

**Session Program**

**13-17 Sept 2021**

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

***B2\_Light weight metals***

Virtual

# Monday 13 September

11:00

## B2\_Light weight metals: B2\_1\_Aluminium alloys I

Session | Location: Room 5

11:00–11:40 **Dynamic Precipitate Evolution in 7xxx Aluminium Alloys (Keynote)**

**Speaker**

Prof. Joseph Robson

11:40–12:00

**Composition-dependent precipitation in Mg/Si graded 6xxx aluminium alloys**

**Speaker**

Ms Justine Taurines

12:00–12:20

**Hardening mechanisms in 6XXX alloys**

**Speaker**

Alexander Wimmer

12:20–12:40

**Early stage solute clustering during natural ageing in Al-Mg-Si alloys**

**Speaker**

Dr Abhinav Jain

12:40

14:00

## B2\_Light weight metals: B2\_2\_Aluminium alloys II

Session | Location: Room 5

14:00–14:20

**Mechanical strength and electrical conductivity of composition graded AlMgSi wires**

**Speaker**

Dr Xavier Sauvage

14:20–14:40

**The atomic structure of GPI zones Al-Zn-Mg alloys**

**Speaker**

Elisabeth Thronsen

14:40–15:00

**Effect of the surface mechanical attrition treatment on multiscale complexity of the Portevin-Le Chatelier effect in an AlMg alloy**

**Speaker**

Hafsa Jaber

15:00–15:20

**The impact of natural aging in Al-Mg-Si alloys and influence of Sc contributions**

**Speaker**

Annika Hämmerle

15:20–15:40

**Scaling laws in the local strain-rate fluctuations during jerky flow in an AlMg alloy**

15:40

**Speaker**

Dr Mikhail Lebyodkin

16:00

**B2\_Light weight metals: B2\_3\_Aluminium alloys III****Session** | **Location:** Room 5

16:00–16:20

**Influence of texture and microstructure on the bendability of Al-alloys****Speaker**

Mr Bernhard Trink

16:20–16:40

**The development of eutectic aluminum alloys and their high temperature performance****Speaker**

Dr Zeyu Bian

16:40–17:00

**Characterization of AA8079 foil stock ingot in as cast and homogenized state****Speaker**

Mr Erik Santora

17:20–17:40

**Influence of crystal neighbor orientation on in-grain texture fragmentation of cube grains in Aluminium****Speaker**

Dr Elisa Cantergiani

17:40

## Tuesday 14 September

09:50

### B2\_Light weight metals: B2\_4\_Titanium alloys I

Session | Location: Room 5

09:50-10:10

#### Phase transformation under rapid heating of the Ti-5553 titanium alloy

##### Speaker

Mr Nicolas CHANFREAU

10:10-10:30

#### Obtaining TRIP/TWIP effects in metastable beta Ti alloys with high oxygen content - field assisted sintering technique as high throughput method

##### Speaker

Mr Dalibor Preisler

10:30-10:50

#### Integrated modelling tools to simulate the evolution of the microstructure in titanium alloys along the production chain

##### Speaker

Mr Ricardo Buzolin

10:50-11:10

#### A nanoscale study on the influence of grain size and orientations on the stress-induced martensitic transformations in metastable $\beta$ titanium alloys.

##### Speaker

Mr Abhishek Rastogi

11:10-11:30

#### Prediction of microstructure gradient distribution of Ti alloys during thermomechanical treatment

##### Speaker

Mr Franz Miller Branco Ferraz

11:30

11:50

### B2\_Light weight metals: B2\_5\_Titanium alloys II

Session | Location: Room 5

11:50-12:10

#### In-situ investigations on transformation pathways of mechanical $\{332\}<113>\beta$ twinning and $\alpha''$ martensitic transformation in TRIP/TWIP Ti alloys

##### Speaker

Bingnan Qian

12:10-12:30

#### Evidencing of oxygen ordering in Ti-Zr-O alloys questions the embrittling nature of oxygen in $\alpha$ -titanium alloys.

##### Speaker

Dr Régis Poulain

12:30-12:50

**Design and development of oxygen-rich alpha titanium alloys for structural applications****Speaker**

Fabienne Amann

12:50-13:10

**Effects of short-time heat treatments on microstructure and mechanical properties of Ti-6Al-4V sheet metal****Speaker**

Mrs Nina Pfeffer

13:10-13:30

**Real-time monitoring of additive manufacturing alloys****Speaker**

Dr Pere Barriobero-Vila

13:30

15:20

**B2\_Light weight metals: B2\_6\_Magnesium alloys****Session** | **Location:** Room 5

15:20-15:40

**Lightweighting with Magnesium Sheets: Material, Process and Component Development****Speaker**

Dr David Klaumünzer

15:40-16:00

**Mechanical and corrosion properties of rapidly solidified ribbon-consolidated Mg alloys with Zn- and Y-rich stacking faults****Speaker**

Dr Daria Drozdenko

16:00-16:20

**Forming of Mg-Al-Ca Alloys - An Introduction to the Processing and Forming Behavior of Mg Wrought Alloys****Speaker**

Mr Nikolaus Papenberg

16:20

17:20

**B2\_Light weight metals: B2\_7\_Advanced Light Metals I****Session** | **Location:** Room 5

17:20-17:40

**Study on processing magnesium alloy AZ91 by Plasma Metal Deposition (PMD®) for space applications****Speaker**

Mr Enrique Ariza-Galvan

17:40-18:00

**Study of the thermal stability of rapidly solidified ribbon-consolidated MgZnY alloy****Speaker**

Klaudia Fekete

18:00-18:20

**Production of oxygen-free titanium components using innovative laser metal deposition process**

**Speaker**

Agata Kulig

18:20-18:40

**First results of scale-up of the updated pyrometallurgical-hydrometallurgical Pedersen Process within the HORIZON2020 project ENSUREAL and examples for industrial concept**

**Speaker**

Dr Roland Koenig

18:40

## Wednesday 15 September

09:50

### B2\_Light weight metals: B2\_8\_Advanced Light Metals II

Session | Location: Room 5

09:50–10:10

#### Aluminium alloys reinforcement due to the incorporation of titanium carbides (TiC) nano particles

##### Speaker

Ane Jiménez Zabaleta

10:10–10:30

#### An overview on nanoparticle reinforced lightweight metal composites

##### Speaker

Dr Qianqian Li

10:30–10:50

#### Crushing behaviour of aluminium open-cell foam on DIHB

##### Speaker

Ms Anja Mauko

10:50–11:10

#### Design of a novel heat-resistant Al-Fe-Ni alloy suitable for selective laser melting process

##### Speaker

Yakai Xiao

11:10–11:30

#### Improved microstructures and mechanical properties for 7085Al alloy subjected to slow quenching by aging treatment

##### Speaker

Hongyu Xiao

11:30

11:50

### B2\_Light weight metals: B2\_9\_Advanced Characterization

Session | Location: Room 5

11:50–12:10

#### MEMS-based in situ electron-microscopy investigation of rapid solidification and heat treatment on eutectic Al-Cu

##### Speaker

Dr Phillip Dumitraschkewitz

12:10–12:30

#### Nucleation and microstructure of single AlSi12 particles rapidly solidified in a fast scanning calorimeter

##### Speaker

Dr Bin Yang

12:30–12:50

#### Advanced electrochemical characterization of light metal degradation

**Speaker**

Dr Noemie Ott

12:50-13:10

**Small-Angle Scattering investigation of Zr dispersoids in 7050 aluminum alloys**

**Speaker**

Mr Mohammad Taha Honaramooz

13:10-13:30

**In-situ wide angle X-ray scattering of precipitation and dissolution reactions during heating of Al alloys**

**Speaker**

Benjamin Milkereit

13:30