



#InvestEUresearch

# Horizon 2020 Work Programme for Research & Innovation 2018-2020

EMRS Event  
Warsaw, 19th September 2018

**Workshop:** Europe in Motion-EUMAT Session

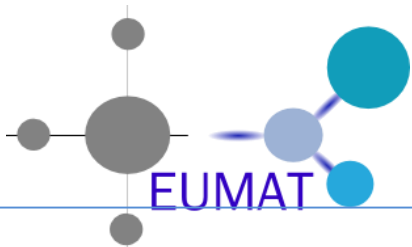
Time: 13:45-16:10

Proponent: Fraunhofer IKTS Dresden on behalf of EMCC OMB

**Proposal title: Harmonisation of materials characterization in Europe**

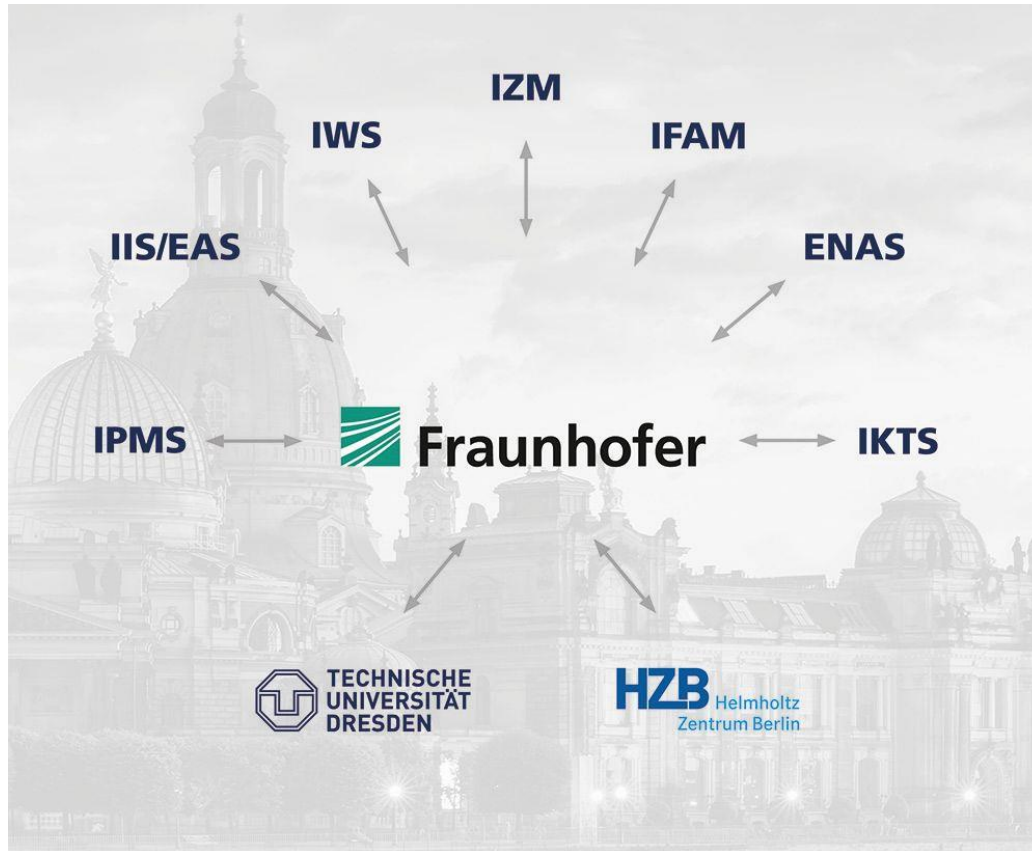
DG Research & Innovation

Research and  
Innovation



# Dresden Fraunhofer Cluster Nanoanalysis

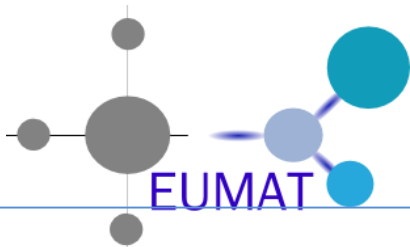
**PARTNER FOR INDUSTRY**



**Nanoanalysis for process and quality control:**

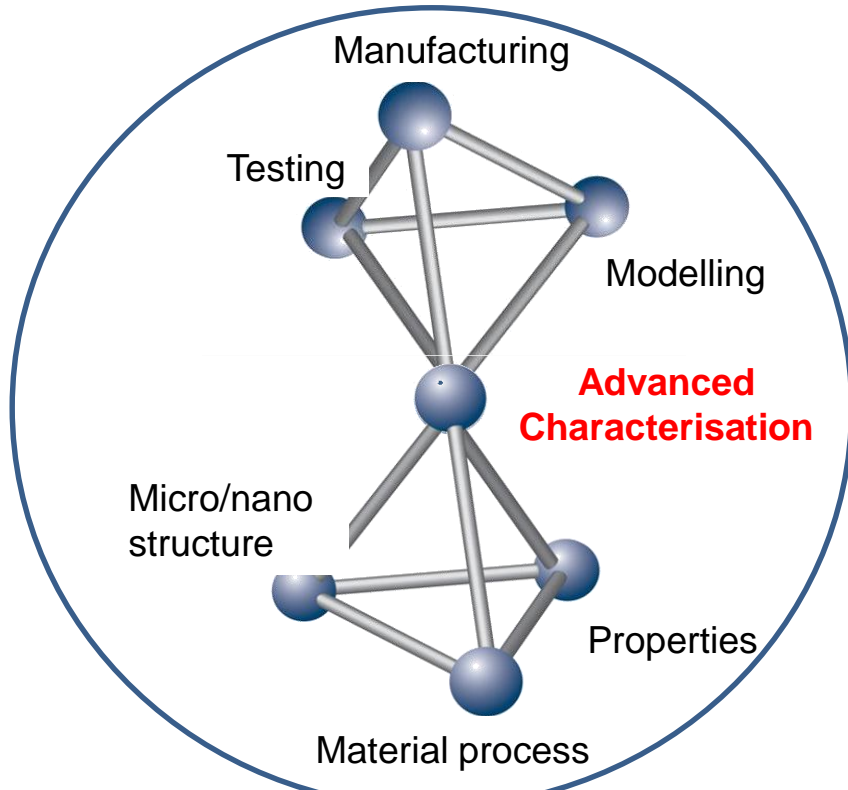
**Saxony's Fraunhofer institutes cluster their competencies in a network to cover a broad spectrum of topics related to nanoanalysis.**

**An internationally visible competence center for nanoanalysis as recognized partner for industry:  
- [www.nanoanalysis.fraunhofer.de](http://www.nanoanalysis.fraunhofer.de)**



# European Materials Characterization Council

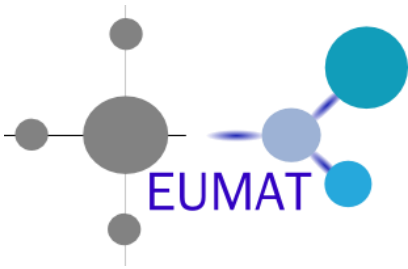
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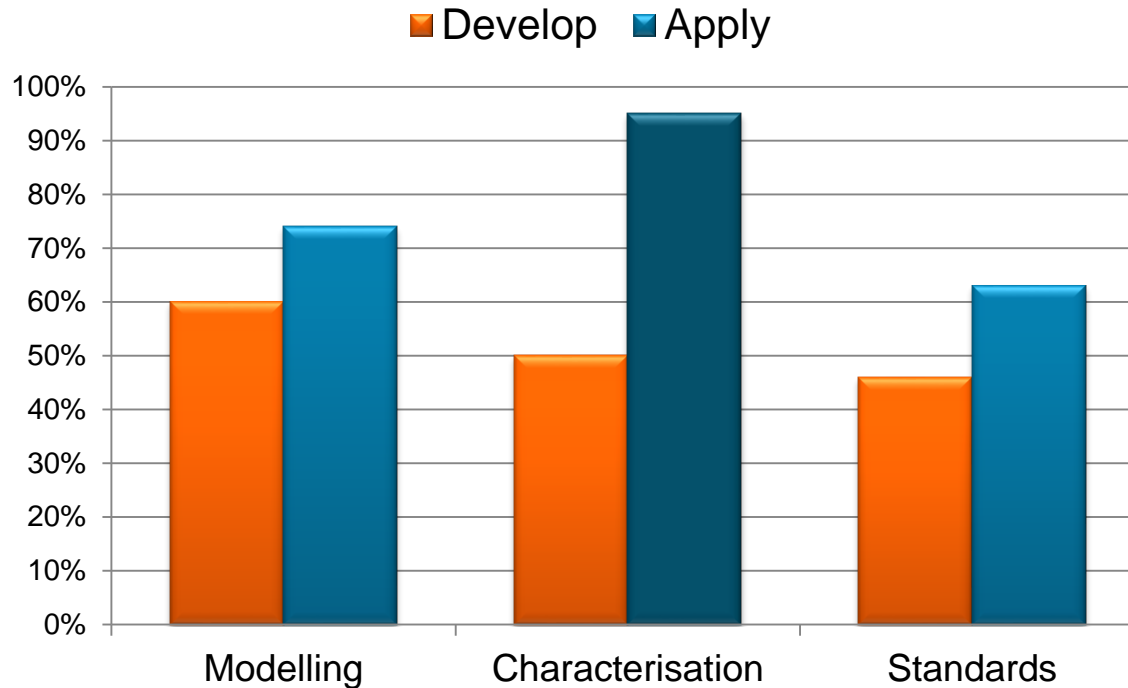
- ✓ The **European Materials Characterisation Council (EMCC)** is a European initiative set up at the beginning of 2016, based on the existing European Materials Characterisation Cluster.
- ✓ The EMCC is a bottom-up activity based on the involvement and support of a wide range of stakeholders.
- ✓ The aim of the EMCC is **to support the process of developing and improving characterisation tools to bring the development of nanomaterials and advanced materials in Europe into end products more successfully.**
- ✓ Coordination between European, national, regional initiatives and Member State support and contribution will be essential to reach full impact of the EMCC.

## Stakeholders

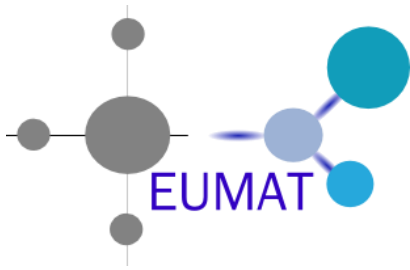
- Materials Scientists covering all types of characterisation expertise,
- Developers and manufactures of analytical instruments (both academic and industry)
- Materials manufacturers and integrators (industrial end-users of characterisation)
  - Standardisation Bodies and Metrology Institutes



# Importance of characterisation

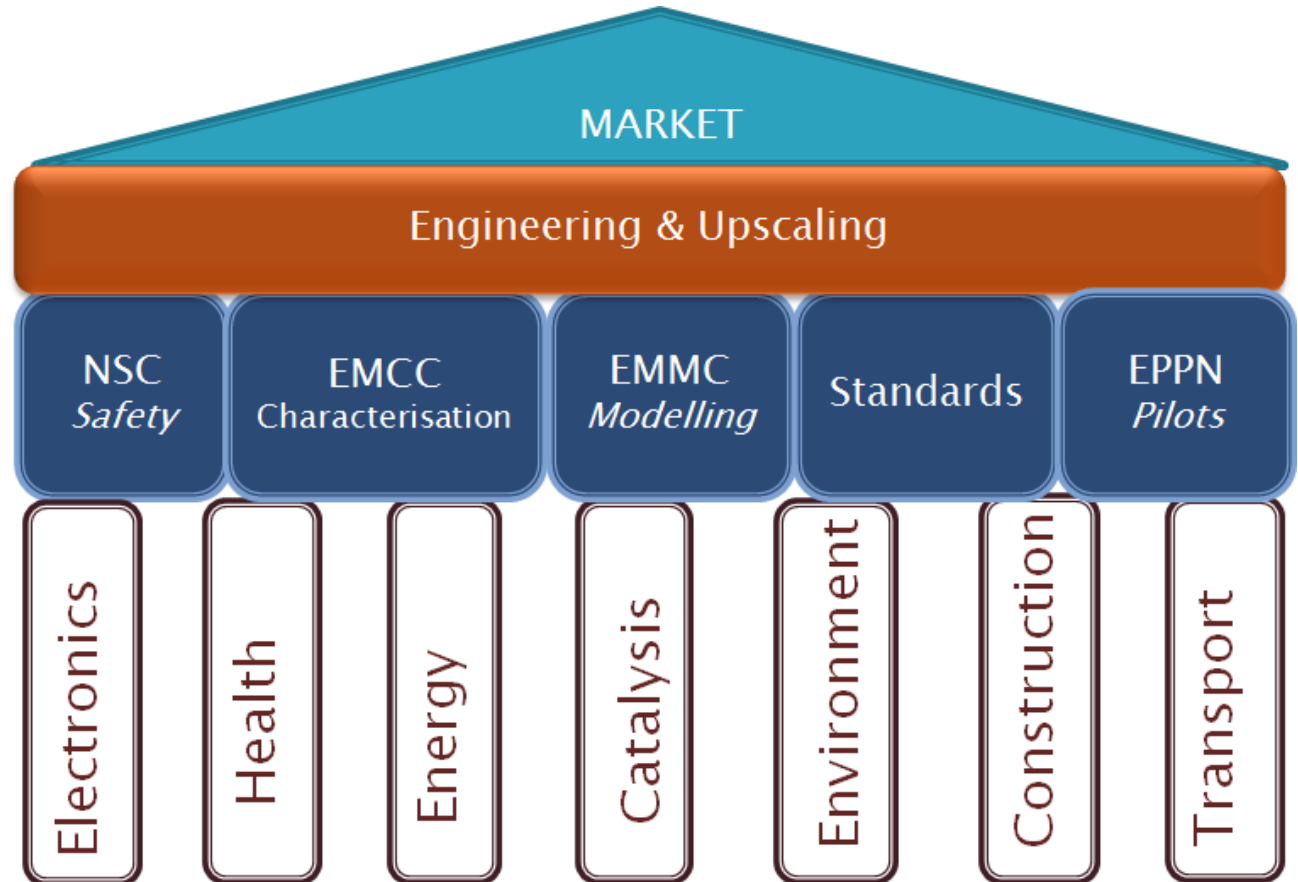


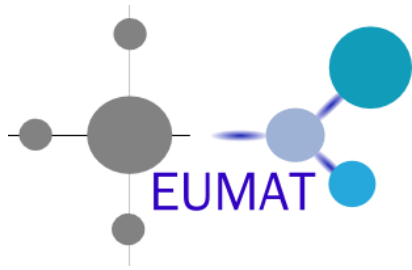
- **Characterisation is the most widely used and most important tool for materials engineering and upscaling.**
- *Source: Characterisation: A central pillar for Engineering and Upscaling, EMCC Report, 2016*



# A strategic initiative

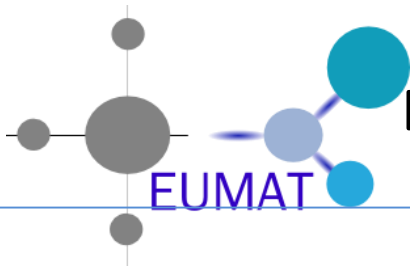
- Cross-cutting
- Adds value to domain activities
- Supports engineering and upscaling of materials towards industrial uptake and market introduction of (new) products.





# Objectives

- ✓ **To support establishing a community of European stakeholders in the process of developing and improving characterisation tools in order to bring the development of nanomaterials and advanced materials in Europe into end products more successfully.**
- ✓ To gather the needs and requirements of that community for characterisation tools and supporting actions.
- ✓ To provide a forum for discussion, problem solving and planning R&I activities in Europe.
- ✓ To establish the formation of standard methodologies on nanocharacterisation in Europe, and create a common background.
- ✓ To create a platform for nanocharacterisation, with the attempt to act with Open Research Data.
- ✓ To link nanometrology with in-situ monitoring and industrial needs.
- ✓ To provide a suitable background for regulation and nanosafety.
- ✓ To support policy development, underpinning the relevant EC priorities, with a stakeholder driven roadmap for characterisation techniques for engineering and upscaling of nano-materials and advanced materials in Europe. This activity is to support the strengthening of Europe's industrial capacity and competitiveness.



# EMCC Roadmap for Materials Characterization

***Authors: EMCC Operational Management Board - B. Boskovic, C. Charitidis, S. Diplas, C. Eberl, G. Goldbeck, S. Kiran, E. Koumoulos, H. Marvin, C. Minelli, M. Sebastiani, F. C. Simeone, T. Syed, A. Taylor, E. Zschech***

EMCC roadmap is available at web page:

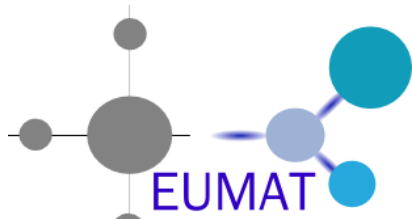
<http://characterisation.eu/index.php/homepage/>

➤ **Four key areas requiring actions**

- Coordination and harmonisation
- Improved access to characterisation capacities and capabilities
- Advancement and valorisation of characterisation tools
- Digitalisation and automation

Criteria:

- Timescale in which the action can be realised (short, i.e. 2-3 years/medium, i.e. 3-5 years/long, i.e. 5-10 years)
- Priority/urgency of the action
- Well established/mature research and innovation agenda
- EU added value
- Economic impact



## EMCC activities and Event 2016 - 2018

- Kick-off meeting, 11 March 2016
- EMCC internal report to EC, March 2016
- Meeting with the EC Task Force „Characterisation“, 18 May 2016
- **EMCC Survey: Development needs for characterisation May/June 2016**
- Survey evaluation and report, June 2016
- EMCC Workshop @ Industrial Technologies, Amsterdam, 24 June 2016

- EMCC Workshop
- @ EuroNanoForum, Valetta, 22 June 2017
- **Publication of EMCC Roadmap for Materials Characterisation**
- Workshop @FRIMACHAT, Limerick, 13 July 2017
- 5th Dresden Nanoanalysis Symposium (DNS), Dresden, 1 September 2017
- Materials 4.0 Symposium @Werkstoffwoche, Dresden, 27 - 29 September 2017

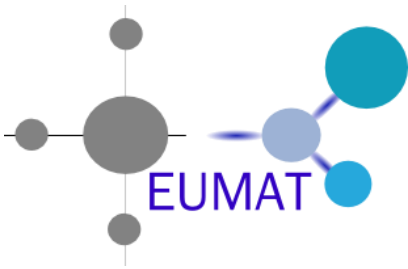
Review of Materials Characterisation in H2020 projects following RoMM template

EMCC Stakeholders Workshop, Brussel, 11 June 2018

6th Dresden Nanoanalysis Symposium, Dresden, 31 August 2018

EMCC Workshop@ Industrial Technologies, Vienna, 29 October 2018



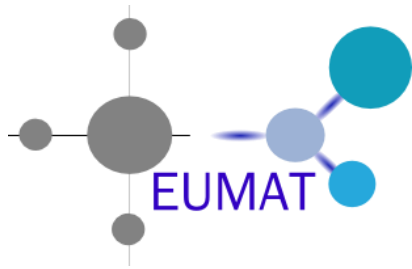


## Collaboration with other European initiatives

The EMCC has/seeks **close interactions with other Clusters/Councils/Networks**, in particular:

- ✓ the [European Materials Modelling Council \(EMMC\)](#)
- ✓ The European Pilot production network (EPPN), the Nanosafety Cluster (NSC)
- ✓ the [EuMaT – European Technology Platform for Advanced Engineering Materials and Technologies](#)
- ✓ the [Research Data Alliance \(RDA\)](#)
- ✓ the [Nanofutures initiative](#).

There is a strong link to the [Alliance for Materials \(A4M\)](#) as well as to the [European Materials Research Society \(EMRS\)](#) and the [Federation of European Materials Societies \(FEMS\)](#).



## Contact details

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**on behalf of:**

**European Materials Characterisation Council (EMCC)**

**- Operational Management Board (OMB) -**

**[www.characterisation.com](http://www.characterisation.com)**