

## EXPERT FORUM

# Sustainable Materials for Future Mobility

Turin, 7-9 October 2019

Mon: Museo dell'Automobile di Torino (Corso Unità d'Italia, 40)

Tue/Wed: Lingotto Conference Center (Via Nizza, 280)

## EVENT PROGRAMME

### Monday, 7 October

14:00

WELCOMING AND REGISTRATION

15:00 - 16:30

RAW MATERIALS. THE NEW OIL?

**Welcome message.** *Andreas Klosssek, EIT RawMaterials*

**Raw materials: the new oil?** *Daniel Cios, European Commission*

**Raw materials for new mobility. Outlook, trends, scenarios.** *David Merriman, Roskill*

**The automotive industry beyond 2030. Perspectives for new materials** *Rosanna Serra, Fiat Chrysler Automobiles*

**Materials for future mobility: a roadmap towards electrification.** *To be confirmed*

16:30 - 17:00

COFFEE BREAK

17:00 - 18:30

SUSTAINABLE MOBILITY: THE ECO-FOOTPRINT OF RAW MATERIALS

**The eco-footprint of raw materials. Current limits.** *Markus Reuter, Helmholtz Zentrum*

**Sourcing of raw materials for electric mobility.** *Christian Hagelüken, Umicore*

**Strategic dialogue on sustainable raw materials.** *Masuma Farooki, MineHutte*

**Roundtable discussion on raw materials and sustainability.**

18:30 - 19:30

GUIDED VISIT AT THE NATIONAL AUTOMOTIVE MUSEUM TORINO

19:30 - 22:00

LIGHT STANDING NETWORKING DINNER



Tuesday, 8 October

ELECTRIFICATION

14:00 - 15:30

<b>SESSION 1</b> SUSTAINABLE SOURCING AND STANDARDS	<b>SESSION 2</b> BATTERIES	<b>SESSION 3</b> MAGNETS & E-DRIVES	<b>SESSION 4</b> FUEL CELLS
<p>LCA for sustainable mobility. <i>Jens Warsen, ACEA</i></p> <p>LCA and MFA of Nickel. <i>Mark Mistry, Nickel Institute</i></p> <p>The SUPRIM project. <i>Rodrigo Freitas de Alvarenga, University of Ghent</i></p> <p>The MFA toolset. <i>Daniel Beat Müller, NTNU</i></p>	<p>Batteries. Key challenges towards the next generations. <i>Clémence Siret, SAFT</i></p> <p>Advanced electrolytes including gel and solid-state. <i>Daniel Goesener, Solvay</i></p> <p>Sustainable high-performance anode materials. <i>Stian Madshus, Elkem</i></p> <p>Open innovation test bed (TEESMAT project). <i>Philippe Azais, CEA</i></p>	<p>Current trends in Rare Earth permanent magnet manufacturing. <i>Boris Saje, Kolektor</i></p> <p>Key challenges and needs in rare earth permanent magnet production. <i>Milana Karajic, Magneti Ljubljana</i></p> <p>Materials and costs in e-motors design. <i>Richard Arlot, Bomatec</i></p> <p>E-drives for automotive. <i>Richard Moore, Nidec-PSA</i></p>	<p>Materials for hydrogen storage. <i>Claudio Pistidda, Helmholtz Zentrum</i></p> <p>Technologies for fuel cells. <i>Fabrice Stassin, Umicore</i></p> <p>Catalysts for fuel cells. From R&amp;D to production. <i>Christian Gebauer, Heraeus</i></p> <p>New electrocatalysts for PEM fuel cells. <i>Breton</i></p>

15:30 - 16:00

**COFFEE BREAK**

16:00 - 17:00

**WORKSHOPS**

LCA & MFA STANDARDS LCI DATABASE DEVELOPMENT	BATTERY RAW MATERIALS	TOWARDS A EUROPEAN RARE-EARTH VALUE CHAIN	FUEL CELLS
ETHICAL SOURCING CAPACITY BUILDING IN AFRICA	SOLID-STATE BATTERIES		

17:00 - 19:00

**COCKTAIL PARTY**

17:30 - 19:00	17:30 - 18:30	17:30 - 18:30
SPEED DATING	THESIS AWARD	POSTER SESSION

19:30 - 22:00

**GALA DINNER AT NH HOTEL LINGOTTO**

Wednesday, 9 October

**LIGHTWEIGHT**

08:30 **WELCOMING ATTENDEES**

09:00 - 10:30

**LIGHTWEIGHT DESIGN FOR FUTURE MOBILITY**

**Welcoming attendees.**

**Sustainable materials for future mobility.** *Roland Gauß, EIT RawMaterials*

**Lightweight challenges for the automotive sector.** *Eduardo Beltrán de Nanclares, Mondragon Corporation*

**Lightweight design in ship building.** *Luigi Pastorino, Fincantieri*

**Industrialisation of Additive Manufacturing. Example of Laser Metal Deposition.** *Tobias Kamps, Siemens*

**Roundtable discussion.**

10:30 - 11:00

**COFFEE BREAK**

11:00 - 12:00

**SESSION 5  
STEELS**

**Speciality metals and alloying agents. Key challenges.** *Stefan Lindner, Outokumpu*

**The Hisarna process.** *Johan van Boggelen, Tata Steel*

**High-strength steels for automotive.** *Thomas Müller, SSAB*

**SESSION 6  
Al-ALLOYS**

**Aluminium and circular economy. The emerging trends.** *Gino Schiona*

**A look back on the value chain. Casting to give value to recycled alloys.** *Roberto Molina, TEKSID*

**Improving of aluminium scraps by innovative remelting techniques.** *Roberta Niboli, Raffmetal*

**SESSION 7  
COMPOSITES**

**Winning solutions for lightweight vehicles using recycled carbon fibers.** *Antonella Tarzia, CETMA*

**Lightweighting for e-mobility. Opportunities and challenges for high performance polymers.** *Erico Spini, RadiciGroup*

**Lightweight design by training.** *Éric Hernández Edo, Fraunhofer IFAM*

12:00 - 13:30

**LUNCH**

13:30 - 15:00

**SESSION 5  
STEELS**

**Steel for the automotive sector.** *Bernardo Barile, ArcelorMittal*

**Inverse topological optimization on steels.** *Michele Maria Tedesco, Fiat Chrysler Automobiles*

**Additive manufacturing of steel.** *Maurizio Vedani, Politecnico di Milano.*

**SESSION 6  
Al-ALLOYS**

**Competition among materials. Light alloys are on the podium.** *Claudio Mus, Endurance Overseas*

**Materials and cost-efficient processes in the production of Al-Ce alloys.** *Orlando Rios, Critical Materials Institute*

**Aluminum parts using additive manufacturing.** *Elena Lopez, Fraunhofer IWS*

**SESSION 7  
COMPOSITES**

**Thermoplastics in automotive: challenges.** *Michel Glotin, Arkema*

**Joining and welding of multimaterials.** *Fernando Liebana Arribas, Tecnalia*

**Material models for joining or crashes.** *Francisco Gilabert, University of Ghent*

Wednesday, 9 October

LIGHTWEIGHT

15:00 - 15:30

COFFEE BREAK

15:30 - 16:30

WORKSHOPS

SUSTAINABLE STEELS

COST-COMPETITIVE  
COMPOSITES

15:30 - 17:00

SPEED DATING

SIDE EVENTS

9:00 - 17:00

**Satellite workshop QM-FORMa**  
*Raquel Lizarraga, KTH*

9:00 - 13:00

**Rare Earth Industry Association**  
*Session 1. Internal Meeting (private)*

13:30 - 15:00

**Rare Earth Industry Association**  
*Session 2. Project Brokerage (open access)*