

FEMS EUROMAT23

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FEMS EUROMAT is the most important international congress in materials science and technology in Europe. It continues a successful congress series promoting the transfer of knowledge and the exchange of experience between academia and industry. **Extended submission deadline: 15 March 2023**

Area C: Processing

C07: Coatings and Surface Modification Technologies

Recent innovations and research in materials, coatings, and processes are designed to make surfaces or substrates more useful, more durable in harsh environments (high-T (temperature), high-P (stress), corrosive, etc.) and/or more cost-effective.

This symposium addresses current scientific and technological progress in traditional and cutting edge coating and thin film processes as well as surface modification treatments or techniques such as vacuum-based processes, electroless deposition, plasma and laser processing, ion beam methods, thermal and chemical diffusion, thermal spraying, hard facing and anodization. Hot topics will include

S.1. Coatings and Thin Films for industrial applications

- Relations between synthesis conditions, microstructure, and functional properties
- Coatings with advanced properties
- New coating concepts and designs
- Design and manufacturing of protective or decorative coatings
- New frontiers in coatings for bio-based and energy applications

S.2. Advanced methods of materials deposition and surface functionalization treatments

- Plasma deposition and related technologies
- Theoretical aspects of surface processing
- New coating technologies, pulsed plasmas, HiPIMS, and industrial coating units
- Fabrication of nanoparticles and 3D nanostructures
- Non-plasma deposition of coatings and thin films
- Novel fabrication and surface functionalization routes
- Chemical methods for surface modification
- Materials nano-modification and lithography

S.3. In-situ and in-operando characterization techniques

- Emerging technologies for surfaces characterization
- Resolution enhancement of surface techniques
- In-situ characterization of coatings during deposition
- High-resolution characterization techniques of thin films
- Scaling up concepts: from lab to market

Symposium Organizer



Prof. Dr. Albano Carvalho
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