

Session Program

13-17 Sept 2021

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

***C14 Thermomechanical processing, severe
plastic deformation & nanostructuring***

Virtual

Thursday 16 September

09:50

C14_Thermomechanical processing, severe plastic deformation & nanostructuring: C14_1_Phase mixing and transformations

Session | Location: Room 14

09:50–10:30

Strain induced metastable phase formation in Al₃₀Zn₂Cu and Al₁₀Zn₂Cu alloys processed by severe plastic deformation (Keynote)

Speaker

Dr Xavier Sauvage

10:30–10:50

Phase transformations in Ti-based alloys subjected to high pressure torsion

Speaker

Anna Korniewa-Surmacz

10:50–11:10

How to characterise mixing during HPT?

Speaker

Dr Roman Kulagin

11:10

11:50

C14_Thermomechanical processing, severe plastic deformation & nanostructuring: C14_2_Microstructure and mechanical properties I

Session | Location: Room 14

11:50–12:10

Pressure Effects and Microstructural Evolution during High Pressure Torsion Processing of Mg-Alloys (Highlight)

Speaker

Suveen Mathaudhu

12:10–12:30

Precipitation strengthening of 6082 aluminum alloy subjected to multiple accumulative roll bonding passes

Speaker

Dr Witold Chrominski

12:30–12:50

Effect of High Pressure Torsion processing of Nb and Nb-alloys on the evolution of microstructure, texture and mechanical properties

Speaker

Soumita Mondal

12:50

14:40

C14_Thermomechanical processing, severe plastic deformation & nanostructuring: C14_3_Microstructure and mechanical properties II

Session | Location: Room 14

14:40–15:00

Linking the 'hardening by annealing' phenomenon with grain boundary relaxation in HPT processed tantalum

Speaker

Markus Alfreider

15:00–15:20

Towards an improvement of mechanical properties of Ti-24Nb-4Zr-8Sn through the design of heterogeneous microstructures**Speaker**

Mr Benoît Fer

15:20–15:40

Deformation and chemical evolution in cementite (Fe₃C) during small-scale tribology**Speaker**

Ms Hanna Tsybenko

15:40–16:00

In situ monitoring of mechanical behavior and microstructural evolution in fine grain Ti-6Al-4V alloy under superplastic conditions**Speaker**

Prof. Moukrane Dehmas

16:00

16:40

C14_Thermomechanical processing, severe plastic deformation & nanostructuring: C14_4_Physical properties / Annealing phenomena**Session | Location:** Room 14

16:40–17:00

Severe plastic deformation of SmCo₅-Cu nanocomposites: structural refinement and magnetic properties after high pressure torsion (Highlight)**Speaker**

Franziska Staab

17:00–17:20

Influencing interface related magnetic properties of NiO and FeNi by tailoring nanostructures with Severe Plastic Deformation**Speaker**

Mr Michael Zawodzki

17:20–17:40

Tailored Magnetic Functionality by High Pressure Torsion**Speaker**

Stefan Wurster

17:40–18:00

Plastic strain triggers mechanically induced grain boundary migration in nanomaterials**Speaker**

Oliver Renk

18:00–18:20

The impact of the stacking fault energy of nanostructured metals on phenomena during annealing at the high hydrostatic pressure**Speaker**

Dr Agnieszka Krawczynska

18:20

Friday 17 September

09:50

C14_Thermomechanical processing, severe plastic deformation & nanostructuring: C14_5_Mechanical properties/ composites/ processes

Session | **Location:** Room 14

09:50–10:10

The effect of processing parameters on the synthesis of an aluminium-titanium nanocomposite by high-pressure torsion

Speaker

Dr Piotr Bazarnik

10:10–10:30

Damage tolerant fatigue behavior of Al/Al-laminates produced by ARB - Role of interfaces on prevalent damage mechanisms

Speaker

Philip Manuel Pohl

10:30–10:50

Combining high strength, ductility and toughness in interface-doped W-Cu nanocomposites

Speaker

Mr Michael Wurmshuber

10:50–11:10

Transition regime in layer thickness dependent strengthening behavior of Cu/Nb LMCs produced by ARB

Speaker

Moritz Kuglstatter

11:10–11:30

Formability and Ductility of Ultrafine-Grained Plates Manufactured by ECAP-Based Processes

Speaker

Mrs Marta Ciemiorek

11:30