

Session Program

13-17 Sept 2021

**EUROPEAN CONGRESS AND EXHIBITION ON
ADVANCED MATERIALS AND PROCESSES -
EUROMAT 2021**

***E2_Battery materials - from fundamentals to
cell development***

Virtual

Tuesday 14 September

09:50

E2_Battery materials - from fundamentals to cell development: E2_1_Energy Storage Materials - New Contenders

Session | Location: Room 13

09:50–10:30

Siloxene And Germanane: Two Promising Battery Electrode Materials? (Keynote)

Speaker

Laure Monconduit

10:30–10:50

Alloys negative electrode for Mg-ion/s batteries

Speaker

Mr Clément Pechberty

10:50–11:10

An exploratory study of electrodes suitable for potassium-based batteries

Speaker

Lucia Fagiolari

11:10–11:30

Incorporation of iron into lamellar manganese hydroxide oxides for hybrid supercapacitors

Speaker

Mr Ronan Invernizzi

11:30

11:50

E2_Battery materials - from fundamentals to cell development: E2_2_Advanced Battery Characterization Techniques

Session | Location: Room 13

11:50–12:10

NMR study of $\text{LiCo}_{0.96}\text{Al}_{0.04}\text{O}_2$ as a positive electrode material for Li-ion batteries: homogeneity and role of doping on mechanisms (Highlight)

Speaker

Ms Fatima-Ezzahra Er-Rami

12:10–12:30

Nanoscale phase evolution in conversion-type lithium-sulfur and lithium-air battery cathodes

Speaker

Dr Christian Prehal

12:30–12:50

In situ nano-tomography at ID16B: a practical guide to battery analysis

Speaker

Victor Vanpeene

12:50–13:10

Implementation of a lithium ion battery charge-discharge system and analysis of the effect of microstructural degradation

Speaker

Marisol Maril

13:10–13:30

On the structure of sulfur/1,3-diisopropylbenzene co-polymers: insights from density-functional theory calculations**Speaker**

Ms Rana Kiani

13:30

15:20

**E2_Battery materials - from fundamentals to cell development:
E2_3_Alternative Battery Chemistries**

Session | Location: Room 13

15:20–15:40

Advanced cathode design for sodium-metal chloride batteries (Highlight)**Speaker**

Dr Meike Heinz

15:40–16:00

Cationic solvation of potassium bis(fluorosulfonyl) imide in monoglyme-based electrolytes: implications in the intercalation mechanism of K⁺ in graphite**Speaker**

Ms Phuong Nam Le Pham

16:00–16:20

Controlling lithium transport and redox mechanism in cathode material Li₃RuO₄ via short range order**Speaker**

Mr Alexander Squires

16:20–16:40

Impact of carbon additives on Sb anodes performance for Na-ion batteries.**Speaker**

Ms Justyna Plotek

16:40–17:00

Exploring the Peierls-Distorted Vanadium Sulphide as A Rechargeable Mg-Ion Cathode**Speaker**

Dr Sunita Dey

17:00

17:20

**E2_Battery materials - from fundamentals to cell development:
E2_4_Battery Functional Interfaces**

Session | Location: Room 13

17:20–17:40

Influence of the LiNi_{0.6}Mn_{0.2}Co_{0.2}O₂ (NMC 622) layered oxide morphology on the positive electrode/electrolyte interface**Speaker**

Mr Adrien Soloy

17:40–18:00

Transition metal dissolution and interface degradation during cycling in LiNi_{0.8}Mn_{0.1}Co_{0.1}O₂-graphite cells**Speaker**

Dr Erik Bjorklund

18:00–18:20

Probing the evolution of electrode-electrolyte interfaces in lithium-ion batteries with operando X-ray absorption spectroscopy**Speaker**

Michael Fraser

18:20–18:40

Surface reactivity and surface characterization of layered β (III)-CoOOH and MnO₂ materials: an experimental and computational study**Speaker**

Alexia Lemoine

18:40