

EERA/ORIENT-NM Energy Materials for Innovation (EM4I) series

Workshop on **Energy Materials for harsh operating conditions** 7-8 April 2022

Organising committee: L. Malerba (CIEMAT/JPNM), H. Ihssen (Helmholtz), P. Pohjanne (VTT/JP AMPEA), R. Mayo (CIEMAT/ JP DfE)
M. Roeb (DLR/JP AMPEA), O. Suminska-Ebersoldt (KIT/JP GEO), B. Tanguy (CEA/JPNM), S. Vasta (CNR/ JP ES)

Programme

7th April

Workshop Introduction

13:00 L. Malerba, CIEMAT

13:15 Adel El Gammal, EERA

Session 1: Chairs - L. Malerba, B. Tanguy

13:30 F. Feyel, Safran Tech, France

Mastering high performance aerostructures by the help of models

14:00 M. Kowal, NCBJ, Poland

Non-destructive testing of components used in a scientific reactor. Review of methods.

14:30 G. Ribay, CEA, France

NDT and SHM of materials under harsh conditions used in Energy Applications

15:00 M. Frignani, Ansaldo Nucleare, Italy

Materials requirements and qualification strategy for the European lead-cooled fast reactor prototype: analysis of the challenges

15:30 Break

Session 2: Chairs - O. Suminska-Ebersoldt, P. Pohjanne

16:00 M. Kozdras, Canmet, Canada

Accelerated development of corrosion resistant materials

16:30 G. Skulason Kaldal, ISOR, Iceland

Materials engineering for geothermal applications

17:00 B. Acosta, JRC, The Netherlands

Hydrogen enhanced fatigue of compressed hydrogen storage vessels

17:30 J. Mykkola, VTT, Finland

Protective Coatings for SOEC interconnects

18:00 End first day

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Session 3: Chairs - S. Vasta, M. Roeb

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| 9:00 | T. Jonsson, Chalmers, Sweden | Power-production from biomass - material development and corrosion prediction in harsh environments |
| 9:30 | F. Sutter, DLR, Germany | Materials for harsh conditions in CSP |
| 10:00 | G. Karagiannakis, Certh, Greece | Materials in harsh conditions for high temperature solar thermochemistry |
| 10:30 | A. Freni, CNR-ICCOM, Italy | Durability of solid desiccant materials for HVAC systems |
| 11:00 | L. Bonaccorsi, U. Reggio Calabria, Italy | Materials for thermal energy storage in harsh operating conditions |

11:30 Break

Panel discussion: Moderator - H. Ihssen

12:00 Panelists:

- P. Jacques, EMIRI, Belgium
- F. Schuster, CEA, France
- G: Karagiannakis, Certh, Greece
- M. Kozdras, Canmet, Canada

Conclusion

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|-------|-------------------------------|---|
| 13:00 | L. Malerba, CIEMAT, Spain | Wrap-up |
| 13:15 | H. Ihssen, Helmholtz, Germany | Announcement next (and last) technical workshop |

13:30 Workshop ends