

Wednesday, 24 May

9:00 - 9:30 Welcome

9:30 - 10:30 Plenary Lecture - Helmut Cölfen
Chair: T. Krasia Christoforou

9:30 Bio-Inspired Mineralization For Medical Applications
Helmut Cölfen

10:30 - 11:00 Coffee Break

11:00 - 11:40 Invited Lecture – Anastasios Tasiopoulos
Chair: T. Krasia-Christoforou

11:00 Fine Tuning the Hydrophobicity of a New Cu²⁺ 3-Dimensional MOF Through Single - Crystal Coordinating Ligand Exchange Transformations
Anastasios Tasiopoulos, Nikos Panagiotou, Manolis Manos, Dimosthenis Giokas

11:40 - 12:40 Session I – Synthesis and Characterization
Chair: Petri Papaphilippou

11:40 Room temperature synthesis of doped ceria nanopowders by cations with different valence state
Branko Matovic, Claus Georg Rebholz

12:00 Effect of Deposition Temperature on the Mechanical and Tribological Properties of CVD Deposited Al-DLC Thin Film Coatings
Ranjan Kumar Ghadai, Soham Das

Online 12:20 Functional nanocomposite coatings of hydrogenated diamond-like carbon with embedded metallic nanoparticles: optical and nanotribological response.
Loukas Koutsokeras, Marios Constantinou, Georgios Constantinides

12:40 Effect of Rising angle of Inclination of foam to Dynamic properties of Polyester foam
Arindam Mukherji

13:00 - 14:30 Lunch

14:30 - 15:10 Invited Lecture – Maria Vamvakaki
Chair: T. Krasia-Christoforou

14:30 Functional And Responsive Polymer Modified Inorganic Nanoparticles
Maria Vamvakaki

15:10 - 16:30 Session II – Functional Nanomaterials
Chair: Constantinos Voniatis

15:10 Synthesis and Characterization of Different Spherical Magnetic Nanoparticles for Biomedical Applications
Maria-Cristina Ioncica, Sandor Ianos Bernad

Online 15:30 Rare earth zirconate nanostructures
Melita Menelaou, Takeshi Nakagawa

15:50 Electrospun polymer nanofabrics as interlayer reinforcement in fiber reinforced composites
Katerina Loizou, Ioanna Savva, Angelos Evangelou, Michalis Georgalas, Ioannis Hadjiefthyvoulou, Katerina Sofocleous, Vasileios Drakonakis

16:10 Magnetically-functionalized nanocomposite fibrous adsorbents for the removal of ofloxacin from wastewater
Petri Papaphilippou, Oana Marinica, Eugenia Tanasa, Fotios Mpekris, Triantafyllos Stylianopoulos, Ladislau Vekas, Theodora Krasia-Christoforou

16:30 - 17:00 Coffee Break

17:00 - 18:00 Session III Medical Applications

Chair: Maria Vamvakaki

- 17:00 Mechano-modulation of tumor microenvironment with polymeric micelles to optimize the efficacy of immunotherapy
Fotios Mpekris, Petri C. Papaphilippou, Myrofora Panagi, Christina Michael, Chrysovalantis Voutouri, Mariyan Marinov Dinev, Theodora Krasia-Christoforou, Triantafyllos Stylianopoulos
- 17:20 Tranilast-loaded micelles outcompete the effects of free drug in normalizing tumor microenvironment and enhancing nano-immunotherapy
Myrofora Panagi, Fotios Mpekris, Pengwen Chen, Chysovalantis Voutouri, Yasuhiro Nakagawa, Horacio Cabral, Triantafyllos Stylianopoulos
- 17:40 Polysuccinimide/Polycaprolactone composite meshes for surgical tissue engineering
Constantinos Voniatis

18:00 - 19:30 Welcome Reception

Thursday, 25 May

9:00 - 10:00 Session IV – Functional Nanomaterials Chair: T. Krasia-Christoforou

- 9:00 Development of Polyurethane Nanocomposites with Improved Self-healing Properties
Kiriaki Chrissopoulou, Evangelia Giannakaki, Kosmas Giannaris, Minas Stylianakis, Spiros H. Anastasiadis
- 9:20 Nano-reinforced Epoxy Foaming Systems as Multifunctional Cores for Fiber Reinforced Polymer Sandwich Composites
Ioanna Savva, Anastasis Georgiou, Nikolaos Tzanopoulos, Michalis Georgalas, Orestes Marangos, Loukas Koutsokeras, Stylianos Yiatros, Georgios Constantinides, Vasileios Drakonakis
- 9:40 Hybrid coatings based on chitosan and rGO modified TiO₂ nanoparticles with a strong antimicrobial activity under visible-light irradiation and stimuli-renewable properties
Evangelia Vasilaki, Theodore Manouras, Eleftherios Koufakis, Ioanna Peraki, Maria Vamvakaki

10:00 - 10:30 Coffee Break

10:30 - 11:50 Session V – Properties and Performance Chair: Kiriaki Chrissopoulou

- 10:30 Tracer particle incorporation - A prerequisite for digital volume correlation of UD fibre-reinforced composites
Thanasis Chatziathanasiou, Okan Demir, Jeroen Soete, Martin Diehl, Mahoor Mehdikhani, Christian Breite, Yentl Swolfs
- 10:50 Thermomechanical properties of HDPE composites with biochar *Luffa Cylindrica* fiber inclusions
Ioannis Ioannou, Paraskevas Kyriacou, Marios Pantelas, Ioannis Pashalidis, John Makris, Spyros Rallis, Kostas Giachalis, Kyriakos Avraam, Theodora Krasia-Christoforou
- 11:10 Investigation on thermal and mechanical properties of 3D printed Polyamide 6 (PA6) composites under dry, wet and high temperature conditions
Mariah Ichakpa, James Njuguna
- 11:30 Ultrafine-grained microstructure effect on the biomedical Ti-based alloy performance
Ivana Cvijović-Alagić, Slađana Laketić, Đorđe Veljović, Vesna Kojić, Jelena Bajat, Marko Rakin

11:50 - 13:30 Lunch

13:30 - 14:10 Invited Lecture - Alina Adriana Minea (Online)

- 13:30 Ionic Liquids-Based Nanocolloids—Application, Development and Scenarios for Heat Transfer
Alina Adriana Minea

14:10 - 15:10 Water Remediation Workshop Chair: T. Krasia-Christoforou, J. Njuguna

Shivani Bhardwaj Mishra - "TBA"

AjayKumar Mishra - "Green Nanomaterials for Waste Water Remediation"

15:10 - 16:45 Poster Session with Refreshments

- Peculiarities of Different Nature Fibres Modification with Copper Selenide
Olga Belukhina, Daiva Milašienė, Remigijus Ivanauskas
- Formation of tin sulfide films on polyamide substrate
Remigijus Ivanauskas, Skirma Žalėnienė, Ingrida Ancutienė

Influence of Modification with Copper Selenide on the Properties of Wool Fibres
Daiva Milasiene, Olga Belukhina, Remigijus Ivanauskas

3-D composite adsorbents based on naturally-derived hydrogels and oxidized biochar fibers for the removal of U(VI) from aqueous media
Andreas Ayiotis, Efthalia Georgiou, Ioannis Pashalidis, Theodora Krasia-Christoforou, Panayiotis Ioannou

The chemical modification of calcium lignosulfonate to obtain flame retardants for engineering-biopolymers
Tomasz Majka

An evaluation of the mechanical behaviour of glass fibre/HDPE thermoplastic composite pipe for oil and gas applications
Obinna Okolie, Nadimul Faisal, James Njuguna

Synthesis of transition metal nitride nanoparticles using a cluster beam source.
Loukas Koutsokeras, Georgios Constantinides

Fabrication and Characterization of Nanofibrous Emitters for Optoelectronic Applications
Georgia Papaparaskeva, Maria Lydia Ioannides, Chryso Lambride, Eugenia Tanasa, Theodora Krasia-Christoforou

A comparison on two ionic liquid based nanofluids heat transfer behaviour
Elena Ionela Chereches, Liviu Ioan Zupcu, Alina Adriana Minea

Calcium carbonate microparticles as templates for the formation of a protein biosensor
Rafaela Loi, Epameinondas Leontidis, Ioannis Sarigiannis

Development of super hydrophobic electrospun fibrous textiles for highly efficient filtration
Ioanna Savva, Katerina Loizou, Maria Karouzou, Michalis Georgalas, Vassilis Drakonakis

From Batch to Pilot Scale Electrocoagulation Treatment of Real Bilge Wastewater
Marios Constantinou, Aikaterini A. Mazioti, Costas Varavvas, Ioannis Vyrides, Georgios Constantinides

Additive Manufacturing of ball milled 316L-SiC metal matrix composite powders
Rafael Stylianou, Angelos Evangelou, Loukas Koutsokeras, Georgios Constantinides, Theodora Kyratsi

16:45 - 22:00 Tour & Conference Dinner

Friday, 26 May

9:30 - 10:10 Invited Lecture – Navinchandra G. Shimpi
Chair: J. Njuguna

Online PAN NF supported silver-graphitic carbon nitride (Ag-gC₃N₄) and Cu: Ni: CNFs Composites: Its property investigation on photocatalytic and super-capacitive properties

Navinchandra G. Shimpi

10:10 - 11:50 Session VI Modelling and Simulations
Chair: I. Ioannou

10:10 A combined theoretical-simulation approach to microstructure and dynamics of poly(ethylene glycol) - silica nanocomposite melts
Emmanuel Skountzos, Dimitrios Tsalikis, *Pavlos Stephanou*, Vlasios Mavrantzas

10:30 Investigating the Mechanical Performance of a Graphene Reinforced Polybutadiene Nanocomposite via Atomistic and Continuum Approaches
Hilal Reda, Malak Barakat, Vangelis Harmandaris

10:50 Structure and Dynamics of Polymer Chains in Polymer/Alumina Interfaces via Machine-Learnt Atomistic Simulations
Nikolaos Patsalidis, George Papamokos, George Floudas, Vagelis Harmandaris

11:10 Ultraprecision machining of brittle and hard materials: a review of composites as a case study.
Tirimisiyu Olaniyan, James Njuguna, Nadimul Faisal, Peter Odedeji, Lukman Abdulkadir

11:30 TECHNOLOGICAL ADVANCEMENTS IN SELF HEALING POLYMERS & 3D REINFORCED NANO ENGINEERING POLYMERS FOR CUSTOMIZED SURFACE & AVIATION APPLICATIONS
PANKAJ KUMAR

12:00 - 13:30 Lunch

13:30 - 15:30 Nanocomposite Advancement for the Hydrogen Energy Economy
Workshop
Chair: T. Krasia-Christoforou, J. Njuguna

Online 13.30 – 14.00 Mutiu Adegboye – **Experimental study of hydrogen pipeline leakage using rGO and Pd-NP decorated H₂-Sensors.**

Online 14:00-14:30 – Ha Duong Ngo **Developments on sensors for hydrogen energy**

Online 14:30-15:00 – Carlos Fernandez - **Exploring new electrocatalytic materials for the hydrogen production**

Online 15:00-15:30 - Materials for molten salt facing parts: challenges and opportunities for nuclear thermochemical cycle electrolysis
Nadimul Faisal, Anil Prathuru, Mamdud Hossain, Vinooth Rajendran

15:30 - 16:00 Closing/Awards