



Advanced materials modelling and characterisation: strategies for integration and interoperability

EuroNanoForum 2021 Satellite Event, 4th May 2021, 14:00 – 17:00 CEST

Organised by the European Materials Modelling Council ([EMMC](#) ASBL) and the European Materials Characterisation Council ([EMCC](#))

Topics:

- Interoperability between materials characterisation and modelling.
- Supporting complex, integrated characterisation and modelling workflows.
- Data traceability for materials throughout multiple lifecycles

Description:

European industrial manufacturing requires the developments of novel, and integrated, characterisation methodologies and computational modelling, especially for establishing in a reproducible and efficient way the process-microstructure-property correlations in advanced materials, allowing design of new and sustainable materials and processes, and rapid upscaling. Increase the efficiency and effectiveness of materials and product development by reducing costs and time for product design and time-to-market, which will enable the transition to a decarbonised economy is the ultimate goal.

Such developments must be based on knowledge transfer facilitated by data documentation standards and the exploitation of open repositories for data exchange that would be accepted as trusted, efficient and reliable for European industrial manufacturing.

To address this challenge [EMMC](#) and [EMCC](#) as well as related projects have been engaged in actions to define a classification and formal documentation of materials modelling and characterisation, the MODA and CHADA, respectively. Furthermore, EMMC has been spearheading the development of an ontology ([EMMO](#)) that serves the applied sciences and in particular materials science including modelling and characterisation.

In this workshop, some current activities regarding interoperability and integration will be presented. In particular, EMMO, MODA and CHADA will be discussed to highlight their usability and utility as a basis for moderated discussions related to the above Topics.

Agenda:

14:00 – 14:25 Welcome and Introduction of participants

14:25 – 14:35 Overview of EMMC and its activities on interoperability, Nadja Adamovic

14:35 – 14:45 Overview of EMCC and its activities on interoperability, Costas Charitidis

14:45 – 15:10 CHADA and the OYSTER CEN Workshop Agreement (CWA), Marco Sebastiani

15:10 – 15:35 Twinned MODA-CHADA case study for electrical characterisation, Malgorzata Celuch

15:35 – 16:00 Modelling and characterisation interoperability facilitated by EMMO, Jesper Friis

16:00 – 17:00 Open discussion session “Characterisation/Modelling integration”, Moderated by Bojan Boskovic and Adham Hashibon



European Materials
Modelling Council

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Characterisation Council



Presenters and Organisers:

- Nadja Adamovic (TU Wien and EMMC President)
- Bojan Boskovic (Cambridge Nanomaterials Technology and EMCC OMB)
- Malgorzata Celuch (QWED and EMMC Focus Area Model Development Co-Chair)
- Costas Charitidis (NTUA and EMCC OMB)
- Gerhard Goldbeck (Goldbeck Consulting and Exec Sec EMMC ASBL)
- Adham Hashibon (Materially GmbH and EMMC Board of Directors)
- Marco Sebastiani (Univ Roma Tre and EMCC Organisational Management Board)

