

Session Program

13-17 Sept 2021

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

F7_Metallic biomaterials

Virtual

Monday 13 September

11:00

F7_Metallic biomaterials: F7_1_Bioabsorbable Metals

Session | Location: Room 14

11:00–11:40

Engineered porous Fe₅₀Mn₅₀ alloys with additions of Zn/Ag as antibacterial elements for biodegradable implant applications (Keynote)

Speaker

Ms Aleksandra Bartkowska

11:40–12:00

Mechanical properties and biodegradability of porous Mg scaffolds fabricated by power bed laser fusion for biomedical applications

Speaker

Jon Molina-Aldareguia

12:00–12:20

Twinning-induced plasticity Fe-based alloys with Ag for ultra-thin biodegradable stents

Speaker

Prof. Diego Mantovani

12:20–12:40

Electropolishing or not biodegradable Fe-based alloys? Surface properties, corrosion behaviour and cell viability study

Speaker

Prof. Diego Mantovani

12:40

14:00

F7_Metallic biomaterials: F7_2_Structure/ Property Relationships

Session | Location: Room 14

14:00–14:40

Utilizing a multiscale 3D imaging approach to study magnesium degradation at resolutions down to 40nm (Keynote)

Speaker

Dr Berit Zeller-Plumhoff

14:40–15:00

Micromechanical Analysis of the Beam Elements in Metallic Programmable Mechanical Metamaterials

Speaker

Dr Kaiyang Yin

15:00–15:20

Impact of Fetuin on the behaviour of Mg-based metallic biomaterials

Speaker

Dr Heike Helmholz

15:20–15:40

Effect of magnesium degradation on titanium: hydrogen uptake

15:40

Speaker

Dr Vasyi Haramus

16:00

F7_Metallic biomaterials: F7_3_Advanced Ti-Alloys by Design**Session** | **Location:** Room 14

16:00–16:20

Development of high strength and high ductility Ti-based alloys for vascular stents (Highlight)**Speaker**

Mrs Carolina Catanio Bortolan

16:20–16:40

An assessment of Ti_{1.5}ZrTa_{0.5}Hf_{0.5}Nb_{0.5} refractory high entropy alloys for implant applications: As a bulk and coating**Speaker**

Mr Armin Asghari-Alamdari

16:40–17:00

Study of non-metallic inclusion and hydrogen contents in Nitinol stents: optimization of industrial products via fundamental metallurgical research**Speaker**

Dr Fan Sun

17:00–17:20

Effect of various surface modifications on c.p. Ti and Ti6Al4V on the adsorption of proteins relevant for osseointegration and inflammatory response**Speaker**

Jacopo Barberi

17:20