

Battery and EV Congress (BEV 2026)

Paper/Presentations

Troy, Michigan, USA
6-7 May 2026

Editors:

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Rafiq Uddin**

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Battery and Electric Vehicle (BEV) 2026 Congress

May 6-7, 2026

MSU (Michigan State University) Management Education Center, Troy, Michigan,

USA

www.gamcinc.com

Program Agenda

MAY 6, 2026

8:30 am – 9:30 am Registration

9:00 am – 12:30 pm Plenary Session Room 103

9:00 am Plenary Chair & Theme:

Session Chair:

Timothy DeBastos

Managing Director

LG Energy Solution North American Development (ESMI-D)

Theme:

Battery & EV Landscape - Now and Beyond

9:30 am

The BEV Value Equation: Range, Cost, charging – and What It Takes to Win Consumers...1

Alan Taub, PhD

Robert H. Lurie Professor of Engineering

Director, Michigan Electric Vehicle Center

The University of Michigan

10:00 am

Navigating the Shift to SDV BMS...18

Devinder Singh

BMS Team Leader

LG Energy Solution

Though changes are not expected, the BEV Program Committee retains full discretion to amend this program at any time, without notice.

10:30 am – 11:00 am Coffee Break

11:00 am

Million-Mile Batteries: The Chemistry Challenges for Heavy-Duty EVs...N/A

[Rianne Schoeffler](#)

Commercial Vehicles & Electrification

Manager Cell Chemistry and Mechanics

Daimler Trucks

11:30 am

Modeling of Mechanical Behavior of Lithium-Ion Cell Internals: Testing and Simulation...N/A

[Arturo Sanchez](#)

Team Leader

General Motors

12:00 pm

Changing Lanes: Navigating the LFP Pivot on the Road to Circularity...27

[Renata Arsenault](#)

Technical Expert, Value Chain, Battery Cell Materials and Recycling

Ford Motor Company

12:30 pm

Adjournment & Lunch

1:30 pm Technical Session – Structures & Efficiency

[Session Chair:](#)

[Teresa Rinker, PhD, PE](#)

Staff Researcher

Advanced Propulsion Manufacturing Processes

General Motors

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1:30 pm

Materials Enabled Automotive Future - Keynote

Paul E. Krajewski, PhD

Director of Materials and Manufacturing Research

General Motors

2:00 pm

Effects of Battery Pack Hardware Layout on Active Material Packaging Efficiency in High Voltage Battery Architectures...40

Drew Raftopoulos

Advanced High Voltage Battery Architectures

Loren Racicot

Andrew Wolfe

Advanced Battery Cell Integration

Evan Yoder

Advanced Battery Structures

General Motors

2:30 pm

History-Agnostic Voltage-Based Anomaly Detection in Nearly 100 Retired Battery Packs at Various States of Health...50

Apoorva Roy

The University of Michigan

3:00 pm – 3:30 pm Coffee Break

3:30 pm

Fundamentals of Cell Vent Management and Vent Gas Analysis in Diverse Electric Vehicle Battery Platforms...60

Sahil Nagpal

High Voltage Battery Systems Engineer

Bhaskara Rao Boddakayala

Global Technical Expert Battery Safety & Materials

Ford Motor Company

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4:00 pm

Dispense Ratio Verification of Two-Part Polymeric Battery Interface Materials...78

[Robin James, PhD](#)

Researcher

[Mary Gilliam, PhD](#)

Staff Researcher

[Selina Zhao, PhD](#)

Senior Researcher

[Michael Lukitsch PhD](#)

Senior Researcher

[Deepa Jha](#)

Materials Chemist

[Jennifer Bracey](#)

Lab Group Manager

General Motors

4:30 pm

The Role of Temperature Sensing in Lithium-Ion Battery Fault Detection...84

[Xin Hui Ooi](#)

The University of Michigan

5:00 pm

Adjournment

MAY 7, 2026

9:00 am - Technical Session – ESS Optimization

Session Chair:

[Lei Chen, PhD](#)

Associate Professor of Mechanical Engineering, College of Engineering and Computer Science

The University of Michigan-Dearborn

9:00 am

**Direct Synthesis of Phosphate Cathode Materials from Black Mass: Bypassing
Conventional LFP Recycling...96**

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Jin Lim, PhD

Chief Executive Officer & Chief Technology Officer

ACT-ion Battery Technologies, Inc

9:30 am

Random 3d Interpenetrating Electrode Design for Energy Storage Applications...102

Longsheng Feng, PhD

Wayne State University

Xinzhe Xue, PhD

Samuel Avalos, PhD

Nathan Delaney, PhD

Cassidy Tran, PhD

Yat Li, PhD

University of California, Santa Cruz

Marcus Worsley, PhD

Tae Wook Heo, PhD

Cheng Zhu, PhD

Lawrence Livermore National Laboratory

10:00 am

Safety of All-Solid-State Batteries with Sulfide Solid-State Electrolyte...107

Thomas A. Yersak, PhD

Staff Researcher – Cell Characterization and Diagnostics

Hernando Gonzalez Malabet, PhD

Researcher - Battery Thermal-Electrochemical Interactions

General Motors Global R&D Center

10:30 am – 11:00 am Coffee Break

11:00 am

High-Entropy Oxides: Boosting Lithium-Ion Batteries with High-Rate Performance and Long-Term Stability...122

Wei Lu, PhD

Professor, Department of Mechanical Engineering

The University of Michigan

11:30 am

On-board Material Diagnostics Enables Silicon Lifetime Management for Durable High Energy Density Batteries...132

Zhiwen Wan

The University of Michigan

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12:00 pm

Adjournment & Lunch

1:00 pm - Technical Session – Process Optimization

Session Chair:

Junjie Ma, PhD

Senior Researcher, Manufacturing Joining, Quality & Analysis Research

General Motors

1:00 pm

Chemically Generated Liquid Sulfur for High-Performance Li-S Batteries...142

Pragadeesh Subramaniam-Venkatesh

Ankun Yang, PhD

Oakland University

1:30 pm

Harnessing AI and Computational Simulation for E-Mobility Manufacturing...152

Lei Chen, PhD

Associate Professor

The University of Michigan-Dearborn

2:00 pm

Workplace EV Charging Management System: Optimizing Employee Convenience and System Efficiency...165

Jian Hu, PhD

Associate Professor of Industrial & Manufacturing Systems Engineering

University of Michigan-Dearborn

2:30 pm – 3:00 pm Coffee Break

3:00 pm

WeldBrAI{n: Enable EV assembly with In-line AI-based quality system for Laser welding...N/A

Hassan Ghassemi-Armaki, PhD

Masoud Pour, PhD

Junjie Ma, PhD

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Teresa Rinker, PhD

General Motors

3:30 pm

Fast and Parameterizable Model of Thermal Runaway Propagation....177

Wenxue Liu, PhD

Post Doctoral Fellow

University of Michigan

4:00 pm

Adjournment

Additional Presentation

Synergizing Physics-Informed Machine Learning and Generative AI for BEV...186

Zheng Liu

University of Michigan

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