

Free webinar

November  
15th

Zoom platform

# Novel high performance materials & components

Energy intensive industries require a radical transformation of their production processes to reach carbon neutrality by 2050. Future low carbon technologies and processes should address **fluctuating and extreme conditions, such as high temperature or corrosive environments, materials and components that will need to be able to be sustained**. In the same way, they also need to be designed for high-energy performance.

This free webinar organized within the P4P Partnership of A.SPIRE aims at presenting the main advances achieved within some of the projects aligned with the LC-SPIRE-08-2020 work-topic.

[registration](#)



## Programme

GMT +2

- 10:00** **Welcome and opening**
- 10:05** **New generation of refractory stainless steels for the industry. The effect of cooling rate during solidification on high temperature properties**  
**HIPERMAT**  
Fernando Santos / Emili Barbarias (*AZTERLAN Metallurgy Research Centre*)
- 10:25** **Rapid development of new materials through the use of a combined approach of generative and physics-based models**  
**ACHIEF**  
Andrea Gregores Coto (*R&D Robotics & Automation*)
- 10:45** **Material Design for Additive Manufacturing: Enablers in Industrial Sustainability**  
**TOPAM**  
Ulrich Krupp (*IEHK, RWTH-AACHEN UNIVERSITY*)
- 11:05** **Enabling the potential of Ceramic Matrix Composites for energy-intensive industries**  
**CEM-WAVE**  
Roberto D'Ambrosio (*University of PISA*)
- 11:25** **Novel Cr-based alloys strengthened by intermetallics for structural and coating applications at high-temperatures >800°C**  
**COMPASsCO2**  
Kan Ma (*University of Birmingham - UoB*)  
Mathias Galetz (*DECHEMA-Forschungsinstitut - DFI*)
- 11:45** **Development of metal coatings by data/physics-based modelling of Compositionally Complex Alloys**  
**FORGE**  
Alvise Bianchin (*MBN nanomaterialia s.p.a.*)
- 11:55** **Questions and discussion**

### Participant projects



### Contact and more information



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[contact](#)