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# Mission 10 000: BATTERIES

October 10th - 11th of 2019 | INL, Braga, Portugal

NOTE: This is a tentative schedule, times listed are subject to change. The Poster exhibition will happen during all the event.
Check back often for updates or subscribe to our newsletter at our website: https://nanogateway.eu/en/mission-batteries/

## PROGRAMME | October 10th, 2019

**8h00 - 9h00** Registration

### OPENING SESSION

**9h00** **Lars Montelius,** Director-General INL

**9h10** **Ricardo Rio,** Mayor of Braga

**09h20** **Welcome Message**

**:: The European Battery Landscape**

**Charles Amos**, Research Fellow, Research Group of Atomic Structure-Composition of Materials, INL

**:: Competence centers as key actors in the European Battery strategy: an overview by INL and IST**

**Lifeng Liu**, Group Leader, Nano Materials for Energy storage and conversion, INL

**Alberto Adán Más**, Researcher, Department of Chemical Engineering, IST

**09h45** **Video Interview with the lithium-ion battery pioneer John Goodenough,** Professor, Department of Electrical & Computer Engineering, University of Texas at Austin

### MORNING SESSION

#### INVITED TALK

**10h00** ***:: European Battery Alliance - Building the European Battery Industry*** Policy

**Thore Sekkenes,** Program director for European Battery Alliance, InnoEnergy Scandinavia AB

**10h45** Poster Session Presentations - Break

#### CONTRIBUTED TALKS

**11h15** ***:: High Power Blue Lasers, a disruptive technology for battery welding ::*** **Victor Blanco, Laser 2000 SAS / NUBURU**

**11h35** ***:: High-Capacitance Negative Electrode based on Cobalt Phosphide Nanocrystals ::*** **Nan Zhang, INL**

#### INVITED TALK

**11h55** ***:: European Partnership on Advanced materials for batteries*** Policy / Science

**Joaquín Villar,** Head of Department, Internationalisation and Forsight, Andalusian Energy Agency

#### ROUNDTABLE DISCUSSION

**Funding & Collaboration Opportunities**

**12h20** **Luís Maia**, Horizon 2020 National Delegate and Contact Point, GPPQ - Portuguese Framework Promotion Office

**Joaquín Villar,** Head of Department, Internationalisation and Forsight, Andalusian Energy Agency

**Juliana Restrepo Sintes**, Director General, AEPIBAL - Industrial Association for Batteries and Energy Storage | BatteryPlat

Moderator: Paula Galvão, Chief Business and Strategic Relations, INL

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## PROGRAMME | October 10th, 2019

**13h20** Networking Lunch — Networking Opportunity

### AFTERNOON SESSION

#### INVITED TALK

**14h50** ***:: Fast Charging of Lithium-Ion Batteries*** — Science

**Daniel Abraham,** Senior Materials Scientist, Argonne National Laboratory

#### CONTRIBUTED TALKS

**15h35** *:: Free-Standing N-Graphene as Conductive Matrix For Ni(OH)2 based Supercapacitive Electrodes ::* **Kush Upadhyay,** IST

**15h55** *:: Compositional mapping of LiNixCoyMnzO2 cathode materials ::* **Cristiana Alves,** INL

**16h15** Coffee break

#### INVITED TALK

**16h45** ***:: Techology Transfer within the EU Batteries Ecosystem: our experience*** — Innovation / Industry

**Oscar Miguel,** Director, CIDETEC Energy Storage

#### INVITED TALK

**17h30** ***:: Structural Characterization of Li-ion Battery Materials Using Advanced Electron Microscopy Techniques*** — Science

**Karalee Jarvis,** Research Engineering/Scientist Associate, Univeristy of Texas at Austin

**18h15** INL Tour

**18h45** Happy Networking Hour

## PROGRAMME | October 11th, 2019

**8h30 - 9h00** Registration

### MORNING SESSION

#### INVITED TALK

**9h00** ***:: Batteries: Industrial Initiatives and Opportunities in Iberia*** — Policy

**Mikel Lasa,** CEO, InnoEnergy Iberia

#### CONTRIBUTED TALKS

**9h45** *:: How relevant is for asset operators to access cell data in large scale stationary Li-ion battery projects: the case of 2nd life batteries ::* **Mario Simões,** EDP Inovação

**10h05** *TBD*

**10h25** Coffee break

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## PROGRAMME | October 11th, 2019

### INVITED TALK

**10h55** — ***:: From thermal harvesting to electrical storage in Li/Na devices*** — Science

**Maria Helena Braga,** Associate Professor, Department of Engineering Physics, University of Porto

### CONTRIBUTED TALKS

**11h40** — ***:: Nanoconfined ionic Liquids and hybrid ionogels: Tuning the Electrolyte-Electrode Interface ::*** **Luis Miguel Varela,** University of Santiago de Compostela

**12h00** — ***:: Ionic Liquids: next generation electrolytes ::*** **Oscar Cabeza,** University of Coruña

### INVITED TALK

**12h20** — ***:: Printed and solid-state batteries: materials, challenges and opportunities***

**Senentxu Lanceros-Mendez,** Scientific Director and Professor, Basque Center for Materials, Applications, and Nanostructures — Technology/Innovation

**13h05** — Networking Lunch — Networking Opportunity

## AFTERNOON SESSION

### INVITED TALK

**14h35** — ***:: Batteries interfaces for renewable energies and electric vehicles*** — Technology/Innovation

**Enrique Romero-Cadaval,** Professor, Power Electric and Electronic Systems R&D Group, University of Extremadura

### INVITED TALK

**15h20** — ***:: Redox flow batteries: present and future perspectives*** — Science

**Adélio Mendes**, Professor, Department of Chemical Engineering, University of Porto

**16h05** — Coffee break

### ROUNDTABLE DISCUSSION

***:: Scaling Battery Innovations: now and tomorrow***
***Opportunities and challenges for the lithium ion battery value chain***

**16h30**

**Mikel Lasa,** CEO, InnoEnergy Iberia
**Jorge Magalhães,** Senior VP, Vestas
**António Silva,** Geologist, Lusorecursos
**Mario Simões,** Technology Expert in Energy Storage, EDP Innovation

Moderator: Fátima Montemor, IST

**18h15** — **AWARDS SESSION**
**Lars Montelius,** Director-General INL

**18h30** — **CLOSING REMARKS**
**Fátima Montemor,** Professor, Department of Chemical Engineering, Vice-President of IST

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# POSTER LIST

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| 02 | Alvaro Caballero | Advances in sustainability for Lithium-Sulfur battery technology: Biomass-derived carbon electrodes |
| 03 | Alvaro Caballero | Advances in safety for Lithium-Sulfur battery technology: alternative anodes and electrolytes |
| 04 | Alvaro Caballero | Advances in performance for Lithium-Sulfur battery technology: Graphene-based electrodes |
| 05 | Ana Mafalda Macatrao | Effect of Magnetic Field on the Electrodeposition of Copper-Iron Nanofoams |
| 06 | Bruno Xavier | Synthesis of nanostructured transition metal phosphides via a one-step vapor-solid reaction method for electrochemical energy storage |
| 07 | Carlos Miguel Costa | Metal–organic framework reinforced poly(vinylidene fluoride) membranes for lithium-ion battery separators |
| 08 | Eduardo Lopez | Testing and evaluation of battery technologies for commercial and residential applications in AGERAR project |
| 09 | Kamil Jasso | Application of carrageenans in lithium-sulfur batteries |
| 10 | Mario Andre Madeira de Almeida | Manganese Sulfide Crystallites - Development and Supercapacitor application |
| 11 | Rajesh Thomas | Improved lithium storage performance of Bi2Se3 electrode with effective surface modification via conductive coating |
| 12 | Zhixin Tai | High-shear exfoliation technology to produce ultrathin 2D nanosheets for high capacity and long-life alkali-ion batteries |
| 13 | Ziyu Lu | Tips-covered anode achieving uniform lithium deposition for stable lithium metal batteries |
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