NANOEMCA First Training Module Connects Materials Research with Open Science and Career Development



From 26 to 30 October 2026, NANOEMCA held its first online training module, bringing together 74 participants from eight countries for a programme on periodic mesoporous organosilica (PMO) materials, responsible publishing and professional development.

Delivered by the NANOEMCA consortium via Microsoft Teams, the course welcomed students, doctoral candidates, postdoctoral researchers, engineers and academic staff from Romania, Spain, France, Türkiye, Colombia, Estonia, Malaysia and Italy. Its international and intersectoral format created opportunities to connect academic research with expertise from research institutes and companies.

Following the welcome and introduction by Claudia Simonescu, Florina Dumitru opened the scientific programme with a session on the synthesis, characterization and applications of Schiff base functionalized PMOs. Pierre Florian introduced solid-state NMR, while Floriana Tuna explored electron paramagnetic resonance and magnetic concepts relevant to metal oxide nanoparticles.

Complementary analytical approaches were presented by Ahmed Malek Djaballah, who covered UV-Vis, FTIR and XPS spectroscopy, and Bogdan Vasile, whose session addressed electron microscopy, from sample preparation to data interpretation. Together, these topics connected material design with the investigation of chemical structure, surface composition, magnetic behaviour and morphology.

The module forms part of Task T2.3 within WP2, Synthesis and characterization of PMOs precursors, led by POLITEHNICA Bucharest and managed by Florina Dumitru.

Its scientific content supports the knowledge needed for precursor synthesis and characterization under Task T2.1 and metal complex research under Task T2.2. By introducing complementary methods and a shared

scientific vocabulary, the course also supports knowledge exchange associated with secondments and the transfer of expertise to participants' home institutions.

The programme extended beyond scientific methods to address how research is communicated, shared and developed into future opportunities. Filomena Silva discussed good practice in authorship and dissemination, while Eugenia Eftimie Totu presented open science approaches linking research data management with open access publication.

Alan Whiteside concluded the module with a session on career planning, professional progression, networking and intellectual property protection. These themes complemented the technical programme by connecting research practice with collaboration and career development.

The first training module represents a step in NANOEMCA's programme of researcher development, supporting the skills and partnerships needed to advance PMO-based materials for environmental, medical and catalytic applications.