

Track 3

Electric & Hybrid Vehicle Technology

Day 1 - Tuesday 7 May

THE BATTERY SHOW
CONFERENCE
EUROPE 2019

electric & hybrid
vehicle technology conference | europe 2019

Morning Plenary Sessions taking place in Conference Room C2.3

12:30 Conference Delegate Networking Lunch

14:30 Hybrid & EV Market Forecasts, Analysis and Opportunities

Moderator Roland Irlé, Co-Founder and Developer, EV-volumes.com

EV VOLUMES.COM

Martin Linder, Partner, McKinsey

Understanding the Current and Future Role of China in Accelerating the Electric Vehicle Market

McKinsey&Company

Neil Morris, CEO, Faraday Institution

Outlining the Results of the UK Electric Vehicles and Battery Economics Study from McKinsey, University of Oxford and the Faraday Institution, Determining the Economic Benefits from EV Manufacture

THE FARADAY INSTITUTION

Yuan Li, Director of Powertrain, BAIC Motor Company

Examining OEM Vehicle Planning under China's Dual Point Policy

北汽集团
BAIC GROUP

15:45 Networking Refreshments in Conference Foyer

16:15 48V Systems: Optimising Next Generation 48V Systems and Architectures To Deliver Fuel Efficiency And Reduced Emissions In The Immediate Term

Moderator Roland Irlé, Co-Founder and Developer, EV-volumes.com

EV VOLUMES.COM

Michael Bassett, Chief Engineer - Research & Advanced Engineering, MAHLE Powertrain Limited

Examining the Fuel Economy Benefits Offered By 48V Mild-Hybridisation

MAHLE
Powertrain

Bastian Hartmann, Research Engineer Advanced Power Supply and Energy Management, Ford Motor Company

From 48V Market Introduction to Mass Market - Opportunities for System Optimization

Ford

Grégory Godefroy, Belt e-Machine RFQ & Advanced projects Platform Manager, Valeo

Valeo

Julian Dunn, Head of Technical Business Managers - Energy Storage, Ricardo Global Automotive

25 kW 48 V Mild Hybrid Motor and Inverter

RICARDO

17:30 Close of Day One and Evening Drinks Reception in Exhibition Hall
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Daily Agenda

Day 1 - Tuesday 7 May



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Plenary / Track 1

Day 1 - Tuesday 7 May

- 08:30 Welcome Address** Jim Greenberger, Executive Director, NAATBatt International
- 09:00 Agenda for Zero- and Low-Emission Mobility for Europe, As Seen By the European Commission**
Maja Bakran Marcich, Deputy Director General, Mobility & Transport, European Commission
- 09:20 Leadership Panel: Realising a European Based Battery Value Chain**
Moderator Jim Greenberger, Executive Director, NAATBatt International
Anil Srivastava, Chief Executive Officer, Leclanché
Andreas Hintennach, Senior Manager, Daimler AG
Jean Baptiste Pernot, Transformation & Operations Excellence Vice-President, Saft



10:30 Networking Break: Coffee & Refreshments in the Foyer

- 11:00 Welcome Address** Roland Irle, Co-Founder and Developer, EV-volumes.com
- 11:15 Driving Efficiency in Electric and Hybrid Vehicles, Enabling the Next Generation of Electric Autonomous Vehicles and delivering Mobility As A Service**
Moderator Roland Irle, Co-Founder and Developer, EV-volumes.com
Eduardo Mascarell, Head of Vehicle to grid and Energy Aggregation, Nissan Europe
Paul Freeland, Principal Engineer, Cosworth
The Landscape for Automotive Powertrains – A Pragmatic Outlook for a Practically Achievable Future
Steve Mountain, Global Energy Storage Lead & RR Associate Fellow - Power Electric Systems, Rolls Royce



Track 1 Business / Market / Industry

12:30 Networking Lunch & Opportunity to Take Advantage of Activities on Show Floor

- 14:30 Assessing Battery Application Market Trends**
Speaker / Moderator James Frith, Senior Energy Storage Analyst, Bloomberg New Energy Finance
Lithium-ion Battery Market Outlook and the Implications for the Supply Chain
Bruno Samaniego, Team Leader of Electrical, Power & Harness Engineering R&T Coordinator of Power & Energy Management for Space Systems, Airbus Defence and Space – Engineering Integration
The Future Role of Storage Systems in Aerospace
Luke Gear, Technology Analyst, IDTechEx
The Silent Transition to Electric Marine Vessels: Technology and Market Outlook
Shmuel De-Leon, CEO, Shmuel De-Leon Energy
Evaluating the E-Bus Li-Ion Battery Market Trends



15:45 Networking Break: Coffee & Refreshments in the Foyer

- 16:15 Forecasting Raw Materials Cost and Availability and Investigating Trends in Global Procurement Strategies**
Speaker / Moderator Gavin Montgomery, Director – Battery Raw Materials, Wood Mackenzie LTD
Vincent Ledoux Pedailles, Executive Director, Infinity Lithium
The Development of The Lithium-Ion Battery Supply Chain in Europe and its Influence on Critical Raw Materials
Michael Insulán, Senior Market Analyst, Eurasian Resources Group
Clean Cobalt in the Age of Electric Mobility and Renewable Energy
Denis Sharypin, Head of Market Research, MMC Norilsk Nickel
Nickel and Cobalt Feed for Batteries
Marcel Goldenberg, Markets and Methodolgy Development, S&P Global Platts
Pricing a Global Revolution – Cobalt, Lithium and Spodumene
Nell Agate Tsui, Principal Research Analyst, IHS Markit
Lithium Supply Chain – Battery Bloat or Bottlenecks?



17:30 Close of Day One and Evening Drinks Reception in Exhibition Hall Sponsored by LORD



Track 2

Battery Engineering & Design

Day 1 - Tuesday 7 May

08:30 - 12:30 Morning Plenary Sessions taking place in Conference Room C2.3

12:30 Conference Delegate Networking Lunch

14:30 Preventing Thermal Runaway Through Improving Thermal Management in Battery Pack Design

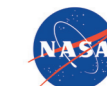
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Moderator Dr Cedric Rouaud, Global Technical Expert – Thermal Systems, Ricardo



Eric Darcy, Battery Technology Discipline Lead, NASA Johnson Space Center
Safe, High Power/Voltage Battery Module Design Challenges



Alvin Wu, Distinguished Member of Technical Staff -William Henry Merrill Society Research Engineer / Commercial & Industrial R&D, Underwriters Laboratories



Forensic Analysis to Explore the Safety Characteristics in Lithium-ion Batteries (LIBs) and Lessons Learned from Failures

Christophe Dos Santos, Application Engineer, LORD
Choosing Thermal Management Solutions and Why it Matters



Dr Carlos Ziebert, Head of the Battery Safety Center, KIT
How Heat Flux Sensors Can Help in Advancing Thermal Management of Cells and Packs



Stephen Neumann, Senior Manager, H.B. Fuller
Thermal Runaway / Propagation Prevention - Encapsulation Techniques to Enhance Safety and Crash Performance



16:00 Networking Break: Coffee & Refreshments in the Foyer

16:15 Assuring Global Competitiveness: European versus Chinese Pack Design

Moderator William Yue, Principal Engineer, Battery Systems, Ricardo



Yuan Li, Director of Powertrain, BAIC Motor Company



Sven Schulz, CEO, Akasol



17:30 Close of Day One and Evening Drinks Reception in Exhibition Hall Sponsored by LORD



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Track 3

Electric & Hybrid Vehicle Technology

Day 2 - Wednesday 8 May

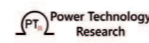
08:30 Hybridization: Examining the Latest Technologies and Architectures to Deliver Electric Vehicle Efficiency and Meet Customer Demands

Moderator Jared Kearby, Principal Analyst, Power Technology Research

Gereon Hellenbroich, Department, Manager, Transmission Design and CAE, FEV Europe GmbH
Outlining the Development of a Powershiftable Two-Speed Electric Drive Unit for High-Performance Applications

Chris Hilton, Chief Technology Officer, Protean Electric
The Role of In-Wheel Motors in Future Transportation

Han-Hein Spit, Vice President, Bosch Transmission Technology B.V.
Evaluating the Potential of CVT Technology in Improving Electrified Powertrains



10:30 Networking Break: Coffee & Refreshments in the Foyer

11:00 E-Motor Developments: Latest Developments In E-Motors and Powertrain Design Including: Alternatives to Rare Earth Magnets, Axial Flux Motor Technology and Thermal Management

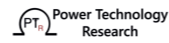
Moderator Jared Kearby, Principal Analyst, Power Technology Research

Christian Pronovost, Sr. Product Manager, Dana Incorporated
Motor Topology Selection for Electric Vehicles

Quentin Werner, Electric Machine Design Engineer, Daimler
Determining the Optimum Rotor-Topology for Electric Drives

Michael Lampérth, CEO, Phi-Power
Examining the Latest Developments in and the Potential of Axial Flux Motor Technology

Peter van Duijsen, Researcher, TU Delft
Simulating Thermal Management for E-Motors and Power Electronics



12:30 Networking Lunch & Opportunity to Take Advantage of Activities on Show Floor

14:00 Powertrain Efficiency: Evaluating the Different Techniques for Improving the Energy Efficiency of The Electric Powertrain

Moderator/Speaker Robert Stanek, Lead Electric Powertrain and Cost Management, P3 Group

Greg Harris, Global Electrification Services Leader, HORIBA MIRA
The Development of Efficient Electric Powertrains

Johan Vanhuysse, Research & Application Engineer, Siemens Industry Software
Generative Engineering: Automatically Creating and Evaluating Hybrid Powertrain Architectures



15:15 Networking Refreshments in Conference Foyer

15:45 Race Track to The Road: Evaluating the Latest Second Generation Race Technology

Moderator/Speaker Jana Kirchen, Consultant, P3 Group

Jason King, Business Development Director, Integral Powertrain
Race to the Clouds – From the Record Breaking VW I.D. R Pike Peak Car to the Road

Rosen Daskalov, Founder, Sin Cars
Outlining the L City Is a Multifunctional Electric Vehicle Platform – Charting the Evolution of Sin Cars from Race Track to The Road

Anthony Law, Head of Motorsport Batteries, McLaren Applied Technologies



17:00 Close of Day Two and Evening Drinks Reception in Exhibition Hall

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Daily Agenda

Day 2 - Wednesday 8 May



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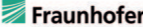
Track 1


Day 2 - Wednesday 8 May

Optimising Automotive Battery Technology Design

08:30 **Welcome Address** Paul Freeland, Principal Engineer, Cosworth 

08:45 **Balancing Functionality and Application Design in OEM Platform & Battery Development**

Dr Kai-Christian Moeller, Spokesman, Fraunhofer Batteries 
Development Perspectives for Cell Formats of Lithium-Ion Batteries in Electromobility


Karsten Mueller, Senior Vice President High Voltage Systems Management, IAV GmbH 
EMBATT – A New Approach To Battery Design


AK Srouji, Director of Battery Cell Technology, Romeo Power 


Dustin Grace, VP of Engineering, Energy Storage and Power Systems, Proterra 

10:30 **Networking Break: Coffee & Refreshments in the Foyer**

11:00 **Electrification for the Masses: Optimising 48V Battery Systems for Mild-Hybrids**

Moderator Paul Freeland, Principal Engineer, Cosworth 

Michael Bassett, Chief Engineer - Research & Advanced Engineering, MAHLE Powertrain Limited 
48 V High-Power Battery for Mild-hybrid Electric Powertrains


Ian Braime, Executive Director, Low Voltage Product Management, A123 Systems 
Key Considerations When Selecting Battery Solutions for 48V Applications


Phil Shaw, Product Line Director, Johnson Controls 
Why LTO Based Chemistries are The Future of 48V Batteries


12:30 **Networking Lunch & Opportunity to Take Advantage of Activities on Show Floor**

14:00 **Investigating Advances in Modular Pack Design and Applications**

Paul Freeland, Principal Engineer, Cosworth 


Pawel Swoboda, Electric Vehicles Business Development Manager, BMZ POLAND 
Current and Future Modularity Approach in Heavy Electrical Vehicle Battery Systems


Martin Klein, Senior Vice President of Engineering, XALT Energy LLC 
Extending Vehicle Mission Capabilities with Adaptive Battery Modules and Controls

Tobias Mayer, Technical Manager, LION Smart GmbH 
Modular Battery Packs on the Basis of Different Cell Technologies and Geometries – Outlook to Cylindrical System Design

15:15 **Networking Break: Coffee & Refreshments in the Foyer**


15:45 **Extending Battery Life, Range and Performance through Battery Management Systems**


Moderator Paul Freeland, Principal Engineer, Cosworth 

Roland Biberger, System Architect Electronics HV-Battery, Audi 
Future Trends in High-Voltage Battery Electronics

Joel Sylvester, Chief Technology Officer, Dukosi Ltd 
BAFTA - A Toolkit for Design and Optimised Operation of EV Batteries

Oskar Dondelowski, Advanced Operations Engineer, Aston Martin 

Samuel Cregut, Battery Management System Expert, Groupe Renault 
A BMS Breakthrough: an OEM Theoretical and Proof Of Concept Approach to Wireless BMS

Alexandre Collet, Chief Technology Officer, ION Energy Inc. 
Battery Intelligence: Using Data to Make the BMS Smarter and Improve Battery Life and Performance


17:00 **Close of Day Two and Evening Drinks Reception in Exhibition Hall**

Track 2

Day 2 - Wednesday 8 May


Battery Chemistries: Increasing Energy Density & Future Battery Cell Design

08:30 **Moving Toward Higher Nickel Chemistries in Lithium-Ion Batteries for Increased Energy Density**

Moderator Andy Leyland, Head of Forecasting, Benchmark Mineral Intelligence 

Claudio Brivio, R&D Engineer, CSEM 
The High Energy Density Challenge in Solar-Powered Aviation: The Case Of Solarstratos

Dr Dee Strand, CSO, Wildcat Discovery Technologies 
Accelerating Development of High Nickel Cathodes

Joanna Clark, Head of Product Development, Battery Materials, Johnson Matthey 
Next Generation High-Energy Low-Cobalt Cathode Materials for Greater Stability and Safety


Raymond Oei, CEO, PT STERN 
Considering Manganese As the Key to Lower Cost Per kWh


10:30 **Networking Break: Coffee & Refreshments in the Foyer**


11:00 **Pushing the Limits of Lithium-Ion Cell Development – Developing Higher Capacity Materials**

Moderator Jim Greenberger, Executive Director, NAATBatt International 

Kenan Sahin, President and Founder, CAMX Power LLC 
Innovation for Lithium-Ion Batteries: Gaps, Opportunities, Obstacles


Dr Wasim Sarwar, Technical Specialist – Battery Systems, Williams Advanced Engineering 
Development of Cutting-Edge Battery Packs Using Next-Generation Cell Chemistries

Tobias Placke, Head of Division “Materials”, MEET Battery Research Center, University of Münster 
Towards High-Energy Lithium-Ion Batteries: Reaching the Limits of Intercalation Chemistry


Andrey Senyut, CEO, OCSiAI Energy 
Reaching 300 Wh/kg Energy Density with Graphene Nanotubes in High-Energy Si/C/SiO Anodes


12:30 **Networking Lunch & Opportunity to Take Advantage of Activities on Show Floor**


14:00 **Future Proofing 12V Technologies: Lead Acid VS Lithium and Alternative Technologies**

Moderator/Speaker Rene Schroeder, Executive Director, EUROBAT 

The EU Before the Elections – What’s Next for Batteries on the Legislative Horizon?

Christoph Fehrenbacher, Managing Director, A123 Systems 

Jörn Albers PhD, Manager Global Requirements Analysis, Johnson Controls Power Solutions EMEA, Johnson Controls Power Solutions EMEA 
Are All Battery Technologies Created Equal? Creating a Positive Environment and Regulatory Framework That Enables All Electrification Technologies

Armin Warm, Supervisor Advanced Power Supply & Energy Management, Ford Research & Advanced Engineering Europe 

15:15 **Networking Break: Coffee & Refreshments in the Foyer**

15:45 **Investigating Technology Readiness Level of Innovative Battery Technologies**

Moderator Shmuel De-Leon, CEO, Shmuel De-Leon Energy 

Laurent Hubard, CEO, Tiamat 

Stephen Voller, CEO & Founder, ZapGo 

David Ainsworth, Chief Technical Officer, Oxis Energy 

17:00 **Close of Day Two and Evening Drinks Reception in Exhibition Hall**

Track 3

Electric & Hybrid Vehicle Technology

Day 3 - Thursday 9 May

08:30 **Bus Operator Case Studies: Outlining the Challenges of Deploying an Electric Bus Fleet, Lessons Learnt and Future Requirements for the Manufacturers**

Moderator Rueben Scriven, Research Analyst, Interact Analysis

Gerard Hellburg, Program manager Zero Emission Mobility, Vervoerregio

Josep Armengol Villa, Director of Engineering and New Developments, TMB

Jörn Schwarze, Member of the Board, KVB

Jens Conrad, Head of Department, RVK



09:30 **Determining the Optimum Fuel and Powertrain Architectures and Technologies to Meet the Specific Needs of Buses**

Josh M Ley, Vice President of Engineering, UQM Technologies

David Barnett, Business Development Director, Wrightbus

Oben Uluc, Sales Director, EMEA & India, Ballard

Marcin Seredynski, Head of Innovation and Research at the E-Bus Competence Centre, Volvo



10:30 **Networking Break: Coffee & Refreshments in the Foyer**

11:00 **Fast Charging: What Impact Will Fast Charging and XFC Have on Powertrain Design and What Are the Latest Developments in Dynamic Charging Systems?**

Moderator / Speaker Hermann Pyschny, Consultant, P3 Group

Patrick Ester, Senior Manager, E-Mobility Business Development, E.ON Ultrafast Charging

Gerrit Stumpe, Business Development eHighway, Siemens Mobility
Dynamic Charging Catenary Electrified Heavy Road Transport

James Galliher, GSR Charge Stations - Electric Vehicles, Volvo



12:30 **Networking Lunch & Opportunity to Take Advantage of Activities on Show Floor**

14:00 **Commercial Vehicles: Evaluating the Latest Developments in Medium and Heavy-Duty Trucks and Large-Scale Electric and Hybrid Powertrains**

Moderator Rueben Scriven, Research Analyst, Interact Analysis

Mihai Dorobantu, Director -Technology Planning and Government Affairs, Vehicle Group, Eaton
Do Heavy-Duty Electric Trucks Really Need Multi-Speed Transmissions?

Commercial EVs: Applying a Systems Engineering Approach to Tackle the Total Cost of Ownership Challenge

Simon Shepherd, Head of Electrified Powertrain, Drive System Design

Ryan Maughan, Managing Director, Avid Technology Group Ltd



15:15 **End of The Battery Show Conference Europe 2019**

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Daily Agenda

Day 3 - Thursday 9 May



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Track 1

Charging, Validation & Testing

Day 3 - Thursday 9 May

08:30 The Fast Charging Trade Off: Fast Charging versus Battery Degradation and Energy Density

Moderator Angelique Janse van Rensburg, Senior Cell Engineer - Battery Systems, Lillium GmbH



Daniela Werlich, Senior Project Manager, Custom Cells Itzehoe GmbH
Jack Of All Trades Device – Why Is It So Difficult to Fast-Charge High Energy Cells?



Masato Origuchi, Expert Electrical Energy Storage Systems, Renault Sas
Need for Quick Charge: Optimising Chargeability and Energy Density



Matthew Keyser, Vehicle Electrification Group Manager, NREL
Battery Thermal Concerns Associated with Extreme Fast Charging



Carla Cavalca de Araujo, Senior Specialist Battery Solutions, 3M Deutschland GmbH
Exploring Direct Contact Cooling for Battery Fast Charging Solutions



10:30 Networking Break: Coffee & Refreshments in the Foyer

11:00 Overcoming the Challenges of Manufacturing Cells at Volume in Europe

Speaker / Moderator Bob Galyen, CTO, CATL



Dr Akos Kriston, Research Fellow, EC JRC
Battery Safety and Performance Testing Assessed from a Regulatory Perspective



Eric Gillett, Policy Specialist Dangerous Goods, Civil Aviation Authority
Non-Compliant Lithium Battery Consignments and the Potential Impact on Air Logistics



Mathy Stanislaus, Lead, Circular Economy Working Group, Global Battery Alliance
Advancing Actions to Scale Circular Approaches to Batteries



12:30 Networking Lunch & Opportunity to Take Advantage of Activities on Show Floor

14:00 Outlining Developments in Battery Safety and Performance Testing Methodologies

Harry Hoster, Professor & Director of Energy Lancaster, Lancaster University
Analysing Battery Degradation via High-Precision Charge Counting



Keith Ong, High-Voltage Power Net eDrive System Integration eDrive Architecture and HV System Technology (RD/EIS), Mercedes - Benz Cars | Daimler AG
Ripple Generator for Immunity Voltage Ripple Tests on EV Battery



Dr. William Q. Walker, Lithium Ion Battery Thermal Test and Analysis, Structural Engineering Division, Thermal Design Branch, NASA Johnson Space Center
Fractional Thermal Runaway Calorimetry (FTRC) Techniques for Lithium-ion Cells



15:15 End of The Battery Show Conference Europe 2019

Track 2

Battery Manufacturing Trends

Day 3 - Thursday 9 May

08:30 Validating Solid-State Battery Technology for Commercialising and Scale-up

Moderator Mauro Pasta, Associate Professor, Associate Professor, Department of Materials, University of Oxford



Richard Clark, Global Lead, Energy Storage, Morgan Advanced Materials
Converting Solid-State from a Distant Point on a Roadmap to a Commercial Reality



Andreas Hintennach, Senior Manager, Daimler AG
From Liquid to Solid Electrolytes: Impact on Batteries, Production, and Cost of Energy Storage



AK Srouji, Director of Battery Cell Technology, Romeo Power



10:30 Networking Break: Coffee & Refreshments in the Foyer

11:00 Creating Material Feed Stock Through Battery Recycling

Moderator Jacqui Murray, Director – Faraday Challenge and Head of Advanced Materials, Innovate UK



Asad Farid, Associate Director, Senior Analyst, Thematics Equity Research, Berenberg
Can Battery Recycling Ease Potential Bottlenecks in Raw Materials Supply Chain?



Claude Chanson, General Manager, RECHARGE
Can a Fair EU Environmental Regulation Support the Development of Sustainable EV Battery Manufacturing?



Panelists

Kunal Phalpher, Chief Commercial Officer, Li-Cycle



Jan Tytgat, Director Government Affairs EU-Benelux, Umicore



12:30 Networking Lunch & Opportunity to Take Advantage of Activities on Show Floor

14:00 Ramping Up Battery Assembly to Meet Future OEM Demand: Building Gigafactories in the EU

Moderator/Speaker Markus Woland, Consultant - Expert Battery Production, P3 Group



Review of Current Battery Factories For Europe and Outlook on Future Potentials For an Integrated Value Chain

Panelists

Patrik Öhlund, CEO, Node Pole



Gordon Bach, Senior Engineering Manager - EU Engineering Center, CATL



Marc Deyda, Global Battery&Hybrid Business Developer, Siemens AG



Martin Anderlind, Director, Northvolt



Sebastian Wolf, Sr. Director EU Operations & Managing Director, Farasis Energy Europe



15:15 End of The Battery Show Conference Europe 2019



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