

Workshop

Materials characterization and software tools as key enablers in NMBP-35 projects: Towards industrial transition and wider acceptance of new methods and products

Agenda

DRAFT V2.0

Date: 24 November 2022. Athens

Time: 09.30 - 16.00 (Athens's time)

Venue: NTUA. Heroon Polytechniou 9 str.,
15780 Zografou Campus,

Athens, Greece

(Hybrid format)

[Click here to join the meeting](#) (MS Teams)



Venue info



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Workshop

The Workshop: *Materials characterization and software tools as key enablers in NMBP-35 projects: Towards industrial transition and wider acceptance of new methods and products*, is being organised by nanoMECommons together with NMBP-35 projects: CHARISMA and EASI-STRESS.

It aims to proclaim knowledge and share new ideas amongst academic scientists, researchers, engineers and other stakeholders from research area of nanotechnology, modelling, and (nano-) characterization. Another goal is to gain deep insights in the work performed in other characterization NMBP projects and testbeds and establish synergies under the umbrella of EMCC. The outcomes of the Workshop will be used for an Open Consultation Process, by identifying the community needs in accordance with EC directives and EMCC objectives.

More information about the workshop, including agenda, registration, venue and travel information is on: www.nanomecommons.eu/events

Agenda Workshop:

- **Remote Connection - main event:** [Click here to join the meeting](#) (8.30 – 15:00 CET, MS Teams)

Event moderators:

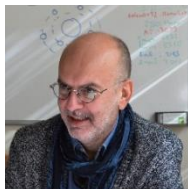
Bojan Boskovic (NanoMECommons, in person)

Afroditi Ntziouni (CHARISMA, remote participants)

Time	Duration	Chairperson	Topic
09:30	0:10	Costas Charitidis (NanoMECommons) Bojan Boskovic (NanoMECommons) Yanaris García (EC)	Welcoming – Introductory words from the host, the event moderator and the NMBP-35 Project Officer
09:40	0:20	Miguel A. Bañares (CHARISMA)	Common achievements of NMBP-35 projects so far and impact beyond the projects.
10:00	1:00	Raquel Portela (CHARISMA)	Session #1: Characterization/Standardization <ul style="list-style-type: none"> • NFDI4Chem. Standardisation of data schema in spectroscopy. Dr. Steffen Neumann (Leibniz Institute of Plant Biochemistry) (15 min) • Open discussion (30 min). Iván Moya (UNE), Spyros Diplas (EMCC), Enrique Lozano (ELODIZ), Nikolaj Zangenberg (DTI). • Q&A (15 min)
11:00	0:15	Coffee break	
11:15	1:00	Ennio Capria (EASI-STRESS)	Session #2: Suites of multi-scale/AI modelling and characterisation tools, and data exchange procedures

			<ul style="list-style-type: none"> • Amphyon/Oqton, Software for modelling material behavior, Tommaso Tamarozzi, (15 min) • Open discussion (30 min). Bastian Barton (Schott), Donna Dykeman (Ansys), EMMC, Nina Jeliaskova (IDEA), Dejan Škrelić (CNRS), Ekaterina Burov (Saint Gobain), Natalia Konchakova / Ilian Todorov (OA chairs of EMMC) • Q&A (15 min)
12:15	0:15	Coffee break	
12:30	1:00	Elias Koumoulos (NanoMECommons)	<p>Session #3: Materials 2030 Roadmap. Characterization and modelling as horizontal enablers</p> <ul style="list-style-type: none"> • AMI, Materials 2030 Roadmap. Marco Falzetti (EUMAT) (15 min). • Open discussion (30 min). Giovanni Masotti (Elen), Marco Falzetti (EUMAT), Gerhard Goldbeck (GCL), Philippe Jacques (EMIRI), Silvia Giovanna Avataneo (Stellantis). • Q&A (15 min)
13:30	1:00	Lunch	
14:30	0:15	Jana Drbohlavova (EC)	Short keynote by EC
14:45	1:15	Costas Charitidis (EMCC, NanoMECommons)	<p>Session #4: European Materials Characterization Council</p> <ul style="list-style-type: none"> • Presentation of EMCC WGs and hot topics/actions (Marco Sebastiani) (20 min) • Presentation: <i>Exploiting the synergies between Research Infrastructures and Open Innovation Test Beds to accelerate industrial innovation and the actuation of the EMCC roadmap</i> - Ennio Capria (10 min) • Roundtable of the NMBP-35 projects; the challenges of characterisation, lessons learnt, next directions (45 min)
16:00		End of the workshop	

Speakers, Moderators & Panellists - Workshop



Prof. Costas A. Charitidis
School of Chemical Engineering NTUA
Department of Materials Science and Engineering
National Technical University of Athens,
Greece

Prof. Constantinos Charitidis is Professor in the School of Chemical Engineering of the National Technical University of Athens and Director of the Laboratory of Advanced, Composite, Nano Materials & Nanotechnology. He is member of the General Assembly of the Hellenic Foundation for Research and Innovation and since 2018 President of the Body. He has been elected in the Deanship of the School of Chemical Engineering of NTUA since 2017. From 2010 to 2016 he has been Director of Section III: Materials Science & Engineering of the School, while from 2011 he is Director of the Interdisciplinary Postgraduate (MSc) Program: Materials Science & Technology (NTUA). He has more than 25 years of experience in the fields of Materials Science & Nanotechnology, Carbon-based materials and Safety impacts of Nanotechnology. He has extensive R&D experience through collaborations with international research centers since he has participated in more than 60 European and National funded projects, in many of them as Scientific Coordinator (most recent are: Nanotechnologies, Advanced Materials, Advanced Manufacturing and Processing, Resource Efficient Economy with a Sustainable Supply of Raw Materials NMP FP7, Horizon 2020). He is a referee in International scientific journals, evaluator & scientific advisor of R&D projects. He is the author of several scientific books, chapters in international text books and more than 240 scientific publications in peer reviewed international journals and conference proceedings and cited ~3700 by other researchers (h-index 33). He has been supervisor of 15 PhD Theses and member of the examining committee of more than 50 PhD theses.



Dr Yanaris Ortega-García -
European Commission
Brussels

Dr Yanaris Ortega-García is a Policy and Project Officer at Materials for Tomorrow at the European Commission. She completed her Physical Chemistry PhD from University of Seville in 2012. She has been working for more than 2 years for European Commission and prior to her role at the Commission, she had been working on the field of fuel cells and hydrogen production.



Dr Bojan Boskovic
CEO,
Cambridge Nanomaterials Technology
14 Orchard Way
Lower Cambourne
Cambridge CB23 5BN - UK

Dr Bojan Boskovic is the Founder, Managing Director, and Principal Consultant of the company. He has more than 20 years of hands-on experience with carbon nanomaterials and composites from

industry and academia in the UK and Europe. Previously, he worked as a R&D Manager at Nanocyl, one of leading carbon nanotube manufacturing companies in Europe. He also worked on carbon nanotube synthesis and applications as a Principal Engineer-Carbon Scientist at Meggitt Aircraft Braking Systems, as a Research Associate at the University of Cambridge, and as a Senior Specialist at Morgan Advanced Materials. During his PhD studies at the University of Surrey he invented low temperature synthesis method for production of carbon nanomaterials that has been used as a foundation patent for the start-up company Surrey Nanosystems. He was a member of the Steering and Review Group for the Mini-IGT in Nanotechnology that advised the UK Government on the first nanotechnology strategy policy document. Dr Boskovic was working as an advisor for the European Commission (EC) on Engineering and Upscaling Clustering and on setting up of the European Pilot Production Network (EPPN) and European Materials Characterisation Cluster (EMCC). He has experience in exploitation and dissemination management on a number of FP7 and H2020 European projects, including UltraWire, NanoLeap, OYSTER, M3DLoC, Genesis and nTRACK. Also in UK Government InnovateUK funded projects, such as UltraMAT and GRAPHOSITE He is also a leader of two private membership based consortiums: Nano-Carbon Enhanced Materials (NCEM) and Advanced Materials for Additive Manufacturing (AMAM).



Dr Miguel Bañares
Full Research Professor
CSIC-ICP
c/ Marie Curie, nº 2
E-28049, Cantoblanco,
Madrid (Spain)

Dr Miguel A. Bañares is Research Professor, Editor-in-Chief, Catalysis Today (Elsevier, Impact Factor 5.825) and co-Editor of Springer Handbook of Advanced Catalyst Characterization. Obtained his PhD in 1992 (University of Salamanca, 1992). He was Chairman, Management Committee of COST Action D36 (ESF), 2006-2011 and is Vice-Chairman, Management Committee of COST Action TD1404 MODENA (ESF). Doctor Honoris Causa, Université de Caen Normandie, France in 2017

Bañares catalysis research focuses on understanding catalysis by combining in situ and operando analyses with computational description of the structure, spectra and reactivity of the catalysts. He applies his catalysis research to understand the reactive basis of nanoparticle toxicity He is active on Raman spectroscopy real-time reaction monitoring of reactions and functional materials state at work. Bañares is co-author of >225 papers, with an h index 47, with more than 48 plenary/keynote lectures.



Dr. Raquel Portela
Tenured scientist
CSIC-ICP
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E-28049, Cantoblanco,
Madrid (Spain)

Dr. Raquel Portela has a PhD in Chemical, Environmental and Process Engineering (USC, 2008). She is working at the CSIC, Instituto de Catálisis y Petroleoquímica (ICP), Madrid, Spain, as tenured scientist since 2000. Her current research lines are related with the use of operando spectroscopy to better understand catalysis and nanomaterials, and with the development of functional cellular ceramics for process optimization and intensification. She has more than 15-year experience in air pollution control by (photo)catalysis and adsorption, and in catalytic reactions of industrial interest. She is co-coordinator

of CHARISMA project on Raman harmonisation and participant in several European and national projects.



Dr. Steffen Neumann
Head of Bioinformatics and Mass Spectrometry
Leibniz Institute of Plant Biochemistry
Weinberg 3
06120 Halle (Saale)
Germany

Dr. Steffen Neumann is Head of Bioinformatics and Mass Spectrometry at Leibniz Institute of Plant Biochemistry. Where his group is focusing on the development of tools and databases for metabolomics and computational mass spectrometry.



Mr Iván Moya Alcón
Programme Manager
Spanish Association for Standardisation-UNE
C/ Génova, 6. 28004
Madrid

Mr Iván Moya Alcón has a degree in Chemistry and a master's degree in Advanced Studies. Since 2008, he is the Programme Manager at UNE, the Spanish Association for Standardisation, monitoring, coordinating and promoting the development of standards at national and international levels and supporting the integration and implementation of standardisation activities in EU funded projects (Horizon 2020, Horizon Europe, Life+ and so forth).



Dr. Eng. Marco Sebastiani
Assistant Professor
University of Roma Tre
Materials Science and Technology
Via della Vasca Navale, 79 - 00144
Rome, Italy

Dr Marco Sebastiani is currently a recognised scientist in the fields of surface engineering, thin film synthesis, nanoscale mechanical characterisation, residual stress assessment at the nano-scale.

In the last ten years, the PI was awarded with a Fulbright Scholarship, have already coordinated three large European projects (Horizon Europe, H2020 and FP7) and a large national project (PRIN2020). He has pioneered a novel method to measure residual stress at small scales (namely, the FIB-DIC micro-ring core), as well as an original methodology to measure fracture toughness at the micro-scale (namely, the pillar splitting method).



Dr Enrique Lozano Diz
Founder and Managing Director
ELODIZ Ltd.
Unit 29, Riverside Business Centre
Victoria Street, High Wycombe
Buckinghamshire, HP11 2LT
UK

Having worked in the analytical devices industry since 2007, **Dr Enrique Lozano** has gained significant commercial and technical experience via several customer-facing engineering and management roles which, together with extensive scientific knowledge, led him to pursue his ambition of creating ELODIZ Ltd. His life, career and studies have spanned 2 continents. Today, Enrique maintains a strong strategic direction and commitment to his business and its employees. Investing time in technological innovations, he continuously looks for ways to improve our products and services so they exceed customer satisfaction and enhance their experience.

Enrique has a major in Chemistry from Seville University, a PhD from University of Neuchatel and is also a significant contributor on the EU-funded consortium CHARISMA project.



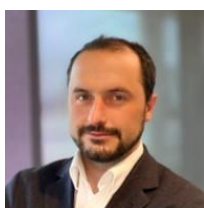
Dr Nikolaj Zangenberg
Director;
Danish Technological Institute
Denmark

Dr Nikolaj Zangenberg holds a PhD in physics and materials science and have worked in both academia and industry. At the Danish Technological Institute, he has previously been responsible for an accredited materials testing lab under ISO 17025. His current focus is on enabling stronger engagement between companies and synchrotron and neutron facilities. He is coordinator for the EU project EASI-STRESS which aims at standardizing residual stress analysis using neutral and synchrotron facilities for non-destructive diffraction measurements. As part of that work, he is the CEN convener for Working Group 10 under Technical Committee 138 (non-destructive testing).



Dr Ennio Tito Capria
European Synchrotron (ESRF),
France

Dr Ennio Tito Capria is the Deputy Head of Business Development at the ESRF. In his research career he worked on the development of electrochemical nanobiosensors, nanocomposites and optoelectronic devices and particularly their characterisation with synchrotron light. At the ESRF, he is coordinating the participation of the ESRF in various collaborative initiative with industry, in particular on energy storage applications, additive manufacturing methods and nano-sciences. Since 2020 Ennio is Director of the Characterisation programme of the Technological Research Institute Nanoelec.



Dr Tommaso Tamarozzi
Director Strategic Business Development
OQTON
Belgium

Dr Tommaso Tamarozzi PhD, is a mechanical engineer by education with several years of experience in the creation and development of innovation teams.

He obtained a PhD at KU Leuven in mechanical engineering and cooperated with several industries and Universities. Among them: Ferrari Gestione Sportiva, BMW, Hyundai Motor Company, Schaeffler, Fiat, LMS International, etc. He recently joined OQTON as Head of Simulation and Product Manager for Additive Inspection. Until June 2022 he worked for 8 years for Siemens Digital Industries where he managed a team of researchers and developers in the field of computational methods for engineering. On top of technical duties, he is experienced in applying for funding and grants, engaging with early adopters and managing a multicultural team. He loves to spend time to research on computational methods, testing procedures and finding innovative ideas for user interfacing.



Dr Bastian Barton
Assistant Scientist
SCHOTT
Mainz, Rhineland-Palatinate,
Germany

Dr Bastian Barton is a Physicist, focused on analytical development and Raman spectroscopy. Develops machine learning models in Python for characterization of (nano) materials. He has a PhD from Heidelberg University.



Dr Donna Dykeman
R&D Manager, Collaborative R&D
Ansys UK
97 Jubilee Avenue,
Milton Park, Abingdon,
England, OX14 4RW

Dr Donna Dykeman is the R&D Manager for the Collaborative R&D Team at the Materials Business Unit, Cambridge UK, Ansys UK, and has worked in the area of materials information management for ten years. Prior to joining Ansys, Donna performed research in materials and process characterization related to polymers and composites manufacturing. She has a BSc and MSc in Mechanical Engineering and PhD in Materials Engineering.



Dr Nina JELIAZKOVA
IDEAconsult Ltd.
Sofia,
Bulgaria

Nina JELIAZKOVA received a M.Sc. in Computer Science from the Institute for Fine Mechanics and Optics, St. Petersburg, Russia in 1991, followed by a PhD in Computer Science (thesis "Novel computer methods for molecular modelling") in 2001 in Sofia, Bulgaria, and a PostDoc at the Central Product Safety department, Procter & Gamble, Brussels, Belgium (2002 - 2003) Her professional career started as a software developer first at the oil refinery Neftochim at Burgas, Bulgaria (1991 - 1995), then at the Laboratory for Mathematical Chemistry, Burgas, Bulgaria (1996 - 2001). She joined the Bulgarian Academy of Sciences at 1996 as a researcher and network engineer at the Network Operating Centre of the Bulgarian National Research and Education Network. She is founder and co-owner of Ideaconsult

Ltd and is technical manager of the company since 2009. She participated in a number of R&D projects in Belgium and Bulgaria, authored and co-authored about 40 scientific papers in Bulgarian and international textbooks, as well as several book chapters. Nina received the Blue Obelisk Award in 2010 for achievements in promoting Open Data, Open Source and Open Standards.



Dejan ŠKRELIĆ
Scientific Instrumentation Engineer
CNRS
France

For the past 5 years **Dejan Škrelić** has been working on characterization of nanostructured glasses and thin films @SVI (CNRS / Saint-Gobain joint research lab).

His area of expertise includes in the first place Raman Spectroscopy, and also Atomic Force Microscopy and X-Ray Tomography. In parallel, he develops tools and semi-automated Machine learning workflows in Python, in domains of Chemometrics, Multispectral Image Processing and (3D) Image Analysis. His previous experiences are in scientific instruments development. He holds an MD in Nanomaterials and a BSc in Physics.



Dr Ekaterina Burov
Research Engineer
Saint Gobain Research Paris
Laboratory Surface du Verre et Interfaces (SVI)
UMR125 CNRS — Saint-Gobain
France

Dr Ekaterina Burov is an expert in physics and physico-chemistry of inorganic materials and their characterization with a multidisciplinary training. She has more than 13 years of professional experience in the field of R&D and management of research projects (industrial and academic):

- Head of the glass development project for optical fiber amplifiers and sensors
- Head of the optical characterization pole
- Head of the "Materials Expertise" group

The results of her scientific work have been the subject of several publications in peer-reviewed journals (25), patents (20) and presentations at national and international conferences.



Dr. Natalia Konchakova
Senior Scientist
Helmholtz-Zentrum Hereon
Germany

Dr. Natalia Konchakova is a senior scientist at Helmholtz-Zentrum Hereon, Germany. She works in the fields of materials modelling, simulation and characterization of lightweight metals, computation analysis of mechanically induced corrosion, and investigation of Magnesium based materials for bio- and structural industrial applications. Knowledge and technology transfer for industrial end-users through digitalization, materials modeling translation and co-development using open innovation environment are in the fields of scientific interests of Dr. Konchakova.

Natalia is an active member of the European Materials Modelling Council (EMMC). She is the Chair of the EMMC Organizational Assembly.

Dr. Konchakova is the coordinator of the H2020 European project VIPCOAT: 'Virtual Open Innovation Platform for Active Protective Coatings Guided by Modelling and Optimization' (DT-NMBP-11-2020, GA 952903) (<https://ms.hereon.de/vipcoat/>). The aim of the project is to assist engineers in coating manufacturing in developing novel environmentally friendly active protective coatings and to advice accelerated test scenarios for their durability based on standardized simulation workflows.



Dr. Ilian Todorov
Principal Scientific Officer
Science and Technology Facilities Council
UK

Ilian Todorov is principal scientific officer at the Science and Technology Facilities Council (UK) where he leads the Computational Chemistry group, based at Daresbury Laboratory.

After completing his PhD in 2001, Ilian Todorov took the opportunity to join the eMinerals project, led by Prof. Martin Dove at University of Cambridge, as a research assistant and application developer. He was seconded at Daresbury Laboratory where he worked closely with Prof. William Smith on the software development and application of DL_POLY, prior to becoming one of the principal authors of DL_POLY. Ilian Todorov worked on various aspects of HPC technologies related to scalable performance and numerical stability of algorithms for molecular dynamics as well as software interoperability via CML (DL_POLY and SIESTA). Active as Research Software Engineer, he also carried out modelling research with Kostya Trachenko in the area of characterisation of damage in ceramics, glasses and metals subjected to irradiation. Ilian Todorov was actively involved in materials communities such as MCC and CCP5 by contributing talks and associated computational training. In 2007 Ilian Todorov joined Daresbury Laboratory as an HPC expert at Advanced Research Computing group, later joining the Computational Chemistry group in 2010 and then taking the group lead in 2014. In 2017 Ilian Todorov took his Visiting Professor title at Queen Mary University of London in 2017, based on the joint research with his collaborator, Prof. Kostya Trachenko. Ilian Todorov is the author of about 80 scientific publications.



Dr. Elias P. Koumoulos
IRES
Belgium

Dr. Elias P. Koumoulos holds a BSc in Chemical Engineering, followed by MSc in Materials Science and Technology and PhD in nanomechanics. To date, he has the authorship of over 70 published papers in ISI journals, 6 book chapters, 90 participations in national/international conferences, and has been thrice awarded for published research work in national and international level. Being occupied in EC and national funded projects, his interests include nanomaterials, nanomechanical properties of materials (metals, alloys, polymers, ceramics, functionally graded materials for brakes, thruster and valve applications, thin films, elastomers, packaging polymers), polymers (processing of plastics, forming, casting, films, biopolymers, petroleum products, environmental friendly processes), R&D, quality control, production process and design.



Marco Falzetti

President

EuMaT - European Technology Platform on Advanced Materials

Director

APRE (Agency for the Promotion of European Research)

Marco Falzetti has a Master of Science in Aeronautical Engineering at Università degli Studi di Roma La Sapienza. He starts his professional research activity on 1990 at CSM where acts as researcher, focusing on the application of Artificial Intelligence techniques in process modelling and control problems. Coordinators and responsible of numerous European Projects in the area of Iron and steelmaking, acts as Italian representative in various European Committees.

In the period 1999-2003, works as National Detached Expert at the Research Directorate General of the European Commission in Brussels. In the material unit of the Directorate G, acts as scientific officer for the ECSC Steel Research programme and 5th Framework programme.

In the period 2003-2015 works in CSM as Manager of EU Research Affairs, where acts as manager of European programmes and international developments for Advanced Material in Centro Sviluppo Materiali and is responsible for EU R&D&I relationships and policies.

From 1st January 2016 he is Director of APRE – Agency for the Promotion of European Research. He has launched the Alliance for Materials initiative (A4M), supported by the EU Commission, and he is acting as chairman of the Management Board of A4M. Chairman of EuMaT (The European Technology Platform on Advanced Engineering Materials and Technologies), member of many advisory boards and steering committees of different EU projects and initiatives. He is also member of the European Commission Advisory Group for the NMP-B part of H2020 programme.



Dr Giovanni Masotti

V.P. Laser Systems

EI.En. S.p.A.

Italy

Dr Giovanni Masotti is an experienced Vice President System with a demonstrated history of working in the electrical and electronic manufacturing industry. He is a strong information technology professional skilled in Medical Devices, Engineering, Sales Management, Manufacturing, and Biomedical Engineering.



Dr Gerhard Goldbeck

Goldbeck Consulting Ltd

UK

Dr Gerhard Goldbeck is Executive Director of Goldbeck Consulting Ltd. He holds a Diplom in Physics from RWTH Aachen University and a PhD in Polymer Physics from Bristol University. His career encompassed research in solid state physics and polymer materials at Jülich, Bristol and Cambridge by means of a range of modelling and characterisation techniques, as well as software development, product management and marketing of materials modelling software at Molecular

Simulations/Accelrys/Biovia. In 2011 he formed Goldbeck Consulting Ltd with the aim to bridge gap in the materials modelling value chain from science to engineering and academia to industry.

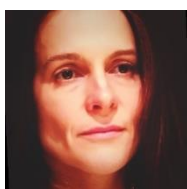
He is a member of the Management Board of the European Materials Characterisation Council and Executive Secretary of the European Materials Modelling Council.



Philippe Jacques
Managing Director
EMIRI
Belgium

Chemical Engineer graduated from the University of Louvain-la-Neuve, Belgium, **Philippe JACQUES** joined Solvay in 1988 in Brussels, Belgium, and moved to various Intellectual Property, R&D management and senior leadership roles. Since October 2018, he is part-time seconded as Managing Director of the Energy Materials Industrial Research Initiative (EMIRI) Association based in Brussels, to address the innovation-related challenges ahead of the industry of advanced materials for clean and sustainable energy & mobility. Since end 2019, Philippe JACQUES is also acting as Secretary-General of BEPA, the Battery European Partnership Association.

EMIRI represents about 60 organisations (industry, research, and associations) active in advanced materials for clean energy & clean mobility technologies. The association contributes to industrial leadership of developers, producers, and users of advanced materials for clean energy & clean mobility by shaping an appropriate innovation, manufacturing / industrial and energy policy framework at the European level.



Silvia Giovanna Avataneo
Project Manager
CRF
Italy

Silvia Giovanna Avataneo currently works as project manager in Group Materials Lab at Fiat Research Center. She oversees some EU and National Collaborative Research Projects, encompassing circular economy, materials recycling, critical raw materials.

From 2010 to 2018 she worked at CRF as Senior Environmental Specialist, managing GML sustainability topics and contributing to FCA Sustainability Report, on circular economy. She has been in charge of managing EMEA US Dodd-Frank Act conflict minerals compliance and critical raw materials applications on automotive sector, especially for monitoring of materials and substances applications on vehicles and components. From 2000 to 2010 she worked at Fiat Material Laboratories, focusing on end-of-life vehicles treatment, heavy metals ban, materials recycling, and recovery technologies.



Dr. Jana Drbohlavová
Seconded National Expert
European Commission, DG RTD
Brussels

Dr Jana Drbohlavová PhD graduated at Université Claude Bernard Lyon 1 and at Faculty of Chemistry, Brno University of Technology in 2008. She is Seconded National Expert at the European Commission, DG RTD.



Dr Spyridon Diplas
Research Manager
SINTEF
Oslo, Norway

Dr Spyridon Diplas has been employed at SINTEF since 2007, as a Research Manager since 2011 and Associate Professor II at the University of Oslo, Dept. of Chemistry since 2008. He has studied metallurgy & materials science at the National Technical University of Athens, University of Manchester, and University of Surrey. He has > 25 years research, teaching, and management experience in 3 countries within metal & alloy processing, energy materials, bulk and surface characterisation, and testing. Has >120 publications (h-index 26).



Dr. Afroditi Ntziouni
NTUA
Greece

Dr Afroditi Ntziouni received her degree in Chemical Engineering from NTUA and pursued a PhD in NTUA (2017). She has participated in several National and European funded projects in Carbon-based materials and Zeolite Synthesis. Through her participation, she acquired significant expertise in Material Science.

Projects Organisers

NanoMECommons



Web: www.nanomecommons.eu

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.

CHARISMA



Web: www.h2020charisma.eu

The new EU-funded CHARISMA Project (Characterisation and HARmonisation for Industrial Standardisation of Advanced MAterials) is set to harmonise Raman Spectroscopy for characterisation across the life cycle of a material, from product design and manufacture to lifetime performance and end-of-life stage.

The project will demonstrate the feasibility of its concept in three industry cases. In the long term, it aims to make Raman spectroscopy a widespread technology used within the Industry Commons concept.

EASI-STRESS



Web: www.easi-stress.eu

The EASI-STRESS project has the overall aim to strengthen industrial access and uptake of non-destructive synchrotron x-ray and neutron diffraction-based residual stress characterization tools by validation against accepted destructive techniques and development of protocols, in close collaboration with industry.

This will enable a better understanding of the formation and progression of residual stresses by direct comparison with and incorporation of the measured data into modelling tools. Incorporating this knowledge into the design process and lifetime assessment of metallic components will give more reliable products with increased lifetime and reduced material usage.

Currently, conservative worst-case-scenario safety factors, e.g. as defined by EUROCODE, are used when designing metallic components exposed to cyclic loads. In knowing the actual internal stress levels, the safety factors can be reduced, resulting in an estimated material cost saving of around 15 %.

The total value of metallic structures across the industrial sectors represented by the partners is estimated as having a production value of more than EUR 100 billion per year. Other industrial benefits include increased lifetime and reduced time-to-market.