

NEWSLETTER



2024 – ISSUE 1

Overview

The **NanoMECommons** is a 4-year project, led by the National Technical University of Athens (NTUA). This project is funded by the EU H2020 Research and Innovation action - RIA (Grant Agreement 952869). It has the participation of 19 partners (11 from industry and 8 academia and research), coming from 10 countries. NanoMECommons will establish a transnational and multidisciplinary research and innovation network to tackle the problem of nanomechanical materials characterisation in multiple industries. The focus of NanoMECommons is to employ innovative nano-scale mechanical testing procedures in real industrial environments, by developing harmonised and widely accepted characterisation methods, with reduced measurement discrepancy, and improved interoperability and traceability of data.



PARTNERS



Surface science and nanostructures, Nano-materials (production and properties), Characterization methods of materials, Nanotechnology, nano-materials, nano engineering



A report on the Joint Workshop of the NMBP-35 projects has been published

A report on the recent joint workshop of the NMBP-35 projects (nanoMECommons, Charisma, and EASY-STRESS) has now been published on the Zenodo platform. To read this report, follow [this link](#).

The workshop was held in Madrid on Wednesday 17 January, 2024, and was supported by the European Materials Characterisation Council (EMCC).



Report on NMBP-35 Workshop: "From Research to Industry: How Characterisation and Digitization Change the Game"

Charitidis, Costas¹ · Bañares, Miguel A.² · Poniella, Raquel³ · Konstantopoulos, Georgios¹ · Orfanidis, Savvas¹ · Tsatsoulis, Theodoros⁴ · Sebastiani, Marco⁵ · Zangenberg, Nikolaj⁶ · Capra, Enrico⁷ · Goldbeck, Gerhard⁸ · Simperl, Alexandra⁹ · Ortega Garcia, Yanaris¹

Show authors

The NMBP-35 workshop "From Research to Industry: How Characterisation & Digitization Changed the Game" emphasized the importance of advanced characterization tools and computer modeling for developing next-generation materials, highlighting their role in achieving sustainable and safe manufacturing practices within Industry 4.0 and 5.0. The workshop explored the benefits of combining real-time data with cutting-edge modelling to reduce reliance on experiments and accelerate innovation. Integrating these processes into industrial research and development can lead to reliable materials design, efficient production scale-up, and improved quality control. Additionally, the need for open-access characterization tools and models throughout the material development chain can be achieved through user-driven Open Innovation Test Beds. A collaboration via European initiatives is crucial for fostering progress in materials science and industrial advancements.

CEN Workshop to Revise CWA 17815:2021: "Materials Characterisation - Terminology, Metadata and Classification"

The field of materials characterisation and modelling encompasses a vast array of materials and applications. This has led to numerous communities developing specialized terminologies for their specific needs. While these terminologies are valuable, advancements in advanced materials and nanotechnology require a strong interdisciplinary approach to bridge these communities.

This CEN workshop aims to establish a common language (definitions and vocabulary) for materials characterisation and modelling. The workshop targets professionals in research and development across various industries, particularly those involved in material characterisation and modelling. The resulting CEN Workshop Agreement (CWA) will enhance communication among experts in all areas of materials characterisation and modelling and facilitate exchange between industrial end-users, experimentalists, and computational modellers.

Workshop Details:

Secretariat: UNI, the Italian National Standards Body

Kick-off Meeting: Online, 24 May 2024, 09:30 – 12:30 CEST

To learn more and register, follow [this link](#).



nanoMECommons will be present at the SimulationWorld - May 14-16, 2024

The SimulationWorld is a 3-day online conference organized by Ansys (nanoMECommons partner), where the **AI/ML Track** will explore the incredible innovations driven by AI-accelerated engineering.

Dr David Mercier (Ansys Senior R&D Project Manager) will be giving a presentation titled: **Dataflow Development and ML for Nanoindentation Data Analysis**. For more information on this event, please visit [this link](#).

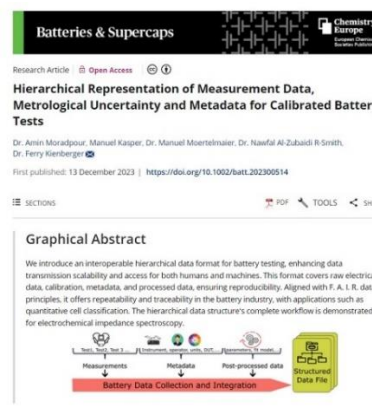


nanoMECommons publication

The partner Keysight, with the support of the nanoMECommons project, has published in the Chemistry Europe (Volume7, Issue3 -March 2024), a paper titled: Hierarchical Representation of Measurement Data, Metrological Uncertainty and Metadata for Calibrated Battery Tests.

The authors of this paper are: Dr. Amin Moradpour, Manuel Kasper, Dr. Manuel Moertelmaier, Dr. Nawfal Al-Zubaidi R-Smith, Dr. Ferry Kienberger.

To read this paper, follow [this link](#).



Project Coordination

Prof. Costas A. Charitidis.

National Technical University of Athens,

9 Heron Polytechniou St., Zographos,

Athens,

Greece GR-157 73

Email: coordinator@NanoMECommons.eu

Dissemination and Exploitation Management

Dr Bojan Boskovic

Cambridge Nanomaterials Technology Ltd

14 Orchard Way

Lower Cambourne

Cambridge CB23 5BN

UK

Email: info@NanoMECommons.eu

www.nanomecommons.eu



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