

**Session Program**

**13-17 Sept 2021**

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

***A8\_Multi-purpose materials (electronic,  
magnetic, thermal, sensors/actuators,  
network materials)***

Virtual

## Thursday 16 September

09:50

### **A8\_Multi-purpose materials (electronic, magnetic, thermal, sensors/actuators, network materials): A8\_1\_Novel materials, flexible & printed electronics and sensors I**

**Session** | **Location:** Room 2

09:50-10:30

#### **2D Materials: from synthesis to applications (Keynote)**

##### **Speaker**

Cecilia Mattevi

10:30-10:50

#### **Stretchable and Skin-Conformable Conductors Based on Polyurethane/Laser-Induced Graphene**

##### **Speaker**

Mr Alexander Dallinger

10:50-11:10

#### **Influence of the stacking sequence on layered- chalcogenides properties: First principle investigation of $\text{Pb}_2\text{Bi}_2\text{Te}_5$**

##### **Speaker**

Mr Weiliang Ma

11:10-11:30

#### **Solution processed photodetectors for imaging and sensing applications**

##### **Speaker**

Prof. Gerwin Gelinck

11:30

11:50

### **A8\_Multi-purpose materials (electronic, magnetic, thermal, sensors/actuators, network materials): A8\_2\_Novel materials, flexible & printed electronics and sensors II**

**Session** | **Location:** Room 2

11:50-12:10

#### **Piezoelectric thick films for printed electronic**

##### **Speaker**

Prof. Danjela Kuscer

12:10-12:30

#### **Roll-to-roll imprinting of biochips used in multiplexed DNA testing via large-scale manufacturing**

##### **Speaker**

Dr Anja Haase

12:30-12:50

#### **Substantially accelerating sensing speed of low-concentration molecules with motorized microsensors and the working mechanism**

##### **Speaker**

Mr Zexi Liang

12:50-13:10

#### **Surface functionalization for a new illumination / sensing platform**

13:10

**Speaker**

Dr Romain Trihan

14:40

**A8\_Multi-purpose materials (electronic, magnetic, thermal, sensors/actuators, network materials): A8\_3\_Novel materials, flexible & printed electronics and sensors III****Session** | **Location:** Room 2

14:40–15:00

**Towards electrical DNA detection in liquid conditions using randomly oriented Si nanowire networks based field effect transistors****Speaker**

Céline Ternon

15:00–15:20

**Complex microfluidic chips fabricated by mask-less laser lithography and roll-to-roll UV-imprinting****Speaker**

Martin Smolka

15:20–15:40

**A sensorized pneumatic soft actuator produced exclusively with multi-material extrusion based additive manufacturing****Speaker**

Antonia Georgopoulou

15:40

16:40

**A8\_Multi-purpose materials (electronic, magnetic, thermal, sensors/actuators, network materials): A8\_4\_Magnetism and spin I****Session** | **Location:** Room 2

16:40–17:00

**2D ferromagnet/Bi<sub>2</sub>Te<sub>3</sub> TI heterostructures grown by Molecular Beam Epitaxy (Highlight)****Speaker**

Athanasios Dimoulas

17:00–17:20

**Spin Filtering by Proximity Effects in Graphene-based Spin Valves****Speaker**

Mr Victor Zatko

17:20–17:40

**Very Long Term Stabilization of a 2D Magnet down to the Monolayer for Device Integration****Speaker**

Dr Julian Peiro

17:40–18:00

**Tuneable Magnetism, Resistance, and Length in Nanoporous Pd(Co) via Hydrogen-Charging****Speaker**

Mr Markus Gößler

18:00

## Friday 17 September

09:50

### **A8\_Multi-purpose materials (electronic, magnetic, thermal, sensors/actuators, network materials): A8\_5\_Magnetism and spin II**

**Session** | **Location:** Room 2

09:50–10:10 **From forest to electronics**

**Speaker**

Prof. Elvira Fortunato

10:10–10:30

### **Analysis of styrene-butadiene based thermoplastic magnetorheological elastomers with surface treated iron particles**

**Speaker**

Mr Arturo Tagliabue

10:30–10:50

### **Effect of copper addition on crystal structure and shape memory effect in Ni-Mn-Ga Heusler alloys**

**Speaker**

Mrs Agnieszka Brzoza-Kos

10:50–11:10

### **Conversion model to minimize eddy current effects on the shape of B-H hysteresis loops measured at different frequencies**

**Speaker**

Mr Vince Jászfi

11:10–11:30

### **Fabrication of Textured AlN Ceramics by Slip Casting under Magnetic Field**

**Speaker**

Tun Wang

11:30

11:50

### **A8\_Multi-purpose materials (electronic, magnetic, thermal, sensors/actuators, network materials): A8\_6\_Nanostructured network materials I**

**Session** | **Location:** Room 2

11:50–12:10

### **Structure and mechanics of continuous ensembles of carbon nanotubes: from bundles and nanoscale networks to macroscopic fabrics**

**Speaker**

Dr Juan Vilatela

12:10–12:30

### **Silicon nanonet, a promising material for flexible and large-scale electronics**

**Speaker**

Mrs Tabassom Arjmand

12:30-12:50

**In-situ coupled mechanical/electrical investigations of EPDM/CB composite materials: mechanical vs. electrical Mullins effect****Speaker**

Ms Clémentine Beutier

12:50

14:40

**A8\_Multi-purpose materials (electronic, magnetic, thermal, sensors/actuators, network materials): A8\_7\_Nanostructured network materials I and Synthesis and properties II****Session** | **Location:** Room 2

14:40-15:00

**Evaluating the performance of polymer nanofiber systems as potential interlayer reinforcements for Fiber Reinforced Composites****Speaker**

Dr Katerina Loizou

15:00-15:20

**Material modeling for graphene-based nano-laminates - from network models to data-based approaches****Speaker**

Jörg Schuster

15:20-15:40

**Interfacial adhesion strength of III-N heterostructures****Speaker**

Thomas Walter

16:00-16:20

**On The Undulatory Mechanical Response of Metallic Glass Foils****Speaker**

Osama Shahin Elzoubi

16:20

16:40

**A8\_Multi-purpose materials (electronic, magnetic, thermal, sensors/actuators, network materials): A8\_8\_Synthesis and properties II and Flexible functional composite materials****Session** | **Location:** Room 2

16:40-17:00

**Insight into the structural, optical and electronic properties of fluorine doped SnO<sub>2</sub> : From theory to applications.****Speaker**

Nikolaos Kelaidis

17:00-17:20

**Titania for cold plasma electrodes****Speaker**

Anne Mannschatz

17:20-17:40

**Hyperthermia heat dissipation mapping of magnetic chitosan films****Speaker**

Ms Ana Barra

17:40-18:00

**Functionalization and surface modification of poly(L-lactic) acid for tissue engineering**

**Speaker**

Dr Maxim Ivanov

18:00–18:20

**New directions in the fabrication and application of piezoelectric composites**

**Speaker**

Dr James Roscow

18:20