

Session Program

13-17 Sept 2021

**EUROPEAN CONGRESS AND EXHIBITION ON
ADVANCED MATERIALS AND PROCESSES -
EUROMAT 2021**

***D2_Characterization of 1D, 2D materials,
ceramics and their composites***

Virtual

Monday 13 September

11:00

D2_Characterization of 1D, 2D materials, ceramics and their composites: D2_1_Control, design and characterization of advanced ceramics

Session | Location: Room 11

11:00-11:40

Measuring the shear strength of joined ceramics (Keynote)

Speaker

Monica Ferraris

11:40-12:00

Structural, Mechanical and Tribological Properties of Layered Ceramic/Graphene Thick Coatings

Speaker

Prof. Csaba Balazsi

12:00-12:20

Unexpected law for grain growth in twinned boron carbide ceramics fabricated under electric field

Speaker

Prof. Diego Gomez-Garcia

12:20-12:40

Characterization of thermal microcracking in refractory ZrO₂-SiO₂ by means of X-ray refraction technique

Speaker

Dr Itziar Serrano-Munoz

12:40

14:00

D2_Characterization of 1D, 2D materials, ceramics and their composites: D2_2_Mechanical Testing and Electron microscopy - Imaging

Session | Location: Room 11

14:00-14:20

In situ bending tests to investigate crack propagation in thin films for microelectronic applications

Speaker

Mrs Sarah Rubeck

14:20-14:40

High-resolution neutron imaging: a new approach to characterize water in engineered Al oxides

Speaker

Noemie Ott

14:40-15:00

Bridging morphology control and extrusion for next-generation piezoresistive sensing

Speaker

Prof. Ludwig Cardon

15:00–15:20

TEM observation and in situ compression tests of transition alumina prepared by high pressure compaction**Speaker**

Prof. Karine Masenelli-Varlot

15:20

16:00

D2_Characterization of 1D, 2D materials, ceramics and their composites: D2_3_Mechanical, thermal and magnetic properties of composite and hybrid materials**Session** | **Location:** Room 11

16:00–16:20

A simple way to make tough diamond/metal laminates**Speaker**

Karsten Durst

16:20–16:40

Mechanical improvement of super-insulating silica aerogel composites: a coupled experimental and discrete element approach**Speaker**

Guillaume Hamelin

16:40–17:00

Preparation and morphological investigation on bioactive ions-doped hydroxyapatite powders as coatings for orthopaedic implants**Speaker**

Dr Monika Furko

17:00–17:20

Novel eco-friendly processing of Al₂O₃-AlN ceramics by hot isostatic pressing**Speaker**

Dr Dheeraj Varanasi

17:20–17:40

Characterization of Degradation Mechanisms in Thermoset Composites**Speaker**

Philipp Siedlaczek

17:40

Tuesday 14 September

09:50

D2_Characterization of 1D, 2D materials, ceramics and their composites: D2_4_Advances in 1D and 2D Carbon - based nanomaterials

Session | **Location:** Room 11

09:50–10:30

1D and 2D Carbon-Based Nanomaterials and Heterostructures: Status Quo for Synthesis, Characterisation & Applications (Keynote)

Speaker

Costas Charitidis

10:30–10:50

Hybrid CNTs nanostructures for smart applications (Highlight)

Speaker

Ms Kate Trompeta

10:50–11:10

Development of multifunctional graphene and carbon nanotube reinforced composites; utilization of advanced thermal properties

Speaker

Mr Georgios Konstantopoulos

11:10–11:30

Computational modeling supported by experiments for the CVD of CNTs

Speaker

Dr Ioannis G. Aviziotis

11:30

11:50

D2_Characterization of 1D, 2D materials, ceramics and their composites: D2_5_Characterization tools for advanced materials

Session | **Location:** Room 11

11:50–12:10

Temperature-dependent displacement cross section of graphene and its impurities: Measuring the carbon adatom migration barrier (Highlight)

Speaker

Mr Andreas Postl

12:10–12:30

Infrared spectroscopy of composite materials using Bergman's spectral representation: Application to a ceria nanopowder

Speaker

Dr Inigo Gonzalez de Arrieta

12:30–12:50

Examination of the Hydrogen Incorporation into Radio Frequency-Sputtered Hydrogenated SiNx Thin Films

Speaker

Nikolett Hegedüs

12:50-13:10

Microstructural characterisation and property evaluation of active-screen plasma multi-functionalised graphene oxide

Speaker

Dr Xiaoying Li

13:10-13:30

Structural, magnetic and photocatalytic studies of SmFeTiO₅-based antiferromagnetic materials

Speaker

Balazs Kobzi

13:30