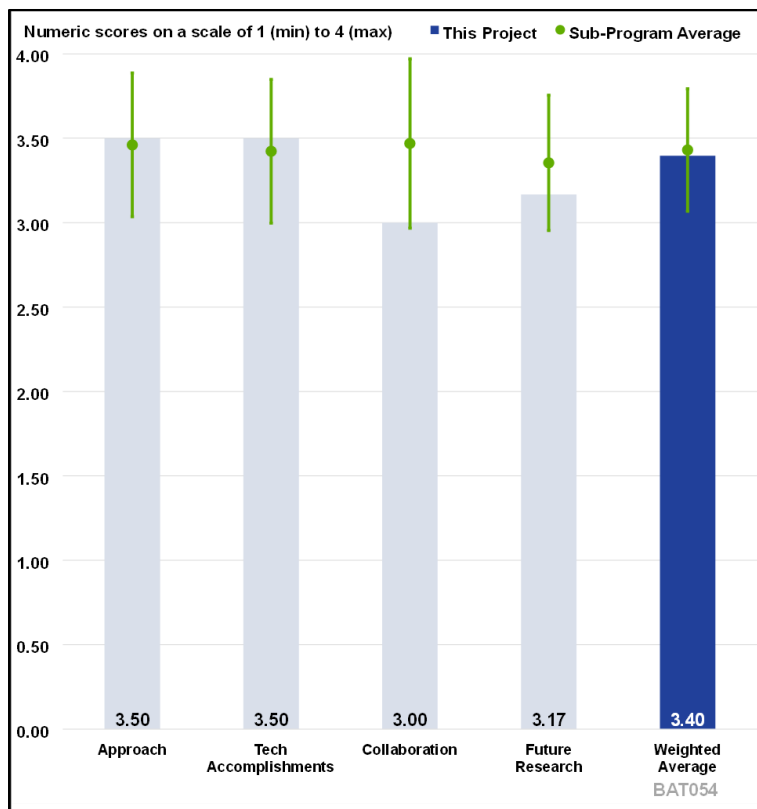


Figure 1-2 - Presentation Number: BAT054 Presentation Title: Modeling of Amorphous Solid-State Conductors Principal Investigator: Gerbrand Ceder, Lawrence Berkeley National Laboratory

Presentation Link:

https://www1.eere.energy.gov/vehiclesandfuels/downloads/2025_AMR/BAT054_Ceder_2025_o.pdf

Presentation Number:

BAT085

Presentation Title:

Interfacial Processes- Diagnostics: Characterization and Modeling of Lithium-Metal Batteries

Principal Investigator:

Robert Kostecki, Lawrence Berkeley National Laboratory

Presenter

Robert Kostecki, Lawrence Berkeley National Laboratory

Reviewer Sample Size

A total of two reviewers evaluated this project.

Project Relevance and Resources

100% of reviewers felt that the project was relevant to current DOE objectives, 0% of reviewers felt that the project was not relevant, and 0% of reviewers did not indicate an answer. 100% of reviewers felt that the resources were sufficient, 0% of reviewers felt that the resources were insufficient, 0% of reviewers felt that the resources were excessive, and 0% of reviewers did not indicate an answer.

Presentation Link:

https://www1.eere.energy.gov/vehiclesandfuels/downloads/2025_AMR/BAT085_Kostecki_2025_o.pdf

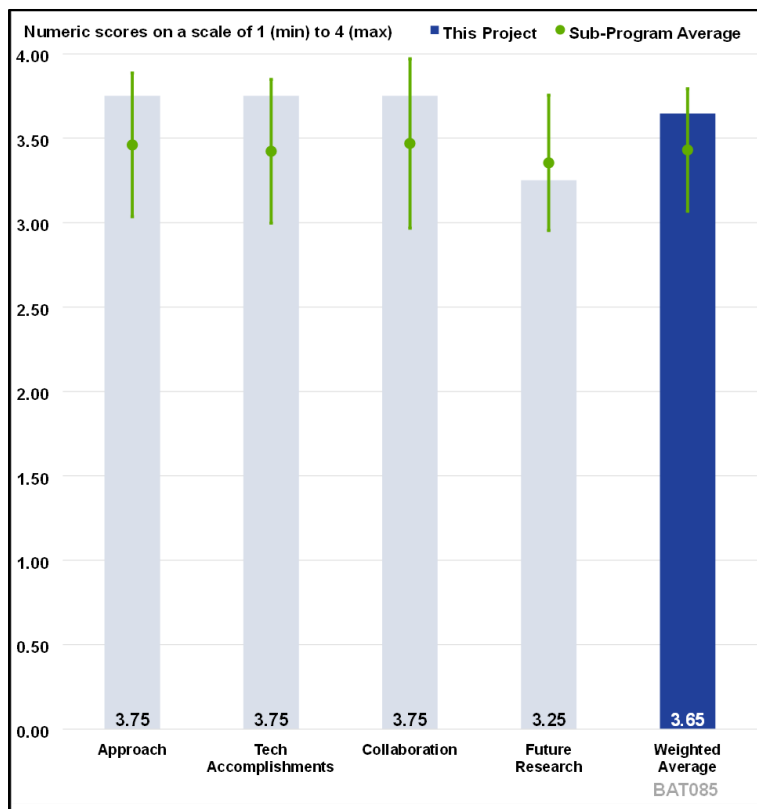


Figure 1-3 - Presentation Number: BAT085 Presentation Title: Interfacial Processes- Diagnostics: Characterization and Modeling of Lithium-Metal Batteries Principal Investigator: Robert Kostecki, Lawrence Berkeley National Laboratory

Presentation Number:

BAT091

Presentation Title:

Characterization and Modeling of Li-Metal Batteries, First Principles Modeling and Machine Learning

Principal Investigator:

Kristin A. Persson, Lawrence Berkeley National Laboratory

Presenter

Kristin A. Persson, Lawrence Berkeley National Laboratory

Reviewer Sample Size

A total of three reviewers evaluated this project.

Project Relevance and Resources

100% of reviewers felt that the project was relevant to current DOE objectives, 0% of reviewers felt that the project was not relevant, and 0% of reviewers did not indicate an answer. 100% of reviewers felt that the resources were sufficient, 0% of reviewers felt that the resources were insufficient, 0% of reviewers felt that the resources were excessive, and 0% of reviewers did not indicate an answer.

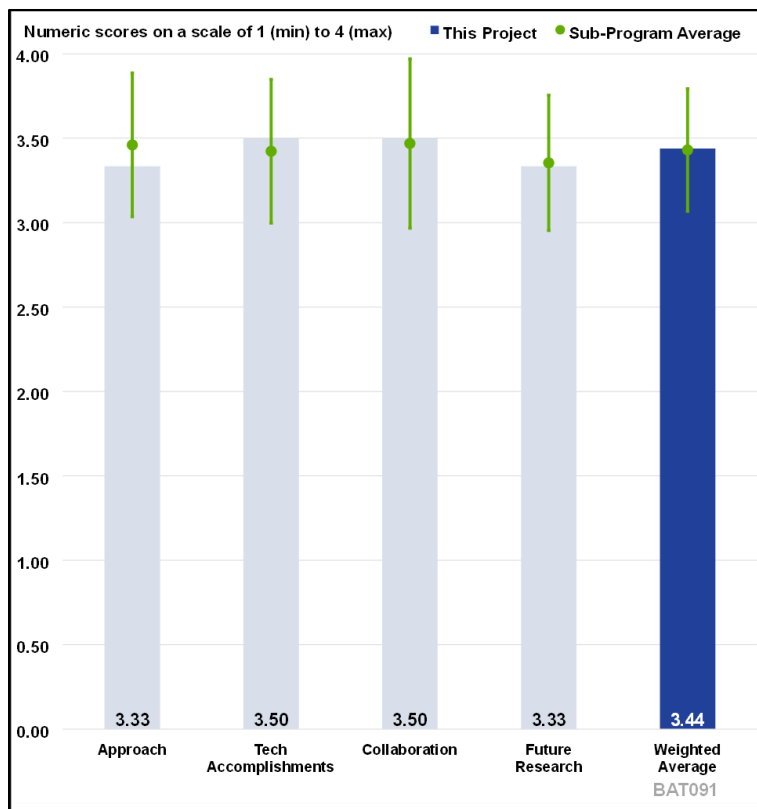


Figure 1-4 - Presentation Number: BAT091 Presentation Title: Characterization and Modeling of Li-Metal Batteries, First Principles Modeling and Machine Learning Principal Investigator: Kristin A. Persson, Lawrence Berkeley National Laboratory

Presentation Link:

https://www1.eere.energy.gov/vehiclesandfuels/downloads/2025_AMR/BAT091_Ceder_2025_o.pdf

Presentation Number:

BAT167

Presentation Title:

Process Development and Scale-Up of Advanced Active Battery Materials

Principal Investigator:

Ozge Kahvecioglu, Argonne National Laboratory

Presenter

Ozge Kahvecioglu, Argonne National Laboratory

Reviewer Sample Size

A total of six reviewers evaluated this project.

Project Relevance and Resources

100% of reviewers felt that the project was relevant to current DOE objectives, 0% of reviewers felt that the project was not relevant, and 0% of reviewers did not indicate an answer. 100% of reviewers felt that the resources were sufficient, 0% of reviewers felt that the resources were insufficient, 0% of reviewers felt that the resources were excessive, and 0% of reviewers did not indicate an answer.

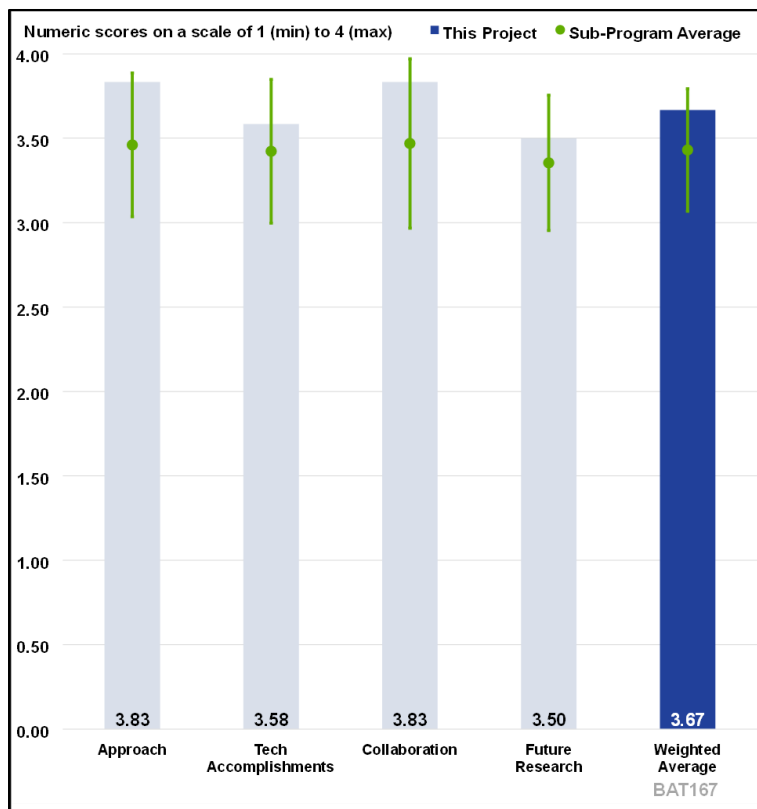


Figure 1-5 - Presentation Number: BAT167 Presentation Title: Process Development and Scale-Up of Advanced Active Battery Materials Principal Investigator: Ozge Kahvecioglu, Argonne National Laboratory

Presentation Link:

https://www1.eere.energy.gov/vehiclesandfuels/downloads/2025_AMR/BAT167_Kahvecioglu_2025_o.pdf

Presentation Number:

BAT168

Presentation Title:

Process Development and Scale-Up of Critical Battery Materials - Continuous Flow-Produced Materials

Principal Investigator:

Trevor Dzwiniel, Argonne National Laboratory

Presenter

Trevor Dzwiniel, Argonne National Laboratory

Reviewer Sample Size

A total of four reviewers evaluated this project.

Project Relevance and Resources

100% of reviewers felt that the project was relevant to current DOE objectives, 0% of reviewers felt that the project was not relevant, and 0% of reviewers did not indicate an answer. 100% of reviewers felt that the resources were sufficient, 0% of reviewers felt that the resources were insufficient, 0% of reviewers felt that the resources were excessive, and 0% of reviewers did not indicate an answer.

Presentation Link:

https://www1.eere.energy.gov/vehiclesandfuels/downloads/2025_AMR/BAT168_Dzwiniel_2025_o.pdf

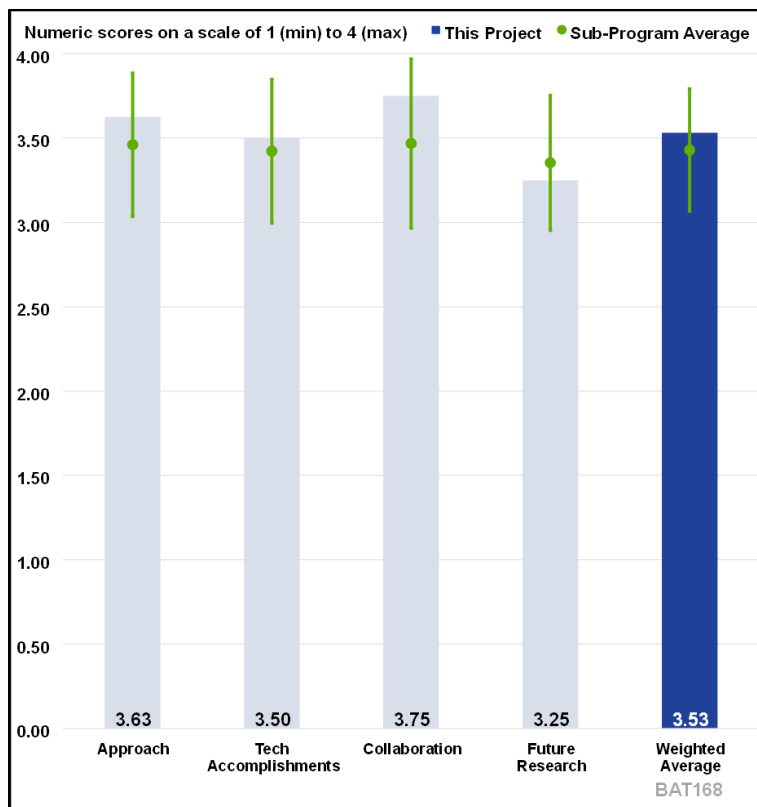


Figure 1-6 - Presentation Number: BAT168 Presentation Title: Process Development and Scale-Up of Critical Battery Materials - Continuous Flow-Produced Materials Principal Investigator: Trevor Dzwiniel, Argonne National Laboratory

Presentation Number:

BAT225

Presentation Title:

Model System Diagnostics for High-Energy Cathode Development

Principal Investigator:

Guoying Chen, Lawrence Berkeley National Laboratory

Presenter

Guoying Chen, Lawrence Berkeley National Laboratory

Reviewer Sample Size

A total of three reviewers evaluated this project.

Project Relevance and Resources

100% of reviewers felt that the project was relevant to current DOE objectives, 0% of reviewers felt that the project was not relevant, and 0% of reviewers did not indicate an answer. 100% of reviewers felt that the resources were sufficient, 0% of reviewers felt that the resources were insufficient, 0% of reviewers felt that the resources were excessive, and 0% of reviewers did not indicate an answer.

Presentation Link:

https://www1.eere.energy.gov/vehiclesandfuels/downloads/2025_AMR/BAT225_Chen_2025_p.pdf

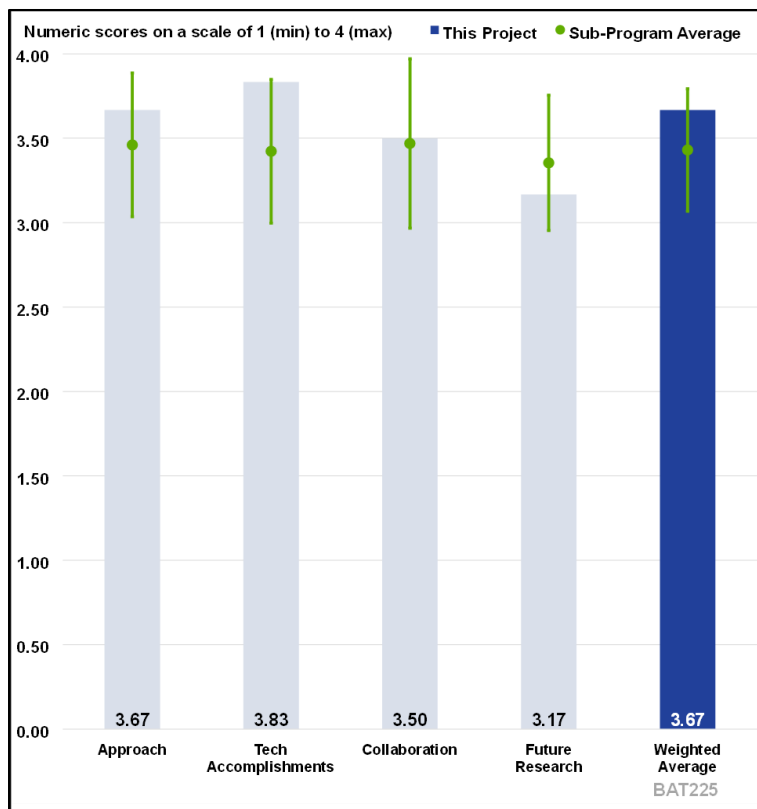


Figure 1-7 - Presentation Number: BAT225 Presentation Title: Model System Diagnostics for High-Energy Cathode Development Principal Investigator: Guoying Chen, Lawrence Berkeley National Laboratory

Presentation Number:

BAT280

Presentation Title:

Novel Chemistry Lithium-Selenium and Selenium-Sulfur Couple

Principal Investigator:

Khalil Amine, Argonne National Laboratory

Presenter

Khalil Amine, Argonne National Laboratory

Reviewer Sample Size

A total of four reviewers evaluated this project.

Project Relevance and Resources

100% of reviewers felt that the project was relevant to current DOE objectives, 0% of reviewers felt that the project was not relevant, and 0% of reviewers did not indicate an answer. 100% of reviewers felt that the resources were sufficient, 0% of reviewers felt that the resources were insufficient, 0% of reviewers felt that the resources were excessive, and 0% of reviewers did not indicate an answer.

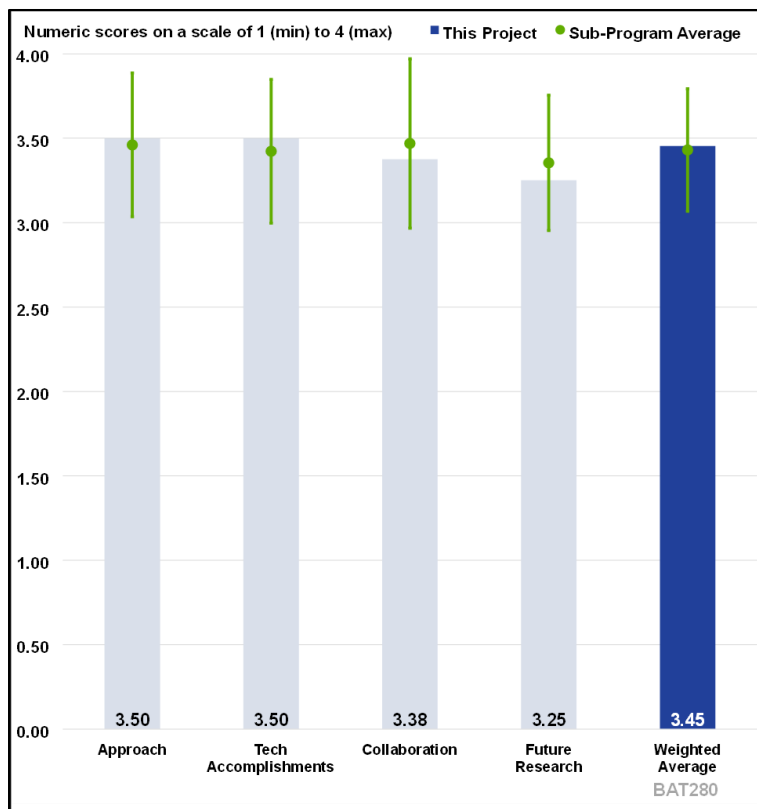


Figure 1-8 - Presentation Number: BAT280 Presentation Title: Novel Chemistry Lithium-Selenium and Selenium-Sulfur Couple Principal Investigator: Khalil Amine, Argonne National Laboratory

Presentation Link:

https://www1.eere.energy.gov/vehiclesandfuels/downloads/2025_AMR/BAT280_Amine_2025_o.pdf

Presentation Number:

BAT282

Presentation Title:

Development of High-Energy
Lithium-Sulfur Batteries

Principal Investigator:

Dongping Lu, Pacific Northwest
National Laboratory

Presenter

Dongping Lu, Pacific Northwest
National Laboratory

Reviewer Sample Size

A total of four reviewers evaluated
this project.

Project Relevance and Resources

100% of reviewers felt that the
project was relevant to current DOE
objectives, 0% of reviewers felt that
the project was not relevant, and
0% of reviewers did not indicate an
answer. 100% of reviewers felt that
the resources were sufficient, 0%
of reviewers felt that the resources
were insufficient, 0% of reviewers
felt that the resources were
excessive, and 0% of reviewers did
not indicate an answer.

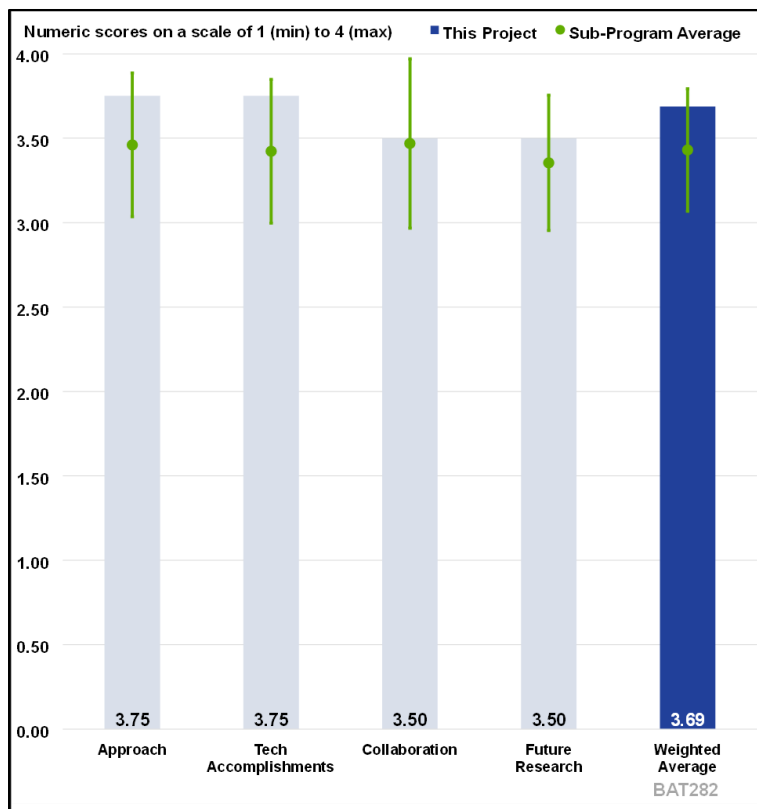


Figure 1-9 - Presentation Number: BAT282 Presentation Title: Development of High-Energy Lithium-Sulfur Batteries Principal Investigator: Dongping Lu, Pacific Northwest National Laboratory

Presentation Link:

https://www1.eere.energy.gov/vehiclesandfuels/downloads/2025_AMR/BAT282_Lu_2025_p.pdf

Presentation Number:

BAT285

Presentation Title:

Investigation of Sulfur Reaction Mechanisms

Principal Investigator:

Enyuan Hu, Brookhaven National Laboratory

Presenter

Enyuan Hu, Brookhaven National Laboratory

Reviewer Sample Size

A total of two reviewers evaluated this project.

Project Relevance and Resources

100% of reviewers felt that the project was relevant to current DOE objectives, 0% of reviewers felt that the project was not relevant, and 0% of reviewers did not indicate an answer. 100% of reviewers felt that the resources were sufficient, 0% of reviewers felt that the resources were insufficient, 0% of reviewers felt that the resources were excessive, and 0% of reviewers did not indicate an answer.

Presentation Link:

https://www1.eere.energy.gov/vehiclesandfuels/downloads/2025_AMR/BAT285_Hu_2025_o.pdf

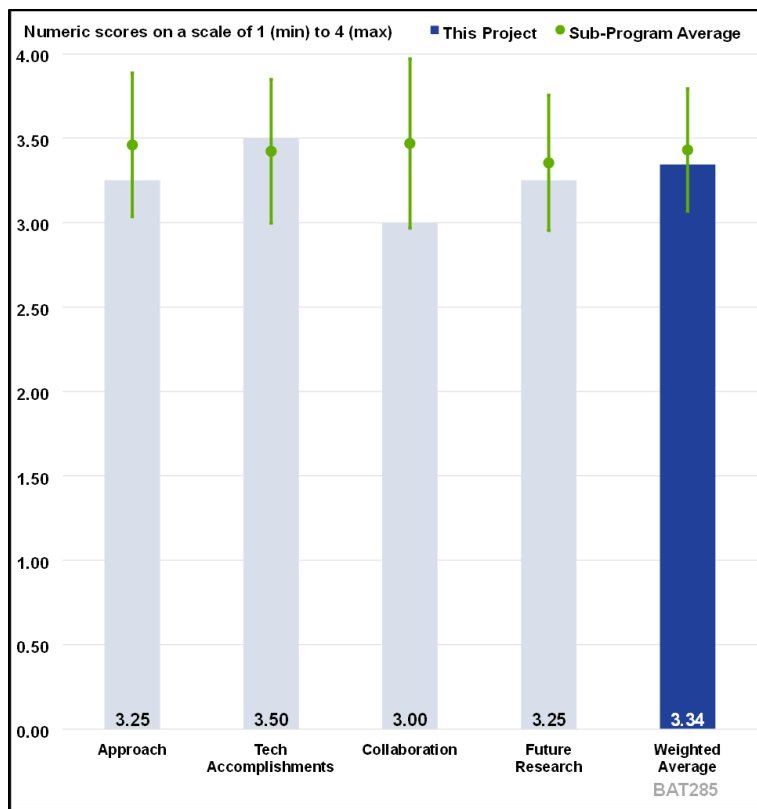


Figure 1-10 - Presentation Number: BAT285 Presentation Title: Investigation of Sulfur Reaction Mechanisms Principal Investigator: Enyuan Hu, Brookhaven National Laboratory

Presentation Number:

BAT309

Presentation Title:

Mathematical Modeling of Beyond Lithium-Ion Batteries

Principal Investigator:

Venkat Srinivasan, Argonne National Laboratory

Presenter

Venkat Srinivasan, Argonne National Laboratory

Reviewer Sample Size

A total of five reviewers evaluated this project.

Project Relevance and Resources

100% of reviewers felt that the project was relevant to current DOE objectives, 0% of reviewers felt that the project was not relevant, and 0% of reviewers did not indicate an answer. 100% of reviewers felt that the resources were sufficient, 0% of reviewers felt that the resources were insufficient, 0% of reviewers felt that the resources were excessive, and 0% of reviewers did not indicate an answer.

Presentation Link:

https://www1.eere.energy.gov/vehiclesandfuels/downloads/2025_AMR/BAT309_Srinivasan_2025_o.pdf

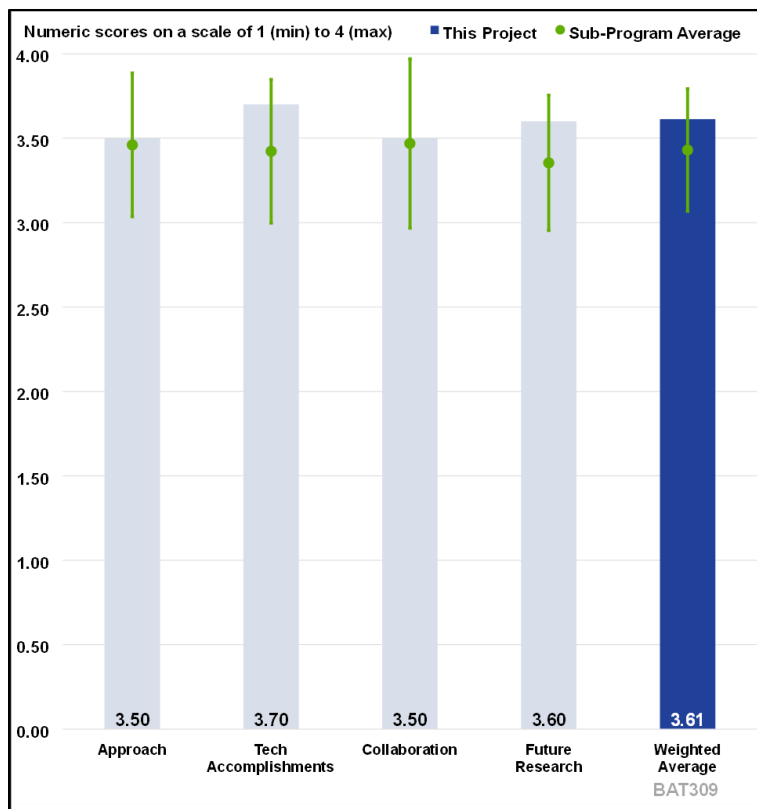


Figure 1-11 - Presentation Number: BAT309 Presentation Title: Mathematical Modeling of Beyond Lithium-Ion Batteries Principal Investigator: Venkat Srinivasan, Argonne National Laboratory

Presentation Number:

BAT315

Presentation Title:

Process R&D for Droplet-Produced Powdered Materials

Principal Investigator:

Joe Libera, Argonne National Laboratory

Presenter

Joe Libera, Argonne National Laboratory

Reviewer Sample Size

A total of five reviewers evaluated this project.

Project Relevance and Resources

100% of reviewers felt that the project was relevant to current DOE objectives, 0% of reviewers felt that the project was not relevant, and 0% of reviewers did not indicate an answer. 100% of reviewers felt that the resources were sufficient, 0% of reviewers felt that the resources were insufficient, 0% of reviewers felt that the resources were excessive, and 0% of reviewers did not indicate an answer.

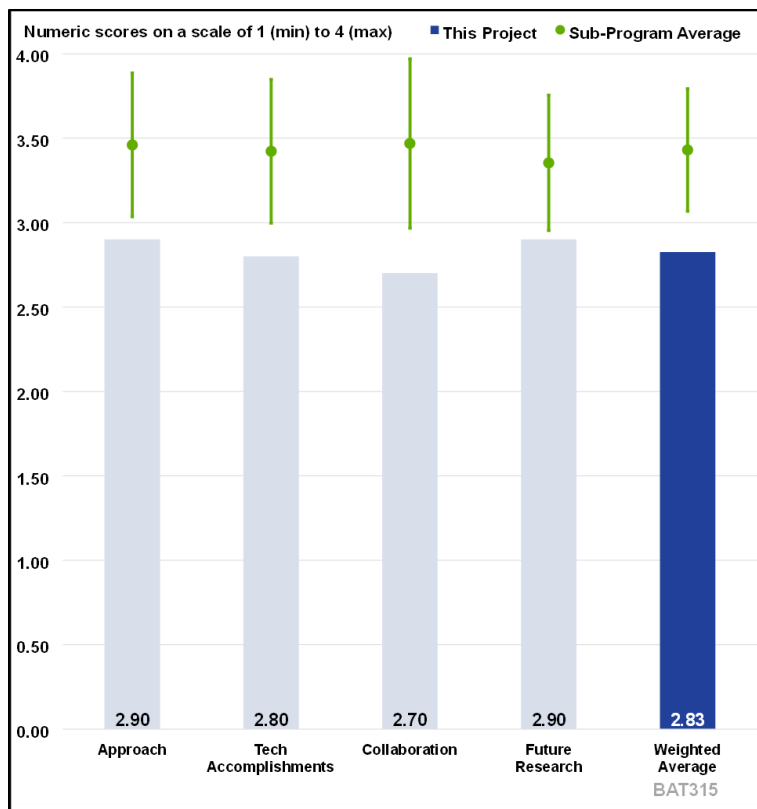


Figure 1-12 - Presentation Number: BAT315 Presentation Title: Process R&D for Droplet-Produced Powdered Materials Principal Investigator: Joe Libera, Argonne National Laboratory

Presentation Link:

https://www1.eere.energy.gov/vehiclesandfuels/downloads/2025_AMR/BAT315_Libera_2025_o.pdf

Presentation Number:

BAT360

Presentation Title:

Cathodes Beyond Lithium Nickel
Manganese Cobalt Oxide (NMC)
811

Principal Investigator:

Arumugam Manthiram, University of
Texas at Austin

Presenter

Arumugam Manthiram, University of
Texas at Austin

Reviewer Sample Size

A total of four reviewers evaluated
this project.

Project Relevance and Resources

100% of reviewers felt that the
project was relevant to current DOE
objectives, 0% of reviewers felt that
the project was not relevant, and
0% of reviewers did not indicate an
answer. 100% of reviewers felt that
the resources were sufficient, 0%
of reviewers felt that the resources
were insufficient, 0% of reviewers
felt that the resources were
excessive, and 0% of reviewers did not indicate an answer.

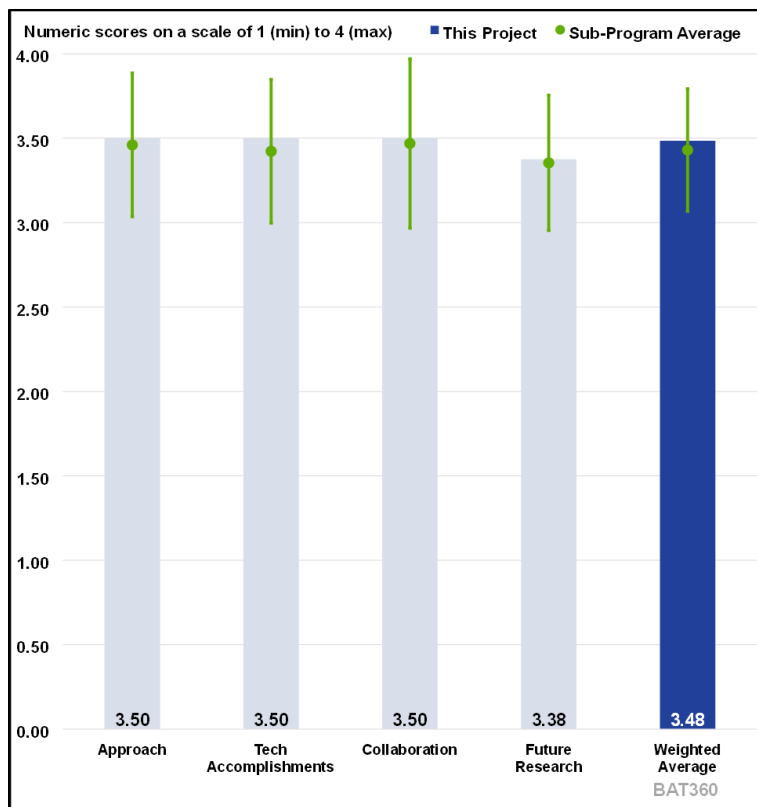


Figure 1-13 - Presentation Number: BAT360 Presentation Title: Cathodes Beyond Lithium Nickel Manganese Cobalt Oxide (NMC) 811 Principal Investigator: Arumugam Manthiram, University of Texas at Austin

Presentation Link:

https://www1.eere.energy.gov/vehiclesandfuels/downloads/2025_AMR/BAT360_Manthiram_2025_p.pdf

Presentation Number:

BAT362

Presentation Title:

High-Capacity S Cathode Materials

Principal Investigator:

Prashant Kumta, University of Pittsburgh

Presenter

Prashant Kumta, University of Pittsburgh

Reviewer Sample Size

A total of four reviewers evaluated this project.

Project Relevance and Resources

100% of reviewers felt that the project was relevant to current DOE objectives, 0% of reviewers felt that the project was not relevant, and 0% of reviewers did not indicate an answer. 100% of reviewers felt that the resources were sufficient, 0% of reviewers felt that the resources were insufficient, 0% of reviewers felt that the resources were excessive, and 0% of reviewers did not indicate an answer.

Presentation Link:

https://www1.eere.energy.gov/vehiclesandfuels/downloads/2025_AMR/BAT362_Kumta_2025_p.pdf

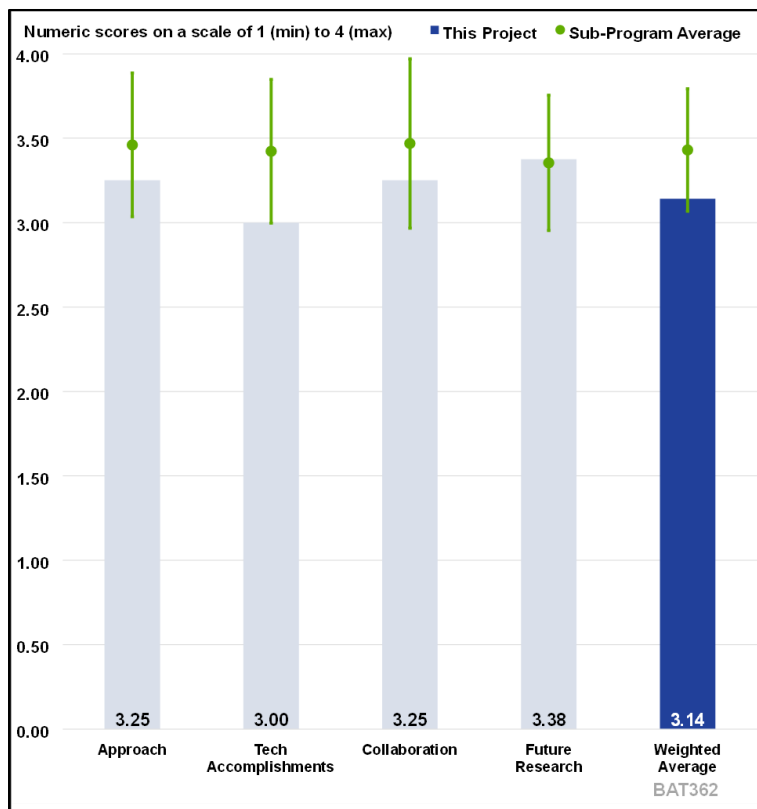


Figure 1-14 - Presentation Number: BAT362 Presentation Title: High-Capacity S Cathode Materials Principal Investigator: Prashant Kumta, University of Pittsburgh

Presentation Number:

BAT367

Presentation Title:

Multiscale Characterization Studies of Lithium Metal Batteries

Principal Investigator:

Peter Khalifah, Brookhaven National Laboratory

Presenter

Peter Khalifah, Brookhaven National Laboratory

Reviewer Sample Size

A total of two reviewers evaluated this project.

Project Relevance and Resources

100% of reviewers felt that the project was relevant to current DOE objectives, 0% of reviewers felt that the project was not relevant, and 0% of reviewers did not indicate an answer. 100% of reviewers felt that the resources were sufficient, 0% of reviewers felt that the resources were insufficient, 0% of reviewers felt that the resources were excessive, and 0% of reviewers did not indicate an answer.

Presentation Link:

https://www1.eere.energy.gov/vehiclesandfuels/downloads/2025_AMR/BAT367_Khalifah_2025_p.pdf

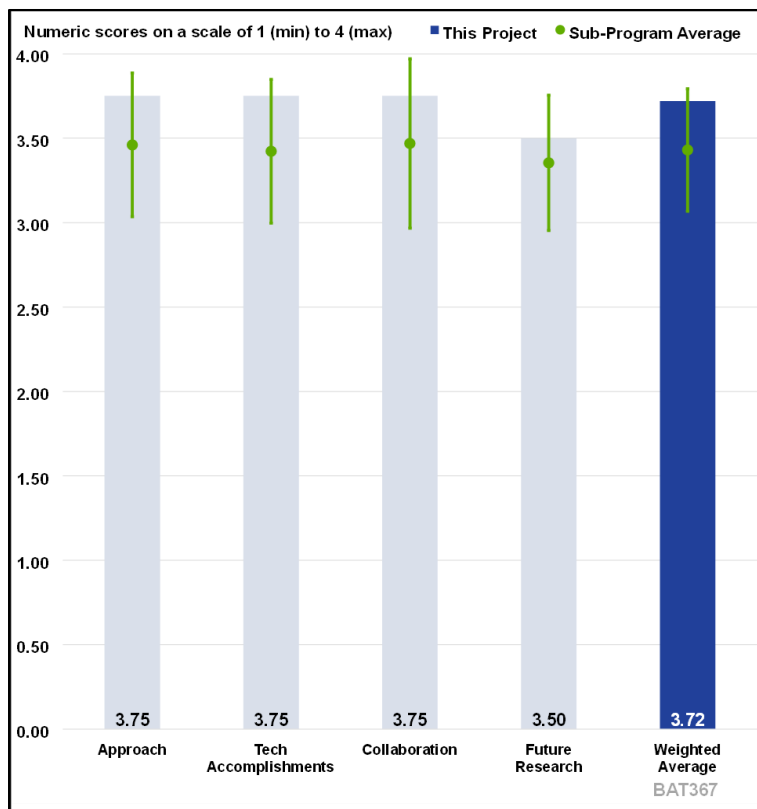


Figure 1-15 - Presentation Number: BAT367 Presentation Title: Multiscale Characterization Studies of Lithium Metal Batteries Principal Investigator: Peter Khalifah, Brookhaven National Laboratory

Presentation Number:

BAT377

Presentation Title:

ReCell – Overview and Update

Principal Investigator:

Jeffrey Spangenberg, Argonne National Laboratory

Presenter

Jeffrey Spangenberg, Argonne National Laboratory

Reviewer Sample Size

A total of four reviewers evaluated this project.

Project Relevance and Resources

100% of reviewers felt that the project was relevant to current DOE objectives, 0% of reviewers felt that the project was not relevant, and 0% of reviewers did not indicate an answer. 75% of reviewers felt that the resources were sufficient, 0% of reviewers felt that the resources were insufficient, 25% of reviewers felt that the resources were excessive, and 0% of reviewers did not indicate an answer.

Presentation Link:

https://www1.eere.energy.gov/vehiclesandfuels/downloads/2025_AMR/BAT377_Spangenberg_2025_o.pdf

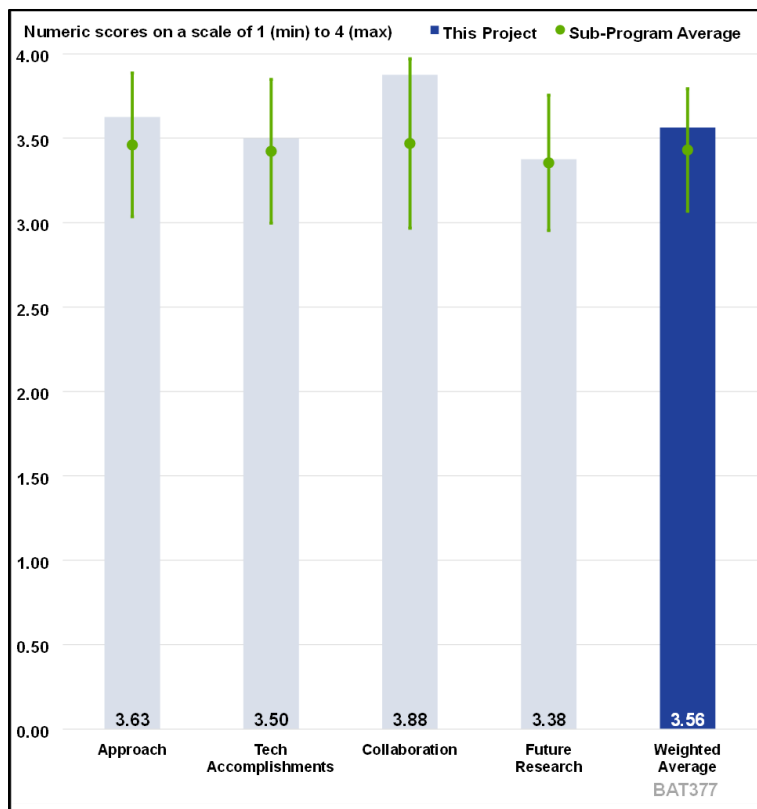


Figure 1-16 - Presentation Number: BAT377 Presentation Title: ReCell – Overview and Update Principal Investigator: Jeffrey Spangenberg, Argonne National Laboratory

Presentation Number:

BAT470

Presentation Title:

Process R&D Using Supercritical Fluid Reactors

Principal Investigator:

Youngho Shin, Argonne National Laboratory

Presenter

Youngho Shin, Argonne National Laboratory

Reviewer Sample Size

A total of six reviewers evaluated this project.

Project Relevance and Resources

100% of reviewers felt that the project was relevant to current DOE objectives, 0% of reviewers felt that the project was not relevant, and 0% of reviewers did not indicate an answer. 100% of reviewers felt that the resources were sufficient, 0% of reviewers felt that the resources were insufficient, 0% of reviewers felt that the resources were excessive, and 0% of reviewers did not indicate an answer.

Presentation Link:

https://www1.eere.energy.gov/vehiclesandfuels/downloads/2025_AMR/BAT470_Shin_2025_o.pdf

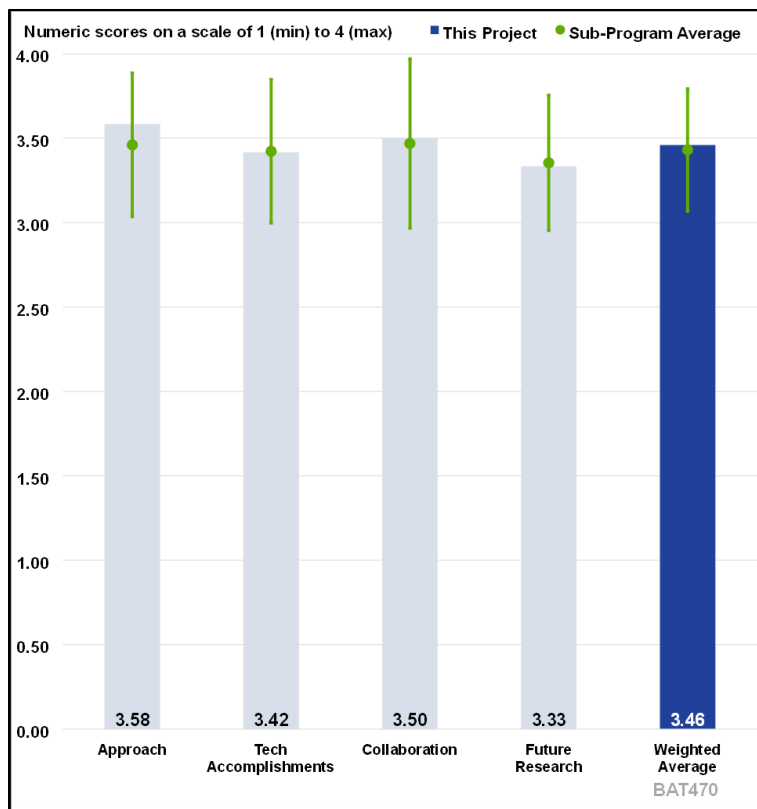


Figure 1-17 - Presentation Number: BAT470 Presentation Title: Process R&D Using Supercritical Fluid Reactors Principal Investigator: Youngho Shin, Argonne National Laboratory

Presentation Number:

BAT496

Presentation Title:

Silicon Consortium Project:
Advanced Characterization of
Silicon Electrodes

Principal Investigator:

Robert Kostecki, Lawrence Berkeley
National Laboratory

Presenter

Robert Kostecki, Lawrence Berkeley
National Laboratory

Reviewer Sample Size

A total of four reviewers evaluated
this project.

Project Relevance and Resources

100% of reviewers felt that the
project was relevant to current DOE
objectives, 0% of reviewers felt that
the project was not relevant, and
0% of reviewers did not indicate an
answer. 100% of reviewers felt that
the resources were sufficient, 0%
of reviewers felt that the resources
were insufficient, 0% of reviewers
felt that the resources were
excessive, and 0% of reviewers did not indicate an answer.

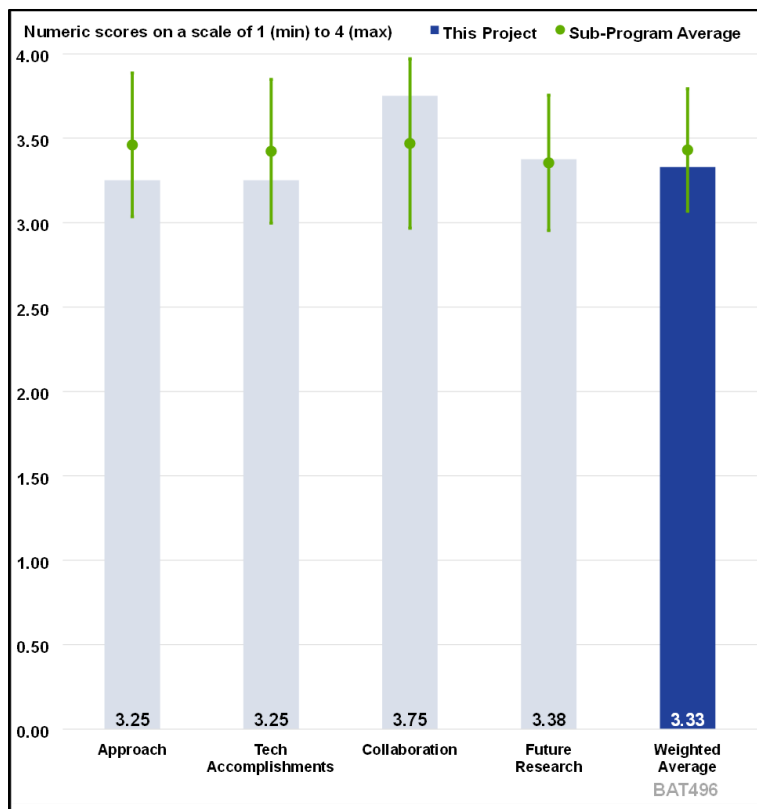


Figure 1-18 - Presentation Number: BAT496 Presentation Title: Silicon Consortium Project: Advanced Characterization of Silicon Electrodes Principal Investigator: Robert Kostecki, Lawrence Berkeley National Laboratory

Presentation Link:

https://www1.eere.energy.gov/vehiclesandfuels/downloads/2025_AMR/BAT496_Kostecki_2025_p.pdf

Presentation Number:

BAT497

Presentation Title:

Silicon Consortium Project:
Electrochemistry of Silicon
Electrodes

Principal Investigator:

Christopher Johnson, Argonne
National Laboratory

Presenter

Christopher Johnson, Argonne
National Laboratory

Reviewer Sample Size

A total of four reviewers evaluated
this project.

Project Relevance and Resources

100% of reviewers felt that the
project was relevant to current DOE
objectives, 0% of reviewers felt that
the project was not relevant, and
0% of reviewers did not indicate an
answer. 50% of reviewers felt that
the resources were sufficient, 25%
of reviewers felt that the resources
were insufficient, 25% of reviewers
felt that the resources were
excessive, and 0% of reviewers did not indicate an answer.

Presentation Link:

[https://www1.eere.energy.gov/vehiclesandfuels/downloads/2025_AMR/BAT497_Johnson_2025_p.p
df](https://www1.eere.energy.gov/vehiclesandfuels/downloads/2025_AMR/BAT497_Johnson_2025_p.pdf)

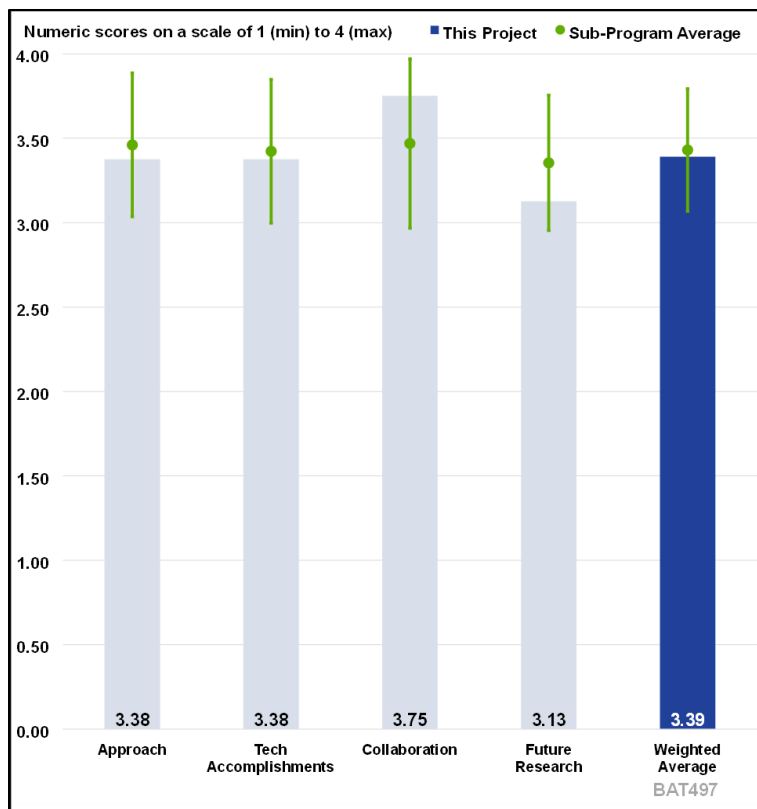


Figure 1-19 - Presentation Number: BAT497 Presentation Title: Silicon Consortium Project: Electrochemistry of Silicon Electrodes Principal Investigator: Christopher Johnson, Argonne National Laboratory

Presentation Number:

BAT498

Presentation Title:

Silicon Consortium Project: Next-Gen Materials for Silicon Anodes

Principal Investigator:

Nathan Neale, National Renewable Energy Laboratory

Presenter

Nathan Neale, National Renewable Energy Laboratory

Reviewer Sample Size

A total of four reviewers evaluated this project.

Project Relevance and Resources

100% of reviewers felt that the project was relevant to current DOE objectives, 0% of reviewers felt that the project was not relevant, and 0% of reviewers did not indicate an answer. 100% of reviewers felt that the resources were sufficient, 0% of reviewers felt that the resources were insufficient, 0% of reviewers felt that the resources were excessive, and 0% of reviewers did not indicate an answer.

Presentation Link:

https://www1.eere.energy.gov/vehiclesandfuels/downloads/2025_AMR/BAT498_Neale_2025_p.pdf

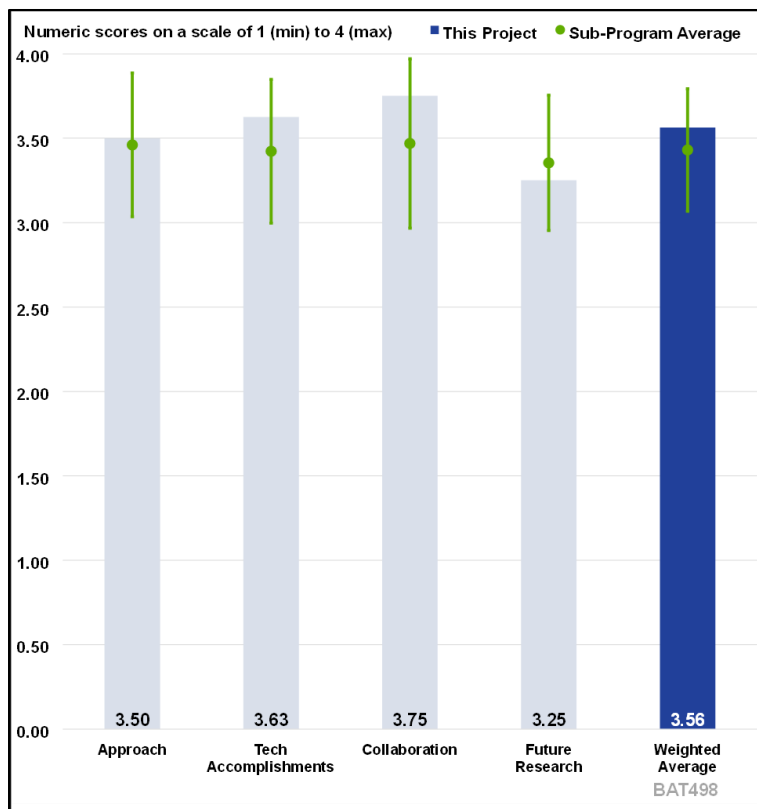


Figure 1-20 - Presentation Number: BAT498 Presentation Title: Silicon Consortium Project: Next-Gen Materials for Silicon Anodes Principal Investigator: Nathan Neale, National Renewable Energy Laboratory

Presentation Number:

BAT499

Presentation Title:

Silicon Consortium Project:
Mechanical Properties of Silicon
Anodes

Principal Investigator:

Katharine Harrison, National
Renewable Energy Laboratory

Presenter

Katharine Harrison, National
Renewable Energy Laboratory

Reviewer Sample Size

A total of four reviewers evaluated
this project.

Project Relevance and Resources

100% of reviewers felt that the
project was relevant to current DOE
objectives, 0% of reviewers felt that
the project was not relevant, and
0% of reviewers did not indicate an
answer. 100% of reviewers felt that
the resources were sufficient, 0%
of reviewers felt that the resources
were insufficient, 0% of reviewers
felt that the resources were
excessive, and 0% of reviewers did not indicate an answer.

Presentation Link:

https://www1.eere.energy.gov/vehiclesandfuels/downloads/2025_AMR/BAT499_Harrison_2025_p.pdf

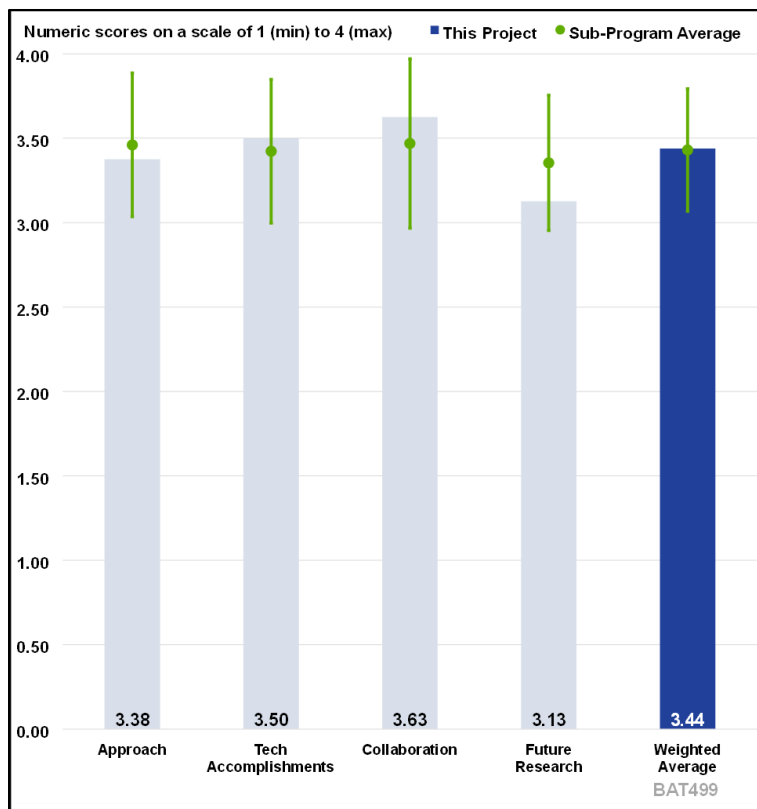


Figure 1-21 - Presentation Number: BAT499 Presentation Title: Silicon Consortium Project: Mechanical Properties of Silicon Anodes Principal Investigator: Katharine Harrison, National Renewable Energy Laboratory

Presentation Number:

BAT501

Presentation Title:

Integrated Modeling of Electrolyte Properties and Machine Learning of Calendar Lifetime Prediction of Si Anode Batteries

Principal Investigator:

Kristin A. Persson, Lawrence Berkeley National Laboratory

Presenter

Kristin A. Persson, Lawrence Berkeley National Laboratory

Reviewer Sample Size

A total of four reviewers evaluated this project.

Project Relevance and Resources

100% of reviewers felt that the project was relevant to current DOE objectives, 0% of reviewers felt that the project was not relevant, and 0% of reviewers did not indicate an answer. 100% of reviewers felt that the resources were sufficient, 0% of reviewers felt that the resources were insufficient, 0% of reviewers felt that the resources were excessive, and 0% of reviewers did not indicate an answer.

Presentation Link:

https://www1.eere.energy.gov/vehiclesandfuels/downloads/2025_AMR/BAT501_Persson_2025_p.pdf

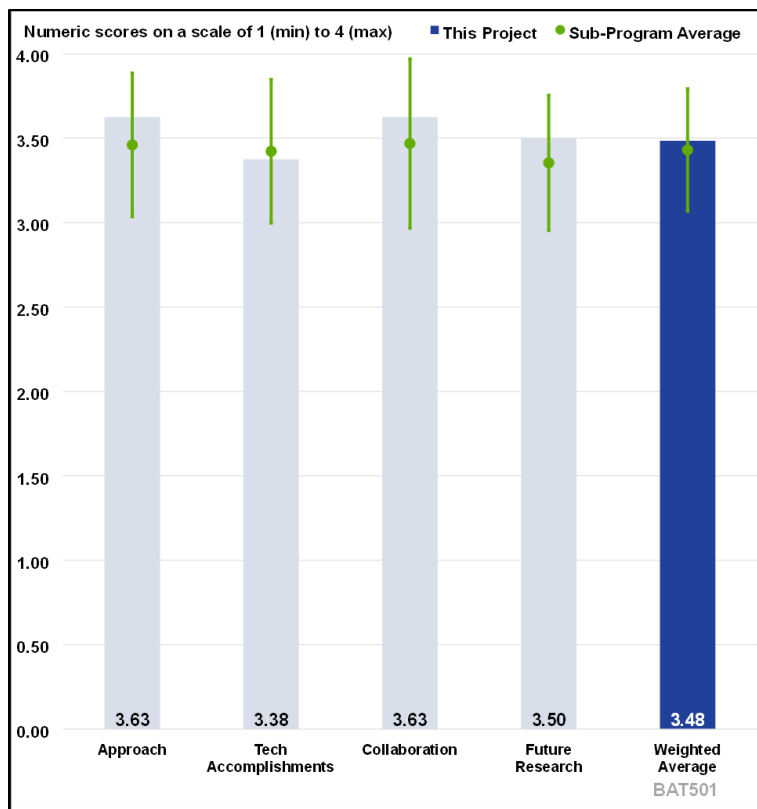


Figure 1-22 - Presentation Number: BAT501 Presentation Title: Integrated Modeling of Electrolyte Properties and Machine Learning of Calendar Lifetime Prediction of Si Anode Batteries Principal Investigator: Kristin A. Persson, Lawrence Berkeley National Laboratory

Presentation Number:

BAT523

Presentation Title:

Development of Long-Life Lithium and Sulfurized Polyacrylonitrile (SPAN) Cells

Principal Investigator:

Ping Liu, University of California San Diego

Presenter

Ping Liu, University of California San Diego

Reviewer Sample Size

A total of five reviewers evaluated this project.

Project Relevance and Resources

100% of reviewers felt that the project was relevant to current DOE objectives, 0% of reviewers felt that the project was not relevant, and 0% of reviewers did not indicate an answer. 80% of reviewers felt that the resources were sufficient, 0% of reviewers felt that the resources were insufficient, 20% of reviewers felt that the resources were excessive, and 0% of reviewers did not indicate an answer.

Presentation Link:

https://www1.eere.energy.gov/vehiclesandfuels/downloads/2025_AMR/BAT523_Liu_2025_p.pdf

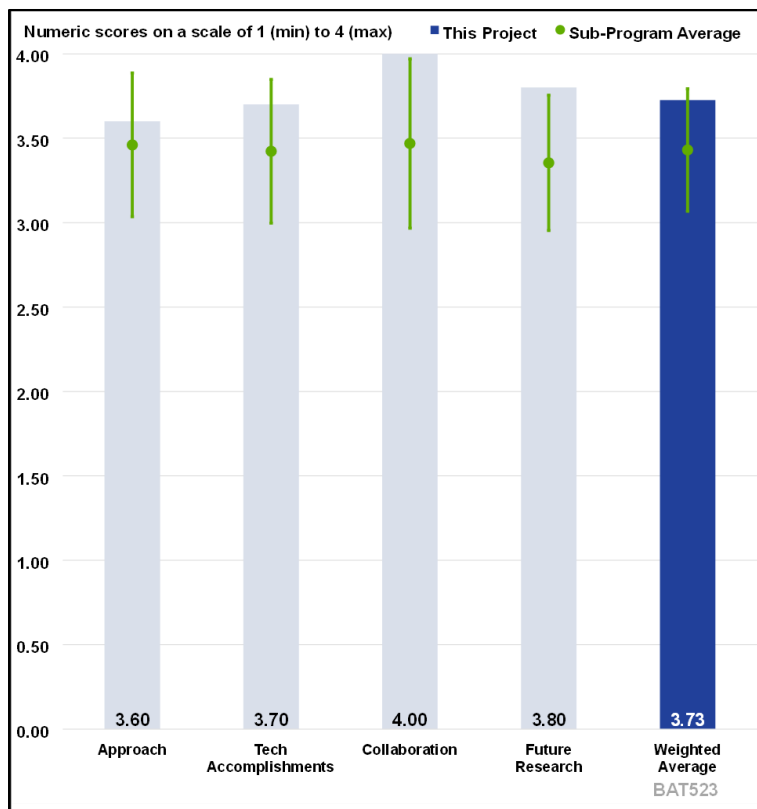


Figure 1-23 - Presentation Number: BAT523 Presentation Title: Development of Long-Life Lithium and Sulfurized Polyacrylonitrile (SPAN) Cells Principal Investigator: Ping Liu, University of California San Diego

Presentation Number:

BAT524

Presentation Title:

Advanced Electrolytes for Lithium Metal Batteries

Principal Investigator:

Chunsheng Wang, University of Maryland, College Park

Presenter

Chunsheng Wang, University of Maryland, College Park

Reviewer Sample Size

A total of two reviewers evaluated this project.

Project Relevance and Resources

100% of reviewers felt that the project was relevant to current DOE objectives, 0% of reviewers felt that the project was not relevant, and 0% of reviewers did not indicate an answer. 100% of reviewers felt that the resources were sufficient, 0% of reviewers felt that the resources were insufficient, 0% of reviewers felt that the resources were excessive, and 0% of reviewers did not indicate an answer.

Presentation Link:

https://www1.eere.energy.gov/vehiclesandfuels/downloads/2025_AMR/BAT524_Wang_2025_p.pdf

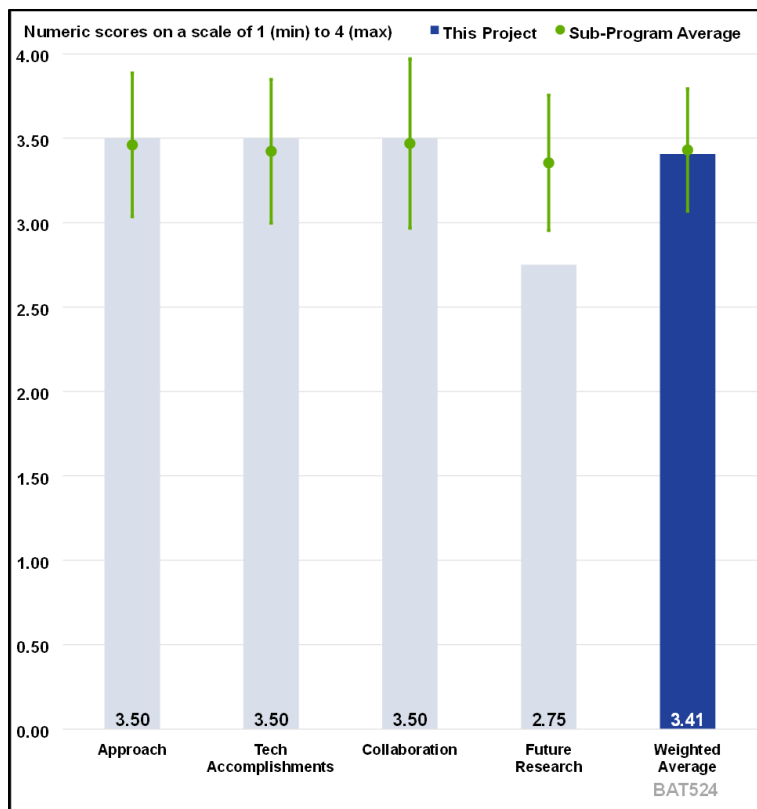


Figure 1-24 - Presentation Number: BAT524 Presentation Title: Advanced Electrolytes for Lithium Metal Batteries Principal Investigator: Chunsheng Wang, University of Maryland, College Park

Presentation Number:

BAT555

Presentation Title:

Advanced Polymer Materials for Batteries

Principal Investigator:

Zhenan Bao, SLAC National Accelerator Laboratory/ Stanford University

Presenter

Zhenan Bao, SLAC National Accelerator/ Stanford University

Reviewer Sample Size

A total of five reviewers evaluated this project.

Project Relevance and Resources

100% of reviewers felt that the project was relevant to current DOE objectives, 0% of reviewers felt that the project was not relevant, and 0% of reviewers did not indicate an answer. 100% of reviewers felt that the resources were sufficient, 0% of reviewers felt that the resources were insufficient, 0% of reviewers felt that the resources were excessive, and 0% of reviewers did not indicate an answer.

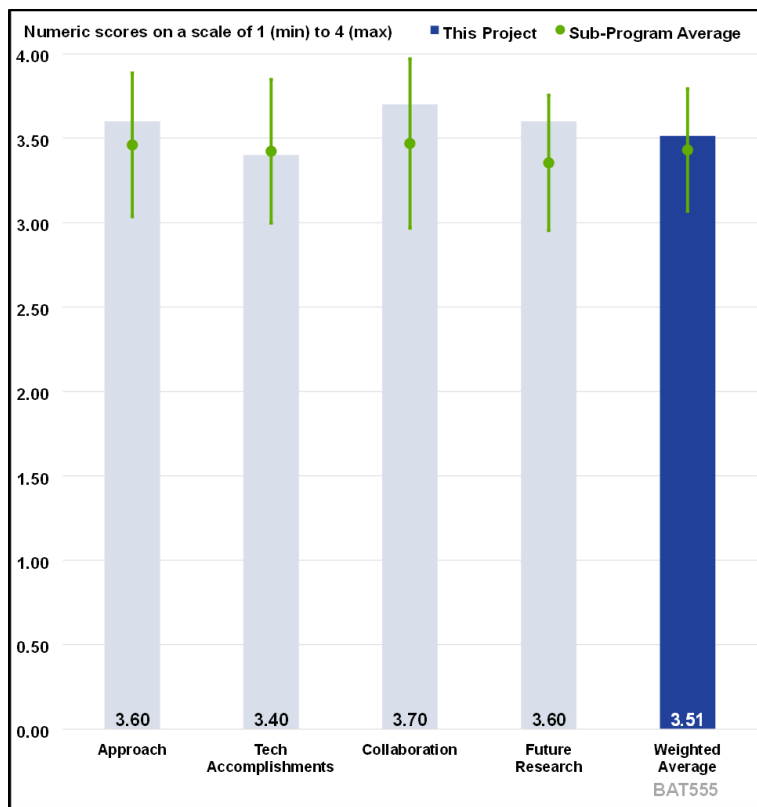


Figure 1-25 - Presentation Number: BAT555 Presentation Title: Advanced Polymer Materials for Batteries Principal Investigator: Zhenan Bao, SLAC National Accelerator Laboratory/ Stanford University

Presentation Link:

https://www1.eere.energy.gov/vehiclesandfuels/downloads/2025_AMR/BAT555_Bao_2025_o.pdf

Presentation Number:

BAT569

Presentation Title:

Earth-Abundant Cathode Active Materials for Li-Ion Batteries

Principal Investigator:

Jason Croy, Argonne National Laboratory

Presenter

Jason Croy, Argonne National Laboratory

Reviewer Sample Size

A total of four reviewers evaluated this project.

Project Relevance and Resources

100% of reviewers felt that the project was relevant to current DOE objectives, 0% of reviewers felt that the project was not relevant, and 0% of reviewers did not indicate an answer. 100% of reviewers felt that the resources were sufficient, 0% of reviewers felt that the resources were insufficient, 0% of reviewers felt that the resources were excessive, and 0% of reviewers did not indicate an answer.

Presentation Link:

https://www1.eere.energy.gov/vehiclesandfuels/downloads/2025_AMR/BAT569_Croy_2025_o.pdf

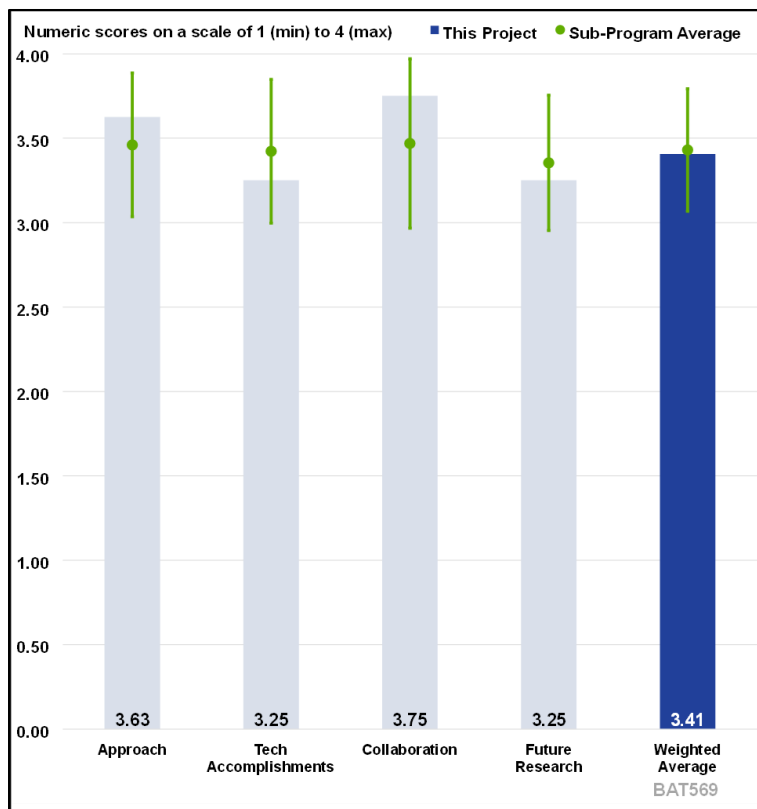


Figure 1-26 - Presentation Number: BAT569 Presentation Title: Earth-Abundant Cathode Active Materials for Li-Ion Batteries Principal Investigator: Jason Croy, Argonne National Laboratory

Presentation Number:

BAT570

Presentation Title:

Cation-Disordered Cathode Materials (DRX+) - Overview and Progress Update

Principal Investigator:

Gerbrand Ceder, Lawrence Berkeley National Laboratory

Presenter

Gerbrand Ceder, Lawrence Berkeley National Laboratory

Reviewer Sample Size

A total of four reviewers evaluated this project.

Project Relevance and Resources

100% of reviewers felt that the project was relevant to current DOE objectives, 0% of reviewers felt that the project was not relevant, and 0% of reviewers did not indicate an answer. 75% of reviewers felt that the resources were sufficient, 0% of reviewers felt that the resources were insufficient, 25% of reviewers felt that the resources were excessive, and 0% of reviewers did not indicate an answer.

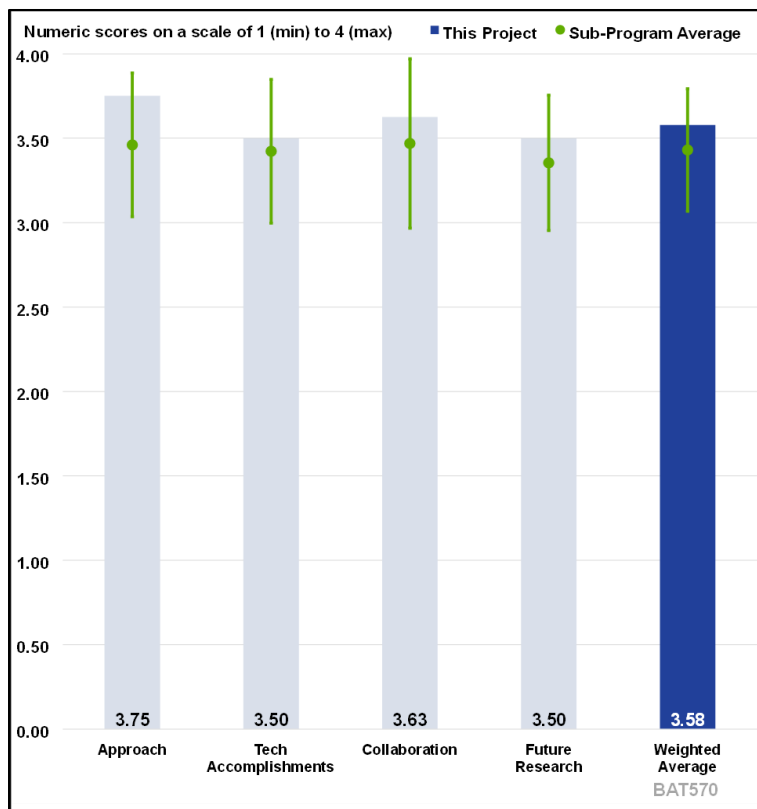


Figure 1-27 - Presentation Number: BAT570 Presentation Title: Cation-Disordered Cathode Materials (DRX+) - Overview and Progress Update Principal Investigator: Gerbrand Ceder, Lawrence Berkeley National Laboratory

Presentation Link:

https://www1.eere.energy.gov/vehiclesandfuels/downloads/2025_AMR/BAT570_Ceder_2025_o.pdf

Presentation Number:

BAT571

Presentation Title:

ReCell Center-Direct Recycling of Materials

Principal Investigator:

Albert Lipson, Argonne National Laboratory

Presenter

Albert Lipson, Argonne National Laboratory

Reviewer Sample Size

A total of five reviewers evaluated this project.

Project Relevance and Resources

100% of reviewers felt that the project was relevant to current DOE objectives, 0% of reviewers felt that the project was not relevant, and 0% of reviewers did not indicate an answer. 80% of reviewers felt that the resources were sufficient, 0% of reviewers felt that the resources were insufficient, 20% of reviewers felt that the resources were excessive, and 0% of reviewers did not indicate an answer.

Presentation Link:

https://www1.eere.energy.gov/vehiclesandfuels/downloads/2025_AMR/BAT571_Lipson_2025_o.pdf

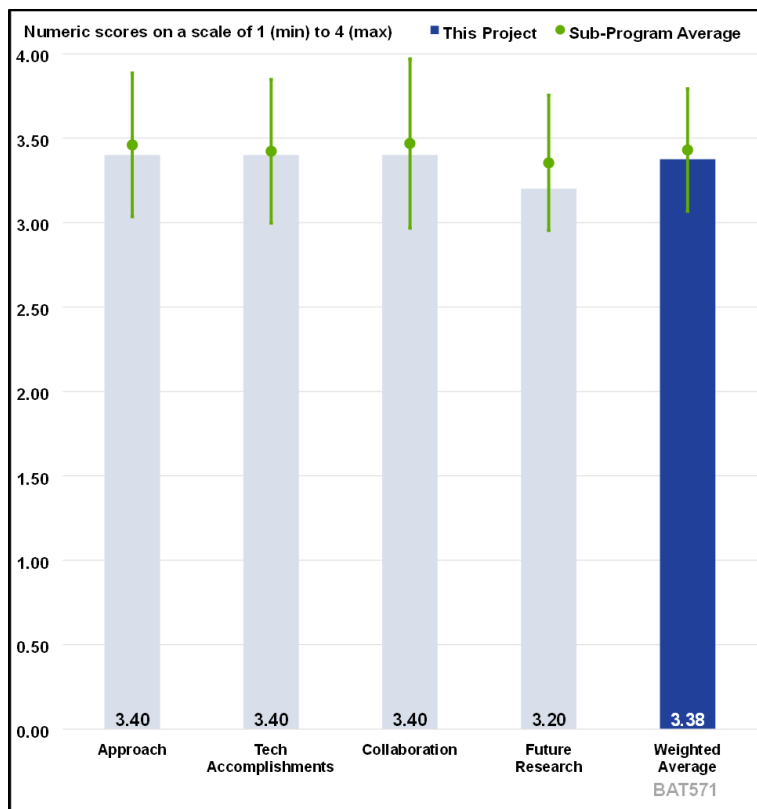


Figure 1-28 - Presentation Number: BAT571 Presentation Title: ReCell Center-Direct Recycling of Materials Principal Investigator: Albert Lipson, Argonne National Laboratory

Presentation Number:

BAT572

Presentation Title:

ReCell Center-Advanced Resource Recovery

Principal Investigator:

Yaocai Bai, Oak Ridge National Laboratory

Presenter

Yaocai Bai, Oak Ridge National Laboratory

Reviewer Sample Size

A total of five reviewers evaluated this project.

Project Relevance and Resources

100% of reviewers felt that the project was relevant to current DOE objectives, 0% of reviewers felt that the project was not relevant, and 0% of reviewers did not indicate an answer. 100% of reviewers felt that the resources were sufficient, 0% of reviewers felt that the resources were insufficient, 0% of reviewers felt that the resources were excessive, and 0% of reviewers did not indicate an answer.

Presentation Link:

https://www1.eere.energy.gov/vehiclesandfuels/downloads/2025_AMR/BAT572_Bai_2025_o.pdf

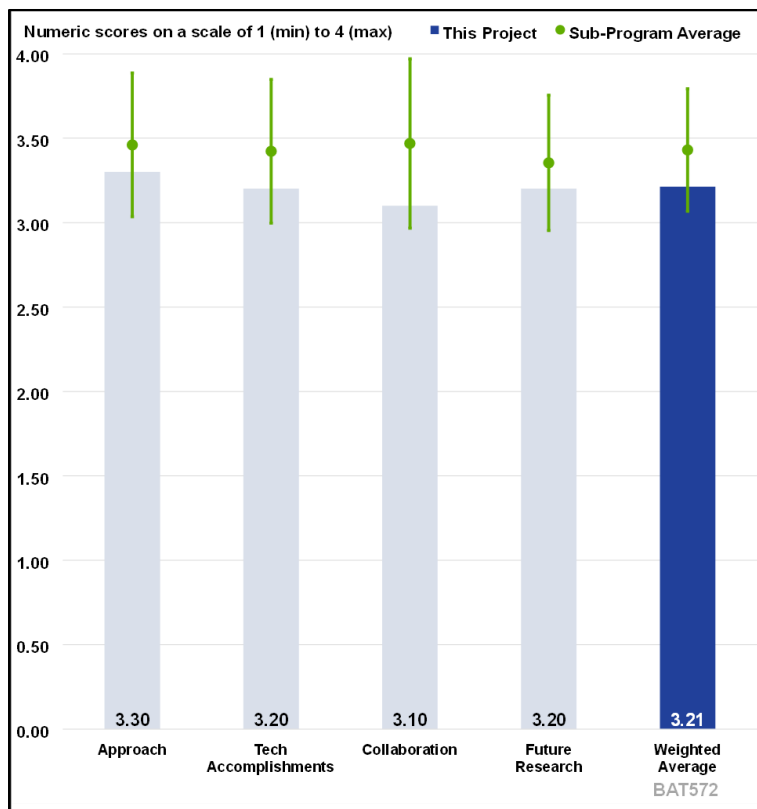


Figure 1-29 - Presentation Number: BAT572 Presentation Title: ReCell Center-Advanced Resource Recovery Principal Investigator: Yaocai Bai, Oak Ridge National Laboratory

Presentation Number:

BAT573

Presentation Title:

ReCell Center-Design for Sustainability

Principal Investigator:

Kandler Smith, National Renewable Energy Laboratory

Presenter

Kandler Smith, National Renewable Energy Laboratory

Reviewer Sample Size

A total of three reviewers evaluated this project.

Project Relevance and Resources

100% of reviewers felt that the project was relevant to current DOE objectives, 0% of reviewers felt that the project was not relevant, and 0% of reviewers did not indicate an answer. 100% of reviewers felt that the resources were sufficient, 0% of reviewers felt that the resources were insufficient, 0% of reviewers felt that the resources were excessive, and 0% of reviewers did not indicate an answer.

Presentation Link:

https://www1.eere.energy.gov/vehiclesandfuels/downloads/2025_AMR/BAT573_Smith_2025_o.pdf

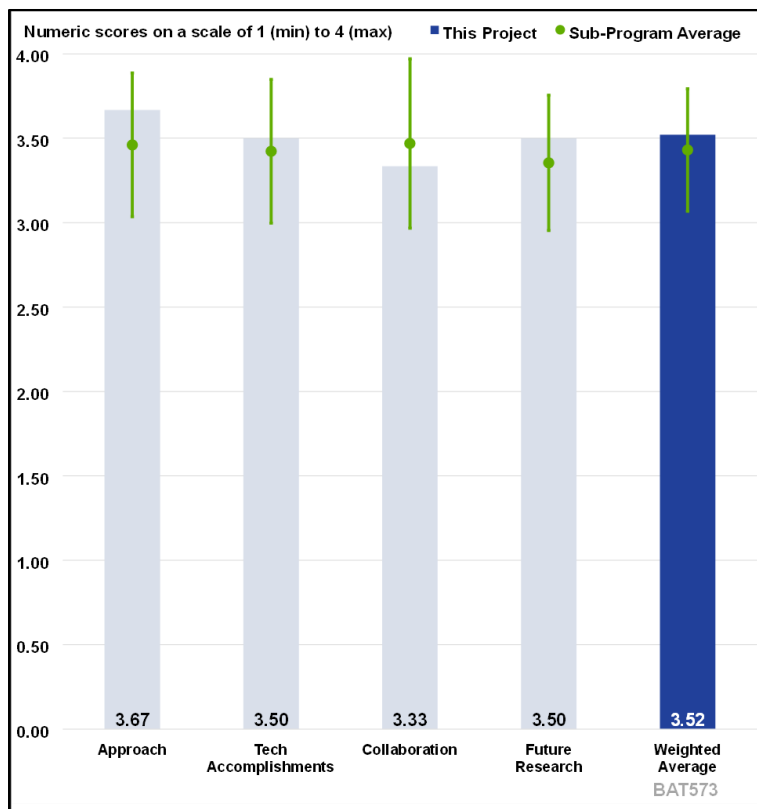


Figure 1-30 - Presentation Number: BAT573 Presentation Title: ReCell Center-Design for Sustainability Principal Investigator: Kandler Smith, National Renewable Energy Laboratory

Presentation Number:

BAT574

Presentation Title:

ReCell Center-Modeling and Analysis

Principal Investigator:

Sabine Gallagher, Argonne National Laboratory

Presenter

Sabine Gallagher, Argonne National Laboratory

Reviewer Sample Size

A total of four reviewers evaluated this project.

Project Relevance and Resources

100% of reviewers felt that the project was relevant to current DOE objectives, 0% of reviewers felt that the project was not relevant, and 0% of reviewers did not indicate an answer. 100% of reviewers felt that the resources were sufficient, 0% of reviewers felt that the resources were insufficient, 0% of reviewers felt that the resources were excessive, and 0% of reviewers did not indicate an answer.

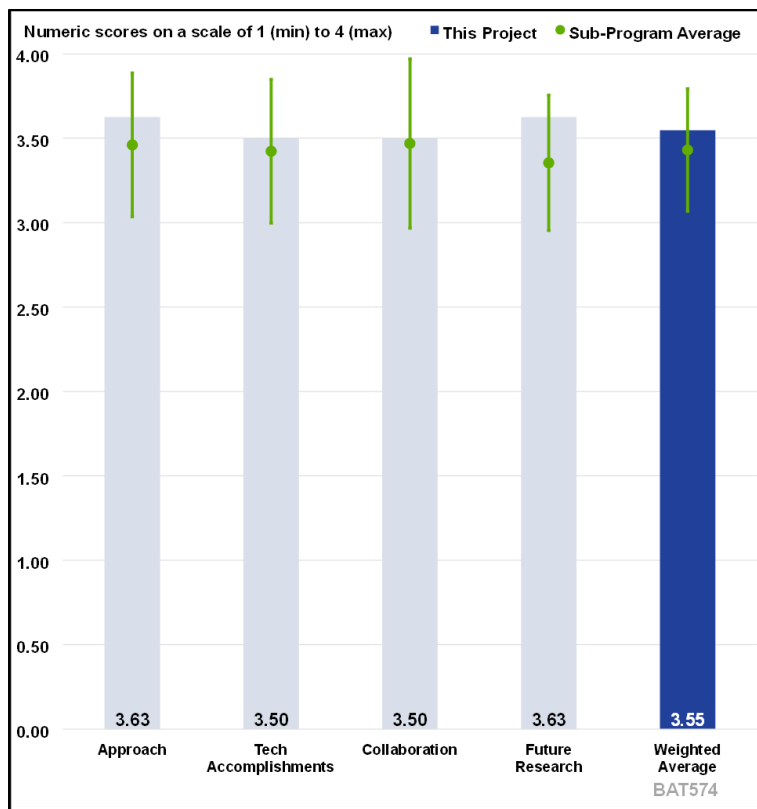


Figure 1-31 - Presentation Number: BAT574 Presentation Title: ReCell Center-Modeling and Analysis Principal Investigator: Sabine Gallagher, Argonne National Laboratory

Presentation Link:

https://www1.eere.energy.gov/vehiclesandfuels/downloads/2025_AMR/BAT574_Gallagher_Key_2025_o.pdf

Presentation Number:

BAT576

Presentation Title:

Solid State Batteries with Long Cycle Life and High Energy Density

Principal Investigator:

Haegyum Kim, Lawrence Berkeley National Laboratory

Presenter

Haegyum Kim, Lawrence Berkeley National Laboratory

Reviewer Sample Size

A total of four reviewers evaluated this project.

Project Relevance and Resources

100% of reviewers felt that the project was relevant to current DOE objectives, 0% of reviewers felt that the project was not relevant, and 0% of reviewers did not indicate an answer. 100% of reviewers felt that the resources were sufficient, 0% of reviewers felt that the resources were insufficient, 0% of reviewers felt that the resources were excessive, and 0% of reviewers did not indicate an answer.

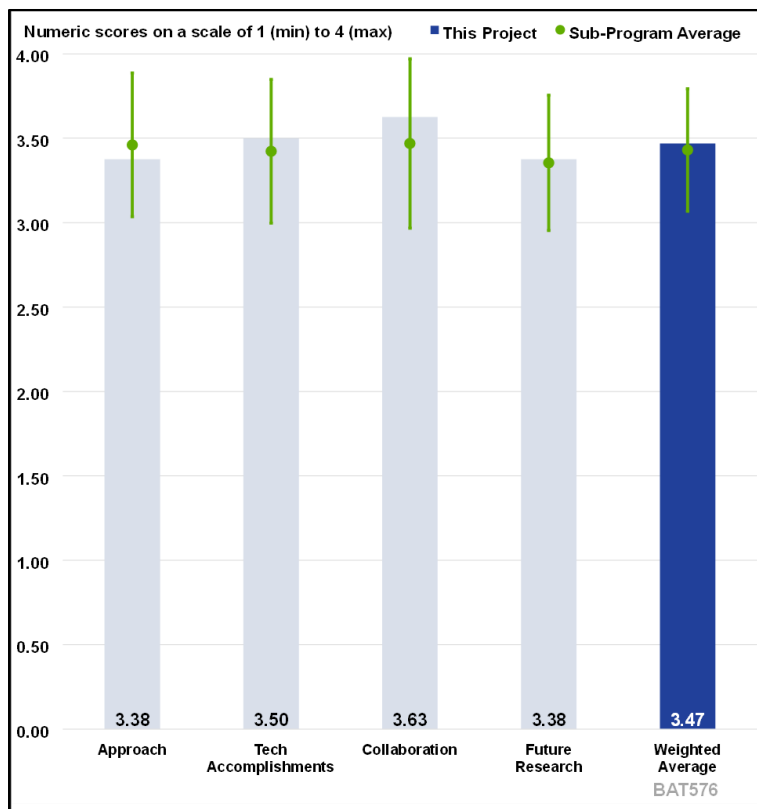


Figure 1-32 - Presentation Number: BAT576 Presentation Title: Solid State Batteries with Long Cycle Life and High Energy Density Principal Investigator: Haegyum Kim, Lawrence Berkeley National Laboratory

Presentation Link:

https://www1.eere.energy.gov/vehiclesandfuels/downloads/2025_AMR/BAT576_Kim_2025_o.pdf

Presentation Number:

BAT577

Presentation Title:

Low-Pressure All-Solid-State Cells

Principal Investigator:

Tony Burrell, National Renewable Energy Laboratory

Presenter

Tony Burrell, National Renewable Energy Laboratory

Reviewer Sample Size

A total of four reviewers evaluated this project.

Project Relevance and Resources

100% of reviewers felt that the project was relevant to current DOE objectives, 0% of reviewers felt that the project was not relevant, and 0% of reviewers did not indicate an answer. 100% of reviewers felt that the resources were sufficient, 0% of reviewers felt that the resources were insufficient, 0% of reviewers felt that the resources were excessive, and 0% of reviewers did not indicate an answer.

Presentation Link:

https://www1.eere.energy.gov/vehiclesandfuels/downloads/2025_AMR/BAT577_Burrell_2025_o.pdf

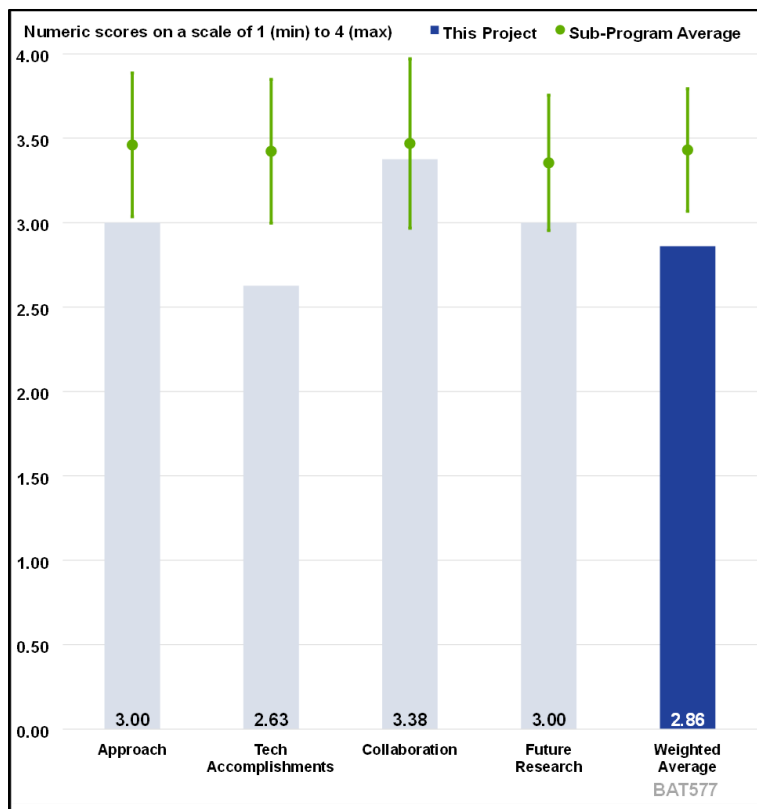


Figure 1-33 - Presentation Number: BAT577 Presentation Title: Low-Pressure All-Solid-State Cells Principal Investigator: Tony Burrell, National Renewable Energy Laboratory

Presentation Number:

BAT578

Presentation Title:

Stable Solid-State Electrolyte and Interface for High-Energy Density Lithium-Sulfur Battery

Principal Investigator:

Dongping Lu, Pacific Northwest National Laboratory

Presenter

Dongping Lu, Pacific Northwest National Laboratory

Reviewer Sample Size

A total of four reviewers evaluated this project.

Project Relevance and Resources

100% of reviewers felt that the project was relevant to current DOE objectives, 0% of reviewers felt that the project was not relevant, and 0% of reviewers did not indicate an answer. 100% of reviewers felt that the resources were sufficient, 0% of reviewers felt that the resources were insufficient, 0% of reviewers felt that the resources were excessive, and 0% of reviewers did not indicate an answer.

Presentation Link:

https://www1.eere.energy.gov/vehiclesandfuels/downloads/2025_AMR/BAT578_Lu_2025_o.pdf

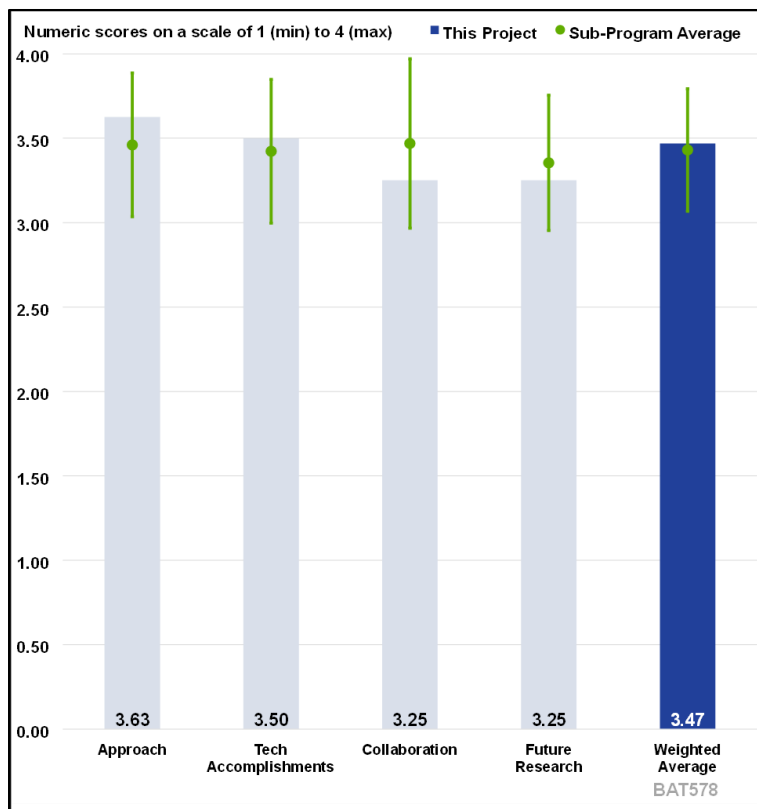


Figure 1-34 - Presentation Number: BAT578 Presentation Title: Stable Solid-State Electrolyte and Interface for High-Energy Density Lithium-Sulfur Battery Principal Investigator: Dongping Lu, Pacific Northwest National Laboratory

Presentation Number:

BAT579

Presentation Title:

Multifunctional Gradient Coatings for Scalable High-Energy Density Sulfide-Based Solid-State Batteries

Principal Investigator:

Justin Connell, Argonne National Laboratory

Presenter

Justin Connell, Argonne National Laboratory

Reviewer Sample Size

A total of four reviewers evaluated this project.

Project Relevance and Resources

100% of reviewers felt that the project was relevant to current DOE objectives, 0% of reviewers felt that the project was not relevant, and 0% of reviewers did not indicate an answer. 75% of reviewers felt that the resources were sufficient, 25% of reviewers felt that the resources were insufficient, 0% of reviewers felt that the resources were excessive, and 0% of reviewers did not indicate an answer.

Presentation Link:

https://www1.eere.energy.gov/vehiclesandfuels/downloads/2025_AMR/BAT579_Connell_2025_o.pdf

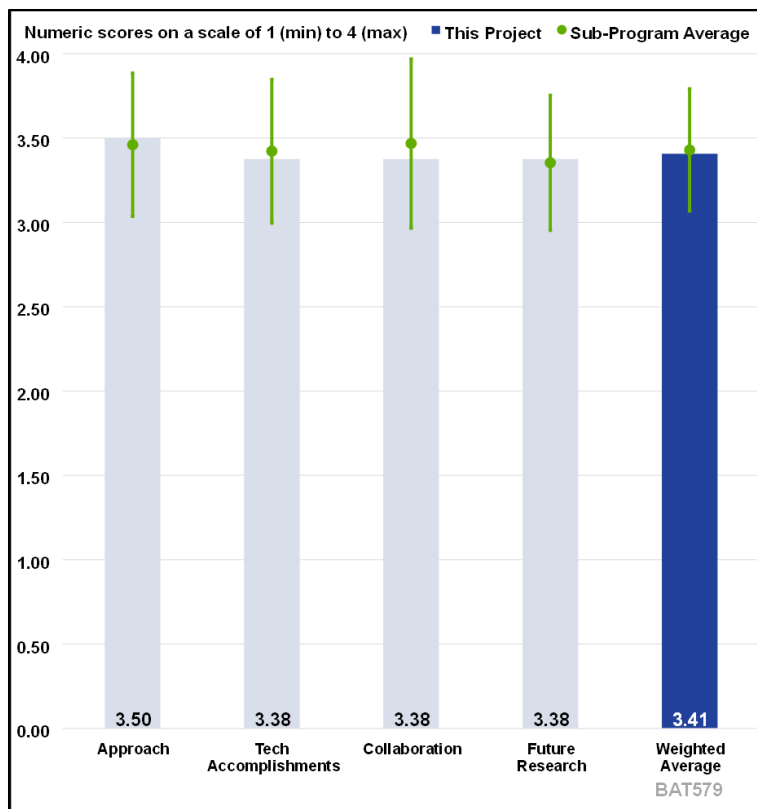


Figure 1-35 - Presentation Number: BAT579 Presentation Title: Multifunctional Gradient Coatings for Scalable High-Energy Density Sulfide-Based Solid-State Batteries Principal Investigator: Justin Connell, Argonne National Laboratory

Presentation Number:

BAT580

Presentation Title:

Thick Selenium-Sulfur Cathode Supported Ultra-thin Sulfide Electrolytes for High-Energy All-Solid-State Batteries

Principal Investigator:

Guiliang Xu, Argonne National Laboratory

Presenter

Guiliang Xu, Argonne National Laboratory

Reviewer Sample Size

A total of four reviewers evaluated this project.

Project Relevance and Resources

100% of reviewers felt that the project was relevant to current DOE objectives, 0% of reviewers felt that the project was not relevant, and 0% of reviewers did not indicate an answer. 100% of reviewers felt that the resources were sufficient, 0% of reviewers felt that the resources were insufficient, 0% of reviewers felt that the resources were excessive, and 0% of reviewers did not indicate an answer.

Presentation Link:

https://www1.eere.energy.gov/vehiclesandfuels/downloads/2025_AMR/BAT580_Xu_2025_o.pdf

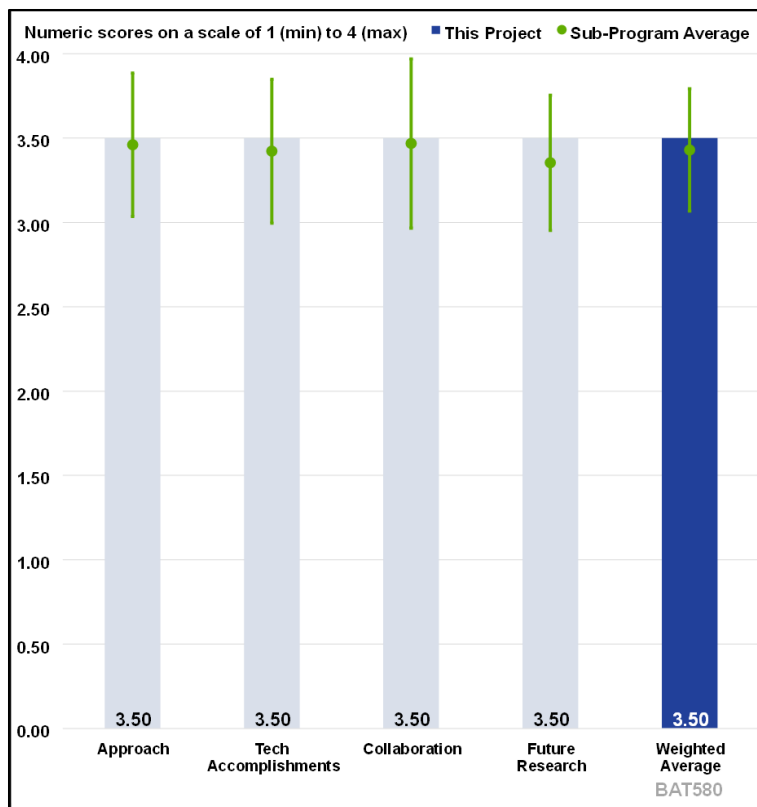


Figure 1-36 - Presentation Number: BAT580 Presentation Title: Thick Selenium-Sulfur Cathode Supported Ultra-thin Sulfide Electrolytes for High-Energy All-Solid-State Batteries Principal Investigator: Guiliang Xu, Argonne National Laboratory

Presentation Number:

BAT581

Presentation Title:

Precision Control of Lithium Surfaces for Solid-State Batteries

Principal Investigator:

Andrew Westover, Oak Ridge National Laboratory

Presenter

Andrew Westover, Oak Ridge National Laboratory

Reviewer Sample Size

A total of six reviewers evaluated this project.

Project Relevance and Resources

100% of reviewers felt that the project was relevant to current DOE objectives, 0% of reviewers felt that the project was not relevant, and 0% of reviewers did not indicate an answer. 83% of reviewers felt that the resources were sufficient, 17% of reviewers felt that the resources were insufficient, 0% of reviewers felt that the resources were excessive, and 0% of reviewers did not indicate an answer.

Presentation Link:

https://www1.eere.energy.gov/vehiclesandfuels/downloads/2025_AMR/BAT581_Westover_2025_o.pdf

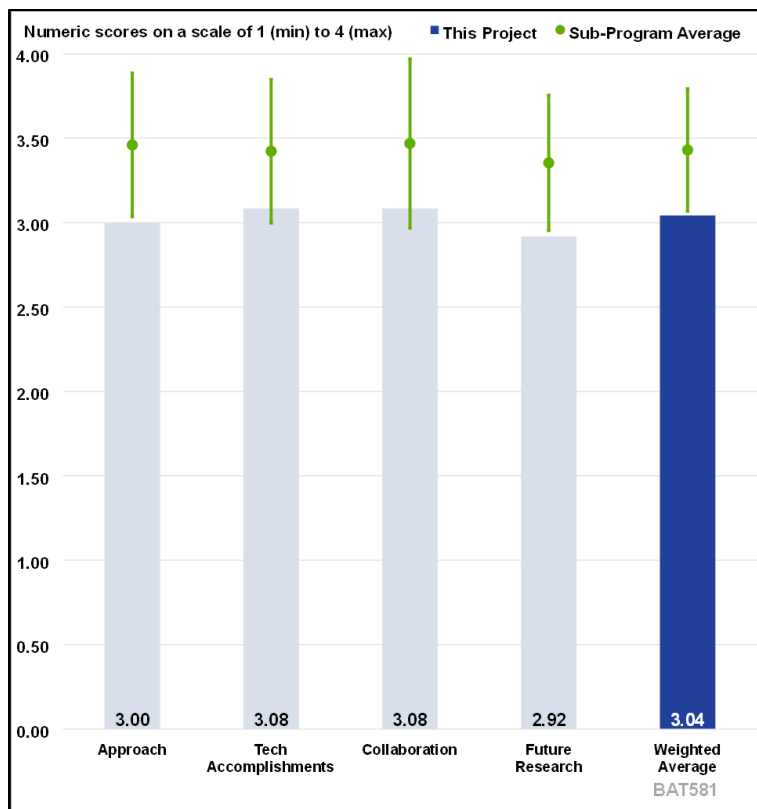


Figure 1-37 - Presentation Number: BAT581 Presentation Title: Precision Control of Lithium Surfaces for Solid-State Batteries Principal Investigator: Andrew Westover, Oak Ridge National Laboratory

Presentation Number:

BAT582

Presentation Title:

Inorganic-Polymer Composite Electrolytes with Architecture Design for Lithium Metal Solid-State Batteries

Principal Investigator:

Enyuan Hu, Brookhaven National Laboratory

Presenter

Enyuan Hu, Brookhaven National Laboratory

Reviewer Sample Size

A total of four reviewers evaluated this project.

Project Relevance and Resources

100% of reviewers felt that the project was relevant to current DOE objectives, 0% of reviewers felt that the project was not relevant, and 0% of reviewers did not indicate an answer. 100% of reviewers felt that the resources were sufficient, 0% of reviewers felt that the resources were insufficient, 0% of reviewers felt that the resources were excessive, and 0% of reviewers did not indicate an answer.

Presentation Link:

https://www1.eere.energy.gov/vehiclesandfuels/downloads/2025_AMR/BAT582_Hu_2025_o.pdf

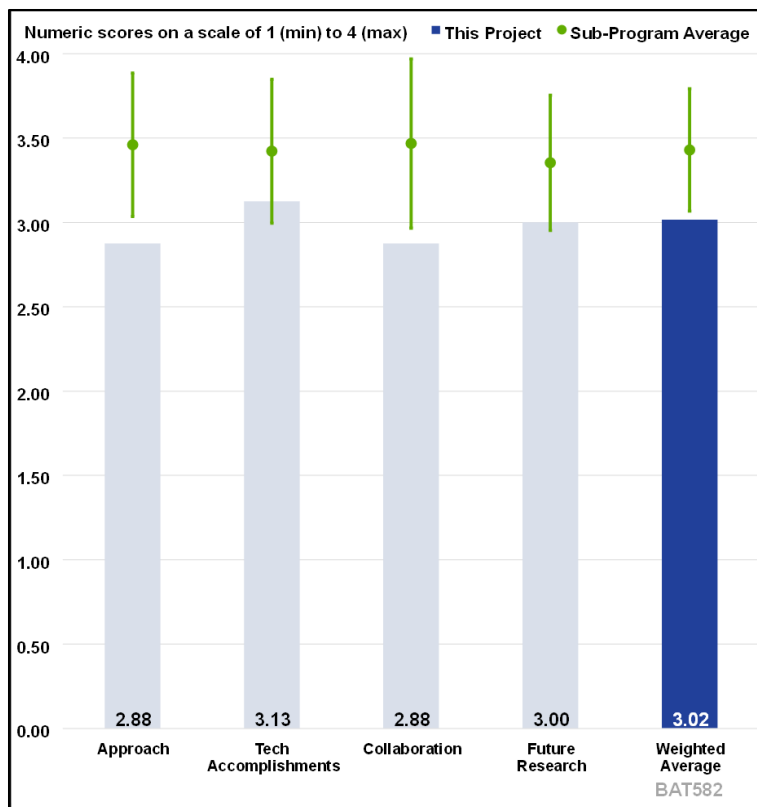


Figure 1-38 - Presentation Number: BAT582 Presentation Title: Inorganic-Polymer Composite Electrolytes with Architecture Design for Lithium Metal Solid-State Batteries Principal Investigator: Enyuan Hu, Brookhaven National Laboratory

Presentation Number:

BAT583

Presentation Title:

Development of All-Solid-State Battery Using Anti-Perovskite Electrolyte

Principal Investigator:

Zonghai Chen, Argonne National Laboratory

Presenter

Zonghai Chen, Argonne National Laboratory

Reviewer Sample Size

A total of three reviewers evaluated this project.

Project Relevance and Resources

100% of reviewers felt that the project was relevant to current DOE objectives, 0% of reviewers felt that the project was not relevant, and 0% of reviewers did not indicate an answer. 100% of reviewers felt that the resources were sufficient, 0% of reviewers felt that the resources were insufficient, 0% of reviewers felt that the resources were excessive, and 0% of reviewers did not indicate an answer.

Presentation Link:

https://www1.eere.energy.gov/vehiclesandfuels/downloads/2025_AMR/BAT583_Chen_2025_o.pdf

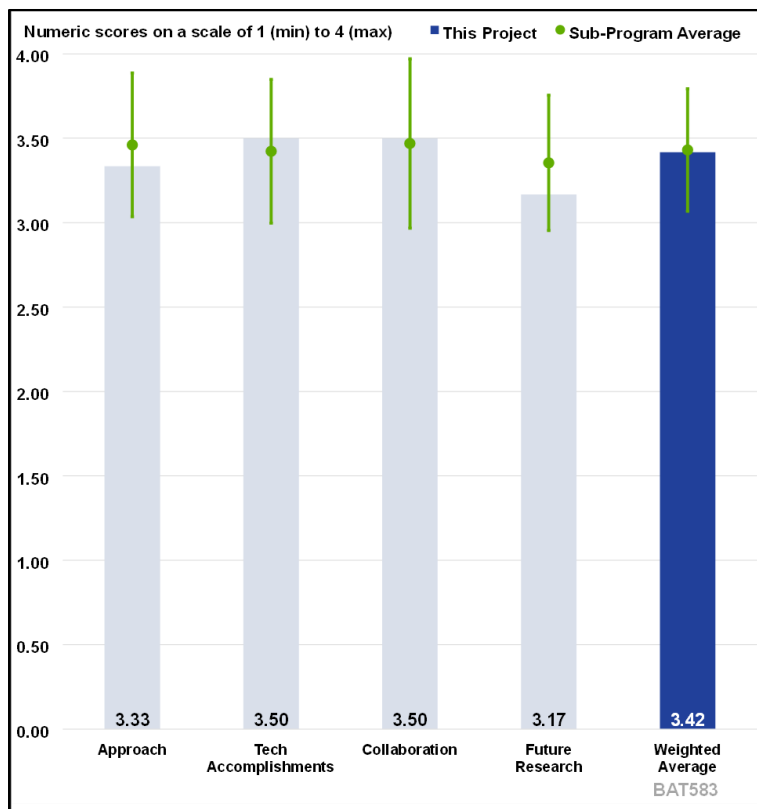


Figure 1-39 - Presentation Number: BAT583 Presentation Title: Development of All-Solid-State Battery Using Anti-Perovskite Electrolyte Principal Investigator: Zonghai Chen, Argonne National Laboratory

Presentation Number:

BAT584

Presentation Title:

Integrated Atomic-, Meso-, and Micro-Scale Diagnostics of Solid-State Batteries

Principal Investigator:

William Chueh/Yi Cui, SLAC National Accelerator Laboratory/ Stanford University

Presenter

William Chueh, SLAC National Accelerator Laboratory/ Stanford University

Reviewer Sample Size

A total of three reviewers evaluated this project.

Project Relevance and Resources

100% of reviewers felt that the project was relevant to current DOE objectives, 0% of reviewers felt that the project was not relevant, and 0% of reviewers did not indicate an answer. 100% of reviewers felt that the resources were sufficient, 0% of reviewers felt that the resources were insufficient, 0% of reviewers felt that the resources were excessive, and 0% of reviewers did not indicate an answer.

Presentation Link:

https://www1.eere.energy.gov/vehiclesandfuels/downloads/2025_AMR/BAT584_Cui_Chueh_2025_p.pdf

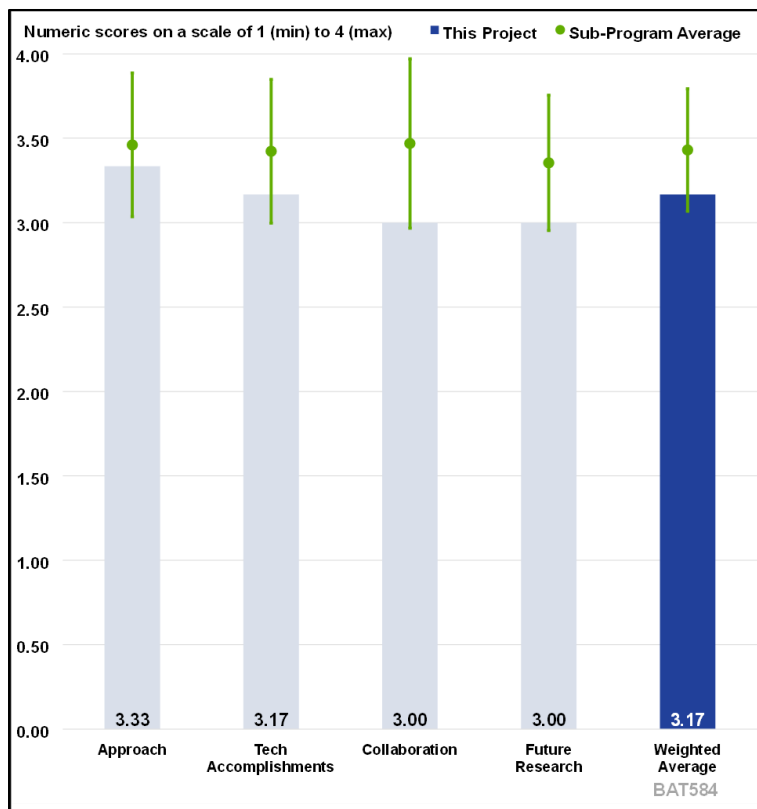


Figure 1-40 - Presentation Number: BAT584 Presentation Title: Integrated Atomic-, Meso-, and Micro-Scale Diagnostics of Solid-State Batteries Principal Investigator: William Chueh/Yi Cui, SLAC National Accelerator Laboratory/ Stanford University

Presentation Number:

BAT605

Presentation Title:

Silicon Consortium Project: Next Generation Electrolytes for Silicon Anodes

Principal Investigator:

Gabe Veith, Oak Ridge National Laboratory

Presenter

Gabe Veith, Oak Ridge National Laboratory

Reviewer Sample Size

A total of five reviewers evaluated this project.

Project Relevance and Resources

100% of reviewers felt that the project was relevant to current DOE objectives, 0% of reviewers felt that the project was not relevant, and 0% of reviewers did not indicate an answer. 100% of reviewers felt that the resources were sufficient, 0% of reviewers felt that the resources were insufficient, 0% of reviewers felt that the resources were excessive, and 0% of reviewers did not indicate an answer.

Presentation Link:

https://www1.eere.energy.gov/vehiclesandfuels/downloads/2025_AMR/BAT605_Veith_2025_p.pdf

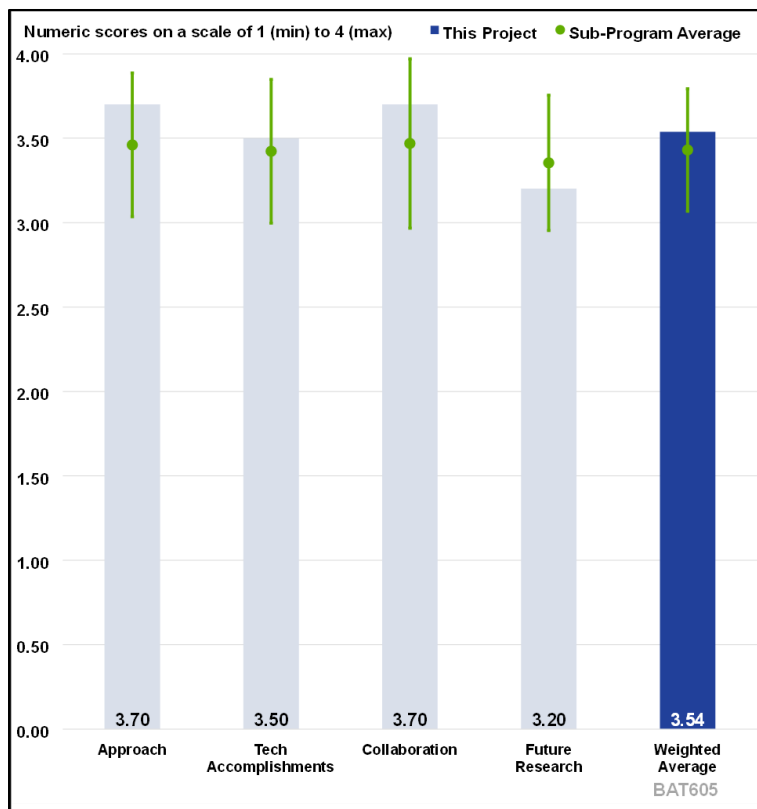


Figure 1-41 - Presentation Number: BAT605 Presentation Title: Silicon Consortium Project: Next Generation Electrolytes for Silicon Anodes Principal Investigator: Gabe Veith, Oak Ridge National Laboratory

Presentation Number:

BAT606

Presentation Title:

VTO High-Performance Computing Cluster

Principal Investigator:

Ray Grout, National Renewable Energy Laboratory

Presenter

Ray Grout, National Renewable Energy Laboratory

Reviewer Sample Size

A total of four reviewers evaluated this project.

Project Relevance and Resources

100% of reviewers felt that the project was relevant to current DOE objectives, 0% of reviewers felt that the project was not relevant, and 0% of reviewers did not indicate an answer. 100% of reviewers felt that the resources were sufficient, 0% of reviewers felt that the resources were insufficient, 0% of reviewers felt that the resources were excessive, and 0% of reviewers did not indicate an answer.

Presentation Link:

https://www1.eere.energy.gov/vehiclesandfuels/downloads/2025_AMR/BAT606_Grout_2025_p.pdf

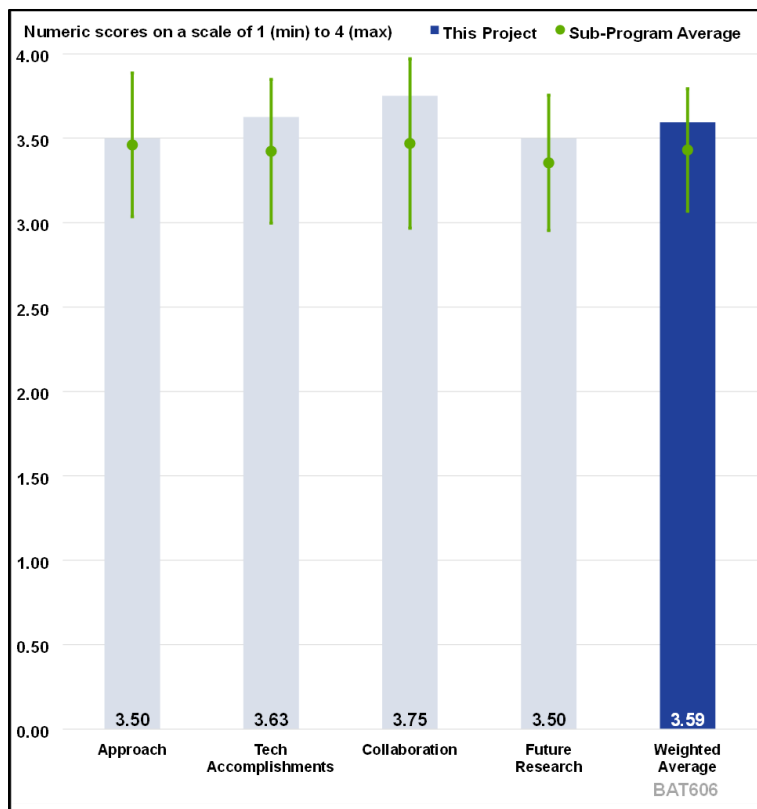


Figure 1-42 - Presentation Number: BAT606 Presentation Title: VTO High-Performance Computing Cluster Principal Investigator: Ray Grout, National Renewable Energy Laboratory

Presentation Number:

BAT607

Presentation Title:

Processing and Scale-Up of High Energy Density Cobalt-Free Cathodes

Principal Investigator:

Ilias Belharouak, Oak Ridge National Laboratory

Presenter

Ilias Belharouak, Oak Ridge National Laboratory

Reviewer Sample Size

A total of seven reviewers evaluated this project.

Project Relevance and Resources

100% of reviewers felt that the project was relevant to current DOE objectives, 0% of reviewers felt that the project was not relevant, and 0% of reviewers did not indicate an answer. 100% of reviewers felt that the resources were sufficient, 0% of reviewers felt that the resources were insufficient, 0% of reviewers felt that the resources were excessive, and 0% of reviewers did not indicate an answer.

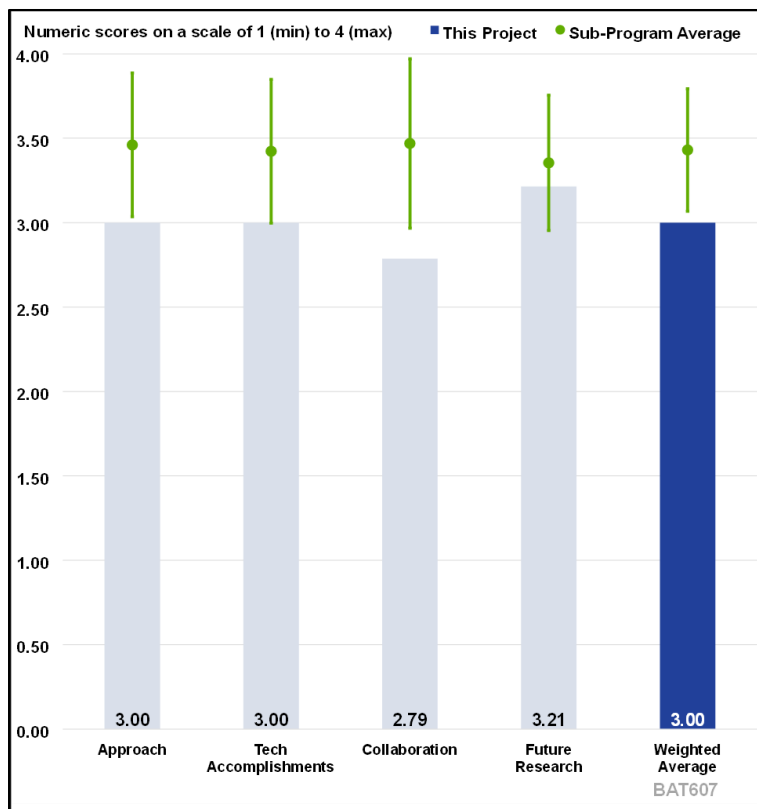


Figure 1-43 - Presentation Number: BAT607 Presentation Title: Processing and Scale-Up of High Energy Density Cobalt-Free Cathodes Principal Investigator: Ilias Belharouak, Oak Ridge National Laboratory

Presentation Link:

https://www1.eere.energy.gov/vehiclesandfuels/downloads/2025_AMR/BAT607_Belharouak_2025_o.pdf

Presentation Number:

BAT608

Presentation Title:

Cathode-Electrolyte Interphase (CEI) Consortium (Thrust 1): Model Cathode Materials for Next-Generation Li-Ion Batteries

Principal Investigator:

Jie Xiao, Pacific Northwest National Laboratory

Presenter

Jie Xiao, Pacific Northwest National Laboratory

Reviewer Sample Size

A total of four reviewers evaluated this project.

Project Relevance and Resources

100% of reviewers felt that the project was relevant to current DOE objectives, 0% of reviewers felt that the project was not relevant, and 0% of reviewers did not indicate an answer. 100% of reviewers felt that the resources were sufficient, 0% of reviewers felt that the resources were insufficient, 0% of reviewers felt that the resources were excessive, and 0% of reviewers did not indicate an answer.

Presentation Link:

https://www1.eere.energy.gov/vehiclesandfuels/downloads/2025_AMR/BAT608_Xiao_2025_p.pdf

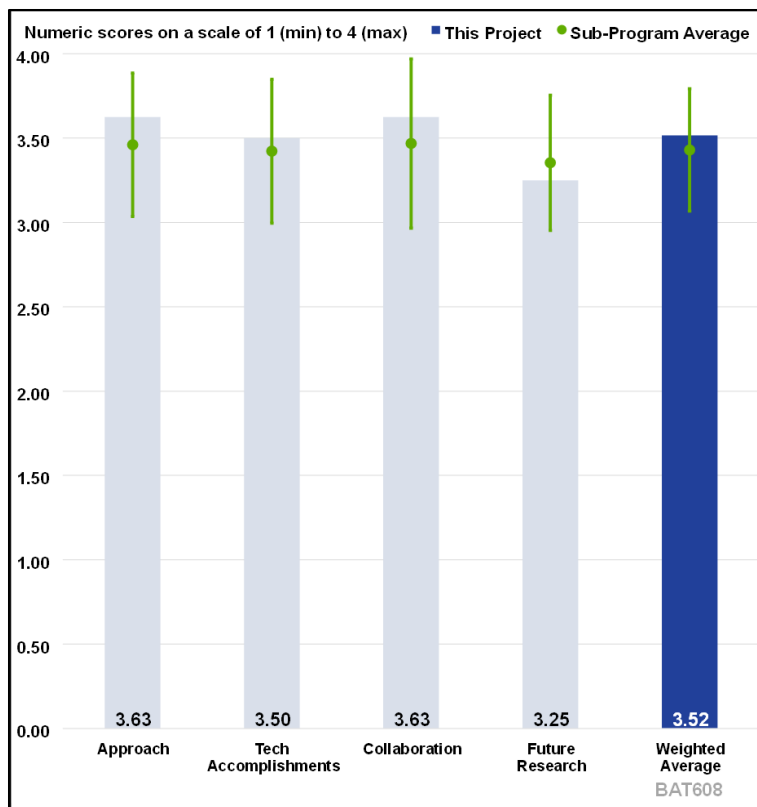


Figure 1-44 - Presentation Number: BAT608 Presentation Title: Cathode-Electrolyte Interphase (CEI) Consortium (Thrust 1): Model Cathode Materials for Next-Generation Li-Ion Batteries Principal Investigator: Jie Xiao, Pacific Northwest National Laboratory

Presentation Number:

BAT609

Presentation Title:

Cathode-Electrolyte Interphase (CEI) Consortium (Thrust 2): Electrolytes and CEI at High Voltages

Principal Investigator:

Jordi Cabana, Argonne National Laboratory

Presenter

Jordi Cabana, Argonne National Laboratory

Reviewer Sample Size

A total of four reviewers evaluated this project.

Project Relevance and Resources

100% of reviewers felt that the project was relevant to current DOE objectives, 0% of reviewers felt that the project was not relevant, and 0% of reviewers did not indicate an answer. 100% of reviewers felt that the resources were sufficient, 0% of reviewers felt that the resources were insufficient, 0% of reviewers felt that the resources were excessive, and 0% of reviewers did not indicate an answer.

Presentation Link:

https://www1.eere.energy.gov/vehiclesandfuels/downloads/2025_AMR/BAT609_Cabana_2025_p.pdf

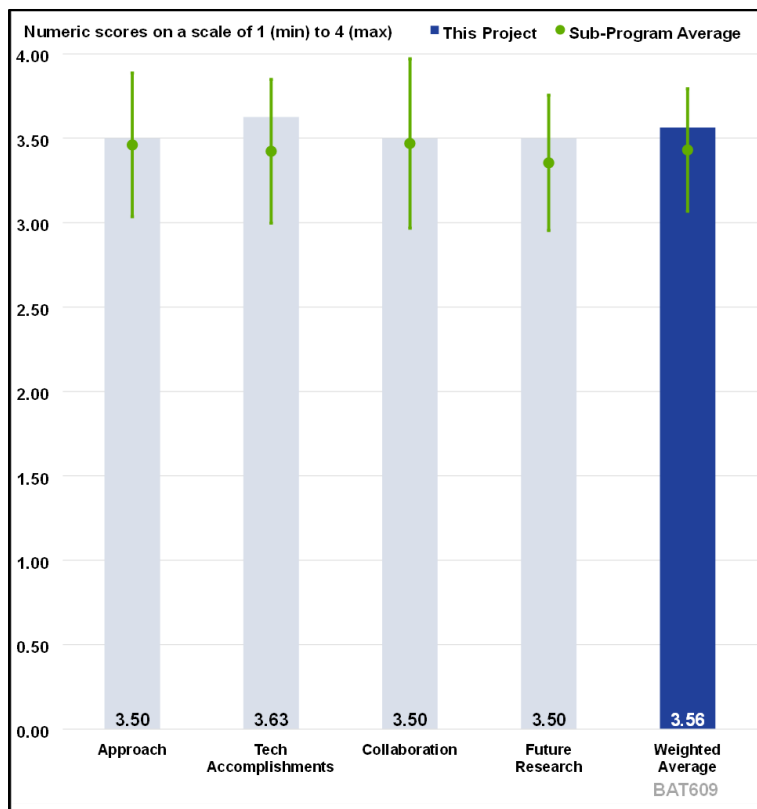


Figure 1-45 - Presentation Number: BAT609 Presentation Title: Cathode-Electrolyte Interphase (CEI) Consortium (Thrust 2): Electrolytes and CEI at High Voltages Principal Investigator: Jordi Cabana, Argonne National Laboratory

Presentation Number:

BAT610

Presentation Title:

Cathode-Electrolyte Interphase (CEI) Consortium (Thrust 3): Characterization and Modeling to Understand CEI

Principal Investigator:

Amy Marschilok, Brookhaven National Laboratory

Presenter

Amy Marschilok, Brookhaven National Laboratory

Reviewer Sample Size

A total of four reviewers evaluated this project.

Project Relevance and Resources

100% of reviewers felt that the project was relevant to current DOE objectives, 0% of reviewers felt that the project was not relevant, and 0% of reviewers did not indicate an answer. 100% of reviewers felt that the resources were sufficient, 0% of reviewers felt that the resources were insufficient, 0% of reviewers felt that the resources were excessive, and 0% of reviewers did not indicate an answer.

Presentation Link:

https://www1.eere.energy.gov/vehiclesandfuels/downloads/2025_AMR/BAT610_Marschilok_2025_p.pdf

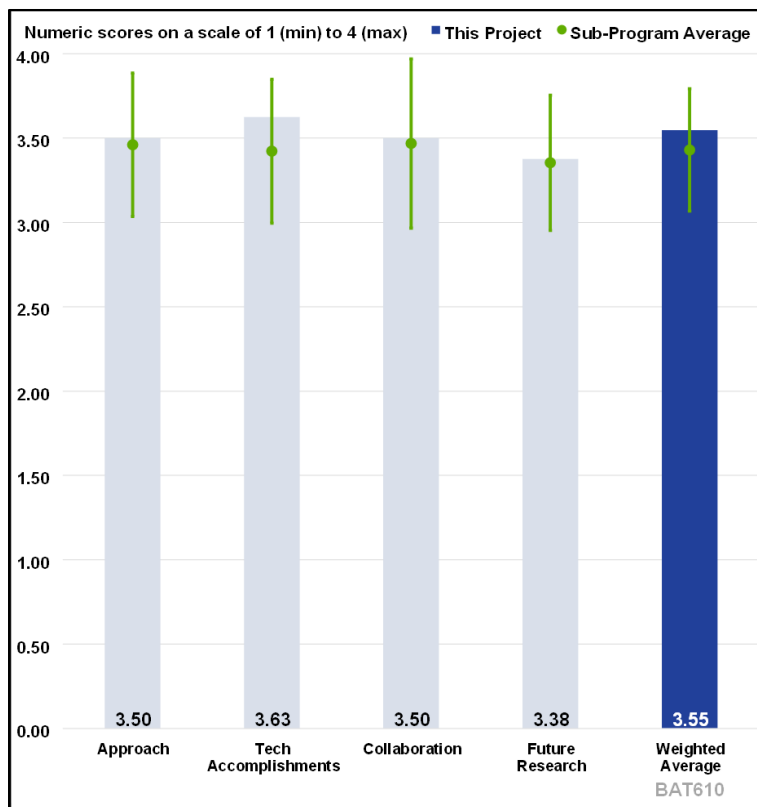


Figure 1-46 - Presentation Number: BAT610 Presentation Title: Cathode-Electrolyte Interphase (CEI) Consortium (Thrust 3): Characterization and Modeling to Understand CEI Principal Investigator: Amy Marschilok, Brookhaven National Laboratory

Presentation Number:

BAT619

Presentation Title:

The Role of Thermodynamics and Kinetics on the Coulombic Efficiency of Lithium Metal Batteries with FEC and DME-based Electrolytes

Principal Investigator:

Yang Shao-Horn, Massachusetts Institute of Technology

Presenter

Yang Shao-Horn, Massachusetts Institute of Technology

Reviewer Sample Size

A total of three reviewers evaluated this project.

Project Relevance and Resources

100% of reviewers felt that the project was relevant to current DOE objectives, 0% of reviewers felt that the project was not relevant, and 0% of reviewers did not indicate an answer. 67% of reviewers felt that the resources were sufficient, 0% of reviewers felt that the resources were insufficient, 33% of reviewers felt that the resources were excessive, and 0% of reviewers did not indicate an answer.

Presentation Link:

https://www1.eere.energy.gov/vehiclesandfuels/downloads/2025_AMR/BAT619_Shaohorn_2025_o.pdf

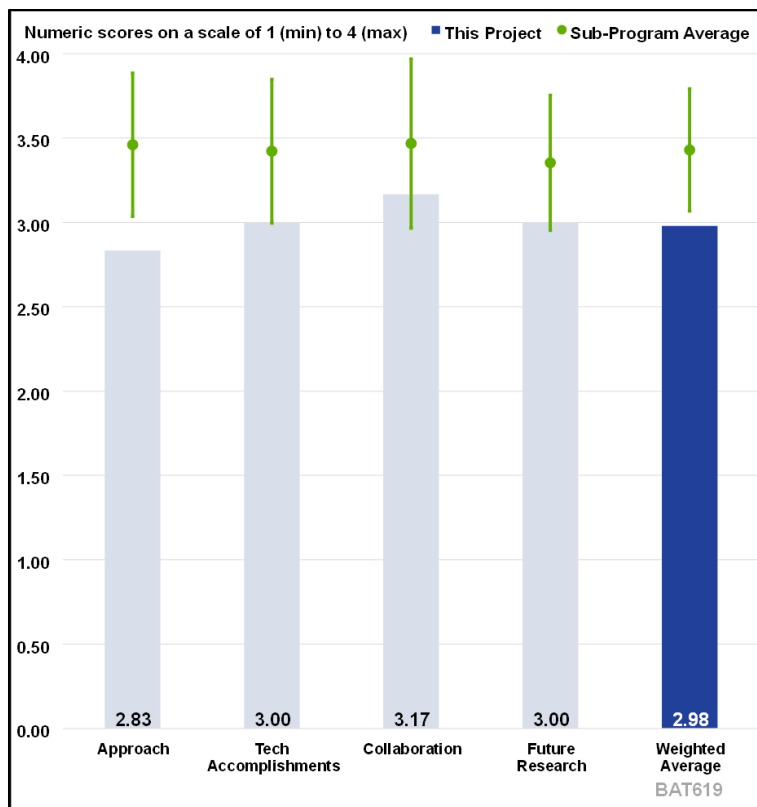


Figure 1-47 - Presentation Number: BAT619 Presentation Title: The Role of Thermodynamics and Kinetics on the Coulombic Efficiency of Lithium Metal Batteries with FEC and DME-based Electrolytes Principal Investigator: Yang Shao-Horn, Massachusetts Institute of Technology

Presentation Number:

BAT620

Presentation Title:

Lithium Metal Anode Stability
Against Soft and Hard Solid
Electrolytes

Principal Investigator:

Nitash Balsara, Lawrence Berkeley
National Laboratory

Presenter

Nitash Balsara, Lawrence Berkeley
National Laboratory

Reviewer Sample Size

A total of four reviewers evaluated
this project.

Project Relevance and Resources

100% of reviewers felt that the
project was relevant to current DOE
objectives, 0% of reviewers felt that
the project was not relevant, and
0% of reviewers did not indicate an
answer. 100% of reviewers felt that
the resources were sufficient, 0%
of reviewers felt that the resources
were insufficient, 0% of reviewers
felt that the resources were
excessive, and 0% of reviewers did not indicate an answer.

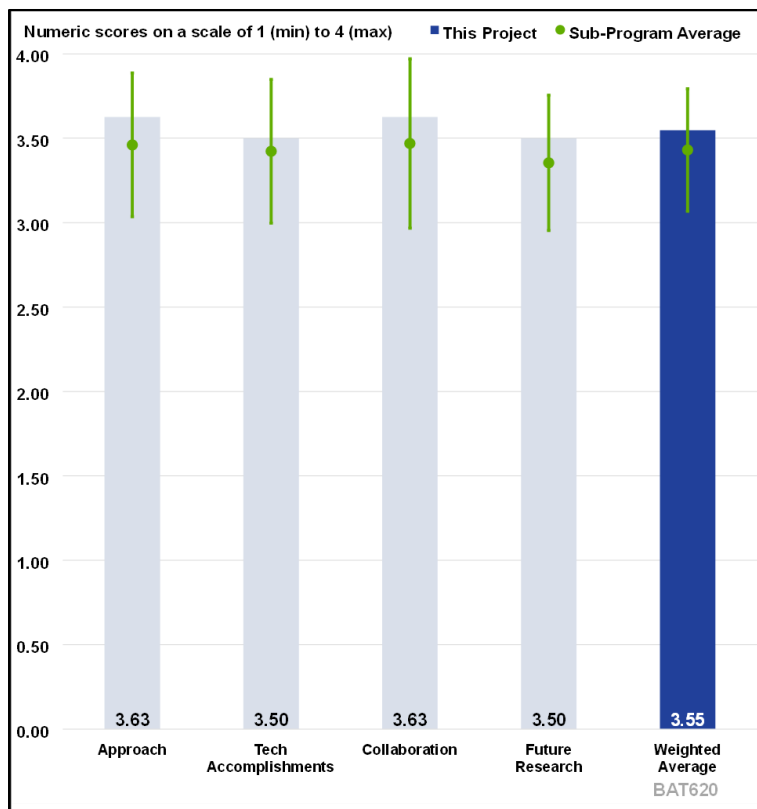


Figure 1-48 - Presentation Number: BAT620 Presentation Title: Lithium Metal Anode Stability Against Soft and Hard Solid Electrolytes Principal Investigator: Nitash Balsara, Lawrence Berkeley National Laboratory

Presentation Link:

https://www1.eere.energy.gov/vehiclesandfuels/downloads/2025_AMR/BAT620_Balsara_2025_o.pdf

Presentation Number:

BAT622

Presentation Title:

Thin Composite Solid Electrolyte for Li Metal Batteries

Principal Investigator:

Chunsheng Wang, University of Maryland, College Park

Presenter

Chunsheng Wang, University of Maryland, College Park

Reviewer Sample Size

A total of three reviewers evaluated this project.

Project Relevance and Resources

100% of reviewers felt that the project was relevant to current DOE objectives, 0% of reviewers felt that the project was not relevant, and 0% of reviewers did not indicate an answer. 100% of reviewers felt that the resources were sufficient, 0% of reviewers felt that the resources were insufficient, 0% of reviewers felt that the resources were excessive, and 0% of reviewers did not indicate an answer.

Presentation Link:

https://www1.eere.energy.gov/vehiclesandfuels/downloads/2025_AMR/BAT622_Wang_2025_o.pdf

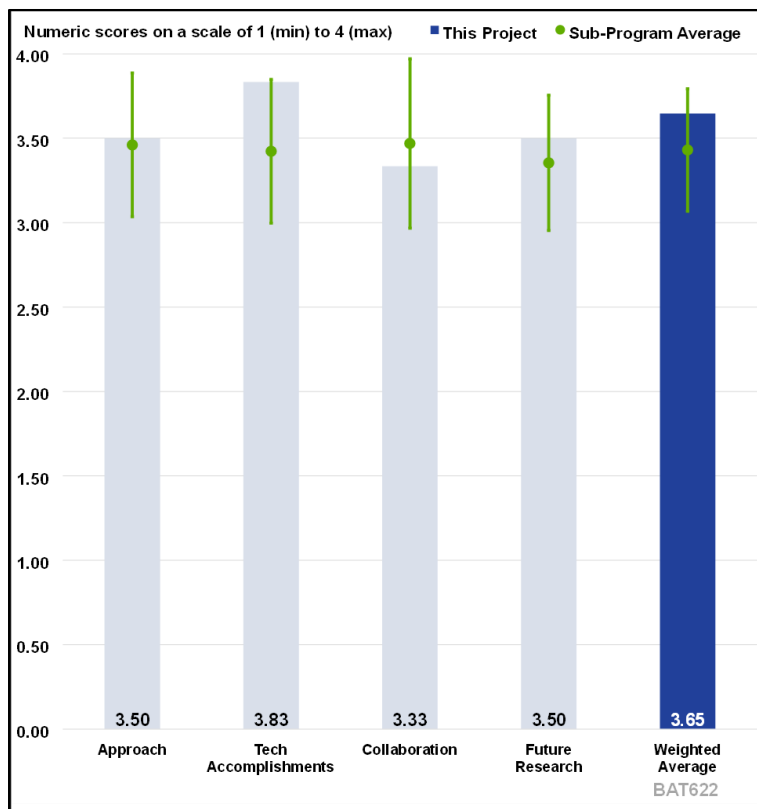


Figure 1-49 - Presentation Number: BAT622 Presentation Title: Thin Composite Solid Electrolyte for Li Metal Batteries Principal Investigator: Chunsheng Wang, University of Maryland, College Park

Presentation Number:

BAT623

Presentation Title:

Optimizing Cathode Architecture for Solid-State Li Metal-Sulfur Batteries

Principal Investigator:

Eric Wachsman, University of Maryland, College Park

Presenter

Eric Wachsman, University of Maryland, College Park

Reviewer Sample Size

A total of three reviewers evaluated this project.

Project Relevance and Resources

100% of reviewers felt that the project was relevant to current DOE objectives, 0% of reviewers felt that the project was not relevant, and 0% of reviewers did not indicate an answer. 100% of reviewers felt that the resources were sufficient, 0% of reviewers felt that the resources were insufficient, 0% of reviewers felt that the resources were excessive, and 0% of reviewers did not indicate an answer.

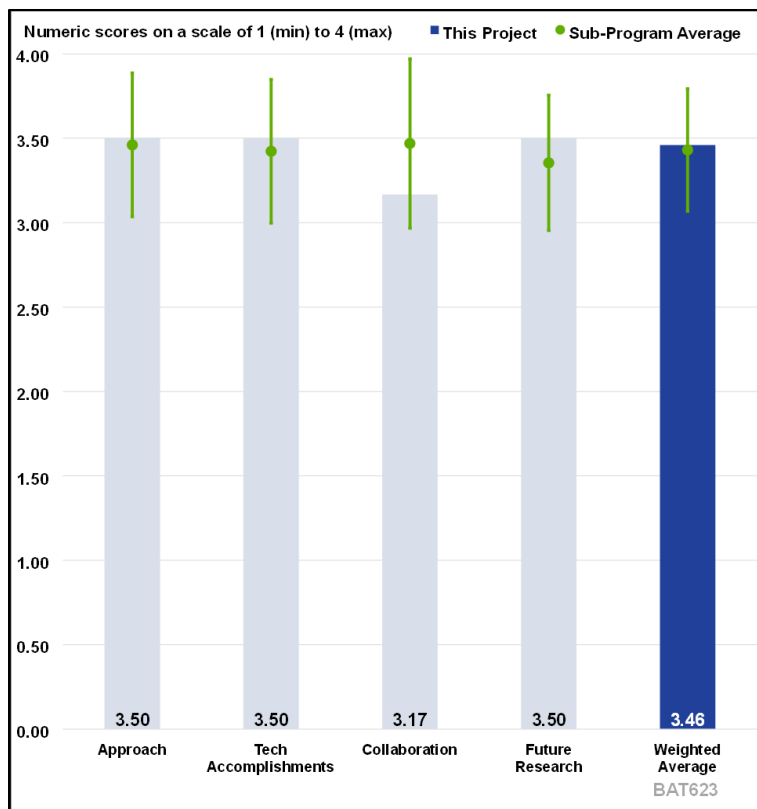


Figure 1-50 - Presentation Number: BAT623 Presentation Title: Optimizing Cathode Architecture for Solid-State Li Metal-Sulfur Batteries Principal Investigator: Eric Wachsman, University of Maryland, College Park

Presentation Link:

https://www1.eere.energy.gov/vehiclesandfuels/downloads/2025_AMR/BAT623_Wachsman_2025_o.pdf

Presentation Number:

BAT624

Presentation Title:

Scalable Noble-metal-free Interlayer Design for Sheet-type Dendrite-free Solid-state Lithium Metal Batteries

Principal Investigator:

Yan Yao, University of Houston

Presenter

Yan Yao, University of Houston

Reviewer Sample Size

A total of four reviewers evaluated this project.

Project Relevance and Resources

100% of reviewers felt that the project was relevant to current DOE objectives, 0% of reviewers felt that the project was not relevant, and 0% of reviewers did not indicate an answer. 100% of reviewers felt that the resources were sufficient, 0% of reviewers felt that the resources were insufficient, 0% of reviewers felt that the resources were excessive, and 0% of reviewers did not indicate an answer.

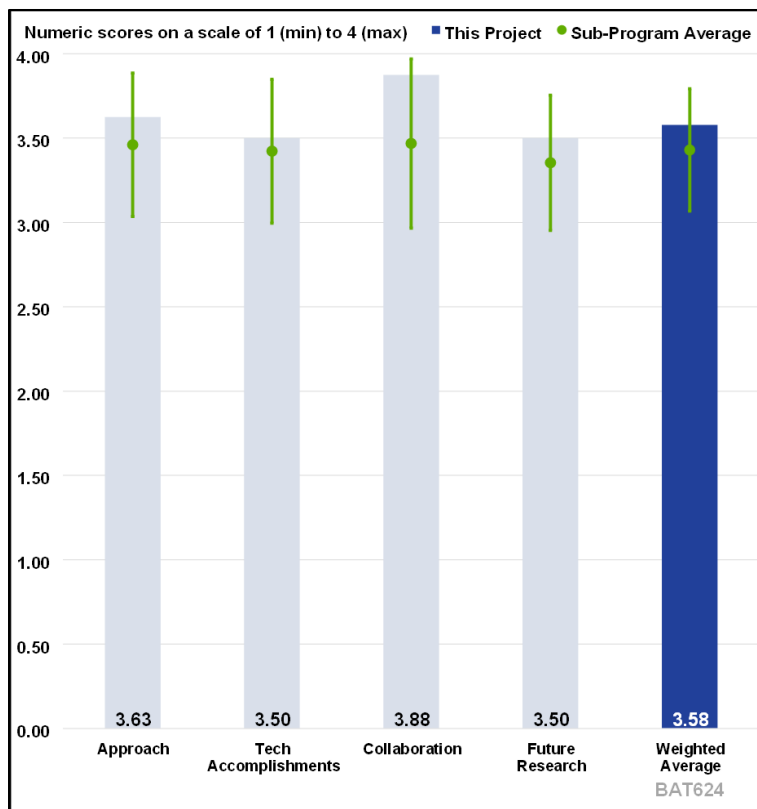


Figure 1-51 - Presentation Number: BAT624 Presentation Title: Scalable Noble-metal-free Interlayer Design for Sheet-type Dendrite-free Solid-state Lithium Metal Batteries Principal Investigator: Yan Yao, University of Houston

Presentation Link:

https://www1.eere.energy.gov/vehiclesandfuels/downloads/2025_AMR/BAT624_Yao_2025_o.pdf

Presentation Number:

BAT625

Presentation Title:

Development of High Energy Density All Solid-State Li Batteries Enabled through Optimized Electrochemical Interface and Engineering Cell Designs

Principal Investigator:

Deyang Qu, University of Wisconsin, Milwaukee

Presenter

Deyang Qu, University of Wisconsin, Milwaukee

Reviewer Sample Size

A total of four reviewers evaluated this project.

Project Relevance and Resources

100% of reviewers felt that the project was relevant to current DOE objectives, 0% of reviewers felt that the project was not relevant, and 0% of reviewers did not indicate an answer. 100% of reviewers felt that the resources were sufficient, 0% of reviewers felt that the resources were insufficient, 0% of reviewers felt that the resources were excessive, and 0% of reviewers did not indicate an answer.

Presentation Link:

https://www1.eere.energy.gov/vehiclesandfuels/downloads/2025_AMR/BAT625_Qu_2025_o.pdf

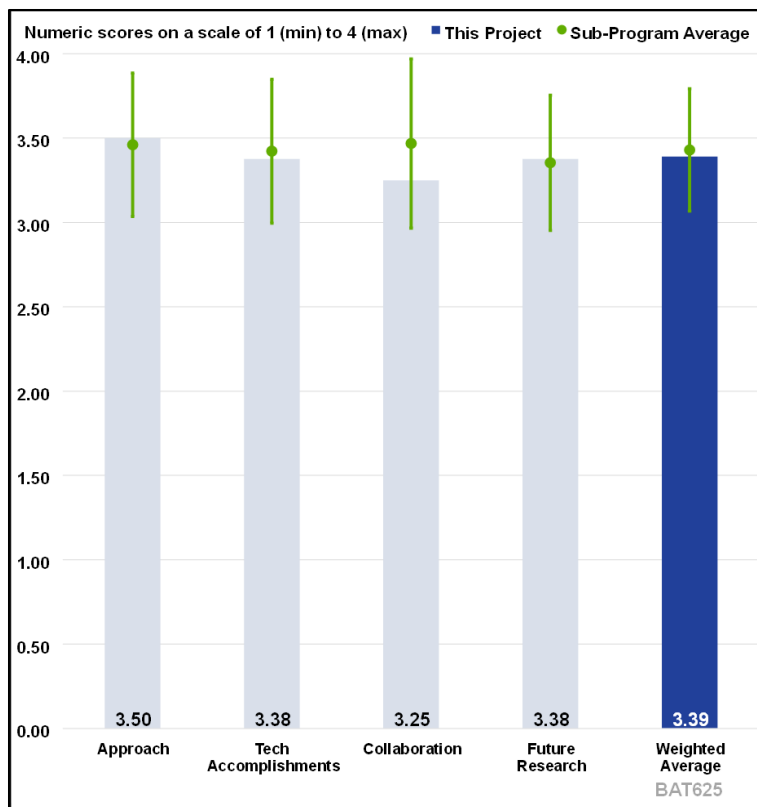


Figure 1-52 - Presentation Number: BAT625 Presentation Title: Development of High Energy Density All Solid-State Li Batteries Enabled through Optimized Electrochemical Interface and Engineering Cell Designs Principal Investigator: Deyang Qu, University of Wisconsin, Milwaukee

Presentation Number:

BAT626

Presentation Title:

Development of Thin, Robust, Lithium-Impenetrable, High-Conductivity, Electrochemically Stable, Scalable, and Low-Cost Glassy Solid Electrolytes

Principal Investigator:

Steve W. Martin, Iowa State University

Presenter

Steve W. Martin, Iowa State University

Reviewer Sample Size

A total of four reviewers evaluated this project.

Project Relevance and Resources

100% of reviewers felt that the project was relevant to current DOE objectives, 0% of reviewers felt that the project was not relevant, and 0% of reviewers did not indicate an answer. 100% of reviewers felt that the resources were sufficient, 0% of reviewers felt that the resources were insufficient, 0% of reviewers felt that the resources were excessive, and 0% of reviewers did not indicate an answer.

Presentation Link:

https://www1.eere.energy.gov/vehiclesandfuels/downloads/2025_AMR/BAT626_Martin_2025_o.pdf

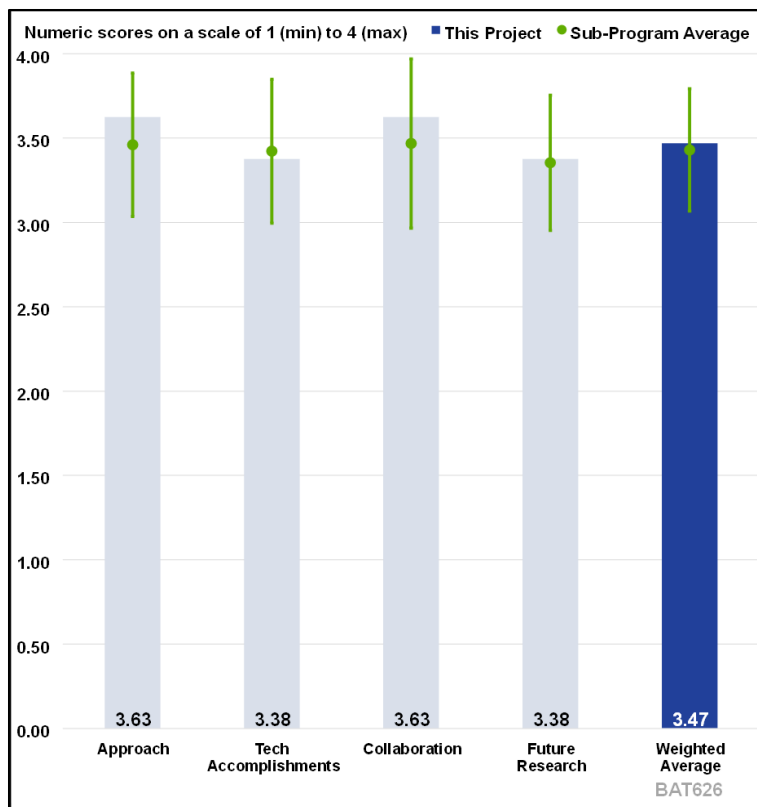


Figure 1-53 - Presentation Number: BAT626 Presentation Title: Development of Thin, Robust, Lithium-Impenetrable, High-Conductivity, Electrochemically Stable, Scalable, and Low-Cost Glassy Solid Electrolytes Principal Investigator: Steve W. Martin, Iowa State University

Presentation Number:

BAT627

Presentation Title:

Developing Materials to Enable High-Energy-Density Cathode and Stable Li Anode for Solid-State Li-S Batteries

Principal Investigator:

Donghai Wang, Southern Methodist University

Presenter

Donghai Wang, Southern Methodist University

Reviewer Sample Size

A total of three reviewers evaluated this project.

Project Relevance and Resources

100% of reviewers felt that the project was relevant to current DOE objectives, 0% of reviewers felt that the project was not relevant, and 0% of reviewers did not indicate an answer. 100% of reviewers felt that the resources were sufficient, 0% of reviewers felt that the resources were insufficient, 0% of reviewers felt that the resources were excessive, and 0% of reviewers did not indicate an answer.

Presentation Link:

https://www1.eere.energy.gov/vehiclesandfuels/downloads/2025_AMR/BAT627_Wang_2025_o.pdf

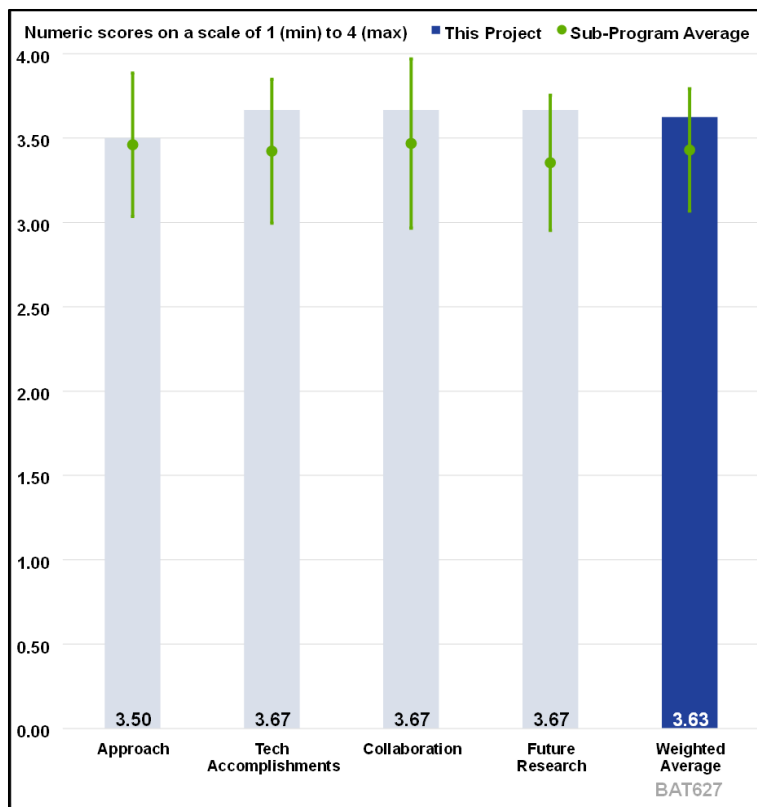


Figure 1-54 - Presentation Number: BAT627 Presentation Title: Developing Materials to Enable High-Energy-Density Cathode and Stable Li Anode for Solid-State Li-S Batteries Principal Investigator: Donghai Wang, Southern Methodist University

Presentation Number:

BAT628

Presentation Title:

Molecular Ionic Composite Solid Electrolytes for Long-Cycling and High Voltage Li-Metal Batteries

Principal Investigator:

Louis Madsen, Virginia Polytechnic Institute

Presenter

Louis Madsen, Virginia Polytechnic Institute

Reviewer Sample Size

A total of three reviewers evaluated this project.

Project Relevance and Resources

100% of reviewers felt that the project was relevant to current DOE objectives, 0% of reviewers felt that the project was not relevant, and 0% of reviewers did not indicate an answer. 100% of reviewers felt that the resources were sufficient, 0% of reviewers felt that the resources were insufficient, 0% of reviewers felt that the resources were excessive, and 0% of reviewers did not indicate an answer.

Presentation Link:

https://www1.eere.energy.gov/vehiclesandfuels/downloads/2025_AMR/BAT628_Madsen_2025_o.pdf

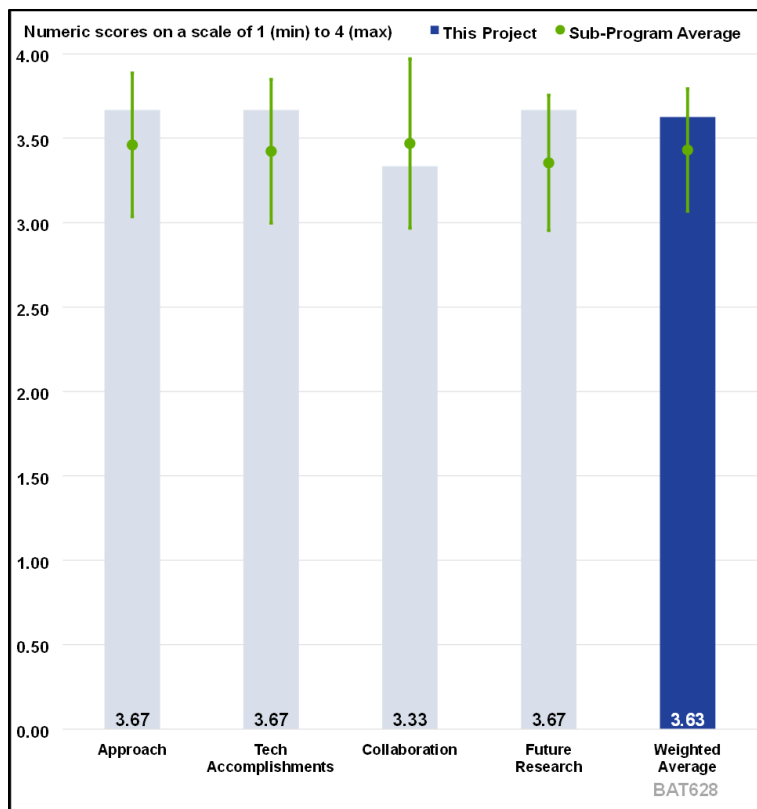


Figure 1-55 - Presentation Number: BAT628 Presentation Title: Molecular Ionic Composite Solid Electrolytes for Long-Cycling and High Voltage Li-Metal Batteries Principal Investigator: Louis Madsen, Virginia Polytechnic Institute

Presentation Number:

BAT629

Presentation Title:

Stable Sulfide-based Anode-Free and Anode-Limited All-Solid-State Lithium Battery

Principal Investigator:

Puru Jena, Virginia Commonwealth University

Presenter

Puru Jena, Virginia Commonwealth University

Reviewer Sample Size

A total of three reviewers evaluated this project.

Project Relevance and Resources

100% of reviewers felt that the project was relevant to current DOE objectives, 0% of reviewers felt that the project was not relevant, and 0% of reviewers did not indicate an answer. 100% of reviewers felt that the resources were sufficient, 0% of reviewers felt that the resources were insufficient, 0% of reviewers felt that the resources were excessive, and 0% of reviewers did not indicate an answer.

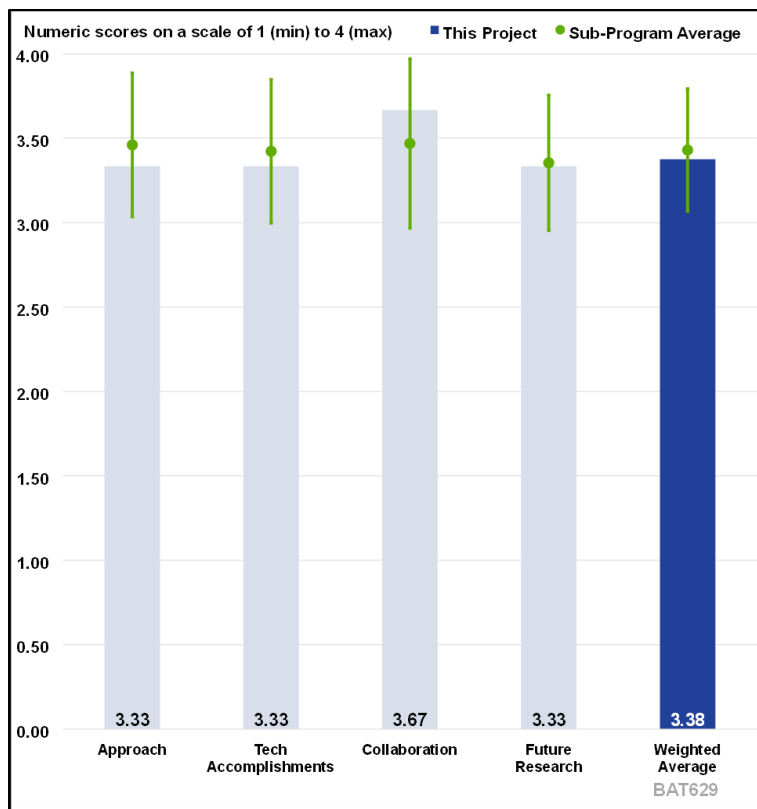


Figure 1-56 - Presentation Number: BAT629 Presentation Title: Stable Sulfide-based Anode-Free and Anode-Limited All-Solid-State Lithium Battery Principal Investigator: Puru Jena, Virginia Commonwealth University

Presentation Link:

https://www1.eere.energy.gov/vehiclesandfuels/downloads/2025_AMR/BAT629_Jena_2025_o.pdf

Presentation Number:

BAT630

Presentation Title:

Blocking Li Metal Dendrites In Solid Electrolytes With Ion-Exchange Induced Residual Stresses

Principal Investigator:

Brian W. Sheldon, Brown University

Presenter

Brian W. Sheldon, Brown University

Reviewer Sample Size

A total of three reviewers evaluated this project.

Project Relevance and Resources

100% of reviewers felt that the project was relevant to current DOE objectives, 0% of reviewers felt that the project was not relevant, and 0% of reviewers did not indicate an answer. 100% of reviewers felt that the resources were sufficient, 0% of reviewers felt that the resources were insufficient, 0% of reviewers felt that the resources were excessive, and 0% of reviewers did not indicate an answer.

Presentation Link:

https://www1.eere.energy.gov/vehiclesandfuels/downloads/2025_AMR/BAT630_Sheldon_2025_o.pdf

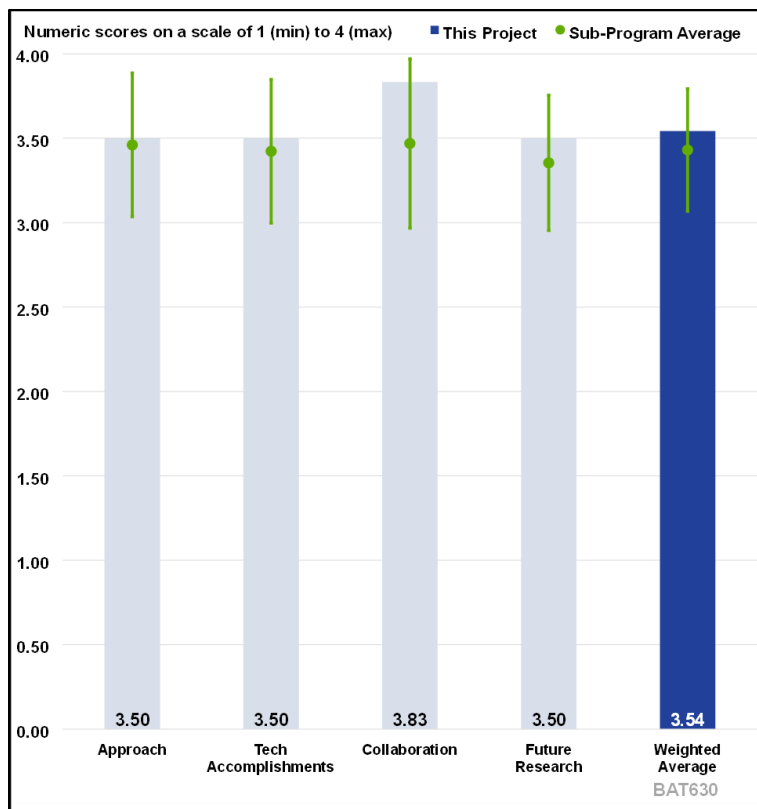


Figure 1-57 - Presentation Number: BAT630 Presentation Title: Blocking Li Metal Dendrites In Solid Electrolytes With Ion-Exchange Induced Residual Stresses Principal Investigator: Brian W. Sheldon, Brown University

Presentation Number:

BAT634

Presentation Title:

A Novel Integrated End-to-end Processing of End-of-Life EV Batteries for Remanufacturing of New EV Cells

Principal Investigator:

Anthony Roger, Cirba Solutions

Presenter

Anthony Roger, Cirba Solutions

Reviewer Sample Size

A total of four reviewers evaluated this project.

Project Relevance and Resources

100% of reviewers felt that the project was relevant to current DOE objectives, 0% of reviewers felt that the project was not relevant, and 0% of reviewers did not indicate an answer. 100% of reviewers felt that the resources were sufficient, 0% of reviewers felt that the resources were insufficient, 0% of reviewers felt that the resources were excessive, and 0% of reviewers did not indicate an answer.

Presentation Link:

https://www1.eere.energy.gov/vehiclesandfuels/downloads/2025_AMR/BAT634_Roger_2025_p.pdf

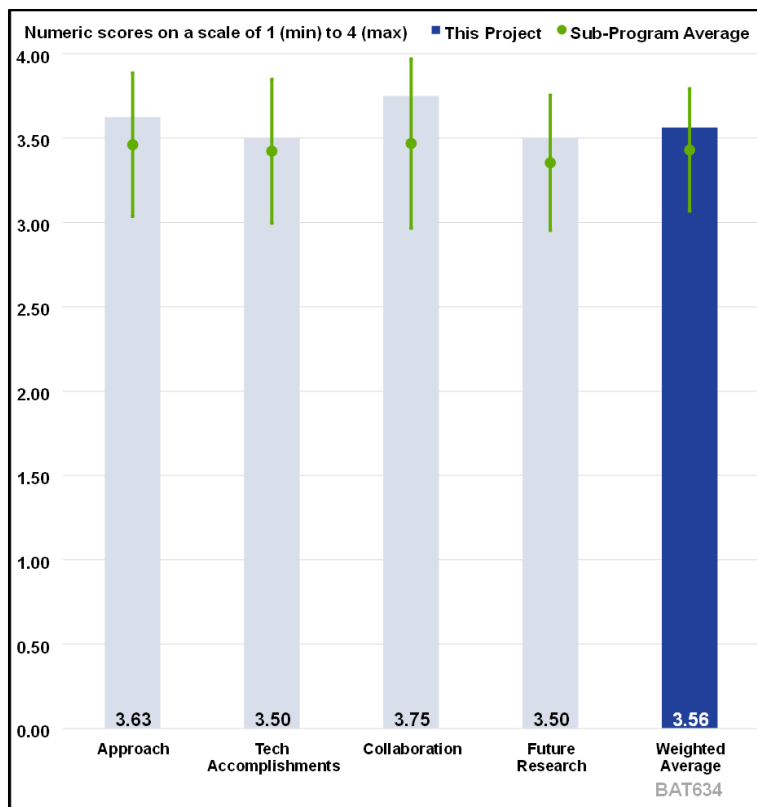


Figure 1-58 - Presentation Number: BAT634 Presentation Title: A Novel Integrated End-to-end Processing of End-of-Life EV Batteries for Remanufacturing of New EV Cells Principal Investigator: Anthony Roger, Cirba Solutions

Presentation Number:

BAT636

Presentation Title:

An Environmentally Sustainable Solution to Completely Recycle and Upcycle Lithium-Ion Battery Components

Principal Investigator:

Xiaofang Yang, Princeton NuEnergy

Presenter

Xiaofang Yang, Princeton NuEnergy

Reviewer Sample Size

A total of two reviewers evaluated this project.

Project Relevance and Resources

100% of reviewers felt that the project was relevant to current DOE objectives, 0% of reviewers felt that the project was not relevant, and 0% of reviewers did not indicate an answer. 50% of reviewers felt that the resources were sufficient, 50% of reviewers felt that the resources were insufficient, 0% of reviewers felt that the resources were excessive, and 0% of reviewers did not indicate an answer.

Presentation Link:

https://www1.eere.energy.gov/vehiclesandfuels/downloads/2025_AMR/BAT636_Yang_2025_p.pdf

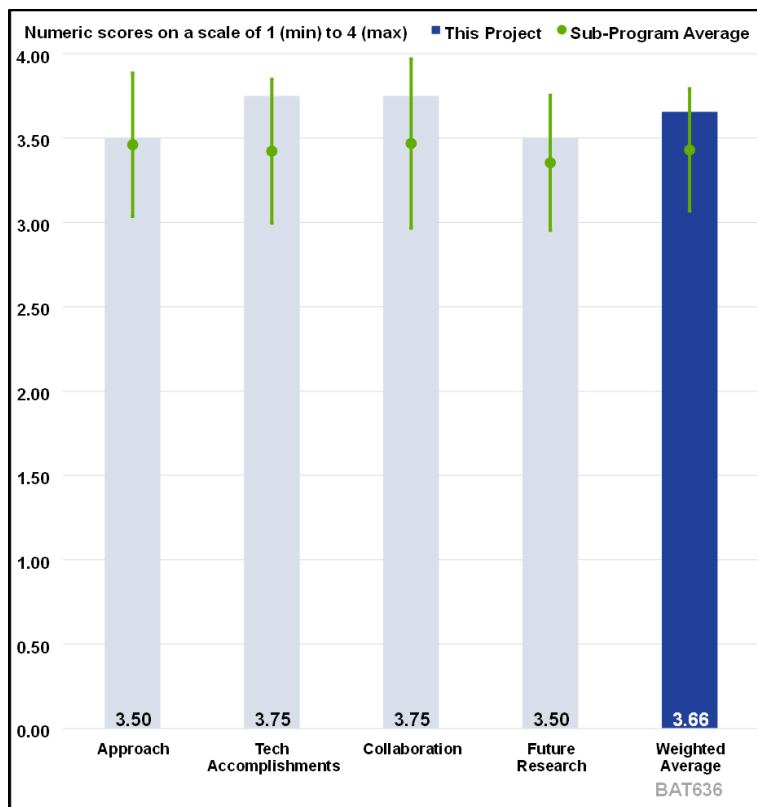


Figure 1-59 - Presentation Number: BAT636 Presentation Title: An Environmentally Sustainable Solution to Completely Recycle and Upcycle Lithium-Ion Battery Components Principal Investigator: Xiaofang Yang, Princeton NuEnergy

Presentation Number:

BAT638

Presentation Title:

Supplying Refined Battery Materials into the U.S. EV Battery Supply Chain by Synergizing Lithium-Ion Battery Recycling with Mine Waste Reclamation

Principal Investigator:

Lei Pan, Michigan Technical University

Presenter

Lei Pan, Michigan Technical University

Reviewer Sample Size

A total of four reviewers evaluated this project.

Project Relevance and Resources

100% of reviewers felt that the project was relevant to current DOE objectives, 0% of reviewers felt that the project was not relevant, and 0% of reviewers did not indicate an answer. 75% of reviewers felt that the resources were sufficient, 25% of reviewers felt that the resources were insufficient, 0% of reviewers felt that the resources were excessive, and 0% of reviewers did not indicate an answer.

Presentation Link:

https://www1.eere.energy.gov/vehiclesandfuels/downloads/2025_AMR/BAT638_Pan_2025_p.pdf

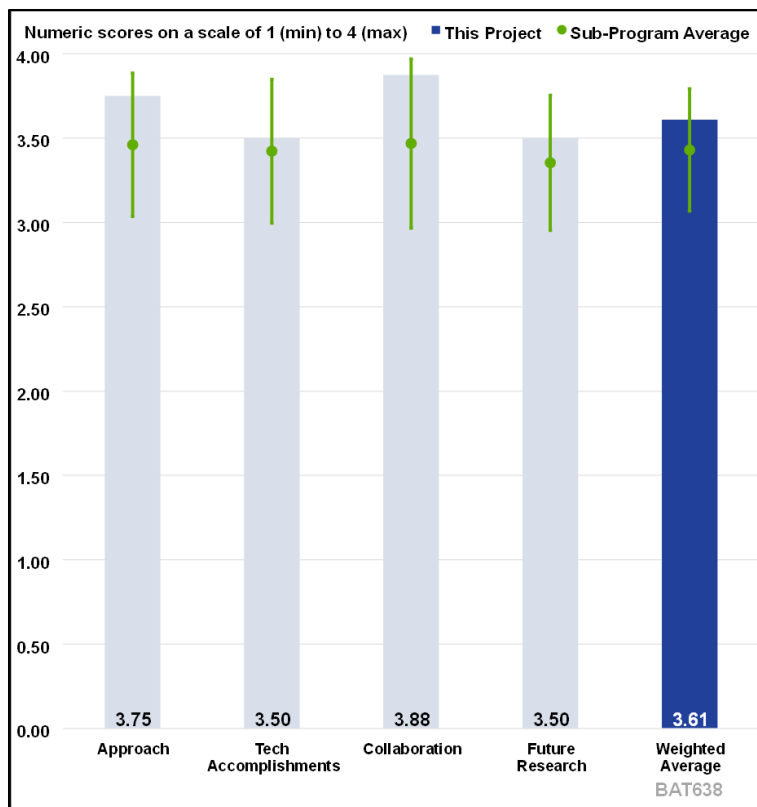


Figure 1-60 - Presentation Number: BAT638 Presentation Title: Supplying Refined Battery Materials into the U.S. EV Battery Supply Chain by Synergizing Lithium-Ion Battery Recycling with Mine Waste Reclamation Principal Investigator: Lei Pan, Michigan Technical University

Presentation Number:

BAT639

Presentation Title:

Advanced Separation and Processing Technologies for an Integrated Lithium-Ion Battery Recycling System

Principal Investigator:

Ryan Melsert, American Battery Technology Company

Presenter

Ryan Melsert, American Battery Technology Company

Reviewer Sample Size

A total of four reviewers evaluated this project.

Project Relevance and Resources

100% of reviewers felt that the project was relevant to current DOE objectives, 0% of reviewers felt that the project was not relevant, and 0% of reviewers did not indicate an answer. 100% of reviewers felt that the resources were sufficient, 0% of reviewers felt that the resources were insufficient, 0% of reviewers felt that the resources were excessive, and 0% of reviewers did not indicate an answer.

Presentation Link:

https://www1.eere.energy.gov/vehiclesandfuels/downloads/2025_AMR/BAT639_Melsert_2025_p.pdf

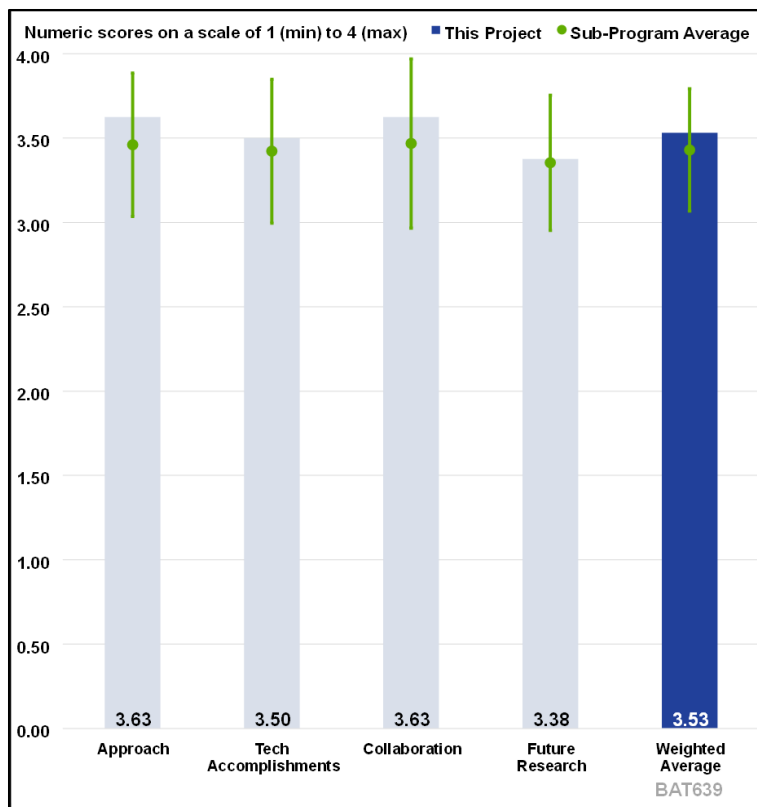


Figure 1-61 - Presentation Number: BAT639 Presentation Title: Advanced Separation and Processing Technologies for an Integrated Lithium-Ion Battery Recycling System Principal Investigator: Ryan Melsert, American Battery Technology Company

Presentation Number:

BAT(ELT303)

Presentation Title:

Second-Life Battery Solar and Storage Facility Demonstration Enabled by Advanced State of Health Tracking

Principal Investigator:

Joe Lacap, RePurpose Energy Inc.

Presenter

Joe Lacap, RePurpose Energy Inc.

Reviewer Sample Size

A total of three reviewers evaluated this project.

Project Relevance and Resources

100% of reviewers felt that the project was relevant to current DOE objectives, 0% of reviewers felt that the project was not relevant, and 0% of reviewers did not indicate an answer. 100% of reviewers felt that the resources were sufficient, 0% of reviewers felt that the resources were insufficient, 0% of reviewers felt that the resources were excessive, and 0% of reviewers did not indicate an answer.

Presentation Link:

https://www1.eere.energy.gov/vehiclesandfuels/downloads/2025_AMR/ELT303_Lacap_2025_p.pdf

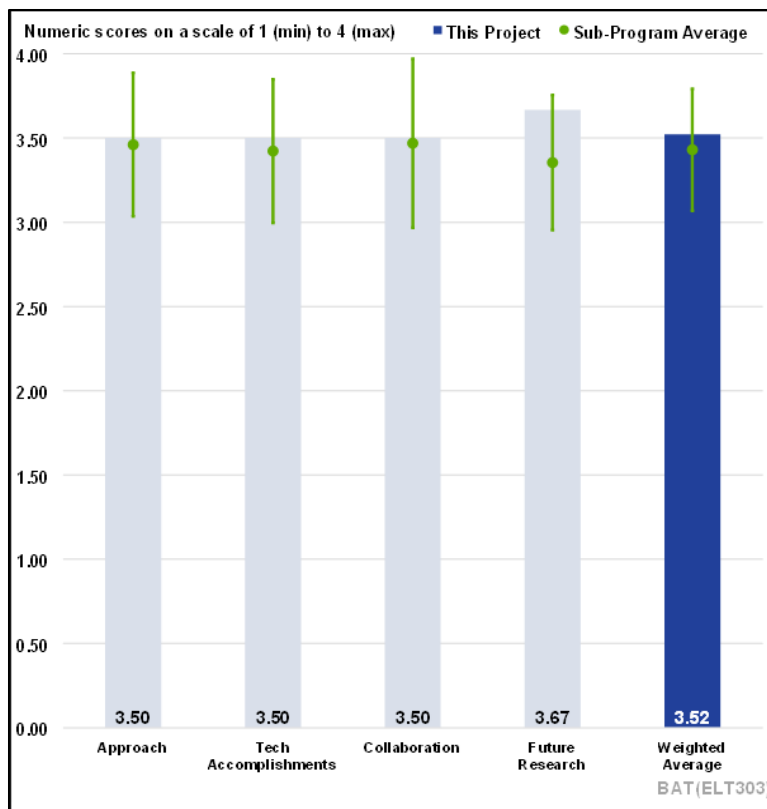


Figure 1-62 - Presentation Number: BAT(ELT303) Presentation Title: Second-Life Battery Solar and Storage Facility Demonstration Enabled by Advanced State of Health Tracking Principal Investigator: Joe Lacap, RePurpose Energy Inc.

Presentation Number:

BAT(ELT304)

Presentation Title:

Low-Cost and Scalable Second Use Battery Demonstration in Central California for Equitable Domestic Manufacturing and Job Growth

Principal Investigator:

Antoni Tong, Smartville Inc.

Presenter

Antoni Tong, Smartville Inc.

Reviewer Sample Size

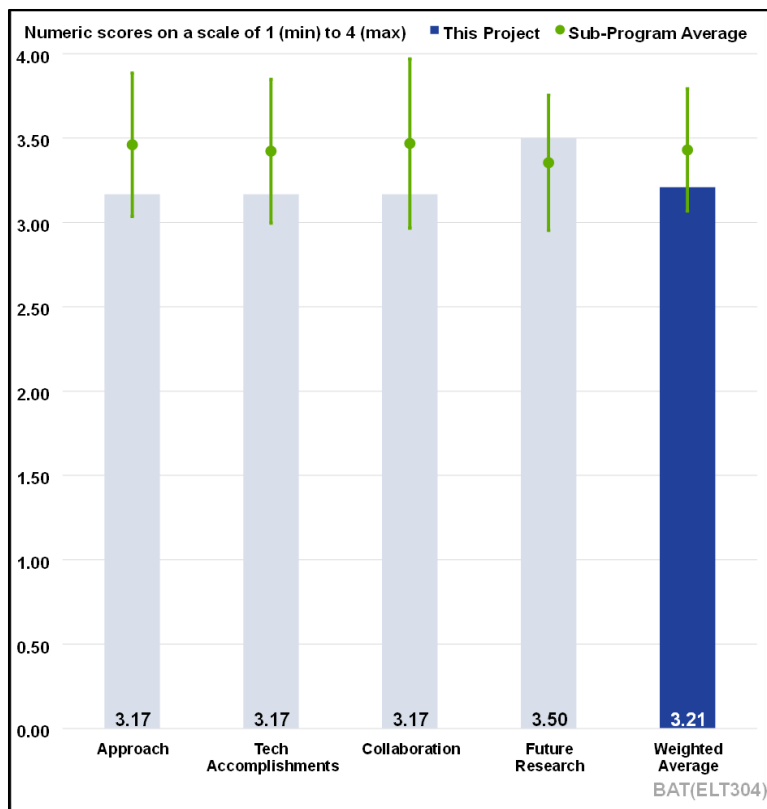
A total of three reviewers evaluated this project.

Project Relevance and Resources

100% of reviewers felt that the project was relevant to current DOE objectives, 0% of reviewers felt that the project was not relevant, and 0% of reviewers did not indicate an answer. 67% of reviewers felt that the resources were sufficient, 0% of reviewers felt that the resources were insufficient, 33% of reviewers felt that the resources were excessive, and 0% of reviewers did not indicate an answer.

Presentation Link:

https://www1.eere.energy.gov/vehiclesandfuels/downloads/2025_AMR/ELT304_Tong_2025_p.pdf



Presentation Number:

BAT(ELT305)

Presentation Title:

Second-life Battery in Mobile EV Charging Application for Rural Transportation (SMART)

Principal Investigator:

Pingen Chen, Tennessee Tech University

Presenter

Pingen Chen, Tennessee Tech University

Reviewer Sample Size

A total of two reviewers evaluated this project.

Project Relevance and Resources

100% of reviewers felt that the project was relevant to current DOE objectives, 0% of reviewers felt that the project was not relevant, and 0% of reviewers did not indicate an answer. 100% of reviewers felt that the resources were sufficient, 0% of reviewers felt that the resources were insufficient, 0% of reviewers felt that the resources were excessive, and 0% of reviewers did not indicate an answer.

Presentation Link:

https://www1.eere.energy.gov/vehiclesandfuels/downloads/2025_AMR/ELT305_Chen_2025_p.pdf

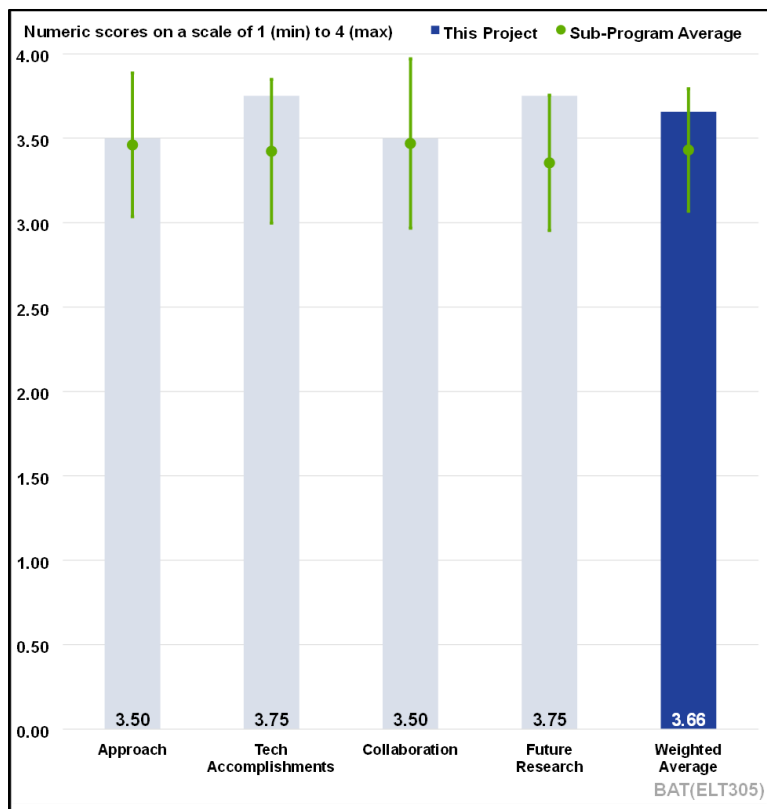


Figure 1-64 - Presentation Number: BAT(ELT305) Presentation Title: Second-life Battery in Mobile EV Charging Application for Rural Transportation (SMART) Principal Investigator: Pingen Chen, Tennessee Tech University

Presentation Number:

BAT(ELT306)

Presentation Title:

Adaptive Second-Use Battery Utilization with Different Degradation Levels for EV Charging Stations and Power Grid

Principal Investigator:

Jaber Qahouq, University of Alabama

Presenter

Jaber Qahouq, University of Alabama

Reviewer Sample Size

A total of two reviewers evaluated this project.

Project Relevance and Resources

100% of reviewers felt that the project was relevant to current DOE objectives, 0% of reviewers felt that the project was not relevant, and 0% of reviewers did not indicate an answer. 100% of reviewers felt that the resources were sufficient, 0% of reviewers felt that the resources were insufficient, 0% of reviewers felt that the resources were excessive, and 0% of reviewers did not indicate an answer.

Presentation Link:

https://www1.eere.energy.gov/vehiclesandfuels/downloads/2025_AMR/ELT306_Qahouq_2025_p.pdf

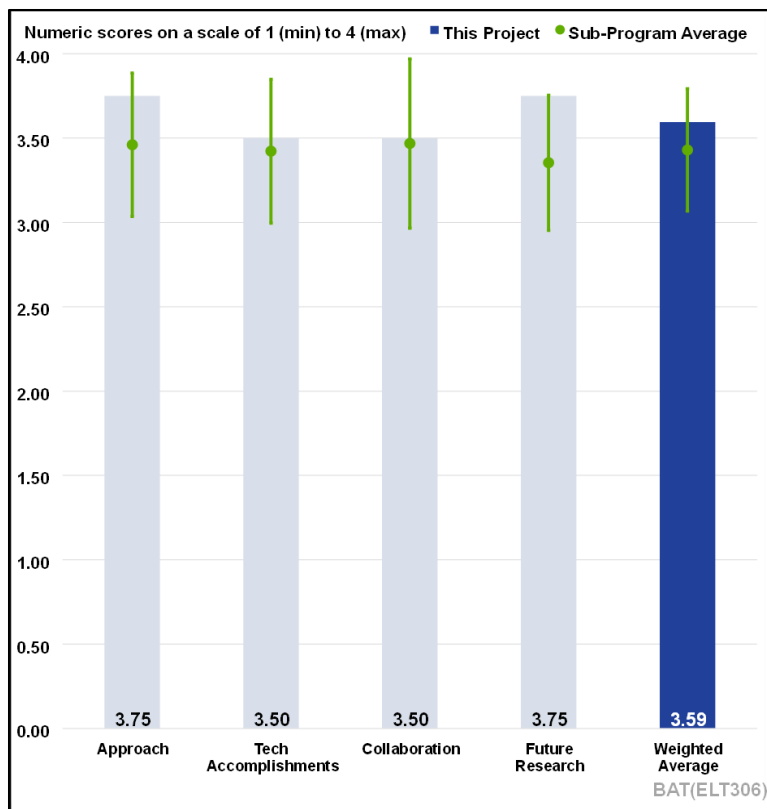


Figure 1-65 - Presentation Number: BAT(ELT306) Presentation Title: Adaptive Second-Use Battery Utilization with Different Degradation Levels for EV Charging Stations and Power Grid Principal Investigator: Jaber Qahouq, University of Alabama

Presentation Number:

BAT(ELT307)

Presentation Title:

13MW Pilot Second-Use Batteries Incorporating Module Level Power Conversion to Improve Battery Safety/ Performance

Principal Investigator:

Seth Kahn, Element Energy, Inc.

Presenter

Seth Kahn, Element Energy, Inc.

Reviewer Sample Size

A total of two reviewers evaluated this project.

Project Relevance and Resources

100% of reviewers felt that the project was relevant to current DOE objectives, 0% of reviewers felt that the project was not relevant, and 0% of reviewers did not indicate an answer. 100% of reviewers felt that the resources were sufficient, 0% of reviewers felt that the resources were insufficient, 0% of reviewers felt that the resources were excessive, and 0% of reviewers did not indicate an answer.

Presentation Link:

https://www1.eere.energy.gov/vehiclesandfuels/downloads/2025_AMR/ELT307_Kahn_2025_p.pdf

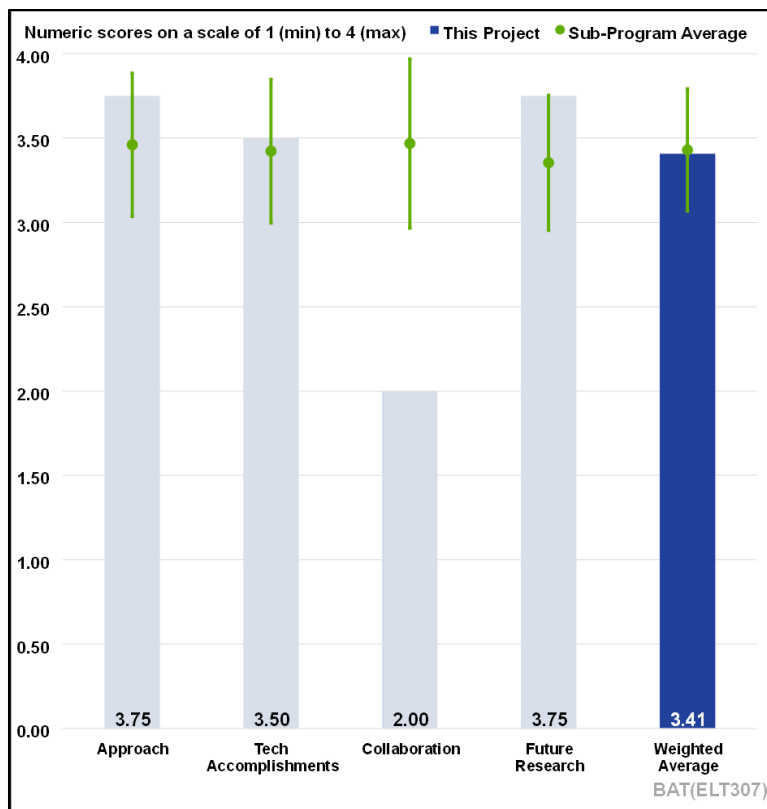


Figure 1-66 - Presentation Number: BAT(ELT307) Presentation Title: 13MW Pilot Second-Use Batteries Incorporating Module Level Power Conversion to Improve Battery Safety/ Performance Principal Investigator: Seth Kahn, Element Energy, Inc.

For more information, visit: energy.gov

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