



CONFERENCE PROGRAMME

MONDAY 28 APRIL		TUESDAY 29 APRIL		WEDNESDAY 30 APRIL	
09:00-09:30	Opening	09:30-10:15	Plenary Talk	09:30-10:00	Invited Talk
09:30-10:15	Plenary Talk			10:00-10:30	Invited Talk
10:15-10:45	COFFEE BREAK	10:15-10:45	COFFEE BREAK	10:30-11:00	COFFEE BREAK
10:45-11:15	Invited Talk	10:45-11:15	Invited Talk	11:00-11:30	Invited Talk
11:15-12:30	Session A	11:15-12:45	Session D	11:30-12:30	Session G
12:30-14:00	LUNCH	12:45-14:00	LUNCH	12:30-14:00	LUNCH
14:00-14:45	Plenary Talk	14:00-14:30	Invited Talk	14:00-15:15	Session H
14:45-16:00	Session B	14:30-15:00 15:00-15:45	Invited Talk Session E		
16:00-16:30	COFFEE BREAK	15:45-16:15	COFFEE BREAK	15:15-15:45	COFFEE BREAK
16:30-18:00	Session C	16:15-17:00	Session F	15:45-16:45	Session I
18:00-18:30	Group Photo	17:00-23:00	Tour & Conference Dinner	16:45-17:15	Closing Ceremony and Announcement of ESEE 2027
18:30-20:00	Welcome Reception & Poster Session				

9:00 - 9:30 **OPENING**9:30 - 10:15 **Plenary 1**

9:30 Controlled release from fibers and droplets of protein-polyelectrolyte complexes
Eyal Zussman

10:15 - 10:45 **COFFEE BREAK**10:45 - 11:15 **Invited Talk**

Chair: **Theodora Krasia-Christoforou**

10:45 Core-shell microstructured particles for protection, controlled release, and other applications
Christian Clasen

11:15 - 12:30 **Session A**

Chair: **Luewton LF Agostinho**

11:15 Poly(tetrafluoroethylene) coatings by electrospray and application for electrojetting emitters
Deepak Parajuli, Eszter Bodnár, Joan Rosell-Llompert

11:30 Raman light sheet microspectroscopy diagnostic of water electrospray
Mário Janda, Kasidapa Polprasarn, Pankaj Pareek, David Pai

11:45 Application of EHDA for respiratory drug delivery
Fatemeh Jahanmard, Mehmet Üzümcü, Maurits Huigen

12:00 Investigating Novel Ionic Liquids for Electrospray Thrusters
Szymon Dworski, Charlie Ryan

12:15 Yield and Stoichiometry of Agglomerates formed by a Bipolar Electrospray
Matthias Kawalek, Wolfgang Peukert, Christian Lübbert

12:30 - 14:00 **LUNCH**14:00 - 14:45 **Plenary Talk**

Chair: **Theodora Krasia-Christoforou**

14:00 Thunderstorm in a Capsule: harnessing wet electrostatic scrubbing for air pollution control
Francesco Di Natale

14:45 - 16:00 **Session B**

Chair: **Joan Rosell-Llompert**

14:45 Electrospun fibers for water and energy harvesting
Urszula Stachewicz

15:00 Synthesis and properties of hydrogel fibers
Donat Szalai, Angela Jedlovszky-Hajdu, Kristof Molnar

15:15 Next Generation Combined - Advanced Therapy Medicinal Products in the Electrospinning and Computational Biophysics Landscape
Nikolas Sochorakis, Andreani Odysseos, Ana Sreamac, Igor Balaz, Marios Constantinou

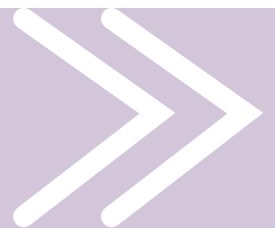
15:30 Towards core-sheath nanofibers with ultrasound-enhanced electrospinning
Antton Huusko, Joni Mäkinen, Dmitry Nikolaev, Henri Österberg, Johannes Schavikin, Ivo Laidmäe, Jyrki Heinämäki, Ari Salmi

15:45 Comparison of needle-based and ultrasound-enhanced electrospinning in generating nanofibrous structures from gelatin methacryloyl for tissue engineering
Johannes Schavikin, Romila Manchanda, Christina Wark, Scott Calabrese Barton, Xanthippi Chatzistavrou, Ivo Laidmäe, Ari Salmi, Jyrki Heinämäki, Nureddin Ashammakhi

16:00 - 16:30 **COFFEE BREAK**

16:30 - 18:00 **Session C**Chair: **Urszula Stachewicz**

- 16:30 Ion evaporation from a population of electrospray nanodroplets
Ignacio G. Loscertales, Francisco J. Higuera
- 16:45 Exploring Electrohydrodynamic Flows for the Engineering of High-Throughput Atomizers
Luis Modesto-López, Alfonso M. Gañán-Calvo
- 17:00 Control of electrospray and charge neutralization for a Soft Mist Inhaler
Kelly Moreira, Fatemeh Jahanmard, Mehmet Üzümcü, Hans Kersbergen, Maurits Huigen, Erik van der Heide, Scott Fleming, Luewton L.F. Agostinho
- 17:15 Experimental Validation of a Simplified Numerical Leaky Dielectric Model for Capillary Electrospray Ion Spacecraft Thrusters
Euan Donovan-Hill, Ford Gooch, Charles Ryan
- 17:30 Unveiling EHDA Spray Modes: An XAI-Approach for Non-Visual Multiclass Mode Recognition.
Luigi Piero Di Bonito, Kelly Moreira, Lelio Campanile, Luewton L.F. Agostinho, Francesco Di Natale
- 17:45 Electrospinning to improving C sequestration and reducing global warming: encapsulating hazelnut biowaste hybrid nanocomposites into nanofibrous soil-like aggregates
Fabrizio De Cesare, Serena Frattari, Simone Serrecchia, Giuseppina Luciani, Virginia Venezia, Sebastiano Marra, Maria Vittoria Verrillo, Antonella Macagnano

18:00 - 18:30 **Group Photo**18:30 - 20:00 **Welcome Reception & Poster Session**

9:30 - 10:15 Plenary TalkChair: **Theodora Krasia-Christoforou**

Electrospinning as an advanced fabrication tool: application to materials for electrochemical hydrogen energy conversion

*Sara Cavaliere***10:15 - 10:45 COFFEE BREAK****10:45 - 11:15 Invited Talk**

10:45 Development And Characterization Of Electrospun Films Of Biopolyester Blends Reinforced With Biowaste - Derived Nanocellulose

*Jose M. Lagaron***11:15 - 12:45 Session D**Chair: **Luigi Piero Di Bonito**

11:15 Electrospun membranes from biowaste for the selective recovery of precious metals from WEEE
Virginia Venezia, Rossella Grappa, Brigida Silvestri, Francesco Di Natale, Giuseppina Luciani

11:30 Biomimicry of the Modular Gaseous Sorption Properties of Reptile Eggshells via Electrospun Keratin Membranes
Yana Maudens, Gerben Debruyne, Eva Loccufier, Lode Daelemans, Erica Savino, Cinzia Tonetti, Claudia Vineis, Alessio Varesano, Matthew Shawkey, Liliana D'Alba, Karen De Clerck

11:45 Development of electrospun poly(3-hydroxybutyrate) materials coated with cellulose derivatives and *Bacillus subtilis*

Petya Tsekova, Mariya Spasova, Donka Draganova, Olya Stoilova

12:00 Design of Electrospun Fibers for Hydrometallurgical Recovery of Gold from Electric and Electronic Wastes
Antonio Di Colandrea, Paraskevas Kyriacou, Luigi Piero Di Bonito, Francesco Di Natale, Theodora Krasia

12:15 Novel electrospun biohybrid polymer materials for biocontrol in sustainable agriculture
Mariya Spasova, Mladen Naydenov, Olya Stoilova

12:30 From handheld to pilot-scale electrospinning - green nanofiber membranes from sustainable materials in healthcare applications

*Gordon Herwig, René M. Rossi***12:45 - 14:00 LUNCH****14:00 - 14:30 Invited Talk**Chair: **Theodora Krasia-Christoforou**

14:00 Electrospinning Meets Sustainable Agriculture: Advanced Solutions for Crop and Soil Health
Antonella Macagnano, Fabrizio De Cesare

14:30 - 15:00 Invited TalkChair: **Theodora Krasia-Christoforou**

14:30 2D to 3D structuration of electrospun mats for biomedical applications
Anne Hébraud, Emeline Lobry, Guy Schlatter

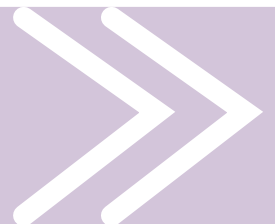
15:00 - 15:45 **Session E**Chair: **Martyna Polak**

- 15:00 Protein-based nonwovens for biomedical applications
Aleksandra Nešić, Mariana Daniela Berechet, Carmen Gaidau, Branka Pilić
- 15:15 Cell Guiding Multicomponent Nanoyarn Tendon Scaffolds with Tunable Morphology and Flexibility
Lucas Schynkel, Marguerite Meeremans, Anna Meyer, Ella Schoolaert, Jozefien Geltmeyer, Abdolrahman Omidinia-Anarkoli, Sandra Van Vlierberghe, Lode Daelemans, Laura De Laporte, Catharina De Schauwer, Richard Hoogenboom, Karen De Clerck
- 15:30 Hydrogel and Microfibre Layered Composite for Cartilage Tissue Engineering
Oleksandr Gryshchuk, Caroline Emonts, Thomas Gries

15:45 - 16:15 COFFEE BREAK

16:15 - 17:00 **Session F**Chair: **Martyna Polak**

- 16:15 Manufacturing of Nanomaterials for Healthcare Applications Empowered by Artificial Intelligence
Maryam Parhizkar
- 16:30 Composite electrospun scaffolds for biomedical applications
Veronika Pálos, Sarolta Halmóczy, Angela Jedlovszky-Hajdu
- 16:45 Red-Ox Active Electrospun Mats as smart wound dressing solutions
Virginia Venezia, Giulio Pota, Antonia Puzone, Giuseppe Vitiello, Alessandro Pezzella, Paolo Armanetti, Luca Menichetti, Gluseppina Luciani

17:00 - 23:00 **Tour & Conference Dinner**

9:30 - 10:00 **Invited Talk**

Chair: **Theodora Krasia-Christoforou**

9:30 Tailored mechanical performance of fiber reinforced polymer (FRP) composites through interlayer enhancement with electrospun polymer nanofibers
Vassilis Drakonakis

10:00 - 10:30 **Invited Talk**

Chair: **Theodora Krasia-Christoforou**

10:00 Fibrous Patches Enriched with Natural Compounds and Synthetic Drugs for Skin Disease and Inflammation
Ewa Kijenska-Gawronska

10:30 - 11:00 COFFEE BREAK

11:00 - 11:30 **Invited Talk**

Chair: **Theodora Krasia-Christoforou**

11:00 Controlling the transport of reactive species from cold plasma into water bulk and aerosols
Zdenko Machala, Mário Janda, Mostafa Hassan

11:30 - 12:30 **Session G**

Chair: **Luis Modesto-López**

11:30 Electrospun Calcium Cobaltite Nanoribbons with Controlled Crystallinity for Enhanced Thermoelectric Performance

Itzhak Ishay Maor, Katharina Kruppa, Adi Rozencweig, Amir Sterzer, Frank Steinbach, Vadim Beilin, Bernd Breidenstein, Gennady Shter, Meirav Mann-Lahav, Armin Feldhoff, Gideon Grader

11:45 Hollow double-shell electrospun fibers for enhanced thermal insulation
Joanna Knapczyk-Korczak, Urszula Stachewicz

12:00 Electrospun π -conjugated polymer blends for white light emission in lighting technology applications
Marharyta Hancharova, Lech Sznitko, Joanna Cabaj

12:15 Disordered photonics of electrospun fibers
Lech Sznitko

12:30 - 14:00 LUNCH

14:00 - 15:15 **Session H**

Chair: **Kelly Moreira**

14:00 Design and Development of a Functional Material-Based Emission Source for CubeSat Propulsion
Gopika Mukundan, Enric Grustan-Gutierrez

14:15 Development of eco-friendly, sound-absorbing nanofibrous veils for Sound Insulation applications
Ioanna Savva, Hilal Reda, Vassilis Drakonakis, Maria Karouzou, Natalia Violari, Vangelis Harmandaris

14:30 Protein-based electrospun fibers as stable, sensory materials
Katarzyna Kołodzińska, Sylwia Baluta, Adrian Cernescu, Joanna Cabaj, Lech Sznitko

14:45 Parameter Optimization for Electrospinning of 4D Nanofibers
Vinayak Nirmale, Norbert Radacsi

15:00 Electrospun poly(L-lactide-co- ϵ -caprolactone) (PLCL) scaffolds with controlled surface potential for tissue engineering application
Katarzyna Marszałik, Martyna Polak, Joanna Knapczyk-Korczak, Krzysztof Berniak, Piotr Szewczyk, Mateusz Marzec, Urszula Stachewicz

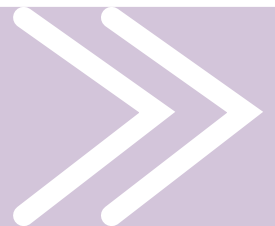
15:15 - 15:45 COFFEE BREAK

15:45 - 17:00 **Session I**

Chair: **Joanna Knapczyk-Korczak**

- 15:45 Impact of rGO and MXene integrated in the electrospun scaffolds on cell focal adhesion points
Martyna Polak, Krzysztof Berniak, Piotr K. Szewczyk, Mateusz M. Marzec, Joanna Knapczyk-Korczak, Urszula Stachewicz, Agnieszka M. Jastrzębska
- 16:00 Functional Electrospun Biopolymers for Agriculture: Controlled Release of Polyphenols from Upcycled Agro-Waste
Simone Serrecchia, Fabrizio De Cesare, Sarai Agustin Salazar, Gabriella Santagata, Cristina Ricucci, Gabriella Di carlo, Antonella Macagnano
- 16:15 Nanofibers and Nanorods for Electrochemical Applications (H2ENRY and AM4BAT projects)
Sandra Martínez, Gerard Pérez, Jorge Luque, Pau Bosch, Eduard Borràs, Aiman Chbani, Milad Madinehei
- 16:30 Advancing Bioartificial Pancreas Design: Electrospun and Post-Treated Mesoporous Polyurethane Membranes for Type 1 Diabetes Therapy
Emeline Lobry, Anne Hébraud, Guy Schlatter

16:45 - 17:15 **Closing Ceremony and Announcement of ESEE 2027**



18:30 - 20:00 Poster Session

- 1 Development and optimization of electrospun 3D PCL scaffolds using a liquid bath collector for enhanced cell culture applications in tissue engineering
Robin Schlinkmann, Alina Farchmin, Thomas Gries
- 2 Eco-friendly, Sound Absorbing Materials based on Cellulose Acetate Electrospun Fibers/Luffa Cylindrica Composites
Viktoria Theodorou
- 3 Advanced Photocatalytic Nanocomposites Based on Electrospun TiO₂ Nanofibers Modified with Green- Synthesized AgNPs
Kateryna Nemesh, Ivan Shepa, Erika Mudra, Oksana Velgosová, Veronika Kucharova, Matej Balaz, Dáša Drenčáková, Marek Vojtko, Frantisek Kromka, Maksym Lisnichuk, Jan Dusza
- 4 Electrospinning of Complex Metal Oxide Ceramic Nanofibers
Ivan Shepa, Kateryna Nemesh, Erika Mudra, Petra Hviscova, Richard Smolko, Dáša Drenčáková, Maksym Lisnichuk, Dmitry Albov
- 5 Methods of Compound Drug Delivery via Porous Collagen Scaffolds
Kyriaki Louka, Iro Papagiannaki, Theodora Krasia, Dimitrios Tzeranis
- 6 Graphene-based electrospun nanofibers in the removal of U(VI) from aqueous media
Andreas Hadjianastasi
- 7 Electrospun fibrous borate-based bioactive glasses
Katarzyna Kozubal, Patrycja Gaćkowska-Gondek, Katarzyna Cholewa-Kowalska, Michał Dziadek
- 8 Bioactive Borate Glass Fibers Obtained by Core-Shell Electrospinning
Patrycja Gaćkowska-Gondek, Katarzyna Kozubal, Michał Dziadek, Katarzyna Cholewa Kowalska
- 9 Advanced plant protection by electrospun materials, natural polysaccharides and beneficial microorganisms
Nasko Nachev, Mladen Naydenov, Mariya Spasova, Olya Stoilova
- 10 Chitosan-coated poly(3-hydroxybutyrate) fibrous materials with *Bacillus subtilis* for eco-friendly plant biocontrol
Nikoleta Stoyanova, Mariya Spasova, Iliyana Valcheva, Olya Stoilova
- 11 Electrospun nanocomposite PSS/GQDs fibers with color-tunable properties for white light emission
Georgia Papaparaska, Paris Papagiorgis, Grigorios Itskos, Christina Michael, Eugenia Tanasă, Theodora Krasia-Christoforou
- 12 Bio-based electrospun membranes loading microbial calcite particles for heavy metal remediation
Virginia Venezia, Laura Vitale, Rocco Di Girolamo, Valerio Funari, Pietro Tedesco, Giuseppe Vitiello
- 13 The luminescent properties of polymer microfibers with DCM dye produced by the electrospinning method
Zuzanna Korczak, Katarzyna Kołodzińska, Kinga Halicka-Stępień, Lech Sznitko
- 14 Electrospun Fiber Mats: A Versatile Platform for Multicolor and White Lasing
Alina Szukalska, Kinga Halicka-Stępień, Katarzyna Kołodzińska, Joanna Cabaj, Lech Sznitko
- 15 Polysuccinimide-salt electrospun scaffold for potential wound dressing application
Veronika Pálos, Angela Jedlovszky-Hajdu, Krisztina S. Nagy, Rita Pázmány, Krisztina Juriga-Tóth, Bálint Budavári, Judit Domokos, Dóra Szabó, Ákos Zsembery, Dorottya Gréta Kis
- 16 Development of an electrospun wound healing nanocomposite
Sarolta Halmoczki, Vivien Rizmajer, Kitti Osan, Angela Jedlovszky-Hajdu

- 17 Developing Engineered Energy-Harvesting Devices Based on Cyanobacteria using Electrospinning
Luis Modesto-López, Mireia Burnat, Rocío López-Igual
- 18 A wet electrostatic scrubbing unit for ammonia-fueled ships
Francesco Di Natale, Arianna Parisi, Luigi Piero Di Bonito, Martina Zabatta, Domenico Flagiello
- 19 Nucleic acid-marked nanoplastics specially manufactured for water technology applications using electrohydrodynamic atomization (EHDA)
Kelly Moreira, Larissa Fernandes, Caitlin Soppe, Luewton L.F. Agostinho
- 20 Integrating electro spray into autonomous drones for greenhouses crop protection
Kelly Moreira, Raphael Leivas, Matheus Novelli, Luewton L.F. Agostinho
- 21 Relationships between electrical properties during electrospinning and the resulting fibrous structure
Steve Lange, Emeline Lobry, Anne Hébraud, Guy Schlatter
- 22 EHDA setup for synthesizing gas sensing nanomaterials
Christoforos Skourides, Nikolas Sochorakis, Dimitris Gounaris, George Biskos
- 23 Modelling and design of an EHDA based biogas odorization system
Kelly Moreira, Leon Schmittgens, Ignacio Loscertales, Luewton L.F. Agostinho
- 24 Hollow lignin-based nanofibres by electrospinning: Roles of composition and solution rheology
Paula Martínez-Cánovas, Salvatore Cito, Francisco Medina, Joan Rosell Llompart
- 25 Printing with submicron fibres by electrostatic stirring of electrohydrodynamic jets
Eszter Bodnár, Ievgenii Liashenko, Alberto Ramon, Andreu Cabot, Joan Rosell-Llompart
- 26 Nanofiber Transwell Platform for Enhancing Cellular Viability and Sensing
Vinayak Nirmale, Bilgi Kip, Colin Campbell, Norbert Radacsi
- 27 Application of SpaceNanoWeld Technology in Satellite Structural Components: Improving Mechanical and Thermal Performance
Savvas Assiotis, Ioannis Ioannou, Andreas Stavrou, Michalis Koutsoftas, Ioanna Savva, Maria Karouzou, Natalia Violari, Vassilis Drakonakis
- 28 Novel nano-enabled membranes for Carbon Capture (CSS) Systems for industrial post combustion processes
Maria Karouzou, Ioanna Savva, Natalia Violari, Achilleas Konstantinou, Vassilis Drakonakis
- 29 Characterization of porosity in electrospun nanocomposite membranes using porometry, uCT, MRI and X-ray Imaging
Anna Marszałek, Anna Nikodem, Agnieszka Fulbiszewska, Łukasz Zych, Tomasz Szponder, Ewa Stodolak-Zych
- 30 Fibers modified with biologically active compounds for immunomodulation
Ewa Stodolak-Zych
- 31 Tailoring electrospun nanofibers to enhance cellular uptake and bioavailability of proteins
Maryam Saberi
- 32 Shake it Till You Make It: Enhancing Cell Attachment onto Melt-Electrowritten Scaffolds
Jessica A. Hollett, Ievgenii Liashenko, Paul D. Dalton, Lucy A. Bosworth
- 33 Bioinspired hierarchical scaffolds direct human conjunctival epithelial cell organization and distribution
Vera Citro, Ievgenii Liashenko, Paul Dalton, Kevin Hamill, Lucy Bosworth