



POLYMERS 2024, COMPOSITES 2024 AND 3BS MATERIALS 2024 INTERNATIONAL JOINT CONFERENCE

06 - 08 MARCH 2024 | SEVILLE, SPAIN

Conferences' Program

Organizer



SETCOR
Conferences & Exhibitions

Polymers / Composites / 3Bs Materials 2024
Joint International Conferences Program
06-08 March 2024, Seville - Spain

Wed. 06 March 2024		
08:00 - 12:00	Conference Registration / Welcome Coffee Break / Posters Installation	
Polymers / Composites / 3Bs Materials 2024 Session I. A		
Santa Cruz Conference Room		
Session's Chairs: Prof. Robert J Young, University of Manchester, UK Prof. De-Yi Wang, IMDEA Materials Institute, Spain		
10:00 - 10:30	Nanofibrillar Multifunctional Thermoplastic Materials Prepared by Solution Blow Spinning. J. González-Benito	Prof. Javier Gonzalez-Benito, University Carlos III de Madrid, Spain
10:30 - 11:00	Carbon Fibers from Lignin Limitations & Opportunities. D.S Argyropoulos	Prof. Dimitris Argyropoulos, North Carolina State Univ., USA
11:00 - 11:30	Incidence of the Mechanisms of Damage in the Performance of Composites. F. P. Carballo	Prof. Federico Paris Carballo, University of Seville, Spain
11:30 - 12:00	Experiments and Analysis of Delamination in Composite Materials. J. Botsis	Prof. John Botsis, EPFL, Switzerland
12:00 - 12:30	Biomimetic Spirocyclizations for the Synthesis of Indole Alkaloids. R.V.A. Orru	Prof. Romano V.A. Orru, Maastricht University, The Netherlands
12:00 - 14:00 Lunch Break		
Polymers 2024 Session I. B: Synthesis, Processing and Characterization		
Session's Chairs: Prof. Javier Gonzalez-Benito, University Carlos III de Madrid, Spain Prof Joana Vaz Pinto, FCT NOVA University Lisbon, Portugal		
14:00 - 14:15	Synthesis of metal-free semiconducting polymers via organocatalysis: sustainable materials for renewable energies. L. Caponecchi, P.Y. Toullec, C. Brochon	Mr. Luca Caponecchia, University of Bordeaux, France
14:15 - 14:30	Fibrous Nanocomposites based on Polylactic acid filled with Fe3O4 Nanoparticles Produced by Solution Blow Spinning. N. Nikolić, D. Olmos and J. González-Benito	Ms. Natasa Nikolic, University Carlos III of Madrid, Spain
14:30 - 14:45	Exploring the Properties of Solution Blow Spun PLA/Sargassum Fibrillar Nanocomposite Materials as a Novel Approach for Sustainable Bioplastics. N. Nikolić, M. González-Hurtado, A. Martínez-García, J. González-Benito and D. Olmos	Dr. Dania Olmos, University Carlos III of Madrid, Spain
14:45 - 15:00	Achieving high impact strengths for polyamide 6 by adjusting the grafting degree of ethylene/1-octene copolymers. A.K. Deeb, O. Neuß and S. Rathgeber	Mr. Abdul Kadir Deeb, University Koblenz, Germany
15:00 - 15:15	Analyzing the Influence of Color Masterbatch in the Injection Molding of Post-Industrial Plastic Waste. M. Pöttinger, C. Marschik, K. Straka, K. Fellner and G. Steinbichler	Ms. Magdalena Poettinger, Competence Center CHASE GmbH, Austria
15:15 - 15:30	Advancing Free Radical Photopolymerization (FRP) and 3D Printing: Exploiting the Potential of Novel Ni(II) Complexes bearing NHC ligands as photocatalysts. N. M. Pesqueira, C. Bignardi, V. P. Carvalho-Jr, B. Eleutério Goi and J. Lalevée	Ms. Naralyne Pesqueira, São Paulo State University (UNESP), Brazil/ University of Haute-Alsace, France

15:30 - 15:45	Photocatalytic degradation of methylene blue dye using a visible active photocatalyst immobilized on polypropylene films. O. Sacco , R. Rescigno, S. Pragliola, V. Vaiano and V. Venditto	Dr. Olga Sacco , University of Salerno, Italy
15:45 - 16:00	Photoreactive polymer composites based on visible-light active photo-catalysts for selective benzene hydroxylation to phenol. A. Mancuso , O. Sacco, V. Venditto and V. Vaiano	Dr. Antonietta Mancuso , University of Salerno, Italy
16:00 - 16:30	Afternoon Coffee Break / Posters Session	
16:30 - 16:45	Core-skin morphology analysis of calendered isotactic polypropylene (iPP) foils. M. Mihelčič , M. Huskić and L. Slemenik Perše	Dr. Mohor Mihelčič , University of Ljubljana, Slovenia
16:45 - 17:00	Ammonia triggered self-healing of an ozone cracked high strength ionomeric elastomer. S. Billa and S. K Rath	Mr. Srikanth B. Billa , Naval Materials Research Laboratory, India
17:00 - 17:15	Numerical Simulation of Thermal Frontal Polymerization in Polymer Composites: The Role of Nanoparticle Fillers. M.Lang , C.Schmidleitner, P.Fuchs and E.Rossegger	Dr. Margit C. Lang , Polymer Competence Center Leoben GmbH, Austria
17:15 - 17:30	Challenges and solutions to assess the real true stress – true strain response of pure and recycled polymers under large strains P. Hao , C. Siebers, K. Ragaert and F. A. Gilabert	Dr. Pei Hao , Ghent University, Belgium

Composites Session I. C: Synthesis, Processing and Characterization**Nervion Conference Room****Session's Chairs:****Prof. John Botsis, EPFL, Switzerland****Prof. Dimitris Argyropoulos, North Carolina State University, USA**

14:00 - 14:30	Electrofluids: liquid composites as soft electrical components. L. González-García	Prof. Lola Gonzalez- Garcia , INM - Leibniz Institute for New Materials, Germany
14:30 - 14:45	Integration of electro-fluids for sensor applications using 3D printing. N. Hautz , D.S. Schmidt, S; Arora, S. Lago-Garrido and L. González-García	Mr. Niclas Hautz , Leibniz Institute for New Materials, Germany
14:45 - 15:00	Cross-linking reaction of bio-based epoxy systems: a study on cure kinetics. P. Di Matteo , A. Iadarolab, V. Brunellaa, R. Ciardiello, D.S. Paolinob, F. Gazzac and V.G. Lambertinic	Dr. Pietro Di Matteo , University of Turin, Italy
15:00 - 15:15	Pt/WO3 Nanoparticle-Dispersed Polydimethylsiloxane Membranes for Transparent and Flexible Hydrogen Gas Leakage Sensors. R. Ishihara , Y. Makino, Y. Yamaguchi and K. Nishio	Dr. Ryo Ishihara , Tokyo University of Science, Japan
15:15 - 15:30	Network metrics of percolating silver-PDMS composites and their correlation with electrical conductivity. D. Perius , A. Taranovskyy, L. González-García and T. Kraus	Mr. Dominik Perius , Leibniz Institute for New Materials, Germany
15:30 - 15:45	Structure and photoluminescence properties of NiW1-xMoxO4 (x = 0, 25, 50, and 75%) solid solutions: A Comprehensive Experimental and Theoretical Exploration. A.F. Gouveia , M. Assis, E.O. Gomes, M.T. Daldin and J. Andrés	Dr. Amanda Gouveia , University Jaume I, Spain
15:45 - 16:00	Evaluation of Radiation Shielding Properties for Innovative Concrete with Oil Shale and Basalt-Boron Fiber Additives. A. Slavickas , M. Vaišnoras, E. Babilas	Mr. Andrius Slavickas , Lithuanian Energy Institute, Lithuania
16:00 - 16:30	Afternoon Coffee Break / Posters Session	
Session's Chairs: Prof. John Botsis, EPFL, Switzerland Prof. Dimitris Argyropoulos, North Carolina State University, USA Prof. Lola Gonzalez- Garcia, INM–Leibniz Institute for New Materials, Germany		
16:30 - 16:45	Advanced Characterization of Short Fibre Reinforced Concrete in Dynamic Regime through Hopkinson bar and X-ray inspection. N. Krčmářová, J. Šleichrt, J. Falta and T. Fíla	Mrs. Nela Krčmářová , Czech Technical University in Prague, Czech Rep.
16:45 - 17:00	Empowering Environmental Sustainability Functionalized SBA-15 as a Cutting-Edge Solution for Effective Metal Uptake. M. Dulski , A. Strach, M. Wojtyniak, B. Chrzaszcz, M. Laskowska, P. Duda, J. Karczewski, J. Goscianska, A. Jankowska and Ł. Laskowski	Dr. Mateusz Dulski , University of Silesia, Poland
17:00 - 17:15	An experimental investigation of spreading behavior of carbon fiber rovings. S. Kohl , C. Marschik, T. Kranzl, M. Schnaitter and G. R. Berger-Weber	Mr. Stefan Kohl , Competence Center CHASE GmbH, Austria
17:15 - 17:30	A new optical method for surface quality analyses of thermoplastic composite parts. J. BIRTHA , E. Kobler, C. Marschik, K. Straka and G. Steinbichler	Mr. Janos BIRTHA , Competence Center CHASE GmbH, Austria
17:30 - 17:45	Inline Quality Assurance of Glass-Fiber-Reinforced Unidirectional Thermoplastic Tapes using Optical Coherence Tomography. M. Wenninger , C. Marschik and G. Berger-Weber	Dr. Michael Wenninger , Competence Center CHASE GmbH, Austria

17:45 - 18:00	Stress wave attenuation in bi-material 3D printed metallic structures. R. Kolman , R. Dvořák, M. Mračko, A. Berezovski, M. Kylar and V. Kotek	Prof. Radek Kolman , Institute of Thermomechanics of the CAS, Czech Rep.
18:00 - 18:15	Erosion Characteristics of SCR Material Under Diverse Temperature Conditions: An Experimental and Computational Inquiry. S. Rajath and N D Shivakumar	Mr. Rajath S , Indian Institute of Science, Bangalore, India
18:15 - 18:30	Method of localized Lagrange multipliers for coupling of 1D and 3D finite elements. R. Dvořák , J.A. Gonzalez, R. Kolman and O. Jiroušek	Mr. Radim Dvorak , Czech Technical University in Prague, Czech Rep.
18:30 - 18:45	Multiscale modelling of composite pressure vessels. L. Bouhala , A. Laachachi, A. Karatrantos	Dr. Lyazid Bouhala , Luxembourg Institute of Science and Technology, Luxembourg

3Bs Materials Session I. D: Synthesis, Processing and Characterization**Arenal Conference Room****Session's Chairs:****Prof. Romano V.A. Orru, Maastricht University, The Netherlands****Prof. Mariana Ionita, University of Science and Technology Polytechnic of Bucharest, Romania**

14:00 - 14:15	Combinatorial Synthesis of polymeric non-viral nanovectors for gene delivery: use of Box Behnken design and Response Surface Methodology. S. Schirinzi , G. Gigli, I. E. Palamà and G. Maiorano	Mr. Simone Schirinzi , University of Salento, Italy
14:15 - 14:30	Improving Comfort and Performance of Contact Lenses Through Hydrophilic Polyphenolic Coatings. P. Demian, D. Nagaya, K. Lee, G. A. Lee, K. Iwai, D. Hasegawa, M. Baba, P. B. Messer-smith, R. Refaei and M. Lamrani	Dr. Mouad Lamrani , Menicon Co., Ltd, Switzerland
14:30 - 14:45	Gallic Acid Loaded-Poly (Lactic Acid) Electrospun Fibers for Bone Tissue Engineering. N. Sribungngaw , P. Naruphontjirakul, P. Namchaiw and K. Ngamkham	Mr. Nuttawut Sribungngaw , King Mongkut's University of Technology Thonburi, Thailand
14:45 - 15:00	Engineered anisotropic interlocking strategy for interface toughening in 3D printed bi-material thermoplastic polymers L. Farràs-Tasias , J. Topard, S. Panier, F. A. Gilabert and F. H. Marchesini	Ms. Laia Farràs Tasias , Ghent University, Belgium
15:00 - 15:15	Mesoporous bioactive glass nanoparticles doped with cobalt and boron for theragnostic applications. M. Vitázková , F. Kurtuldu, N.Mutlu, E.Vidomanová, Z.Vargas and M. Michálek	Mrs. Martina Vitázková , FunGlass, Alexander Dubček University of Trenčín, Slovakia
15:15 - 15:30	Spray dried drug loaded zein microparticles for active wound healing. C. Gnoccchi , M. Lenzuni, F. Fiorentini, D. Merino, M. Summa, R. Bertorelli, G. Suarato and A. Athanassiou	Ms. Chiara Gnocchi , University of Genoa, Italy
15:30 - 15:45	Complex composites based on collagen scaffold as wound dressings. M. Deaconu , A.-M. Brezoiu , A.-M. Prelipcean, R. Mitran, C. Matei and D. Berger	Dr. Mihaela Deaconu , Politehnica University of Bucharest, Romania
15:45 - 16:00	Functional characterization of Hermetia illucens-derived chitosans for wound healing applications. M. Giani , B. Vigani, G. Sandri, A. Guarnieri, P. Falabella and S. Rossi	Dr. Micaela Giani Alonso , University of Pavia, Italy
16:00 - 16:30	Afternoon Coffee Break / Posters Session	
16:30 - 16:45	Nanostructured Multi-Responsive Coatings for Tuning Surface Properties. S. Giasson and A. Guerron	Prof. Suzanne Giasson , University of Montreal, Canada
16:45 - 17:00	Novel antibacterial coating: functionalization with bovine serum albumin and silver. C.Reggio , S. Spriano, A. C. Scalia and A. Cochis	Dr. Camilla Reggio , Politecnico di Torino, Italy
17:00 - 17:15	Mechanical Characterization of Electrospun Tubular Scaffolds with Randomly Distributed PLA/PCL Bicomponent Fibers. J. Oztemur, S. Ozdemir, H. Sezgin and I. Yalcin-Enis	Mrs. Janset Oztemur , Istanbul Technical University, Turkey
17:15 - 17:30	Fibroblast Growth Factor 21 Adsorption on Polyelectrolyte Layers: Modelling and Experimental Studies. A. Michna , P. Batys, M. Dąbkowska, B. Kowalski, A. Pomorska, M. Wasilewska and Z. Adamczyk	Dr. Aneta Michna , Jerzy Haber Institute of Catalysis and Surface Chemistry, Poland
17:30 - 17:45	Glass Fiber-reinforced Bio-derived Polybenzoxazine Composites for Medical Application. C. Jubsilp , P. Mora and S. Rimdusit	Dr. Chanchira Jubsilp , Srinakharinwirot University, Thailand
17:45 - 18:00	Synthesis and evaluation of poly(propylene fumarate)-grafted graphene oxide as nanofiller for porous scaffolds. A.M. Pandele	Dr. Andreea Madalina Pandele , National Polytechnic University of

		Science and Technology Bucharest, Romania
Thu. 07 March 2024		
Polymers / Composites / 3Bs Materials 2024 Session II. A		
Santa Cruz Conference Room		
Session's Chairs: Prof. De-Yi Wang, IMDEA Materials Institute, Spain Prof. Federico Paris Carballo, University of Seville, Spain		
09:00 - 09:30	Polymers and Green Chemistry: Materials for a Circular Economy. J.H. Clark	Prof. James Clark, University of York, UK
09:30 - 10:00	Stimulating Biomaterial Innovation: Why the Hip Implant Has Not Changed Since 1967. T.J. Webster	Prof. Thomas J. Webster, Hebei University of Technology, China
10:00 - 10:30	The Role of Nanofiller Geometry in the Reinforcement of Polymer-based Nanocomposites. R.J. Young, Z. Li and M. Liu	Prof. Robert J Young, University of Manchester, UK
10:30 - 11:00	Morning Coffee Break / Posters Session	
11:00 - 11:30	Molecular raincoats are better than coatings: enabling water-resistant biocomposites. J. Andrew, P. Ramadoss and G.R. Stephenson	Prof. G. Richard Stephenson, Cellexcel Ltd, UK
11:30 - 12:00	Microbial polymers: novel biomaterials with improved properties. F. Freitas	Dr. Filomena Freitas, NOVA Lisbon, Portugal
12:00 - 14:00	Lunch Break	
Group Photo at 13:45		
Polymers / Composites 2024 Session II. B		
Santa Cruz Conference Room		
Session's Chairs: Prof. Robert J Young, University of Manchester, UK		
14:00 - 14:30	Fire-safe Strategies on Fiber Reinforced Polymer Composites: Progress and Challenge. D-Y. Wang	Prof. De-Yi Wang, IMDEA Materials Institute, Spain
14:30 - 14:45	BIO-IGNITION Project: Development of Innovative Fire-Retardant Additives from Renewable Resources Compatible with Various Polymers in Construction, Automotive and Railway Sectors. A. González-Jiménez, J.V. Izquierdo and B. Galindo	Dr. Antonio Gonzalez-Jimenez, AIMPLAS, Spain
14:45 - 15:00	Smart ethylene-octene copolymer nanocomposites with hybrid MWCNT- Fe3O4 fillers: development, properties and applications. J. Zicans, R. Merijs-Meri, I. Reinholds and T. Ivanova	Prof. Remo Merijs-Meri, Riga Technical University, Latvia
15:00 - 15:15	Surface and mechanical properties of polymer nanocomposite PVDF-HFP/PVP/SiO2 with anti-fouling properties U. Gradišar Centa, M. Sterniša and L. Slemenik Perše	Dr. Urška Gradišar Centa, University of Ljubljana, Slovenia
15:15 - 15:30	Effect of a Nanocellulose on the Optical and Mechanical Properties of Flax Pulp. J. Bárta, K. Hájková and A. Sikora	Mr. Josef Bárta, Czech University of Life Sciences Prague, Czech Rep.
15:30 - 15:45	Effect of Solvent Additives on Polyelectrolyte Physicochemical Properties and Complexation. P. Batys, M. Morga, M. Khavani, T. Kastinen, I. Leszczyńska, S. M. Lalwani, C. I. Eneh, J. L. Lutkenhaus and M. Sammalkorpi	Dr. Piotr Batys, Jerzy Haber Institute of Catalysis and Surface Chemistry, Poland
15:45 - 16:00	Influence of external factors on the structure of poly-L-lysine (PLL) and poly-L-glutamic acid (PGA) and formation of PLL/PGA complexes. M. Morga, A. Harmat, T. Kastinen, P. Bonarek, D. Lupa, D. Kosior, Z. Adamczyk, J. L. Lutkenhaus, M. Sammalkorpi and P. Batys	Dr. Maria Morga, Jerzy Haber Institute of Catalysis and Surface Chemistry, Poland

16:00 - 16:30 Afternoon Coffee Break / Posters Session		
16:30 - 16:45	The effect of copper flakes surface modification on physical properties of conductive polymer composites. M. Mihelčič, A. Oseli and L. Slemenik Perše	Dr. Lidija Slemenik Perse , University of Ljubljana, Slovenia
16:45 -17:00	Chemically degradable thermoset matrix for recycling structural polymer composites. J.W. Yi , S.W. Kim, J.W. Lee, J.S. Kim, and M.K. Um	Dr. Jinwoo Yi , Korea Institute of Materials Science- Changwon, Rep. of Korea
17:00 - 17:15	Polymer-infiltrated zirconia ceramic networks with biodegradable and bioactive biocomposites produced by additive manufacturing. G. Fargas , E.J. Pujol, B. Begines, Y. Torres, L. Llanes and A. Alcudia	Ms. Gemma Fargas Ribas , Polytechnic University of Catalonia, Spain
17:15 - 17:30	Application of treatment methods for recycled concrete aggregates to improve their properties A. Al-Yaqout	Dr. Anwar Al-Yaqout , Kuwait University, Kuwait

Conference Dinner at 19:30, Mosaico Restaurant – Level 1

Thu. 07 March 2024

3Bs Materials Session II. C:
Biomaterials Synthesis, Processing and Characterization
Biobased and Biomimetic Materials / Bio interfaces / Biomaterials applications

Nervion Conference Room

Session's Chairs:
Prof. Thomas J. Webster, Hebei University of Technology, China
Prof. Ivan Chodak, Polymer Institute SAS, Slovakia

14:00 - 14:30	Anti-infection Strategies Applied to Design Coating Materials for Stable and Biodegradable Biomedical Implants. J.V. Rau	Prof. Julietta V. Rau , Institute of Structure of Matter, CNR, Italy
14:30 - 15:00	CaCO3 Ceramics - A Bioresorbable Bone Grafting Material. S. Umemoto , H. Unuma, T. Furusawa, T. Goto and T. Sekino	Prof. Hidero Unuma , Yamagata University, Japan
15:00 - 15:15	Bio-based flexural structures based on epoxidized plant oils. A. Solt-Rindler , J. Janesch, L. Dumschat, O. Vay and C. Hansmann	Dr. Axel Solt-Rindler , Wood Material Technologies, Austria
15:15 - 15:30	Design of stimuli responsive antimicrobial materials based on the reversible surface grafting of trans-2-hexenal on chitosan films through imine linking. P. Esteve-Redondo , R. Heras-Mozos, C. López de Dicastillo, R. Gavara and P. Hernández-Muñoz	Mrs. Patricia Esteve Redondo , IATA-CSIC, Spain
15:30 - 15:45	Holistic approach to understand how teleost fish scales fulfil their biological function - from nano to macro structure organization. A. Petitpas , J. Veillon, L. Rubatat, P. Moonen, V. Pellerin and S.C.M. Fernandes	Mr. Arnaud Petitpas , University of Pau et des Pays de l'Adour, France
15:45 - 16:00	Moisture Sensor Inspired by Natural Cellulosic Networks. S. D. Almeida, P. L. Almeida, M. H. Godinho and A P. C. Almeida	Dr. Ana Almeida , NOVA School of Science and Technology, Portugal
16:00 - 16:30	Afternoon Coffee Break / Posters Session	
Session's Chairs: Prof. Julietta V. Rau , Institute of Structure of Matter, CNR, Italy Prof. Hidero Unuma , Yamagata University, Japan		
16:30 - 17:00	Modification of thermoplastic starch to achieve a broad range of properties in mixtures with biopolymers. I. Chodak and H. Peidayesh	Prof. Ivan Chodak , Polymer Institute SAS, Slovakia
17:00 - 17:15	Bio-inspired multilayered nanocellulose-based assemblies with anisotropic properties. L. Garnier , O. Felix and B. Jean	Ms. Leila Garnier , Institut Charles Sadron, France
17:15 - 17:30	Bioinspired Two Photon Polymerized Micro-Pillar Antibacterial Surfaces. G.E. Marsh , T. Ning, K. Jodeiri Iran, R.D. Wildman and M.SL. Yee	Dr. Georgina Marsh , Swansea University, UK
17:30 - 17:45	Evolution and characterization of Drosophila glue, a model for biomimicry. M. Monier , J-N. Lorenzi, F. Borne, V. Contremoulins, L. Mevel, R. Petit, F. Graner and V. Courtier	Ms. Manon Monier , Institut Jacques Monod, France
17:45 - 18:00	Guiding Cellular Behaviour via Contact with Nature Inspired, ECM- mimetic Hierarchical Topographic Cues. A. Gope , A. Mukhopadhyay and R. Mukherjee	Mr. Ayan Gope , Indian Institute of Technology Kharagpur, India

Conference Dinner at 19:30, Mosaico Restaurant – Level 1

Polymers / Composites/ 3Bs Materials Session II. D: Biobased Materials/ Biopolymers/ Biocomposites**Arenal Conference Room****Session's Chairs:**

Prof. John Botsis, EPFL, Switzerland
Prof. James Clark, University of York, UK
Dr. Filomena Freitas, NOVA Lisbon, Portugal

14:00 - 14:15	Bio-based hybrid composite epoxy/NIPU foams for constructive Applications. L. Gryshchuk	Dr. Liudmyla Gryshchuk , Leibniz-Institut für Verbundwerkstoffe GmbH, Germany
14:15- 14:30	Shape Memory Composites based on Bio-Benzoxazine/Bio-Urethane Copolymers Reinforced with Graphene with NIR Actuation Ability. S. Rimdusit , W. Jamnongpak, K. Charoensuk and C. Jubsilp	Prof. Sarawut Rimdusit , Chulalongkorn University- Bangkok, Thailand
14:30 - 14:45	Impact and flexural properties of woven flax-carbon thermoplastic hybrid bio-composites. M. Bahrami , M. Mehdikhani, Y. Swolfs, J. Abenojar and M.A. Martinez	Mr. Mohsen Bahrami , Universidad Carlos III de Madrid, Spain
14:45 - 15:00	Degradation behavior of poly(lactic acid) biocomposites filled with natural materials. M. Musiol , S. Jurczyk, W. Sikorska, H. Janeczek, J. Rydz and K. Molnar	Mrs. Marta Musiol , Centre of Polymer and Carbon Materials, Poland
15:00 - 15:15	Green composites reinforced with sisal fabric: a preliminary investigation on mechanical response. C. Santulli, S. Boria , G. Del Bianco, V. Giammaria, M. Capretti, and V. Castorani	Dr. Simonetta Boria , University of Camerino, Italy
15:15 - 15:30	Development of sustainable corn derivatives-based composites. A. Cunha , P. Teixeira, S. Gomes, A. Monteiro, N. Senhorães, R. Malta, C. M. Brito, L.F.S. Silva, N.M. Pereira, I. Oliveira, J.Viegas.	Mr. Américo Cunha , CeNTI - Centre of Nanotechnology and Smart Materials, Portugal
15:30 - 15:45	Supercritical CO ₂ impregnation of PHB-HV in submerged and non-submerged mango leaves extract. L. León , D. Valor, I. García-Casas, A. Montes, C. Pereyra and E.J. Martínez de la Ossa	Ms. Ludisbel León Marcos , University of Cadiz, Spain
15:45 - 16:00	Scaling-up of supercritical solvent impregnation of olive leaf extract into polypropylene films. Á. Pineda, C. Cejudo, L. Verano, N. Machado , C. Mantell, L. Casas	Dr. Noelia Machado , University of Cadiz, Spain
16:00 - 16:30	Afternoon Coffee Break / Posters Session	
16:30 - 16:45	Inclusion of natural antioxidants from olive pruning waste in porous biomaterials using supercritical technology. I. García-Casas , D. Valor, H. Elayoubi, L. León, C. Pereyra and A. Montes.	Dr. Ignacio Garcia Casas , University of Cadiz, Spain
16:45 - 17:00	Hydrothermal treatment to optimize supercritical CO ₂ polycaprolactone foaming processes for tissue engineering scaffolds. B. García-Jarana , D. Valor López, J. M. Abelleira, J. Sánchez-Oneto, J. R. Portela and E. J. Martínez de la Ossa	Dr. Belen Garcia-Jarana , University of Cadiz, Spain
17:00 - 17:15	Antiviral activity of silk fabric functionalized with SnO ₂ nanoparticles A. Baranowska-Korczyc , D. Kowalczyk, K. Sobczak, M. Krzyżowska and M. Cieślak	Dr Anna Baranowska-Korczyc , Lodz Institute of Technology, Poland
17:15 - 17:30	Assumptions for obtaining thermoactive wood-based composites for furniture and interior design A. Ježo , G. Maksymiuk, M. Wronka and G. Kowaluk	Ms. Aleksandra Ježo , Warsaw University of Life Sciences, Poland

17:30 - 17:45	Selected Challenges when Preparing and Characterizing Thermoactive Wood-based Composites for Furniture and Interior Equipment A. Wronka , A. Ježo and G. Kowaluk	Ms. Anita Wronka , Warsaw University of Life Sciences, Poland
---------------	--	--

Conference Dinner at 19:30, Mosaico Restaurant – Level 1

Polymers / Composites 2024 Session III. A: Energy and Environmental Applications

Arenal Conference Room

Session's Chairs:

Prof. Federico Paris Carballo, University of Seville, Spain
Prof Joana Vaz Pinto, FCT NOVA University Lisbon, Portugal

09:00 - 09:15	3D printed Schwarz primitive lattice based interpenetrating phase composites for improved energy absorption. W. Feng Lu and X. Guo	Prof. Wen Feng Lu , National University of Singapore, Singapore
09:15 - 09:30	Solvent Delamination of Multilayer Composite Waste –Challenges and Experiences. G. Denafas , I. Pitak, V. Makarevičius, A. Baltušnikas, R. Kriukienė, A. R. Zubas, A. Šleiniūtė and T. Mumladze	Prof. Gintaras Denafas , Kaunas University of Technology, Lithuania
09:30 - 09:45	Metal Foam in Lightweight Heat-Exchangers: Innovation and Recycling Imperatives. J.E. Grimmerstein	Mr. Julius Grimmerstein , TU Bergakademie Freiberg, Germany
09:45 - 10:00	Electromagnetic properties of polymer composites based on 2000HH/2000HM-ferites and ferroelectric matrices. V.G. Kostishin , R.I. Shakirzyanov, I.M. Isaev, A.Yu. Mironovich, B.M. Skibo and M. Jaloliddinzoda	Prof. Vladimir Kostishin , National Research Technological University "MISiS", Russia
10:00 - 10:30 Morning Coffee Break		
10:30 - 10:45	Tailoring the Dielectric Properties of Binder-ST Composites: RTF Experiments vs. OOF2 Modeling. N. Kuzmić , D. Fabijan, S. Davor Škapin, M. Nelo, H.Jantunen and M. Spreitzer	Mrs. Nina Kuzmić , Jožef Stefan Institute, Slovenia
10:45 - 11:00	Na-ion battery using a composite electrolyte. Y. Wang, X. Xu and L. Lu	Prof. Li Lu , National University of Singapore, Singapore
11:00 - 11:15	Radio absorption properties of magnetic polymer composites based on Li-Mn-Zn-spinel ferrites in the range of 0.1 – 7.0 GHz. V.G. Kostishin , R.I. Shakirzyanov, I.M. Isaev, A.Yu. Mironovich, B.M. Skibo and M. Jaloliddinzoda	Prof Vladimir Kostishin , National Research Technological University "MISiS", Russia
11:15 - 11:30	Multifunctional Parylene C membranes for microelectronic devices integration. J.V. Pinto , B.J. Coelho, D. Carvalho, J. Coelho. J.P. Neto, J. Martins, A. Roviso, R. Martins, L.N. Boane, M. Cortinhal, H. Águas, M. Mendes, R.Igreja and P. Barquinha	Prof Joana Vaz Pinto , FCT NOVA University Lisbon, Portugal
11:30 - 11:45	Structural simulation and alternative fabrication of a rear suspension fork link using composite materials for electrical vehicle applications. M. Lasheras-Zubiate, J:L Fernández , E. Teiletxea, G. Argandoña, I. Landa, R. Herrero and R. Mazquiarán	Dr. Rakel Herrero , NAITEC, Spain
11:45 - 12:00	Addressing fire risk in electric vehicles battery boxes using inorganic polymer-based fiber-reinforced composites. A. Natali Murri , E. Papa, E. Landi, C. Mingazzini and V. Medri	Dr. Annalisa Natali Murri , CNR-ISSMC, Italy
12:00 - 12:15	Strong and tough double-network hydrogels with excellent adsorption performance for diclofenac: behaviors and mechanisms. L. Wang , G-J. Euverink and F. Picchioni	Mrs. Lin Wang , University of Groningen, The Netherlands

3Bs Materials 2024 Session III. B: Biomaterials / Biomimetics Materials / Biobased Materials applications**Nervion Conference Room****Session's Chairs:****Prof. Magdalena Ziabka, AGH - University of Krakow, Poland****Dr. Georgina Marsh, Swansea University, UK****Dr. Corine Tourne-Petelth, Univ Montpellier, France**

09:00 - 09:15	3D-printed poly(lactic acid) structures coated in hydroxyapatite and loaded with a drug delivery system for the reconstruction of cranial defects. A. D'Andrea , R. Donate, M. Monzón and I. Cacciotti	Ms. Alessia D'Andrea , University of Rome Niccolò Cusano, Italy
09:15 - 09:30	Encapsulation of ectoine in lipid nanoparticles for the treatment of in-inflammatory bowel disease. M. Abajo and V. Saez-Martinez	Dr. Virginia Saez , i+Med S. Coop, Spain
09:30 - 09:45	Lymphatic Network Engineering and Regeneration in Vitro and in Vivo for the Lymphedema Treatment. Q. Zhang , Y. Wu, M. Fowler, E. Chang, M. Schaverien and P. Yu	Dr. Qixu Luke Zhang , UT MD Anderson Cancer Center, USA .
09:45 - 10:00	Delivering Parasite-Derived Immunotherapeutics from Hyaluronic Acid Hydrogels Acting as Soft Tissue Supports. V. Ward , J. O'Dwyer, R. Lalor, J. P. Dalton and G.P. Duffy	Ms. Victoria Ward , Univ. of Galway, Ireland
10:00 - 10:30	Morning Coffee Break	
10:30 - 10:45	A novel approach in bone regeneration and detection of ALP and RUNX2 osteogenic biomarkers. M. Ionita	Prof. Mariana Ionita , University of Science and Technology Politechnic of Bucharest, Romania
10:45 - 11:00	Hybrid silylated hydrogels for biomolecules encapsulation: design, stability, and controlled release. C. Tourne-Petelth , G. Subra and A. Mehdi	Dr. Corine Tourne-Petelth , Univ Montpellier, France
11:00 - 11:15	Core-shell hydrogels as in vitro tumor models. I. Parodi , M.M. Fato and S. Scaglione	Dr. Ilara Parodi , University of Genoa, Italy
11:15 - 11:30	Cell desiccation: a cheaper and more efficient alternative for storage and transport. L.V. Barrios Silva , N.S. Sharifulden, N. Mandakhbayar, S.J. Shin, J.H. Park, D.J. Player, H.W. Kim, D. Vllasaliu and D.Y.S. Chau	Ms. Lady Barrios Silva , University College London, UK
11:30 - 11:45	Elevating Wound Healing: Unveiling the Impact of Wireless Electrical Stimulation on Cell Differentiation and Observed Improved Cell Attachment and Expansion. L. Gazvoda , M. Zabčić, M. Spreitzer and M. Vukomanović	Mrs. Lea Gazvoda , Jožef Stefan Institute, Slovenia

Polymers / Composites / 3Bs Materials 2024 Posters

06 and 07 March 2024 Sessions

N.	Poster Title	Author, Affiliation, Country
1.	Development of Models to Predict the Properties of Materials Produced of Polymeric Yarns. T. Rolich, I. Salopek Čubrić and G. Čubrić	Prof. Goran Čubrić , University of Zagreb Faculty of Textile Technology, Croatia
2.	On The Measurement of the With of the Distribution of Retardation Times in Polypropylene J. André and J. Cruz Pinto	Prof. José André , Guarda Polytechnic Institute, Portugal
3.	Synchrotron radiation-based FTIR Microspectroscopy and TEM investigations on the Core-Shell structure PEGylated polymeric particles. D.Makharadze , L.J.del Valle, T. Kantaria, T.Kantaria, R. Katsarava AND J.Puiggali	Mr. Davit Makharadze , Polytechnic University of Catalonia, Spain
4.	Photocatalytic carbon dioxide reduction using titanium dioxide modi-fied with metal salts. I. Pelech , K. Sobczuk, K. Ćmielewska, P. Staciwa, D. Sibera, E. Kusiak-Nejman , A.W. Morawski and U. Narkiewicz	Prof. Iwona Pelech , West Pomeranian University of Technology in Szczecin, Poland
5.	Synthesis of Graphene/Polymer Nanocomposites based for additive manufacturing technologies. S. Mikaberidze , M. Maisuradze and N. Jalagonia	Mrs. Sopo Mikaberidze , Tbilisi Technical University, Georgia
6.	Polyhydroxybutyrate-co-hydroxyvalerate composites with rapeseed microfibrers throughout its life cycle. M. Žiganova, A. Ābele, I. Bochkov, T. Ivanova, R. Merijs-Meri and J. Zicāns	Dr. Janis Zicans , Riga Technical University, Latvia
7.	Pectic polysaccharides extracted from melissa and lavender solid by-products of essential oil industry. A. Slavov and G. Marovska	Dr. Anton Slavov , University of Food Technologies Plovdiv, Bulgaria
8.	Supercritical Solvent Impregnation of poly-lactic acid food films with olive leaf extract for fresh fish preservation. M. Tirado, C. Cejudo , F. Sánchez, A. M. Roldán, L. Casas and C. Mantell	Ms. Cristina Cejudo Bastante , University of Cadiz, Spain
9.	Sustainable Gum Arabic Adhesives intended for Corn Seed Coating S. Fuster-Esteso , R. Torres-Vera, J. Martínez-Ruiz and J.M. Martín-Martínez	Ms. Sara Fuster Esteso , University of Alicante, Spain
10.	Phosphorus-Nitrogen synergic bio-based flame retardant from chitosan and phytic acid for plastic matrices applications. M. Expósito and L. Agostinis	Ms. María Expósito , AIMPLAS, Spain
11.	Removal of Emerging Contaminants in waters by filtration with biochars. T. Undabeytia , J.M. De la Rosa, Á. Sánchez-Martín, S Nir, M. Arenas-Arévalo, F. Behrendt and A. Diéguez-Alonso	Dr. Tomas Undabeytia , Instituto de Recursos Naturales y Agrobiología (IRNAS-CSIC), Spain .
12.	The bio-based cellulose produced by acetic acid bacteria as a potential material for sustainable packaging. C. M. Kuo , S. Q. Huang, B. C. Shi, Y. R. Chang and Y. T. Chen	Dr. Chiu-Mei Kuo , Chung Yuan Christian University, Taiwan
13.	Polymeric films conjugated with silver and copper nanoparticles to enhance the antimicrobial activity. E. Hernández-Martín , B. Merás-Saiz and M. Iriarte-Cela	Mrs. Esther Hernández Martín , Nanotechnology Department, Technological and Research Centre, Spain
14.	Development of novel drug delivery systems based on polymeric nanofibers for the treatment of glioblastoma. P.V. Badía Hernandez , J. Moll-Carrió, M. Fuentes-Baile, R. Díaz-Puertas, M. Saceda, M.P. García-Morales and R. Mallavia	Mr. Pedro V.B. Hernández , Miguel Hernández de Elche University, Spain
15.	Assessing Smoke Emission Characteristics of Innovative Cork-Based Composites Incorporating Recycled Plastic Materials. T. Barboni , S. Petlitckaia and P-A. Santoni	Mr. Toussaint Barboni , University of Corsica, France
16.	Multiferroic ceramic composites obtained by three sintering methods. P. Niemiec , D. Bochenek, G. Dercz, A. Chrobak and G. Ziolkowski	Dr. Przemysław Niemiec , University of Silesia in Katowice, Poland

17.	Multiferroic composites based on BaTiO ₃ and nickel-zinc ferrite material. D. Bochenek , P. Niemiec, G. Dercz, A. Chrobak and G. Ziolkowski	Prof. Dariusz Bochenek , University of Silesia in Katowice, Poland
18.	Optimization of parameters for producing piezoelectric BT/PVDF nanocomposites using additive manufacturing. L. Santiago-Andrades , M. J. Sayagués, F. J. Gotor and R. Moriche	Ms. Lucía Santiago Andrades , University of Seville, Spain
19.	Influence of the addition of BT nanoparticles on the piezoelectrical, mechanical and tribological properties of BT/PVDF nanocomposites. A. Otero, M.J. Sayagués, F. J. Gotor, R. Donate, M. Monzón, R. Paz, F. Gutiérrez-Mora and R. Moriche	Dr. Felipe Gutiérrez Mora , University of Seville, Spain
20.	High-temperature mechanical and electrical characterization of zirconia composites with 2D nanomaterials. F.J. Coto-Ruiz A. de la Cruz-Blanco, R. Moriche, Á. Gallardo-López, F. Gutiérrez-Mora, A. Morales-Rodríguez and R. Poyato	Mr. Francisco Javier Coto Ruiz , University of Seville, Spain
21.	Photoreduction of carbon dioxide over TiO ₂ /Ru composites. D. Sibera , I. Pelech, P. Staciwa, K. Ćmielewska, K. Sobczuk, E. Ekiert, E. Kusiak-Nejman, A. W. Morawski and U. Narkiewicz	Dr. Daniel Sibera , West Pomeranian University of Technology, Poland
22.	Dynamics of a thin-walled composite structure with a piezoelectric sensor deformation. L.Zárybnická , M. Marek and R.Kolman	Dr. Lucie Zárybnická , College of Polytechnics Jihlava, Czech Rep.
23.	Laboratory Evaluation of the Use of Seashell and Bio-based Epoxy Asphalt in Porous Asphalt Mixtures. M. Alharthai	Dr. Mohammad Alharthai , Najran University, Saudi Arabia
24.	Recovering and Transforming fishing waste for a sustainable future. S. Miranda , M. Fernandes, R. Reis, T. Simões, J. Redol, P. Manuel, C. Serralheiro and P. Ramalhete	Ms. Sónia Miranda , Innovation in Polymer Engineering (PIEP), Portugal
25.	Development of feather-based materials. K. Wrześniewska-Tosik , T. Mik, E. Wesołowska, T. Kowalewski, M. Pałczyńska and J. Wietecha	Mrs. Justyna Wietecha , Lodz Institute of Technology, Lodz, Poland
26.	Alimentary Protein Isolate and Chitosan Derivatives Complexes as Novel Biomaterials for Skin Repair. D. lanev , B. Vigani, M. Mori, C. Valentino, M. Ruggeri, G. Sandri, and S. Rossi	Dr. Daiana lanev , University of Pavia, Italy
27.	Cellulosic responsive membranes for dynamic water collection. S. D. Almeida , P. L. Almeida, M. H. Godinho and A P. C. Almeida	Mr. Sérgio Almeida , NOVA School of Science and Technology, Portugal
28.	Development of 3D graphite scaffolds due to carbonization of biomaterial spongin at temperatures up to 2200 °C. M. Kotula , A. Kubiak, B. Leśniewski, M. Pajewska-Szmyt and H. Ehrlich	Ms. Martyna Kotula , Adam Mickiewicz University, Poland
29.	Marine Spongin-containing Scaffolds for Creation of functional Iron-Based 3D Composite Materials. A. Kubiak , M. Pajewska-Szmyt, M. Kotula, B. Leśniewski and H. Ehrlich	Ms. Anita Kubiak , Adam Mickiewicz University, Poland
30.	Slow crack growth resistance of zirconia-hydroxyapatite composites. A.Wojteczko and M. Ziabka	Dr. Agnieszka Wojteczko , AGH - University of Krakow, Faculty of Materials Science and Ceramics, Poland
31.	Optimizing Advanced Implant Surfaces: Employing Composite Coatings of Bioglasses and Antimicrobial Substances for Improved Bone Repair and Enhanced Antimicrobial Protection. I. Ungureanu Negut , C. Ristoscu, V. Grumezescu and C. Hapenciuc	Dr. Irina Ungureanu Negut , National Institute for Lasers, Plasma and Radiation Physics, Romania
32.	Characterization & Degradation of Polymers using Various Scaffold Designs for Use in Critical Size Bone Defects. S. Meyr , E. Mirdamadi, R. Smith and M.O. Wang	Ms. Samantha Meyr , University of Maryland, USA
33.	Antibacterial activity and biological response of zirconia based ceramic composites. M. Ziabka and A.Wojteczko	Prof. Magdalena Ziabka , AGH - University of Krakow, Faculty of Materials Science and Ceramics, Poland

34.	Stimuli responsive imine bonds for the green synthesis of antimicrobial-chitosan conjugates. E. Simó-Ramírez , R. Heras-Mozos, C. López de Dicastillo, R. Gavara and P. Hernández-Muñoz	Mr. Ernest Simó Ramírez , IATA-CSIC, Spain .
35.	Novel functionalized gold nanoparticles with improved contact-based antimicrobial properties. M. Žabčič , L. Gazvoda, M. Spreitzer and M. Vukomanović	Ms. Martina Žabčič , Jožef Stefan Institute, Slovenia
36.	Poly(alkylene citrate) (PAC) and PAC-based materials as novel promising candidates for vascular graft production. L. Svobodová , F. Koper, A. Flis, M. Trávníčková, E. Pamuła, L. Bačáková and W. Kasprzyk	Dr. Lucie Svobodová , Institute of Physiology of Czech Academy of Sciences, Czech Rep.
37.	The Role of Manganese in the Evolution of Calcium Phosphate Bioceramics. B. Tyliszczak , D. Słota, K. Niziołek, J. Sadlik, A. Tomala and A. Sobczak-Kupiec	Prof. Bożena Tyliszczak , Cracow University of Technology, Poland
38.	Polymer - Ceramic Composites Enriched in Silk Fibroin for Osteochondral Applications. A. Sobczak-Kupiec , D. Słota, K. Niziołek, D. Trager and B. Tyliszczak	Prof. Agnieszka Sobczak-Kupiec , Cracow University of Technology, Poland
39.	Tissue-Engineered Tri-leaflet Valved Stents on Biodegradable Poly-ε-Caprolactone Scaffolds. M. Saeid Nia , J. A. Seiler and G. Lutter	Dr. Monireh Saeid Nia , University Hospital Schleswig-Holstein, Germany
40.	Silver nanoparticle as therapeutic options to fight the resistome, mobilome and virulome of multidrug resistant <i>Acinetobacter baumannii</i> circulating clones in South Romania. I. Gheorghe-Barbu , I. Czobor Barbu, V.M. Corbu, A-Ş. Dumbravă, D-M Găboreanu, G.-A Grigore, C.O. Vrâncianu, M. Surleac, S. Paraschiv, D. OŢealea, D. Ficaî, A. Ficaî and M.C. Chifiriuc	Mrs. Irina Gheorghe-Barbu , University of Bucharest, Romania
41.	Inorganic nanoparticle-based multifunctional coatings for the preservation of Romanian cultural heritage objects. A.Ş. Dumbravă , I. Gheorghe-Barbu, V.M. Corbu, D.M. Găboreanu, I.C. Marinaş, I. Pecete, D. Ficaî, A. Ficaî, M.C. Chifiriuc and T.E. Şesan	Ms. Andreea Stefania Dumbrava , University of Bucharest, Romania
42.	Biomechanical and Morphological Evaluation of Cryopreserved Porcine Tissues. M. Casarin , M. Todesco, C.G. Fontanella, A. Morlacco, F. Dal Moro, L. Astolfi and A. Bagno	Mrs. Martina Casarin , University of Padua, Italy
43.	Understanding cell-matrix interactions between primary neurons and breast tumor cells in a brain-like 3D microenvironment. E. Türker , J. Faber, M.S. Andrade Mier, N. Murenu, P. Stahlhut, G. Lang, S. Budday, N. Schaefer, P. Strissel R. Strick and C. Villmann	Ms. Esra Türker , University of Würzburg, Germany
44.	Using Biosurfactant Molecules for hydrocarbon desorption from solid surfaces: A Molecular Dynamics Study A. B. Salazar-Arriaga and H. Dominguez	Ms. Ana Beatriz Salazar-Arriaga , National Autonomous University of Mexico, México .
45.	Polyvinyl caprolactam polyvinyl acetate-polyethylene glycol grafted copolymer as an excellent solubility enhancer of apigenin and its neuroprotective potential A. Stasiłowicz-Krzemień , N. Rosiak and J. Cielecka-Piontek	Mrs Anna Stasiłowicz-Krzemień , Poznan University of Medical Sciences, Poland



SETCOR
Conferences & Exhibitions