

EUROMAT 2021

EUROPEAN CONGRESS AND EXHIBITION
ON ADVANCED MATERIALS AND PROCESSES

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12. - 16. SEPTEMBER 2021

GRAZ, AUSTRIA

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Area C

Symposium C.13

Title: Wetting, High-Temperature Capillarity, Interface design & Modeling

Organizer	Institution	Contact email
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Abstract

The aim of the symposium is to present the latest scientific and technological results in the areas of interface design and modelling, materials processing, capillarity and wetting phenomena at (predominantly but not exclusively) high temperatures.

These fields will be tackled by both experimental and theoretical studies in order to discuss among experts about novel perceptions, new equipments, and different approaches for studying and analyzing these phenomena.

The symposium will cover the following scientific and technological subjects (but not limited to):

- Liquid surfaces of metals, glasses and salts; surface energy and adsorption.
- Metal-metal, metal-ceramic, metal-glass and ceramic-ceramic interfaces at high temperatures: wettability, adhesion, interfacial reactions, infiltration, segregation, grain boundary wetting and intergranular films.
- Capillary phenomena in stressed polycrystals: anisotropy of internal wetting, zero creep, pressure solution.
- Capillarity in microgravity.
- Characterization of interfaces at high temperatures.
- Advances in measurement techniques of capillary properties at high temperatures.
- Marangoni phenomena.
- Corrosion and embrittlement by liquid metals.
- Liquid-based processes for joining: brazing, soldering, transient liquid phase bonding
- Materials processing: crystal growth, casting and foundry processes, processing of metal-matrix composites, etc.

Contributions to this symposium are supposed to be published in the Journal of Materials Engineering and Performance after peer review.



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