



Italian National Agency for New Technologies,
Energy and Sustainable Economic Development

network of infrastructures
extreme

Workshop on High Performance Materials

6-7 December 2018, Brindisi (Italy)

Programme Overview

Day One – December 6 th , Thursday - Palazzo Granafei-Nervegna (Via Duomo, 20)	
10.00	Registration and welcome coffee
10.45-11.00	Opening
11.00-12.20	Session 1 – The strategies for innovation framing high performance materials
12.20-13.00	Session 2 – The Network of Infrastructures EXTREME
13.00-14.30	Lunch
14.30-16.30	Session 2 – continuation
16.30-18.00	Session 3 – Regional Innovation Scheme Hubs and the KICs
18.00-20.00	Guided tour
20.00-22.30	Social Dinner

Day Two – December 7 th , Friday – Cittadella della Ricerca (S.S. 7 Appia, km 706)	
9.15	Shuttle bus to ENEA research centre
9.30	Registration
9.45-11.30	Session 4 – ENEA Brindisi laboratories
11.30-13.00	Session 5 – ENEA international initiatives
13.00-14.00	Lunch
14.00-16.00	Session 6 – Strategies and projects of relevant industries and stakeholders
16.00-17.30	Session 7 – Matchmaking / networking
17.30	Shuttle bus back to Brindisi city centre / Brindisi airport

Programme details on pg. 3

Supported by:



This activity has received funding from the European Institute of Innovation and Technology (EIT), a body of the European Union, under the Horizon 2020, the EU Framework Programme for Research and Innovation

1



COST is supported by the
EU Framework Programme
Horizon 2020

Background and workshop description

About the Network of Infrastructures EXTREME

EXTREME is a project funded by the European Knowledge and Innovation Community (KIC) "EIT RawMaterials" (<https://eitrawmaterials.eu/>), which is the largest consortium in the raw materials sector worldwide, including more than 120 partners from industry, universities and research institutions from more than 20 EU countries. Through this project, the "**Network of Infrastructures EXTREME**" (<http://www.network-extreme.eu/>) has been established, coordinated by ENEA (Italian National Agency for New Technologies, Energy and Sustainable Economic Development) and consisting of 9 European partners, sharing their expertise, laboratories and advanced equipment, focused on the efficient use of materials under challenging conditions of temperature, wear, load, friction, corrosion, etc. Through this partnership, the network can offer support to enterprises, industries, and research and technology organisations operating in those technological sectors where such conditions are commonly reached, like transport, machining, energy, construction, etc.

About the workshop

The two-day "Workshop on High Performance Materials", organized by ENEA in the framework of the network of infrastructures EXTREME (coordinated by ENEA and funded by the KIC EIT RawMaterials), is also supported by the COST Action CA15102 "CRM-Extreme" and under the patronage of the City of Brindisi. It will present technological advances and issues related to high performance materials, components and devices. Trends on different technological/industrial fields requiring such high performances will be addressed, like aerospace and automotive sectors.

Representatives of the KIC EIT RawMaterials, international scientific experts and companies will take part in the event. Institutional representatives at local and international level are also invited, together with stakeholders in the Mediterranean area, in order to increase awareness on the issues covered by the workshop and its background and evaluate new possible joint actions.

The workshop will be held in two different locations in Brindisi: 1st day in Palazzo Granafei-Nervegna (a historic building in the city centre) and 2nd day in the ENEA Brindisi research centre at Cittadella della Ricerca.

During the second day, a visit to the ENEA laboratories will be included.

Further information

- Daniele Valerini, coordinator of the network EXTREME, daniele.valerini@enea.it
- Michele Penza, Head of ENEA Laboratory SSPT-PROMAS-MATAS, michele.penza@enea.it
- <http://www.network-extreme.eu/news/workshop-on-high-performance-materials>

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Workshop on High Performance Materials, 6-7 December 2018, Brindisi (Italy)

Day One – December 6th, Thursday

Palazzo Granafei-Nervegna (Via Duomo 20, Brindisi), room “Sala Università”

h 10.45 – Opening and institutional greetings

Chair: Dr. Michele Penza, ENEA, Head of Lab, Brindisi

- D. Della Sala, Head of Division Sustainable Materials at ENEA, Rome
- R. Rossi, Major of Brindisi Municipality and President of Brindisi Province

h 11.00 – Session 1 - The strategies for innovation framing high performance materials

Chair: Dr. Michele Penza, ENEA, Head of Lab, Brindisi

Representatives from institutional organizations (local authorities, regional institutions, European institutions) will be invited to present an overview of their ongoing and future strategies for innovation.

- M. Falzetti, Chair of EuMaT and Director of APRE: *Framework and trends on high performance materials in EU*
- A. Monterisi, ARTI Puglia: *Regional tools for innovation in Apulia*
- G. Acierno, President of DTA Scarl: *Technologies trends in the aerospace and defence: DTA strategy and programme*
- A. Arvizzigno, General Manager CVIT-BOSCH: *R&D in CVIT and Bosch view about Automotive trends*

h 12.00 – Session 2 - The Network of Infrastructures EXTREME

Chair: Dr. Dario Della Sala, ENEA, Head of Division, Rome

The European project and network EXTREME, funded by the KIC EIT RawMaterials, will be presented. Partners and stakeholders of the network will report about the framework and the activities related to high performance materials.

- P.L. Franceschini, Director of Innovation Hub (CLC) South of EIT RawMaterials: *The EIT RawMaterials: current status and new opportunities*
- D. Valerini, project leader at ENEA and coordinator of Nol EXTREME: *The Network of Infrastructures EXTREME*
- M. Penza, Head of Laboratory Functional Materials and Technologies for Sustainable Applications at ENEA: *Current Research in Functional Materials for Eco-Innovation at ENEA Brindisi*
- A. Vida, Head of research group at Bay Zoltán Nonprofit Ltd. for Applied Research: *Novel layers and high entropy materials at Bay Zoltan Research Centre*
- T. Kosec, Head of Laboratory for Metals, Corrosion and Anti-Corrosion Protection at ZAG - Slovenian National Building and Civil Engineering Institute: *Sensing beyond conventional methods*
- J. Mazur, researcher at IMN - Institute of Non-Ferrous Metals: *Powder materials for advanced production methods from materials containing refractory metals*
- F. Ceruti, research fellow at University of Milano Bicocca: *Unimib @ Extreme: some insights from the market opportunity analysis*

h 16.30 – Session 3 - Regional Innovation Scheme Hubs and the KICs

Chair: Dr. Dario Della Sala, ENEA, Head of Division, Rome

The new Mediterranean Innovation Hub, branching from the Innovation Hub South of EIT RawMaterials, will be introduced, and its framework discussed by relevant stakeholders, together with representatives of other RIS Hubs.

- P.L. Franceschini, Director of Innovation Hub (CLC) South of EIT RawMaterials: *Towards a Mediterranean RIS Hub*
- Igor Duriska, Technical University of Košice: *The Regional Centre Košice*
- D. Della Sala, Head of Division Sustainable Materials at ENEA: *ENEA for KIC EIT RawMaterials*
- S. Modeo, MRS S.r.l.: *The impact of EIT RawMaterials on the startup: the case of MRS*
- Discussion

h 18.00 – Guided tour

h 20.00 – Social Dinner

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3



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Day Two – December 7th, Friday

Cittadella della Ricerca (S.S. 7 Appia, km 706, Brindisi), room “Sala conferenze CEDAD-Unisalento”

h 9.15 – Shuttle bus from Brindisi city centre to the ENEA research centre

h 9.40 – Session 4 – ENEA Brindisi laboratories

Chair: Dr. Michele Penza, ENEA, Head of Lab, Brindisi

The main research activities of the ENEA Brindisi research centre will be presented, and a full tour to the ENEA laboratories will be organized.

- M. Penza, Head of Laboratory Functional Materials and Technologies for Sustainable Applications: *Overview of ENEA Brindisi Laboratories*
- Visit to the ENEA laboratories

h 11.30 – Session 5 - ENEA international initiatives

Chair: Dr. Daniele Valerini, Coordinator of Noi EXTREME, ENEA, Brindisi

Some international activities with ENEA coordination or involvement (e.g. H2020 and EIT RawMaterials projects) will be shown during this session.

- G. Di Girolamo, project leader at ENEA: *Solutions on CRMs: main outcomes from SCRREEN network activities*
- M.L. Grilli, project leader at ENEA: *MONAMIX Project: Efficient Extraction of Mixed Rare Earths Oxides from Monazite Concentrates and their Use in High Temperature Coatings*
- A. Rinaldi, project leader at ENEA: *NEXTOWER project and coatings for high temperature liquid metal corrosion*
- F. Caretto, project leader at ENEA: *"REVALUE" project: new advanced composite materials for eco-sustainable transports*
- P. Tassini, project leader at ENEA: *KIC EIT RM Network of Infrastructures OPTNEWOPT*
- D. Mirabile Gattia, researcher at ENEA: *Magnesium for hydrogen storage and beyond*

h 14.00 – Session 6 - Strategies and projects of relevant industries and stakeholders

Chair: Dr. Dario Della Sala, ENEA, Head of Division, Rome

Enterprises and relevant organizations are invited to present their R&D activities related to the topics of the workshop, together with the description of their technological and industrial needs and strategies.

- M.L. Ruello, professor at Università Politecnica delle Marche: *The COST Action "CRM-EXTREME"*
- E. Cadoni, professor at SUPSI - University of Applied Sciences of Southern Switzerland: *Mechanical behaviour of materials under extreme conditions of high strain rate and elevated temperature*
- P. Gregori, ProM Facility Director at Trentino Sviluppo: *The ProM Facility at Polo Meccatronica: prototyping activities through additive manufacturing*
- G. Tranell, Professor and Deputy Director of Centre for Research Driven Innovation-Metal Production at NTNU - Norwegian University of Science and Technology: *R&D&E activities at NTNU in the area of metal production and processing for advanced applications*
- I. Yakoumis, CEO of Monolithos Catalysts and Recycling Ltd.: *Prometheus: First commercial copper based automotive catalyst for automotive applications*
- A. Grimaldi, Senior specialist at CVIT-BOSCH: *Common Rail High Pressure Pumps at Robert Bosch*
- M. Ribauda, R.I. S.p.A. on behalf of a SMEs Network (R.I. S.p.A., Reco 3.26, SIC Divisione Elettronica): *Cutting-edge Tech & Innovative Logistics*

h 16.15 – Session 7 - Matchmaking / Networking

Chair: Dr. Michele Penza, ENEA, Head of Lab, Brindisi

This networking session will be aimed to find matches between the workshop participants in order to find new possible collaborations and discuss the development of new joint actions.

h 17.30 – Shuttle back to Brindisi city centre / Brindisi airport

A shuttle service scheduled at different times from about 13.00 to 17.30 will be arranged for participants transfer to Brindisi city center or Brindisi airport.

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