



TRIBOLOGY INTERNATIONAL CONFERENCE



# SICT 2023 / PLASMA TECH 2023 / TRIBOLOGY 2023 JOINT CONFERENCES

26-28 Avril, 2023 - Lisbon, Portugal

## Conference Program

Organizer



**SETCOR**  
Conferences & Exhibitions

# SICT 2023 / PlasmaTech 2023 / Tribology 2023 Joint Conferences Program

26 - 28 April 2023 | Lisbon, Portugal

<b>26 April 2023</b>		
<b>08:30 - 12:00</b>	<b>Participants registration</b>	
<b>08:30 - 10:30</b>	<b>Welcoming Coffee - Mezzanine Area</b>	
<b>SICT 2023 / Plasma Tech 2023 / Tribology 2023 Joint Plenary Session</b>		
<b>Conference Room Roma I</b>		
<b>Session's Chairs:</b> <b>Prof. Luis L. Alves</b> , Instituto Superior Técnico- Lisbon, <b>Portugal</b> <b>Prof. Igor Adamovich</b> , Ohio State University, <b>USA</b> <b>Prof. Michael R. Wertheimer</b> , Polytechnique Montréal, <b>Canada</b>		
<b>10:30 - 11:00</b>	Functional Plasma Polymer Films – Optimization, Implementation and Application <b>D. Hegemann</b>	<b>Dr. Dirk Hegemann</b> , Empa - Swiss Federal Lab for Materials Science and Technology, <b>Switzerland</b>
<b>11:00 - 11:30</b>	Thermodynamic quasi-equilibria in high power magnetron discharges: A generalized Poisson-Boltzmann relation K. Köhn, D. Krüger, D. Eremin, L. Xu, <b>R.P. Brinkmann</b>	<b>Prof. Ralf Peter Brinkmann</b> , Ruhr-University Bochum, <b>Germany</b>
<b>11:30 - 12:00</b>	Development of a Portable Surface Modification Technology to Control the Tribological Properties of Al7075-T6 Alloy for Aerospace Applications <b>A. Amanov</b> and J-H. Kim	<b>Prof. Auezhan Amanov</b> , Sun Moon University, <b>Rep. of Korea</b>
<b>12:00 - 14:00</b>	<b>Lunch Break - Restaurante Rio de Janeiro</b>	
<b>SICT 2023 Session I. A:</b> <b>Surface treatments and coatings deposition and functionalization / Characterization / Properties Multifunctional composite and hybrid coatings</b>		
<b>Conference Room Roma I</b>		
<b>Session's Chairs:</b> <b>Prof. Vasily Efremenko</b> , Pryazovskyi State Technical University, <b>Ukraine</b> <b>Dr. Mohamed Belhaj</b> , ONERA-DPHY- Toulouse, <b>France</b> <b>Dr. Madhan K. Arumugam</b> , King Fahd University of Petroleum and Minerals, <b>Saudi Arabia</b>		
<b>14:00 - 14:30</b>	Development of Nanolayered Thin Films for Joining Applications <b>S. Simões</b> , M.Silva, F.Viana, A.S. Ramos and M.T. Vieira	<b>Dr. Sónia Simões</b> , University of Porto, <b>Portugal</b>
<b>14:30 - 14:45</b>	Clay mineral nanosheets suspended in water give bright and noniridescent structural colors P.H. Michels-Brito, V. Dudko, J. Breu and <b>J. Otto Fossum</b>	<b>Prof. Jon Otto Fossum</b> , Norwegian University of Science and Technology, <b>Norway</b>
<b>14:45 - 15:00</b>	Molecular Layer Deposition – Versatile Tool for High Performance CNT-Polymer Composites <b>R. Yerushalmi</b>	<b>Prof. Roie Yerushalmi</b> , The Hebrew University of Jerusalem, <b>Israel</b>
<b>15:00 - 15:15</b>	Controlling porosity of adsorbed polymeric overlayers: Monte Carlo simulations of the Ullmann coupling of halogenated PAHs <b>P. Szabelski</b> and J. Lisiecki	<b>Prof. Paweł Szabelski</b> , Maria Curie-Skłodowska University, <b>Poland</b>
<b>15:15 - 15:30</b>	Revealing atomic-scale phase transition in epitaxial VO <sub>2</sub> thin films <b>M. Ahmadi</b> , Atul, M. Ahamdi, S. de Graaf and B. Kooi	<b>Mr. Masoud Ahmadi</b> , University of Groningen, <b>the Netherlands</b>
<b>15:30 - 15:45</b>	Eco-efficient flame retardant bio-based self-stratifying coatings <b>M. Jimenez</b> , C. Lemesle, S. Bellayer, S. Duquesne, M. Casetta, A-S. Schuller and J. Molina	<b>Prof. Maude Jimenez</b> , University of Lille, <b>France</b>
<b>15:45- 16:00</b>	Aerosol Deposition of CuFeO <sub>2</sub> photo-cathode coatings <b>A. Bruera</b> , A. Eisenberg, G. Bolelli, F. Gärtner, M. Schieda, T. Klassen and L. Lusvarghi	<b>Ms. Alessia Bruera</b> , University of Modena and Reggio Emilia, Modena, <b>Italy</b>
<b>16:00 - 16:30</b>	<b>Coffee Break / Posters Session - Mezzanine Area</b>	

<b>16:30 - 16:45</b>	Superhydrophobic candle soot-coated PDMS surfaces replicated from leek leaves <b>S.M. Mirmohammadi</b> , H. Daghigh Shirazi, S. Franssila, J. Vapaavuori and V. Jokinen	<b>Mr. Seyed M. Mirmohammadi</b> , University, Finland
<b>16:45 - 17:00</b>	The influence of low temperature plasma oxidizing process on the bioactivity of NiTi shape memory alloy in terms of medical applications <b>J. Witkowska</b> , T.Borowski, A. Sowińska, E. Choińska, D. Moszczyńska, J. Morgiel, J. Sobiecki and T.Wierzchoń	<b>Mrs. Justyna Witkowska</b> , Warsaw University of Technology, Poland

26 April 2023

**Plasma Tech Session I. B: Plasma fundamentals / Modelling / Atomic and Molecular Processes**

**Conference Room Roma II**

**Session's Chairs:**

**Prof. Ralf Peter Brinkmann**, Ruhr-University Bochum, **Germany**

**Dr. Dirk Hegemann**, Empa - Swiss Federal Laboratories for Materials Science and Technology, **Switzerland**

**Prof. Holger Kersten**, University Kiel, **Germany**

<b>14:00 - 14:30</b>	Isolating and Quantifying the Reactions of Vibrationally Excited Molecules in Nonequilibrium Plasmas <b>I. Adamovich</b>	<b>Prof. Igor Adamovich</b> , Ohio State University, <b>USA</b>
<b>14:30 - 15:00</b>	How relevant is charged-particle transport in global models? <b>L.L. Alves</b> and A. Tejero-del-Caz	<b>Prof. Luis L. Alves</b> , Instituto Superior Técnico, Lisbon, <b>Portugal</b>
<b>15:00 - 15:30</b>	Calculation of Equilibrium Plasma Thermodynamics <b>G. Colonna</b> , A. D'Angola and A. Laricchiuta	<b>Dr. Gianpiero Colonna</b> , CNR-ISTP-Bari, <b>Italy</b>
<b>15:30 - 16:00</b>	A Database of Transport Cross Sections for Planetary Atmospheres <b>A. Laricchiuta</b> , A. D'Angola, F. Pirani, M. Capitelli and G. Colonna	<b>Dr. Annarita Laricchiuta</b> , National Research Council Bari, <b>Italy</b>
<b>16:00 - 16:30</b>	<b>Coffee Break / Posters Session - Mezzanine Area</b>	
<b>Session's Chairs:</b>		
<b>Prof. Holger Kersten</b> , University Kiel, <b>Germany</b>		
<b>Dr. Annarita Laricchiuta</b> , National Research Council Bari, <b>Italy</b>		
<b>Dr. Gianpiero Colonna</b> , CNR-ISTP-Bari, <b>Italy</b>		
<b>16:30 - 17:00</b>	Development Process, Structure and Performance Parameters of a Shielded 433 MHz Plasma Jet with 600W <b>H. Heuermann</b> and St. Terbrack	<b>Prof. Holger Heuermann</b> , FH Aachen University of Applied Sciences, <b>Germany</b>
<b>17:00 - 17:15</b>	Energetics of Reactions in a Dielectric Barrier Discharge with Argon Carrier Gas with Admixed Hydrofluoromethanes S. Watson, B. Nisol and <b>M.R. Wertheimer</b>	<b>Prof. Michael R. Wertheimer</b> , Polytechnique Montréal, <b>Canada</b>
<b>17:15 - 17:30</b>	Electron emission yield of metals: in-situ cleaned and exposed to ambient atmosphere surfaces <b>M. Belhaj</b> and S. Dadouch	<b>Dr. Mohamed Belhaj</b> , ONERA-DPHY, Toulouse, <b>France</b>
<b>17:30 - 17:45</b>	Modelling of electrostatic discharge inception conditions in presence of multipactor effect in HF spatial components <b>Q. Peysson</b> , P. Sarrailh, M. Belhaj, N. Fil and D. Payan	<b>Mr. Quentin Peysson</b> , ONERA-DPHY- Toulouse, <b>France</b>
<b>17:45 - 18:00</b>	Thermal & Dielectric Breakdown Criterium for Low Voltage Switching Devices <b>T. Merciris</b> , M. Masquere, Y. Cressault and P. Petit	<b>Mr. Thomas Merciris</b> , Schneider Electric, <b>France</b>

26 April 2023

**SICT 2023 / Tribology 2023 Joint Session I. C: Surface Engineering, Coatings and Tribology**

Conference Room Milão I + II

**Session's Chairs:**

**Prof. Auezhan Amanov**, Sun Moon University, Rep. of Korea

**Prof. Ardian Morina**, University of Leeds, UK

14:00 - 14:30	Importance of contact temperatures for tribology of polymer contacts <b>M. Kalin</b>	<b>Prof. Mitjan Kalin</b> , University of Ljubljana, Slovenia
14:30 - 14:45	Metallurgical features and functional properties of NiW coatings deposited onto low alloyed steel D. Figuet, A. Billard, C. Savall, J. Creus and <b>J-L. Grosseau-Poussard</b>	<b>Prof Jean-Luc Grosseau-Poussard</b> , La Rochelle University, France
14:45 - 15:00	Experimental investigations on wear performance of PVD hard coatings using Micro scratch testing method <b>Maryam A. Zolbin</b> and R. Aghababaei	<b>Ms. Maryam A. Zolbin</b> , University, Aarhus, Denmark
15:00 - 15:15	Hard anodizing of diecast AISi10MnMg alloys <b>G. Scampone</b> , A. Russo, R. Muzzani, A. Carminati and G. Timelli	<b>Ms. Giulia Scampone</b> , University of Padova, Italy
15:15 - 15:30	Tribological Characteristics of Hybrid Thermally Sprayed Coatings using Graphene Family Nanomaterials <b>D. Skaltsas</b> , G.N. Rossopoulos, D. Giasafaki, P. Ioannou, D. Andreouli, C.I. Papadopoulos, C.I. Sarafoglou and I. Georgiopoulos	<b>Mr. Dimitrios Skaltsas</b> , National Technical University of Athens, Greece
15:30 - 15:45	Tribological Behaviour of TiAlN and AlCrN coatings deposited over martensitic stainless steel <b>E. L. Dalibon</b> , A. J. Maskavizan and S.P. Brühl	<b>Dr. Eugenia L. Dalibon</b> , UTN- FRCU, Argentina
15:45 - 16:00	Atomic-scale understanding of the amorphous/crystalline interface evolution in DLC/WC coatings via different quenching rates <b>L. Ma</b> , N. Nemati and R. Aghababaei	<b>Mr. Li Ma</b> , Aarhus University, Denmark
16:00 - 16:30	<b>Coffee Break / Posters Session - Mezzanine Area</b>	
<b>Session's Chairs:</b>		
<b>Prof. Mitjan Kalin</b> , University of Ljubljana, Slovenia		
<b>Prof Jean-Luc Grosseau-Poussard</b> , La Rochelle University, France		
<b>Prof. Ardian Morina</b> , University of Leeds, UK		
16:30 - 16:45	Fatigue behaviour of diamond-like carbon coatings with various adhesion layers <b>J. Vetter</b> , M. Günther, P. Hofmann, S. Grosse and S. Schmauder	<b>Mr. Joshua Vetter</b> , Robert Bosch GmbH/ University of Stuttgart, Germany
16:45 - 17:00	Study of the application of DLC coating on cold stamping tools <b>E. Barba</b>	<b>Mr. Eneko Barba</b> , Public University of Navarre, Pamplona, Spain
17:00 - 17:15	Wear reduction by application of silver coatings at 1850 m/s high speed electric sliding contacts C. Biethan, F. Alouahabi, F. Moitrier and <b>M. Schneider</b>	<b>Dr. Markus Schneider</b> , French-German Research Institute of Saint-Louis, France
17:15 - 17:30	Investigate the microstructure and wear resistance of Fe <sub>3</sub> Al coating on GCI prepared by direct energy deposition <b>H. Rajaei</b> , S. Amirabdollahian, C. Menapace, G. Straffelini and S. Gialanella	<b>Mr. Hossein Rajaei</b> , University of Trento, Italy
17:30 - 17:45	A Hybrid Graphene-Reinforced Copper-Matrix/Multilayer Composite Coating for High-Load and Environment-Resistant Solid Lubrication on Steel <b>N. Savjani</b> , S. Zhao, L. Fabbri, G. Paterakis, E. X. Johansson, G. Bartolini, V.O. Mercadillo, E. Piciollo, G. Anagnostopoulos, F. Bertocchi, A.M. Andersson, M.A. Bissett and I.A. Kinloch	<b>Dr. Nicky Savjani</b> , the University of Manchester, UK
17:45 - 18:00	Characterization of mechanical and lubrication properties of Double network ion gels synthesized by a one-pot process <b>H. Arafune</b> , Y. Watarai, T. Kamijo, S. Honma and T. Sato	<b>Dr. Hiroyuki Arafune</b> , National institute of technology, Tsuruoka College, Japan

<b>18:00 - 18:15</b>	Micro-arc oxidation of hydrostatically extruded titanium in phosphate-based electrolytes <b>L. Maj</b> , F. Muhaffel, A. Jarzebska, A. Trelka, K. Trembecka, M. Kulczyk, A. Sulyok, H. Cimenoglu and M. Bieda	<b>Dr. Lukasz Maj</b> , Institute of Metallurgy and Materials Science, <b>Poland</b>
<b>18:15 - 18:30</b>	Emission behavior and brake performance at mild and severe sliding conditions of a conventional cast iron disc and a cermet-coated disc <b>S. Candeo</b> , F. Varriale, A.P. Nogueira, S. Gialanella and G. Straffelini	<b>Mr. Stefano Candeo</b> , University of Trento, <b>Italy</b>
<b>18:30 - 18:45</b>	Tribological performance of doped-DLC coatings in the presence of functionalized copolymer <b>T. Omiya</b> , T Vuchkov, 3, A. Cavaleiro, J.F.J. Coelho and F. Ferreira	<b>Mr. Takeru Omiya</b> , University of Coimbra, <b>Portugal</b>

27 April 2023

**SICT 2023 Session II. A:  
Surface and coatings Characterization / Properties  
Multifunctional composite and hybrid coatings**

Conference Room Roma I

**Session's Chairs:**

**Prof. Maude Jimenez**, University of Lille, France  
**Prof. Jon Otto Fossum**, Norwegian University of Science and Technology, Norway

09:00 - 09:30	Nucleation and growth of intragranular acicular ferrite from the interface between NaCl-type particles and steels <b>W. Mu</b>	<b>Dr. Wangzhong Mu</b> , KTH Royal Institute of Technology, Sweden
09:30 - 09:45	In situ study of the interlayer intercalation of 2-mercaptobenzothiazole in layered double hydroxides directly grown on AA2024 alloy <b>C. Neves</b> , I. Sousa, A. Salak and J. Tedim	<b>Dr. Cristina Neves</b> , University of Aveiro, Portugal
09:45 - 10:00	Evaluation of surface functionalization for improved adhesion between nitinol and thermoplastic polyurethane <b>T. Schneiders</b> and T. Gries	<b>Mr. Thomas Schneiders</b> , RWTH Aachen University, Germany
10:00 - 10:15	Wetting and phase electrowetting as a probe for surface chemistry of hydrophobic materials. M.A. F. Figueroa, B. Manchon and <b>M. Maillard</b>	<b>Dr. Mathieu Maillard</b> , Univ Lyon, France.
10:15 - 10:30	Study of the wettability texturing hydrophobic surfaces prepared with cross-linked hybrid solutions under UV <b>I. Caldeira</b> , B. Toury, C. Brylinski, V. Gâté, D. Turover and M. Maillard	<b>Mrs. Isabel Caldeira</b> , Univ Lyon, France

10:30 - 11:00

Coffee Break / Posters Session - Mezzanine Area

**Session's Chairs:**

**Prof. Maude Jimenez**, University of Lille, France  
**Dr. Wangzhong Mu**, KTH Royal Institute of Technology, Sweden  
**Prof. Jon Otto Fossum**, Norwegian University of Science and Technology, Norway

11:00 - 11:15	Substrate controlled hydrophobicity of Y2O3 thin films <b>J. Borowiec</b>	<b>Dr. Joanna Borowiec</b> , University College London, UK
11:15 - 11:30	Spreading Dynamics of Metal on Metal-on-Glass <b>H. Taitelbaum</b>	<b>Prof. Haim Taitelbaum</b> , Bar-Ilan University, Ramat-Gan, Israel
11:30 - 11:45	Elemental and chemical depth profiling of organic-coated steel strips <b>D. Leidlmair</b> , J. Duchoslav, G. Mayr, B. Strauß and D. Stifter	<b>Mr. Daniel Leidlmair</b> , Johannes Kepler University-Linz, Austria
11:45 - 12:00	Analysis of Coatings by Glow Discharge Emission Spectroscopy: Light Elements <b>Z. Weiss</b>	<b>Dr. Zdenek Weiss</b> , Institute of Physics of the Czech Academy of Sciences, Czech Republic
12:00 - 12:15	Ex situ Raman spectroelectrochemistry of IrO <sub>2</sub> and Ir metal nanoparticles in as-deposited and electrochemically activated states <b>A.K. Surca</b> , L. Moriau, M. Bele, M.A. Nazrulla, A. Lončar, N. Hodnik	<b>Dr. Angelja K. Surca</b> , National Institute of Chemistry, Ljubljana, Slovenia

12:00 - 14:00

Lunch Break - Restaurante Rio de Janeiro

Group Photo at 13:45

**SICT 2023 / PlasmaTech 2023 Joint session II. B:**  
**Bio-interfaces, Biomedical / Bioactive surfaces and coatings**  
**Plasma applications for biology, medicine, and agriculture**

**Session's Chairs:**

**Prof. Liutauras Marcinauskas**, Lithuanian Energy Institute/ Kaunas University of Tech, **Lithuania**  
**Dr. Ana Megía-Macías**, Comillas Pontifical University, **Spain**

<b>14:00 - 14:30</b>	Design of new antimicrobial osseointegrated dental implants <b>S. Carvalho</b>	<b>Prof. Sandra Carvalho</b> , University of Coimbra, <b>Portugal</b>
<b>14:30 - 15:00</b>	Drug Eluting Coatings to Enhance the Functionality of Implants <b>M. Zilberman</b>	<b>Prof. Meital Zilberman</b> , Tel- Aviv University, <b>Israel</b>
<b>15:00 - 15:30</b>	Fluid interfaces as platforms for understanding the interaction of pollutants with lipid barriers <b>E. Guzmán</b>	<b>Prof. Eduardo Guzman Solis</b> , Complutense University of Madrid, <b>Spain</b>
<b>15:30 - 15:45</b>	Room vs. body temperature to evaluate electrical interface parameters of state-of-the-art PEDOT-PSS electrode for neural stimulation <b>K. Cysewska</b>	<b>Dr. Karolina Cysewska</b> , Gdansk University of Technology, <b>Poland</b>
<b>15:45 - 16:00</b>	Plasma-deposited hydrophobic organosilicon coatings for sustainable leather in footwear applications <b>C. Ruzafa-Silvestre</b> , V.M. Serrano-Martínez and E. Orgilés- Calpena.	<b>Mr. Carlos Ruzafa Silvestre</b> , Footwear Technology Centre (INESCOP), <b>Spain</b>
<b>16:00 - 16:30</b>	<b>Coffee Break / Posters Session - Mezzanine Area</b>	
<b>Session's Chairs:</b>		
<b>Prof. Eduardo Guzman Solis</b> , Complutense University of Madrid, <b>Spain</b> <b>Prof. Meital Zilberman</b> , Tel-Aviv University, <b>Israel</b>		
<b>16:30 - 17:00</b>	Plasma applications for smart and sustainable agriculture (PIAgri) with the emphasis on biotechnologies <b>N. Puač</b> , O. Jovanović, S. Živković, M. Milutinović, S. Jevremović, G. Malović and N. Škoro	<b>Dr. Nevena Puac</b> , University of Belgrade, <b>Serbia</b>
<b>17:00 - 17:15</b>	Multifunctional transparent oxide thin films for photocatalytic and antimicrobial applications <b>J.G. Cuadra</b> , S. Molina-Prados, G. Mínguez-Vega, A.C. Estrada, T. Trindade, C. Oliveira, M.P. Seabra, J. Labrincha, S. Porcar, R. Cadena, D. Fraga and J.B. Carda	<b>Mr. Jaime González Cuadra</b> , University Jaume I, <b>Spain</b>
<b>17:15 - 17:30</b>	In vitro Analysis of Plasma Activated Water: A Step Toward Effective Plasma Medicine <b>A. Megía-Macías</b> , O.D. Cortázar, S. Moreno, A. Brun, Y. Ballesteros and E. Gómez-Casado	<b>Dr. Ana Megía-Macías</b> , Comillas Pontifical University, <b>Spain</b>
<b>17:30 - 17:45</b>	A Step Forward in Ulcer Management: The Clinical Findings of Cold Plasma Therapy for Torpid Ulcers in Legs A. Megía-Macías, <b>O.D. Cortázar</b> and B. Hontanilla	<b>Dr. Daniel Cortázar</b> , MEDICAL PLASMAS S.L, <b>Spain</b>
<b>17:45 - 18:00</b>	Treatment of microalgae by gliding arc plasma and pulsed electric field <b>L. Marcinauskas</b> , K. Jonynaitė, R. Uscila, A. Stirkė, Ž. Kavaliauskas, M. Aikas, S. Keršulis and V. Stankevič	<b>Prof. Liutauras Marcinauskas</b> , Lithuanian Energy Institute/ Kaunas University of Tech, <b>Lithuania</b>
<b>18:00 - 18:15</b>	Cold Atmospheric Plasma treatment of in-vivo B16/F10 Melanoma cancer cells and the immunological response <b>A.S. Mashayekh</b> , S. Yin, Z. Liu and K. Yan	<b>Mr. Amir Shahriar Mashayekh</b> , Zhejiang University, <b>China</b>
<b>18:15 - 18:30</b>	Plasma Polymerized Nano particles: Synthesis, Diagnostics, and Bio-functionalization <b>L. L. Haidar</b> , M. M. M. Bilek and B. Akhavan	<b>Mrs. Laura Haidar</b> , The University of Sydney, <b>Australia</b>

27 April 2023

**SICT 2023 / Plasma Tech 2023 Joint Session II. C:  
Plasma fundamentals / Modelling / Atomic and Molecular Processes  
Plasma Processing / Materials Interactions / Coatings**

**Conference Room Roma II**

**Session's Chairs:**

**Prof. Ralf Peter Brinkmann**, Ruhr-University Bochum, **Germany**  
**Dr. Dirk Hegemann**, Empa - Swiss Federal Lab for Materials Science and Technology, **Switzerland**  
**Dr. Tiago Silva**, Instituto Superior Técnico- Lisbon, **Portugal**

09:00 - 09:30	Particle fluxes towards surfaces in plasma processing: Are probe diagnostics still in vogue? <b>H. Kersten</b> , T. Trottenberg, L. Hansen, M. Klette, F. Schlichting, V. Schneider, A. Spethmann	<b>Prof. Holger Kersten</b> , University Kiel, <b>Germany</b>
09:30 - 09:45	Studies in the sheath of an asymmetric CCP with an optically trapped microparticle <b>V. Schneider</b> , J. Schleitzer and H. Kersten	<b>Dr. Viktor Schneider</b> , Christian-Albrechts Univ Kiel, <b>Germany</b>
09:45 - 10:00	Langmuir probe measurements in a dual-frequency capacitively coupled rf discharge <b>J. Schleitzer</b> , V. Schneider and H. Kersten	<b>Ms. Jessica Schleitzer</b> , Christian-Albrechts University Kiel, <b>Germany</b>
10:00 - 10:15	Simulation of facility effects on magnetic nozzle expansions <b>D. García-Lahuerta</b> , M. Merino and E. Ahedo	<b>Mr. Diego García-Lahuerta</b> , University Carlos III de Madrid, <b>Spain</b>
10:15 - 10:30	First Characterisation of a Dual ECR Thruster <b>C. Boyé</b> , J. Navarro and M. Merino	<b>Mr. Célian Boyé</b> , University Carlos III de Madrid, <b>Spain</b>
10:30 - 11:00	<b>Coffee Break / Posters Session - Mezzanine Area</b>	
<b>Session's Chairs:</b> <b>Prof. Ralf Peter Brinkmann</b> , Ruhr-University Bochum, <b>Germany</b> <b>Prof. Holger Kersten</b> , University Kiel, <b>Germany</b> <b>Dr. Tiago Silva</b> , Instituto Superior Técnico- Lisbon, <b>Portugal</b>		
11:00 - 11:15	Complex plasma with active Janus particles <b>V. Nosenko</b>	<b>Dr. Volodymyr Nosenko</b> , German Aerospace Center DLR, <b>Germany</b>
11:15 - 11:30	Characterization and Modelling of Surface Plasma Devices <b>S. Marín-Meana</b> , G. Regodon-Harkness, A. Palmero, J. Cotrino, A. R. González-Elípe, A. Gómez-Ramírez and M. Oliva-Ramírez	<b>Mr. Servando Marín-Meana</b> , Seville University, <b>Spain</b> .
11:30 - 11:45	Modeling and experimental characterization of the extraction of a focused broad ion beam from an inductively coupled plasma source. <b>K.M. Rettig</b> , T. Dunger, E. Loos, M. Nestler and J. Schuster	<b>Mr. Kevin M. Rettig</b> , scia Systems GmbH, <b>Germany</b>
11:45 - 12:00	Modelling of an electric arc during contact separation. <b>O. Ojeda Mena</b> , Y. Cressault, P. Teulet and J. P. Gonnet	<b>Mr. Oswaldo El. Ojeda Mena</b> , Paul Sabatier University-Toulouse, <b>France</b> .
12:00 - 12:15	Synthesis of High-entropy Alloy Nanoparticles by an Induction Thermal Plasma Jet <b>K.S. Kim</b> , M; Couillard, Z; Tang, H. Shin, D. Poitras, C. Cheng, O. Naboka, D. Ruth, M. Plunkett, L. Chen, M. Nganbe and Y. Zou	<b>Dr. Keun Su Kim</b> , National Research Council Canada, <b>Canada</b>
12:15 - 12:30	Atmospheric-Pressure Nanosecond-Pulsed Plasma-Induced Free-Radical Polymerization of HEMA Liquid Layers <b>I. A. Goncalves</b> , N. D. Boscher, D. Abessolo Ondo and R. Quintana	<b>Ms. Ingrid A. Gonçalves</b> , Luxembourg Institute of Science and Technology, <b>Luxembourg</b>
12:00 - 14:00	<b>Lunch Break - Restaurante Rio de Janeiro</b>	
<b>Group Photo at 13:45</b>		

<b>Session's Chairs:</b> <b>Prof. Luís L. Alves, Instituto Superior Técnico- Lisbon, Portugal</b> <b>Dr. Gianpiero Colonna, CNR-ISTP-Bari, Italy</b> <b>Prof. Holger Heuermann, FH Aachen University of Applied Sciences, Germany</b>		
<b>14:00 - 14:15</b>	Large RF plasma data set for training plasma processing machine learning models <b>A. Fierro</b> , T. Hardin, A. Lietz, M. Hopkins, A. Belianinov and B. Bentz	<b>Prof. Andrew Fierro</b> , University of New Mexico, <b>USA</b>
<b>14:15 - 14:30</b>	Preparation of ceramic composite coatings by combining cold-spray deposition and plasma electrolytic oxidation <b>J. Martin</b> , A. Maizeray, C. Da Silva Tusch, G. Marcos, M.P. Planche, H. Liao, T. Czerwiec and G. Henrion	<b>Dr. Julien Martin</b> , University of Lorraine- Nancy, <b>France</b>
<b>14:30 - 14:45</b>	New insights into the plasma electrolytic oxidation of aluminium with incorporation of carbon nanoparticles. <b>C. Da Silva Tusch</b> , L. Magniez, C. Czerwiec, J. Martin, G. Marcos, S. Fontana, C. Herold and G. Henrion	<b>Mr. Corentin Da Silva Tusch</b> , University of Lorraine- Nancy, <b>France</b>
<b>14:45 - 15:00</b>	Development of a water repellent/anti-icing transparent plasma polymerized HMDSO coating <b>R. Jafari</b> , E. Eslami and G. Momen	<b>Mr. Reza Jafari</b> , University of Quebec in Chicoutimi, <b>Canada</b>
<b>15:00 - 15:15</b>	Superhydrophobic bio-inspired stainless steel surfaces by coupling additive manufacturing and atmospheric pressure plasma coatings <b>K. Dourgaparsad</b> , D. Balloy, I-C. Gruescu and M. Jimenez	<b>Mr. Kevin Dourgaparsad</b> , University of Lille, <b>France</b>
<b>15:15 - 15:30</b>	Multi-physics multi-scale modelling of SiO <sub>2</sub> deposition by HC-PECVD with O <sub>2</sub> /TMDSO mixture used as gaseous precursors <b>J. Müller</b> , P. Moskovkin, D. Cornil, K. Tomanková, A. Obrusník and S. Lucas	<b>Dr. Jérôme Müller</b> , University of Namur, <b>Belgium</b>
<b>15:30 - 15:45</b>	Low pressure cold plasma treatment and coating of expanded polypropylene beads. <b>M. Dilger</b> , S. Bellayer, S. Duquesne and M. Jimenez	<b>Mr. Melvin Dilger</b> , University of Lille, <b>France</b>
<b>15:45 - 16:00</b>	Reactive DCMS vs. Reactive HiTUS of TiNbVTaZrHf-Nx Coatings <b>F. Lofaj</b> , L. Kvetková, P. Hviščová, M. Kabátová, T. Roch and V. Girman	<b>Dr. Frantisek Lofaj</b> , Institute of Materials Research of SAS, <b>Slovakia</b>
<b>16:00 - 16:30</b>	<b>Coffee Break / Posters Session - Mezzanine Area</b>	
<b>16:30 - 16:45</b>	Hard transparent oxides by High Power Impulse Magnetron Sputtering <b>A.W. Oniszczyk</b> , W. Gajewski and P. Róžański	<b>Dr. Anna Wiktorja Oniszczyk</b> , TRUMPF Huettinger Sp. z o.o., <b>Poland</b>
<b>16:45 - 17:00</b>	Hot active plasma treatment of ZnMgAl corrosion protection coatings <b>J. Duchoslav</b> , D. Leidlmair, G. Säckl, M. Kehrler, T. Stehrer, C.K. Riener, M. Arndt and D. Stifter	<b>Dr. Jiri Duchoslav</b> , Johannes Kepler University Linz, <b>Austria</b>
<b>17:00 - 17:15</b>	Plasma Etching of SiO <sub>2</sub> Using Fluorinated Ethers with Low Global Warming Potential S. You and <b>C. -K. Kim</b>	<b>Prof. Chang-Koo Kim</b> , Ajou University, <b>Rep. of Korea</b>
<b>17:15 - 17:30</b>	Role of low pressure plasma composition in Zn <sub>x</sub> Mn <sub>y</sub> O <sub>z</sub> stoichiometry and electrochemical performances as Zinc-Ion Batteries cathode <b>L. Bekkar</b> , A. Lemarchand, C. Bazin, H. Perrot and M. Nikravec	<b>Mr. Lounis Hakim Bekkar</b> , University Sorbonne Paris Nord, <b>France</b>
<b>17:30 - 17:45</b>	The effect of electrolytic-plasma hardening on the microstructure, mechanical and tribological properties of medium carbon steel B.K. Rakhadilov, D.R. Baizhan, L.G. Zhurerova, <b>N.M. Magazov</b> and N.E. Berdimuratov	<b>Mr. Nurtoleu Magazov</b> , Sarsen Amanzholov East Kazakhstan University, <b>Kazakhstan</b>

27 April 2023

**Tribology 2023 Session II. D:  
Coatings and Surfaces Corrosion / Tribological Properties /  
Physics or Chemistry of Tribo-Surfaces/ Nanotribology**

Conference Room Milão I + II

**Session's Chairs:**

**Prof. Auezhan Amanov**, Sun Moon University, **Rep. of Korea**  
**Dr. Madhan K. Arumugam**, King Fahd University of Petroleum and Minerals, **Saudi Arabia**

09:00 - 09:30	The application of a new Raman-based optical profilometry for understanding the governing factors of the tribofilm growth on a a-C:H coating <b>N. Xu and A. Morina</b>	<b>Prof. Ardian Morina</b> , University of Leeds, <b>UK</b>
09:30 - 10:00	Advancing solid interfaces and lubricants by first principles materials design <b>M. Clelia Righi</b>	<b>Prof. Maria Clelia Righi</b> , University of Bologna, <b>Italy</b>
10:00 - 10:30	Surface Effect : a Key to Understand and Reduce Friction in Lubricated Contacts <b>J. Cayer-Barrioz</b>	<b>Prof. Juliette Cayer-Barrioz</b> , Ecole centrale de Lyon-CNRS, <b>France</b>
10:30 - 11:00	Coffee Break / Posters Session - Mezzanine Area	
<b>Session's Chairs:</b> <b>Prof. Auezhan Amanov</b> , Sun Moon University, <b>Rep. of Korea</b>		
11:00 - 11:30	Modeling inelastic deformation in contact problems <b>L. Nicola</b>	<b>Prof. Lucia Nicola</b> , University of Padova, <b>Italy</b>
11:30 - 11:45	Enhanced tribological properties of Ti-6Al-4V ELI alloy through combination of slide burnishing and low-temperature gas nitriding <b>D. Toboła</b> , J. Morgiel, Ł. Maj, A. Polkowska and A. Łętocha	<b>Dr. Daniel Toboła</b> , Łukasiewicz Research Network/ Krakow Institute of Technology, <b>Poland</b>
11:45 - 12:00	Improving wear and corrosion resistance of a ta-C film by sealing surface with ALD TiO <sub>2</sub> for biomedical applications <b>G. Wu</b> , J. Wu, A. Morina, N. Xu and L. Yang	<b>Dr. Guizhi Wu</b> , University of Leeds, <b>UK</b>
12:00 - 12:15	Development of Corrosion and UV Resistant Fusion Bonded Epoxy Coatings on Steel components for offshore applications <b>M. K. Arumugam</b>	<b>Dr. Madhan K. Arumugam</b> , King Fahd University of Petroleum and Minerals, <b>Saudi Arabia</b>
12:15 - 12:30	Use of the parallel and normal SVET vibration modes and data recollection for the direct investigation of corrosion processes <b>J. Izquierdo</b> , A. Abreu-García and R.M. Souto	<b>Dr. Javier Izquierdo Pérez</b> , University of Laguna, <b>Spain</b>
12:00 - 14:00	Lunch Break - Restaurante Rio de Janeiro	
Group Photo at 13:45		
<b>Session's Chairs:</b> <b>Prof. Maria Clelia Righi</b> , University of Bologna, <b>Italy</b> <b>Prof. Juliette Cayer-Barrioz</b> , Ecole centrale de Lyon-CNRS, <b>France</b>		
14:00 - 14:30	Graphene derivatives as solid lubricant in polymer-tribology, Challenges and opportunities <b>N. Emami and J. Somberg</b>	<b>Prof. Nazanin Emami</b> , Luleå University of Technology, <b>Sweden</b>
14:30 - 14:45	Investigation of Modification with GLYMO and Carbodiimide on Thermomechanical Properties of Two-Component Castor Oil Based Polyurethane Adhesives <b>A. Yildirim</b> , N.K. Mermer and M.A. Özkan	<b>Ms. Arzu Yildirim</b> , Kalekim Construction Chemicals Co, <b>Turkey</b>
14:45 - 15:00	Why Teflon is so slippery while other polymers are not <b>H. Terwisscha-Dekker</b> , B. Weber and D. Bonn	<b>Mr. Hans Terwisscha-Dekker</b> , Uni. of Amsterdam, <b>The Netherlands</b>
15:00 - 15:15	Influence of different deterministic surface texturing processes on friction and tool life for load collectives in sheet metal forming <b>P. Schumann</b> , R. Lindner and P. Groche	<b>Mr. Philipp Schumann</b> , TU Darmstadt, <b>Germany</b>

15:15 - 15:30	Dedicated Hybrid Turbo GDI Engine with Low Friction Loss <b>Q. Zhou</b>	<b>Dr. Quanbao Zhou</b> , Changan UK R&D Centre, <b>UK</b>
15:30 - 15:45	Nanoscale study of the growth of ZDDP tribofilm based on compression/shear stress <b>K. Sato</b> and S. Sasaki	<b>Mr. Kaisei Sato</b> , Tokyo University of Science, <b>Japan</b>
15:45 - 16:00	Research on Pitting Fatigue Properties of Diamond-like Carbon Films under Pure Rolling Contacts <b>K. Nakayama</b> , S. Watanabe, A. Harada, K. Sato and S. Sasaki	<b>Mr. Kenya Nakayama</b> , Tokyo University of Science, <b>Japan</b>
16:00 - 16:30	<b>Coffee Break / Posters Session - Mezzanine Area</b>	
<b>Session's Chairs:</b> <b>Prof. Lucia Nicola</b> , University of Padova, <b>Italy</b> <b>Prof. Maria Clelia Righi</b> , University of Bologna, <b>Italy</b>		
16:30 - 17:00	LUBGEAR – Increased Lifetime of Gears under Loss of Lubrication <b>L. Braumann</b>	<b>Mr. Lorenz Braumann</b> , Research, Advanced Drivetrain Technologies, <b>Austria</b>
17:00 - 17:15	Experimental approach to evaluate the fatigue life of DLC coating based on friction and continuous wear data <b>M. Zellhofer</b> , M. Jech, E. Badisch, F. Ditrói, A. Kübler and P. H. Mayrhofer	<b>Mr. Manuel Zellhofer</b> , AC2T research GmbH, <b>Austria</b>
17:15 - 17:30	Measuring Rolling Friction of Microparticles using Lateral Force Microscopy <b>S. Scherrer</b> , S. N. Ramakrishna and L. Isa	<b>Mr. Simon Scherrer</b> , ETH Zürich, <b>Switzerland</b>
17:30 - 17:45	Smart Lubrication Management of Rolling Bearings using a State-Estimation-Based Control Strategy <b>B. Mrak</b> , B. Peremans, Y. Perremans, D. Fauconnier, Z. Tao and S. Schlimpert	<b>Dr Branimir Mrak</b> , Flanders Make, <b>Belgium</b>
17:45 - 18:00	A mapping approach for the influence of the operating conditions on wheel-rail damage <b>N. Zani</b> , C. Petrogalli and A. Mazzù	<b>Dr. Nicola Zani</b> , University of Brescia, <b>Italy</b>
18:00 - 18:15	Capabilities of multiphysics simulations for thrust bearings <b>S. Cupillard</b>	<b>Dr. Samuel Cupillard</b> , Hydro-Québec research Institute, <b>Canada</b>
18:15 - 18:30	A Generalized Oval Equation for the Film Thickness Calculation of Journal Bearings Operating under Heavy EHL Regime <b>G. N. Rossopoulos</b> , I. Pervelis and C. I. Papadopoulos	<b>Mr. Georgios-Nikitas Rossopoulos</b> , National Technical University of Athens, <b>Greece</b>

28 April 2023

**Tribology 2023 Session III. A:  
Lubricants and hydrodynamic lubrication / Biotribology**

**Conference Room Roma I**

**Session's Chairs:**

**Prof. Moises Garcia-Morales**, University of Huelva, **Spain**

**Dr. Shouhei Kawada**, Kansai University, **Japan**

**Mr. Lorenz Braumann**, Advanced Drivetrain Technologies, **Austria**

<b>09:00 - 09:30</b>	Predicting total hip replacement wear: recent in-silico development combining synovial lubrication and multibody dynamics. <b>A. Ruggiero</b>	<b>Prof. Alessandro Ruggiero</b> , University of Salerno, <b>Italy</b>
<b>09:30 - 09:45</b>	In Situ Formation of Lubricious Phases in HIPIMS Deposited Mo-W Doped Carbon Coatings in Boundary Lubrication Conditions <b>P.E. Hovsepian</b> and A.P. Ehasarian	<b>Prof. Papken Hovsepian</b> , Sheffield Hallam University, <b>UK</b>
<b>09:45 - 10:00</b>	Influence of Ionic Liquids Admixture on Electrorheological and Tribological Properties of PAO6 and GP1 Lubricating Oils <b>T.J. Kaldonski</b> , J. Juda, P. Wychowański and T. Kaldonski	<b>Dr. Tomasz J. Kaldonski</b> , Military Univ. of Technology, Warsaw, <b>Poland</b>
<b>10:00 - 10:30</b>	<b>Coffee Break / Posters Session - Mezzanine Area</b>	
<b>10:30 - 10:45</b>	Effects of Lubricant Viscosity on Rolling Contact Fatigue Damage of Bearing Steel <b>R. Ohashi</b> , A. Harada, Y. Yuhara, K. Sato and S. Sasaki	<b>Mr. Ryotaro Ohashi</b> , Tokyo University of Science, <b>Japan</b>
<b>10:45 - 11:00</b>	Active Control of Friction Coefficient under Ionic Liquids Lubrication Using Surface Potential <b>S. Kawada</b> , S. Tanji, M. Miyatake and S. Sasaki	<b>Dr. Shouhei Kawada</b> , Kansai University, <b>Japan</b>
<b>11:00 - 11:15</b>	Sustainable biolubricants based on recycled oils <b>D. Márquez</b> and L. Batlle	<b>Mr. Daniel Marquez</b> , Leitat Technological Center, <b>Spain</b>
<b>11:15 - 11:30</b>	The influence of heuristic and ad-hoc choices on the determination of lubricant viscosities from equilibrium molecular dynamics simulations <b>G. Toraman</b> , T. Verstraelen and D. Fauconnier	<b>Ms. Gözdenur Toraman</b> , Ghent University, <b>Belgium</b>
<b>11:30 - 11:45</b>	High-Fidelity Fluid-Structure Interaction Simulation of Elastohydrodynamically Lubricated Line Contact <b>N. Delaissé</b> , P. Havaej, D. Fauconnier and J. Degroote	<b>Mr. Nicolas Delaissé</b> , Ghent University, <b>Belgium</b>

28 April 2023

**SICT 2023 Session III. B:  
Coatings for Energy and Environmental Applications**

Conference Room Roma II

**Session's Chairs:**

**Dr. Mikhail Gromov**, Ghent University, **Belgium**  
**Dr. Zdenek Weiss**, Institute of Physics of the Czech Academy of Sciences, **Czech Rep.**

08:30 - 09:00	Plasma Etching of High Aspect Ratio Semiconductor Features: Challenges and Remedies F. Krüger, E. Litch, T. Piskin and <b>M.J. Kushner</b>	<b>Prof. Mark J. Kushner</b> , University of Michigan, <b>USA</b>
09:00 - 09:30	Validation of non-equilibrium kinetics in CO <sub>2</sub> -N <sub>2</sub> plasmas <b>T. Silva</b> , C. Fromentin, T. C. Dias, E. Baratte <sup>2=</sup> , O. Guaitella and V. Guerra	<b>Dr. Tiago Silva</b> , Instituto Superior Técnico- Lisbon, <b>Portugal</b>
09:30 - 09:45	XPS analysis of ethylene-based encapsulants and damp heat aged fractured glass laminate surfaces <b>G. Säckl</b> , G. M. Wallner, J. Duchoslav, M. Tiefenthaler and D. Stifter	<b>Mr. Gary Säckl</b> , Johannes Kepler University Linz, <b>Austria</b>
09:45 - 10:00	Hybrid polymer-liquid electrolytes for lithium-ion batteries: effect of porosity on the ionic and molecular mobility. <b>M. Cattaruzza</b> , Y. Fang, I. Furó, G. Lindbergh, F. Liu and M. Johansson	<b>Ms. Martina Cattaruzza</b> , KTH Royal Institute of Technology, <b>Sweden</b>
10:00 - 10:15	Synthesis and Characterization of Low VOC Unsaturated Polyester Coatings for Electrical Insulation Applications <b>K. Aksoy</b> , S.Gümüş and A. Aytaç	<b>Dr. Kaan Aksoy</b> , Betek Boya ve Kimya Sanayi A.Ş., Kocaeli, <b>Turkey</b>

10:00 - 10:30

Coffee Break - Mezzanine Area

**Plasma Tech 2023 Session III. C:  
Plasma application in Energy and environment**

**Session's Chairs:**

**Dr. Tiago Silva**, Instituto Superior Técnico- Lisbon, **Portugal**  
**Prof. Mark J. Kushner**, University of Michigan, **USA**

10:30 - 11:00	Plasma-Assisted Nitrogen Fixation in the Presence of Water <b>M. Gromov</b> , I. Sremački, K. Leonova, N. Kamarinopoulou, E. Vervloessem, N. Britun, P. Dimitrakellis, Y. Gorbanev, C. Leys, D. G. Vlachos, N. De Geyter, A. Bogaerts, R. Morent, R. Snyders and A. Nikiforov	<b>Dr. Mikhail Gromov</b> , Ghent University, <b>Belgium</b>
11:00 - 11:15	CO <sub>2</sub> neutral concrete and sustainable fuels and chemicals produced in a novel plasma-based process <b>P. Roessner</b> , S. Renninger, M. Lambarth, J. Stein, S. Kaufmann, V. Seithümmer, J. Hemmerling and K. P. Birke	<b>Mr. Paul Roessner</b> , University of Stuttgart, <b>Germany</b>
11:15 - 11:30	Influence of Enthalpy Inhomogeneity on the CO <sub>2</sub> Splitting Performance in a High-Power ICP <b>H. Burghaus</b> , C. F. Kaiser, S. Fasoulas and G. Herdrich	<b>Mr. Hendrik Burghaus</b> , University of Stuttgart, <b>Germany</b>
11:30 - 11:45	Techno economic potential of plasma based CO <sub>2</sub> splitting in power to liquid plants <b>S.J. Kaufmann</b> , S; Renninger, M; Lambarth, M; Raab, J; Stein, P; Roessner and K.P. Birke	<b>Mr. Samuel J. Kaufmann</b> , University of Stuttgart, <b>Germany</b>
11:45 - 12:00	Utilizing the Power of Thermal Plasma Technology for the Electrification of the Chemical Industry <b>S. Mirpour</b> , D.C.M. van den Bekerom, Y. Creighton and H. Linden	<b>Dr. Shahriar Mirpour</b> , TNO-Geleen, <b>The Netherlands</b>
12:00 - 12:15	Plasmas reactors enabling the fossil-to-electric transition of industrial processes <b>C. Winnewisser</b> , S. Salem, G. Hintz, E. Mann and V. Ramopoulos	<b>Dr. Carsten Winnewisser</b> TRUMPF, <b>Germany</b>

## SICT 2023 / PlasmaTech 2023 / Tribology 2023 Joint Conferences Posters

N.	Poster Title	Author, Affiliation, Country
1.	Sensor-plasma coupling resistance: model and measurements in the Earth ionosphere <b>E. Seran</b> , S. Hess and M. Godefroy	<b>Dr. Elena Seran</b> , Sorbonne University, Paris, <b>France</b>
2.	Hybrid plasma source with wireless power transmission system <b>J-H. Kim</b> , J-Y. Park and C-W. Chung	<b>Dr. Ju Ho Kim</b> , Hanyang University, <b>Rep. of Korea</b>
3.	Non-transferred plasma torch modeling : methods and studies of the plasma properties with COMSOL <b>A. Truilhé</b> , Y. Cressault, F.Valensi and B.Chinè	<b>Mr. Antoine Truilhé</b> , Paul Sabatier University, Toulouse, <b>France</b>
4.	Determination of Vibrational and Rotational Temperatures of a Non-Equilibrium Nitrogen Atmospheric Pressure Plasma Torch dedicated for Surface Treatment by Optical Emission Spectroscopy and Diatomic Molecular Spectra Simulation. <b>V.E.Solofondrakotroka</b> , Y.Cressault, M.Masquère, R.Rakotosaona, V.Ramarozatovo and R.Ramanantsoa	<b>Mr. Vahatra E. Solofondrakotroka</b> , Paul Sabatier University, Toulouse, <b>France</b>
5.	A 0D kinetic modelling of a DBD reactor in humid air <b>G. Pierotti</b> , A. Popoli and A. Cristofolini	<b>Mr. Giacomo Pierotti</b> , University of Bologna, <b>Italy</b>
6.	Injection's core moulds reusing through the degraded coating's removal by laser technology. <b>R. Santos</b> , I. Marcelino, T. Ferreira, L. Pereira, F. M. Costa and N. M. Ferreira	<b>Mr. Rodrigo Santos</b> , University of Aveiro, <b>Portugal</b>
7.	Development of a smart PDMS icephobic coating using encapsulated phase change materials M. Shamhsiri, <b>G.Momen</b> and R.Jafari	<b>Prof. Gelareh Momen</b> , University of Quebec at Chicoutimi, <b>Canada</b>
8.	Anodizing of AISi10Mg alloy fabricated by LPBF <b>A. Togni</b> , M. F. Bonilauri, A. Bruera, G. Bolelli and L. Lusvarghi	<b>Mr. Alessandro Togni</b> , University of Modena and Reggio Emilia, <b>Italy</b>
9.	Low-temperature gas and plasma nitriding on Inconel 718 produced by Laser-Powder Bed Fusion: effects on wear and corrosion resistance <b>M.F. Bonilauri</b> , L. Bortolotti, G. Bolelli, R. Bolzonella, O. Messe and L. Lusvarghi	<b>Mrs. Maria Francesca Bonilauri</b> , University of Modena and Reggio Emilia, <b>Italy</b>
10.	A Low Friction and High Repetition Durability Sliding System based on Ionic Liquid Type Polymer Brushes Combined with a Molecularly Smooth Surface <b>T. Kamijo</b> , H. Arafune, T. Morinaga and T. Sato	<b>Dr. Toshio Kamijo</b> , National Institute of Technology, Tsuruoka College, <b>Japan</b>
11.	Effects of Chemical Surface Modification on Diffusion Coefficients in Hierarchically Porous Media Through Multiscale Simulations <b>U. Tallarek</b> , D. Hlushkou, N. Trebel and A. Höltzel	<b>Prof Ulrich Tallarek</b> , Philipps University, Marburg, <b>Germany</b>
12.	Effect of Chemical Surface Modification with Long Alkyl Chains on Surface Diffusion Properties: Chain Length vs. Ligand Density <b>N. Trebel</b> , J. Rybka, A. Höltzel and U. Tallarek	<b>Ms. Nicole Trebel</b> , Philipps University, Marburg, <b>Germany</b>
13.	Obtaining of superhydrophobic surfaces by nanosecond laser ablation <b>I; Urzica</b> , C; Logofatu, A; Simon and C. Udrea	<b>Mrs. Iuliana Urzica</b> , National Institute for Laser, Plasma and Radiation Physics, <b>Romania</b>
14.	Improving adhesion of vulcanised rubber by atmospheric plasma surface treatment for the footwear industry <b>V.M. Serrano-Martínez</b> , C. Ruzafa-Silvestre, M.P. Carbonell-Blasco and E. Orgilés-Calpena.	<b>Mr. Víctor M. Serrano Martínez</b> , Footwear Technology Centre (INESCOP), <b>Spain</b>
15.	Polymer Surface Characterization Improved by DCSBD Plasma Technique <b>M. Pajtášová</b> , S. Ďurišová, D. Ondrušová, P. Skalková, R. Janík and S. Brigantová	<b>Prof. Mariana Pajtášová</b> , Faculty of Industrial Technologies- Púchov, <b>Slovakia</b>
16.	Plasma activation for the growth of titanium and titanium dioxide thin films. <b>Y F Barragan</b> , P A Tsygankov,FF Parada-Becerra, E A Orozco, Y Q Pacheco and C J Páez	<b>Mr. Yerson Fabian B. Jimenez</b> , Industrial University Santander, <b>Colombia</b>
17.	Computational study and diagnostics of glow discharge plasma <b>Y F Barraga</b> , Y Q Pacheco, P A Tsygankov ,FF Parada-Becerra,E A Orozco and C J Páez	<b>Mr. Yerson Fabian B. Jimenez</b> , Industrial University Santander, <b>Colombia</b>

18.	Tribological Assessment of SLM Fabricated Biomedical Steel After Pulsed Plasma Processing <b>V. Efremenko</b> , Yu. Chabak, I. Petryshynets, B. Efremenko, A. Lekatou and V. Zurnadzhy	<b>Prof. Vasily Efremenko</b> , Pryazovskyi State Technical University, <b>Ukraine</b>
19.	Development of amorphous carbon hard mask with the high etch selectivity by addition of nitrogen for high aspect ratio patterning <b>S. J. Park</b> , K.-C. Shin, D. Kim, S. Y. Baek, J. Kim, J. Park, S. Roh, S. Kyung and C. Choi	<b>Dr. Sejun Park</b> , Samsung Electronics, <b>Rep of Korea</b>
20.	Microwave Cold Atmospheric Pressure Plasma for Surface Preparation in Aerospace Composite Bonding <b>K. Papangelis</b> , A. Bennett, A. Prasad, Z. Huang and D. Ayre	<b>Mr. Konstantinos Papangelis</b> , ADTEC Europe LTD, <b>UK</b>
21.	Low Temperature Atmospheric Pressure Plasma Treatment for Mould Inactivation on Building Materials <b>M. Domonkos</b> , J. Jirešová, E. Lokajová and P. Tichá	<b>Dr. Mária Domonkos</b> , Czech Technical University in Prague, <b>Czech Republic</b>
22.	Cleaning injection moulds through laser technology R. Santos, I. Marcelino, T. Ferreira, L. Pereira, F. M. Costa and <b>N. M. Ferreira</b>	<b>Dr. Nuno Ferreira</b> , University of Aveiro, <b>Portugal</b>
23.	Modeling of the focusing system of an ion beam with the plasma lens <b>Y.Q. Pacheco</b> , Y F Barragan, F F Prada and P A Tsygankov	<b>Mrs. Yhonatan Pacheco</b> , University industrial of Santander, <b>Colombia</b>
24.	Solar furnace synthesis of persistent luminescent strontium aluminate ceramic with improved luminescent properties <b>V. Vitola</b> and I. Bite	<b>Dr. Virginija Vitola</b> , University of Latvia, <b>Latvia</b>
25.	Crystallographic quality and surface morphology of V2O3 thin films deposited on annealed sapphire surfaces <b>U.B. Arnalds</b> and K. Ignatova	<b>Prof. Unnar Arnalds</b> , University of Iceland, <b>Iceland</b>
26.	Bio-degradation of Mechanical and Structural Materials Subjected to Mine Water Affected Environments. <b>A.M. Sarmiento</b> , J.M. Dávila, F. Macías, F. Córdoba, J.C. Fortes and J.A. Grande	<b>Dr. Aguasanta Sarmiento</b> , University of Huelva, <b>Spain</b>
27.	Extrem Reduction of Tensile Concrete Strength Subjected to Mine Water Affected Environments. <b>J.M. Dávila</b> , A.M. Sarmiento, M. santisteban, A.T. Luís and J.A. Grande	<b>Dr. Jose M. Davila Martin</b> , University of Huelva, <b>Spain</b>
28.	Development of Transparent, Scratch Resistant, and Hydrophobic Coatings for Aerospace Transparencies <b>A. Kuban</b> , Y. Okumus, N. Erdogan, B. Baytekin and H. Y. Ersan	<b>Mr. Anil Kuban</b> , Turkish Aerospace, <b>Turkey</b>
29.	Effect of curing methods on the abrasive and corrosion wear resistance of organic coating systems I. Stojanović , I. Juraga , M. Kurtela , <b>M. Logar</b> and I. Fatović	<b>Ms. Mirta Logar</b> , University of Zagreb, <b>Croatia</b>
30.	Effect of Nano Particles on Mechanical and Thermal Properties of Polyurethane Based Transparent Coatings <b>Y.Okumus</b> , A. Kuban, S. Açar and N. Erdoğan	<b>Dr. Yigitalp Okumus</b> , Turkish Aerospace Industries Inc., <b>Turkey</b>
31.	Airborne Contamination Contribution to Nanoscale Friction of Graphene Surfaces <b>F. Ptak</b> , C. M. Almeida and R. Prioli	<b>Dr. Felipe Ptak</b> , Weizmann Institute of Science, <b>Israel</b>
32.	Influence of steel and copper fibres in train brake friction materials on airborne wear particle emissions to the environment Y. Tsybrii, I. Zglobicka, <b>M. Kuciej</b> and O. Nosko	<b>Prof. Michal Kuciej</b> , Bialystok University of Technology, <b>Poland</b>
33.	Cellulose Nanofiber Oleogels: A Target-Oriented Approach towards Environmental Preservation through Sustainable Lubrication C. Roman, M.A. Delgado, S.D. Fernández-Silva, M. García-Pérez and <b>M. García-Morales</b>	<b>Prof. Moises Garcia-Morales</b> , University of Huelva, <b>Spain</b>
34.	Tribological Properties of Glycol-Based Deep-Eutectic Solvents C. Del Toro, <b>M.D. Avilés</b> , M.D. Bermúdez and F.J. Carrión-Vilches	<b>Dr. María Dolores Avilés</b> , Technical University of Cartagena, <b>Spain</b>
35.	An approach on the potential application of a smart nanoclay-based biolubricant in electrified ball bearings S.D. Fernández-Silva, M. García-Morales, C. Roman, T. Amann , F. Gatti, A. Kailer and <b>M.A. Delgado</b>	<b>Prof. Miguel A. Delgado</b> , University of Huelva, <b>Spain</b>
36.	Woven fabric abrasion resistance conditioned by weave, weft density and raw material composition <b>I. Schwarz</b> , S. Brnada, T. Bardov and A. Kalazic	<b>Prof. Ivana Schwarz</b> , University of Zagreb, <b>Croatia</b>

37.	Triboelectric Activation of Wood Surfaces by means of Wood Disintegration Processes <b>LM. Leiter</b> and R. Wimmer	<b>Ms. Lena M. Leiter</b> , University of Natural Resources and Life Sciences Vienna, <b>Austria</b>
38.	Multilayer Chitosan/Lignin Nanocoating with Silver Nanoparticles for Antimicrobial Cotton <b>M. Radetić</b> , D. Marković, J. Petkovska, N. Mladenovic, M. Radoičić, N. A. Vest, B. Palen, J. C. Grunlan and I. Jordanov	<b>Prof. Maja Radetic</b> , University of Belgrade, <b>Serbia</b>
39.	Carbon-based coatings on ureteral stents to prevent urinary infections <b>S. Cruz</b> , D.Santo, P. Pereira, D. Calheiros, L. Rodrigues, T. Gonçalves, A. Cavaleiro and S. Carvalho	<b>Dr. Sandra Cruz</b> , Instituto Pedro Nunes, <b>Portugal</b>
40.	Inactivation of Spores and Mycelium of <i>Aspergillus Brasiliensis</i> by Non-Thermal Atmospheric Pressure Plasma <b>P. Tichá</b> , M. Domonkos, K. Zdeňková and P. Demo	<b>Dr. Petra Tichá</b> , Czech Technical University in Prague, <b>Czech Republic</b>
41.	Optical limiting behavior of the DNA-based materials functionalized with natural dyes <b>P. Gheorghe</b> , A.M. Anton and A. Petris	<b>Mrs. Petronela Gheorghe</b> , National Institute for Laser, Plasma and Radiation Physics, <b>Romania</b>
42.	Integration of capacitive sensors and LEDs into HPL boards.- interactive surfaces <b>F. Wirth</b> and T. Volkmer	<b>Mr. Filipp Wirth</b> , Bern University of Applied Sciences, <b>Switzerland</b>



**SETCOR**  
Conferences & Exhibitions