

SICT 2022 / PlasmaTech 2022 / Tribology 2022 Joint Hybrid Conferences Program

27 - 29 April 2022 | Barcelona, Spain

27 April 2022		
08:00 - 12:00	Onsite Participant registration.	
08:30 - 10:00	Welcoming Coffee	
SICT 2022 / Plasma Tech 2022 / Tribology 2022 Joint Plenary Onsite session		
Onsite Conference Room Glorias A		
Session's Chairs: Prof. Holger Kersten, University Kiel, Germany Prof. Alicia de Andrés, Materials Science Institute of Madrid (CSIC), Spain Prof. Alessandro Ruggiero, University of Salerno, Italy		
10:00 - 10:30	Continuous to Nanoflake MoS ₂ Single-Layers: Characterization and Sensing Applications using Optical Spectroscopies. A. de Andrés, S. Cortijo-Campos, L. Álvarez-Fraga and C. Prieto	Prof. Alicia de Andrés, Materials Science Institute of Madrid (CSIC), Spain
10:30 - 11:00	Post-Thermal Spray Coating Surface Modification and Potential Industrial Applications A. Amanov and Y.S. Pyun	Prof. Auezhan Amanov, Sun Moon University, Rep. of Korea
11:00 - 11:30	The Energy Balance of Nano- and Microparticles during Plasma Processing H. Kersten	Prof. Holger Kersten, University Kiel, Germany
11:30 - 12:00	Graphene nanowalls grown on stainless steel by inductively coupled plasma chemical vapor deposition E. Bertran-Serra, S. Chaitoglou, R. Amade Rovira, A. Mushegyan-Avetishyan, I. Alshaikh, L. F. Pantoja-Suarez, J. L. Andújar Bella, A. Perez-del-Pino and E. Giorgy	Prof. Enric Bertran-Serra, Barcelona University, Spain
12:00 - 14:00	Lunch Break	
SICT 2022 Session I: Surfaces and Coatings processing / Characterization / Properties Multifunctional composite and hybrid coatings		
Onsite Conference Room Glorias A		
Session's Chairs: Prof. Alicia de Andrés, Materials Science Institute of Madrid (CSIC), Spain Prof. Auezhan Amanov, Sun Moon University, Rep. of Korea Dr. Himanshu H Mishra, King Abdullah University of Science & Technology, KSA		
14:00 - 14:30	A comparative study of Ir(dmpq) ₂ (acac) doped CBP, mCP, TAPC and TCTA for phosphorescence OLEDs D. Tselekidou, L. Panagiotidis, K. Papadopoulos, V. Kyriazopoulos and M. Gioti	Prof. Maria Gioti, Aristotle University of Thessaloniki, Greece
14:30 - 14:45	Synthesis of freestanding porous alumina and metallic nanowires S. Ionescu, C. Gheorghiu, D. Popa and V. Leca	Ms. Stefania-Cristina Ionescu, National Institute for Physics and Nuclear Engineering, Romania
14:45 - 15:00	Tunable thermal and photochemical crosslinking of CHic-able diazo-groups containing polyers D. Rusitov and J. Rühle	Mr. Dennis Rusitov, University of Freiburg, Freiburg, Germany
15:00 - 15:15	Dual-phase CuZr thin film metallic glasses (TFMGs) deposited by PVD magnetron sputtering: bias voltage and thickness dependency of structure, hardness, and wear resistance A. Bagherpour, M-S. Colla b, A. Orekhov, T. Pardoen and S. Lucas	Mr. Alireza Bagherpour, The University of Namur, Belgium
15:15 - 15:30	Post Processed Ceramic Based Coatings on Steels using Thermal Spray A. Pattnayak, A. Gupta, N.V Abhijith, D. Kumar, J. Jain and V. Chaudhry	Mr. Abhijit Pattnayak, Indian Institute of Technology Delhi, India

15:30 - 15:45	Effects of 18 Ni (300) maraging steel coating by laser deposition on LPBF AISI 316L component V. Errico , P. Posa, A. Angelastro, M. Mazzarisi, A. Fusco and S.L. Campanelli	Mr. Vito Errico , The Polytechnic University of Bari, Italy
15:45 - 16:00	Properties of coatings and SPS sinters made of tungsten diboride alloyed with Ti, Cr, Mo, Re and Zr R. Psiuk , M. Wiśniewska, D. Garbiec and T. Mościcki	Mr. Rafal Psiuk , Institute of Fundamental Technological Research, Poland
16:00 - 16:30	Coffee Break	
Session's Chairs: Prof. Alicia de Andrés, Materials Science Institute of Madrid (CSIC), Spain Prof. Auezhan Amanov, Sun Moon University, Rep. of Korea Dr. Ramon Escobar Galindo, University of Seville, Spain		
16:30 - 16:45	The Influence of Ambient Cure Chemistry and Stoichiometry on the Surface Properties of Epoxy Coatings for Industrial Application C. Bannister , A. Guy and R. Thompson	Mr. Callum Bannister , Durham University, UK
16:45 - 17:00	Study of bioinspired super-hydrophobic polymer textured surfaces to design fluorine-free high repellency textiles Q. Legrand , S. Benayoun and S. Valette	Dr. Quentin Legrand , Ecole Centrale de Lyon, France
17:00 - 17:15	Development and investigation of textile materials with Conductive Coatings intended for microwave shielding and absorption V. Rubeziene , A. Sankauskaitė, S. Varnaitė-Žuravliova and A. Abraitienė	Dr. Vitalija Rubeziene , Center for Physical Sciences and Technology- Kaunas, Lithuania
17:15 - 17:30	Oxidation Kinetics of Inconel 625® under CO ₂ B. Contri , S. Valette, M. Soustre and P. Lefort	Mr Boris Contri , University of Limoges, France
17:30 - 17:45	Evaluation and improvement of adhesion between polymeric nano-fibers and metallic substrates T. Schneiders , F. Ahrens and T. Gries	Mr. Thomas Schneiders , RWTH Aachen University, Germany
17:45 - 18:00	Effect of the detonation spraying technological parameter on the phase composition and properties of Cr ₃ C ₂ - NiCr coatings N.M.Magazov , B.K. Rakhadilov D.N. Kakimzhanov and L.G. Zhurerova	Mr. Nurtoleu Magazov , Daulet Serikbayev East Kazakhstan technical university, Kazakhstan
18:00 - 18:15	Hybrid nanostructures for (photo)electrochemical water splitting S. Kment , A. Naldoni and R. Zboril	Dr. Stepan Kment , Palacky University Olomouc, Czech Republic
18:15 - 18:30	The effect of cold plasma and fs-laser generated plasma surface treatment on the wettability of high strength steel and the strength of the overlap bonded joint Z. Weltsch and M. Berczeli	Dr. Zoltan Weltsch , John von Neumann University, Hungary
18:30 - 18:45	Influence of cold plasma surface treatment of HIPS and PA6 based nanocomposite polymers on wetting properties and 2K epoxy and 2K hybrid adhesive joints M. Berczeli and Z. Weltsch	Mr. Miklos Berczeli , John von Neumann University, Hungary

27 April 2022

Plasma Tech Session I
Plasma fundamentals / Modelling / Atomic and Molecular Processes

Onsite Conference Room Glorias B

Session's Chairs:

Prof. Enric Bertran-Serra, Barcelona University, Spain

Dr. Thomas Danny Michl, University of Applied Sciences and Arts Northwestern Switzerland, Switzerland

Prof. Vasco Guerra, Technical University of Lisbon, Portugal

14:00 - 14:30	Controlling Atmospheric Pressure Plasma Interactions with Solids and Liquids Kseniia Konina, Mackenzie Meyer, Sanjana Kerketta, Astrid Raisanen, Jordyn Polito and Mark J. Kushner	Prof. Mark J. Kushner , University of Michigan, USA
14:30 - 14:45	Plasma spraying related modelling and experimental studies M. Baeva , T. Zhu, H. Testrich, R. Methling and R. Foest	Dr. Margarita Baeva , Leibniz Institute for Plasma Science and Technology, Germany
14:45 - 15:00	Non-Thermal Plasma Sources Based on Cometary and Point-to-Ring Discharges E. Lokajová , J. Khun, A. Machková, P. Kašparová, M. Klenivskiy, E. Vaňková, P. Galář, J. Julák and V. Scholtz	Mrs. Eliska Lokajova , University of Chemistry and Technology- Prague, Czech Republic
15:00 - 15:15	A modelling investigation of the mechanisms underlying the O/O ₂ removal in the afterglow of a CO ₂ plasma with a carbon bed O. Biondo , F. Girard-Sahun, G. Trenchev, G. van Rooij and A. Bogaerts	Mr. Omar Biondo , The University of Antwerp, The Netherlands
15:15 - 15:30	Behaviour of Electric Arc in Plasma-Chemical Reactor during Hazardous Waste Processing V. Grigaitienė , D. Gimžauskaitė, V. Valinčius, R. Kėželis, R. Uscila and Ž. Kavaliauskas	Dr. Viktorija Grigaitiene , Lithuanian Energy Institute, Lithuania
15:30 - 15:45	Global plasma modelling of PECVD growth of SiO ₂ films for optical applications K. Tomankova , N. Rivolta and A. Obrusnik	Ms. Kristina Tomankova , PlasmaSolve company, Czech Republic
15:45 - 16:00	Characterization of non-thermal coronal plasma discharges for different high voltage electrode configurations in the atmosphere using air. S.O. Babalola, V. Tshigo , M.O. Daramola and S.A. Iwarere	Mr Victor Tshigo , University of Pretoria, South Africa
16:00 - 16:15	Investigations of the sheath in a dual-frequency capacitively coupled rf discharge by optically trapped microparticles J. Schleitzer , V. Schneider and H. Kersten	Ms. Jessica Schleitzer , Christian-Albrechts Univ., Germany

27 April 2022

SICT 2022 / Tribology 2022
ReSISTant EU Project Workshop: Drag Reducing Surfaces (Riblets) - Simulations, high resistant nano-coatings development, applications, and new manufacturing processes for future worldwide applications

Onsite Conference Room Glorias C

08:30 - 10:00

Welcoming Coffee

Workshop Chairs:
Dr. Andreas Flanschger, Bionic surface technologies GmbH, Austria

10:00 - 10:15	Overview Project ReSISTant A. Flanschger	Dr. Andreas Flanschger , Bionic surface technologies GmbH, Austria
10:15 - 10:45	Industrial Compressors: Riblet Simulation Results L.G. de Albeniz Martinez	Mr. Lucas Garcia de Albeniz Martinez , Bionic surface technologies GmbH, Austria
10:45 - 11:15	Industrial Compressors: Applications and Test results M. Meyer	Mr. Michael Meyer , MAN Energy Solutions Schweiz AG, Switzerland
11:15 - 11:45	Riblet application technologies I: Coatings for harsh conditions A. Brinkmann	Mr. Andreas Brinkmann , Fraunhofer IFAM, Germany
11:45 - 12:15	Aircraft Turbines: Riblet Simulation Results L.G. de Albeniz Martinez	Mr. Lucas Garcia de Albeniz Martinez , Bionic surface technologies GmbH, Austria

12:00 - 14:00

Lunch Break

14:00 - 14:15	Project ReSiSTant and beyond – new Riblet applications Flanschger	Dr. Andreas Flanschger , Bionic surface technologies GmbH, Austria
14:15 - 14:45	Riblet application technologies II: Riblet Film and beyond C. Baum	Dr. Christoph Baum , Polyscale GmbH & Co. KG, Germany
14:45 - 15:15	Riblet Application Technologies III: Laser Y. Shibazaki	Mr. Yuichi Shibazaki , NIKON Corporation, Japan
15:15 - 15:45	Riblet Application Technologies IV: Direct Contactless Microfabrication H. Bilinsky	Mr. Henry Bilinsky , MICROTAU PTY LTD, Australia

16:00 - 16:30

Coffee Break

16:30 - 17:00	Riblet Material Development: Antifouling Riblet coatings A. Brinkmann	Mr. Andreas Brinkmann , Fraunhofer IFAM, Germany
17:00 - 17:30	Surface Characterization: Roughness direct simulation L.G. de Albeniz Martinez	Mr. Lucas Garcia de Albeniz Martinez ; Bionic surface technologies GmbH, Austria
17:30 - 18:00	Riblet Material Development: Riblet Defects and their impact C.Feichtinger	Mr. Christoph Feichtinger , Bionic surface technologies GmbH, Austria

28 April 2022

**Plasma Tech Session II:
Plasma Processing / materials interactions / coatings**

Onsite Conference Room Glorias A

Session's Chairs:

Prof. Mark J. Kushner, University of Michigan, USA
Prof. Vasco Guerra, Technical University of Lisbon, Portugal
Dr. Minkwan Kim, University of Southampton, UK

09:00 - 09:30	Selectively changing key surface properties via atmospheric gliding arc plasma deposition T. Danny Michl , A. Goel and S. Neuhaus	Dr. Thomas Danny Michl , University of Applied Sciences and Arts Northwestern Switzerland, Switzerland
09:30 - 09:45	On the formation of carbon nanoparticles in expanding laser-induced plasma A. Kaczmarek and J. Hoffman	Ms. Agata Kaczmarek , Institute of Fundamental Technological Research Polish Academy of Sciences, Poland
09:45 - 10:00	Carbon nanostructure production from ethanol by cold plasma A. Jurov , J. Zavašnik and U. Cvelbar	Dr. Andrea Jurov , University of Zagreb, Croatia
10:00 - 10:15	Hydrophobic and Amphiphobic Postmodification of Mesoporous Aerogels via Cold Plasma Coating B. Schroeter , I. Jung, P. Gurikov and I. Smirnova	Dr. Baldur Schroeter , Hamburg University of Technology, Germany
10:15 - 10:30	Plasma Activated Liquids: a Method for Efficient Surface Modification of Semiconductor Nanostructures P. Galář , F. Matějka, J. Khun and K. Kůsová	Dr. Pavel Galář , Institute of Physics of the Czech Academy of Sciences, Czech Republic
10:30 - 11:00	Coffee Break	
11:00 - 11:15	UV-LED, UV-laser and Corona discharge treatments for polypropylene surface functionalization and optimization of PP-Fiber Reinforced Concrete B. Malchiodi , P. Pozzi and C. Siligardi	Mrs Beatrice Malchiodi , University of Modena and Reggio Emilia, Italy
11:15 - 11:30	Fast Switch From Hydrophilic to Hydrophobic Surface of Cellulose Film by Low-Temperature Plasma Treatment A. Oberlintner , V. Shvalya, B. Likožar and U. Novak	Ms Ana Oberlintner , National Institute of Chemistry, Slovenia
11:30 - 11:45	Recent progress in the electrical management of the plasma electrolytic oxidation process J. Martin , V. Ntomprougkidis, C. Tusch, A. Maizeray, G. Marcos, T. Czerwiec, T. Belmonte and G. Henrion	Dr Julien Martin , University of Lorraine, France
11:45 - 12:00	Promoting resource preservation by PECVD barrier coatings for refillable PET bottles P. Alizadeh and R. Dahlmann	Dr. Philipp Alizadeh , RWTH Aachen University, Germany
12:00 - 12:15	Cathodic plasma electrolytic deposition of an aluminium oxide based hydrogen permeation barrier M. Wetegrove , M. Rohloff, U. Lindemann, A. Quade and A. Kruth	Dr. Marcel Wetegrove , Leibniz Institute for Plasma Science and Technology, Germany
12:00 - 14:00	Lunch Break	

**Plasma Tech Session III:
Plasma application for biology, medicine, and agriculture**

Onsite Conference Room Glorias A

**Session's Chairs:
Prof. Lia-Mara Ditu, University of Bucharest, Romania
Prof. Cristina Canal, The Polytechnic University of Catalonia, Spain
Dr. Ita Junkar, Jožef Stefan Institute, Slovenia**

14:00 - 14:30	Challenges in Plasma-Conditioned Liquids and Hydrogels for Cancer Treatment C. Labay, F. Tampieri, A. Espona, X. Solé-Martí, M. Mateu-Sanz, J. Tornin and C. Canal	Prof. Cristina Canal , The Polytechnic University of Catalonia, Spain
14:30 - 15:00	Multifunctional medical materials of the future by plasma surface modification I. Junkar and M. Benčina	Dr. Ita Junkar , Jožef Stefan Institute, Slovenia
15:00 - 15:15	Improved biocompatibility of hydrothermally and plasma-treated titanium M. Benčina , N. Rawat, P. Starič, K. Lakota, S. Sodin-Šemrl, A. Iglič and I. Junkar	Dr. Metka Bencina , Jožef Stefan Institute, Slovenia
15:15 - 15:30	PECVD coatings as migration barriers for the use of post-consumer recyclates in food contact L. Kleines and R. Dahlmann	Mrs. Lara Kleines , RWTH Aachen University, Germany
15:30 - 15:45	Utilization of Plasma in Medicine: Inactivation of Acanthamoebas, Dermatophytes, and Staphylococci T. Měřínská , E. Lokajová, J. Julák, E. Nohýnková, J. Khun, V. Scholtz and P. Petráš	Ms. Tereza Merinska , University of Chemistry and Technology- Prague, Czech Republic
15:45 - 16:00	Understanding the molecular mechanisms of non-thermal plasma treatments on Arabidopsis thaliana seeds A. Waskow , A. Guihur, A.A. Howling and I. Furno	Ms. Alexandra Waskow , EPFL university, Switzerland
16:00 - 16:30	Coffee Break	

28 April 2022

**SICT 2022 / Tribology 2022 Joint Session I:
Coatings and Surfaces Corrosion / tribological properties / adhesion and Adhesives**

Onsite Conference Room Glorias B

Session's Chairs:

Dr. Himanshu H Mishra, King Abdullah University of Science & Technology, KSA

08:30 - 09:00	Corrosion Protection Potential of Hard Nitride Based Coatings Produced with PVD techniques M. Ürgen and B. Avci	Prof. Mustafa Urgen , Istanbul Technical University, Turkey
09:00 - 09:15	Anticorrosive PEO coatings on metallic cast heat enhancers for thermal energy storage N. Ražny , A. Dmitruk and K. Naplocha	Ms. Natalia Ražny , Wrocław University of Science and Technology, Poland
09:15 - 09:30	Self-healing core-shell nanofibres for corrosion protective coatings N. C. M. Spera and J. P. S. Sousa	Dr. Natalia Spera , Iberian Nanotechnology Laboratory, Portugal
09:30 - 09:45	Epoxy Novolac Coating Interactions at High Pressure High Temperature Conditions N. Rajagopalan , C.E. Weinell, K. Dam-Johansen and S. Kiil	Dr. Narayanan Rajagopalan , Technical University of Denmark, Denmark
09:45 - 10:00	Mechanisms of corrosion protection of steel using industrial water-borne zinc rich sol-gel coatings A. Boidot , C. Jama, J-B. Vogt and F. Gheno	Mr. Arthur Boidot , Ecole Centrale Lille, France
10:00 - 10:15	Pull-off strength of polyurethane coatings with waste rubber fillers on aluminum substrate after aged and thermal shock processes P. Mayer , M. Ferraris and S. Perero	Dr. Paulina Mayer , Wrocław University of Science and Technology, Poland
10:00 - 10:30	Tungsten carbide surfaces: challenging PVD coatings by additive manufacturing F. Koehn , W. Schulz and J. Albrecht	Mr. Florian Koehn , Aalen University, Germany

10:30 - 11:00

Coffee Break

Session's Chairs:

Prof. Mustafa Urgen, Istanbul Technical University, Turkey

Dr. Himanshu H Mishra, King Abdullah University of Science & Technology, KSA

11:00 - 11:15	Adhesive and wear behavior of a duplex coating of a nitrided layer plus diamond-like carbon coating. I. Gómez , A. Claver, J.A. Santiago, J. Fernandez, Braceras and J.A. Garcia	Prof. Iñigo Gómez Alonso , Public University of Navarre, Spain
11:15 - 11:30	Wear behavior of single stage HVOF sprayed TiNbMoMnFe high entropy alloys coating N.V. Abhijith , A. Pattnayak, A. Gupta and D. Kumar	Mr. N.V. Abhijith , Indian Institute of Technology Delhi, India
11:30 - 11:45	Tribological Characterization of Ti-based Magnetron Sputtered Thin Films: A small-scale in situ study A. Sayilan , J. Ferreira, C. Goudin, C. Lopes, J. Borges, F. Vaz, N. Mary, S. Descartes and P. Steyer	Ms. Aslihan Sayilan , MATEIS, Univ. Lyon/ INSA-Lyon, France
11:45 - 12:00	Controlling the tribological properties of hard coatings by substrate engineering W. Schulz , F. Köhn and J. Albrecht	Mr. Wadim Schulz , Aalen University, Germany
12:00 - 12:15	Effect of Substrate (WC-Co) Surface Roughness on the Tribological Properties of DLC Coatings Deposited by HiPIMS S.A. Khan , J. Oliveira, N. Emami and A. Ramalho	Mr. Sharjeel Ahmed Khan , University of Coimbra, Portugal
12:15 - 12:30	Antiadhesive coating in aqueous phase to prevent colonization by microorganisms M. Champion , I. Linossier, K. Rehel, C. Hellio, X. Moppert and F. Faÿ	Ms. Marie Champion , University of South Brittany, France

12:00 - 14:00

Lunch Break

28 April 2022

**SICT 2022 / Tribology 2022 joint Session II:
Physics or chemistry of tribo-surfaces/ Nanotribology (Part I)**

Onsite Conference Room Glorias C

Session's Chairs:

Dr. Chen Xiao, Advanced Research Center for Nanolithography, The Netherlands

Dr. Alberto Rota, University of Modena and Reggio Emilia, Italy

Prof. Shih-Chieh Lin, National Tsing Hua University, Taiwan

08:30 - 09:00	Adhesion-aided friction of viscoelastic materials G. Carbone , C. Mandriota and N. Menga	Prof. Giuseppe Carbone , Polytechnic University of Bari, Italy
09:00 - 09:30	Compositional and topographical tailoring of tungsten carbide surfaces to control friction and wear under dry conditions J. Albrecht , W. Schulz and F. Köhn	Prof. Joachim Albrecht , Aalen University, Germany
09:30 - 10:00	Experimental and modelling-based upscaling of new material concept for journal bearings H. Ronkainen , J. Tervo, M. Savolainen, J. Virtanen and Sami Majaniemi	Prof. Helena Ronkainen , VTT Technical Research Centre, Finland
10:00 - 10:15	Challenges to Testing - Rolling Contact Fatigue on Modern High Strength Steels V. Heino , R. Parikka, M. Lindroos and H. Ronkainen	Dr. Vuokko Heino , VTT Technical Research Centre of Finland Ltd, Finland
10:15 - 10:30	The Dynamics of Capillary Bridge Formation in the Non-Contact Regime F. Cassin and B. Weber	Dr. Felix Cassin , Advanced Research Center for Nanolithography, The Netherlands
10:30 - 11:00	Coffee Break	
Session's Chairs:		
Prof. Giuseppe Carbone, Polytechnic University of Bari, Italy		
Prof. Helena Ronkainen, VTT Technical Research Centre, Finland		
11:00 - 11:30	Recent in-silico models for wear calculation in total hip replacements A. Ruggiero	Prof. Alessandro Ruggiero , University of Salerno, Italy
11:30 - 11:45	Wear Particle Dynamics Drives the Difference between Repeated and Non-Repeated Reciprocating Sliding F-C. Hsia, F. Elam, D. Bonn, B. Weber and S. Franklin	Dr. Chen Xiao , Advanced Research Center for Nanolithography, The Netherlands
11:45 - 12:00	Fine Defect Engineering of Graphene Friction A. Zambudio , E. Gnecco, J. Colchero, R. Pérez, J. Gómez-Herrero and C. Gómez-Navarro	Mr. Aitor Zambudio Sepúlveda , The Autonomous University of Madrid, Spain
12:00 - 12:15	Investigation of experimental production parameters effects on the wear behaviour of copper-tungsten disulfide composite M. Freschi , L. Dragoni, M. Mariani, O. Haiko, J. Kömi, N. Lecis and G. Dotelli	Mr. Marco Freschi , Polytechnic university of Milan, Italy
12:15 - 12:30	Fabrication of generated rough surface topographies through additive manufacture for replication and study in various polymer materials J. Perris , C. Kumar, Y. Xu, N. Gadegaard and D. Mulvihill	Mr. Jack Perris , University of Glasgow, UK
12:00 - 14:00	Lunch Break	

SICT 2022 / Tribology 2022: i-Tribomat Workshop

Session's Chairs:
Dr Xavier Borrás, AC2T Research, Austria

14:00 - 14:45	AC2T – The European Tribology Centre F. Pirker	Dr. Franz Pirker, AC2T research GmbH, Austria
14:45 - 15:00	On the Challenges in Achieving Comparable and Reproducible Tribological Model Tests M. Kröll	Mr. Mirco Kröll, Federal Institute of Materials Research and Testing (BAM), Germany
15:00 - 15:15	Seamless Data Flow J. Benedicto and A. Garcia	Mr. Jesus Benedicto, ATOS, Spain
15:15 - 15:30	The Tribology Database D. Dykeman	Dr. Donna Dykeman, Ansys UK Ltd, UK
15:30 - 15:45	The Art of Downscaling & Upscaling U. Cihak-Bayr	Dr. Ulrike Cihak-Bayr, AC2T research GmbH, Austria
15:45 - 16:00	Success Story of TRYGONAL IBERIA F. Pagano	Dr. Francesco Pagano, Tekniker Foundation, Spain
16:00 - 16:30	Coffee Break	
16:30 - 16:45	Game Changing in Material Development through Lab-to-Field Approaches I. Minami	Prof. Ichiro Minami, Luleå University of Technology, Sweden

SICT 2022 / Tribology 2022 joint Session II: Physics or chemistry of tribo-surfaces / Nanotribology (Part II)

Onsite Conference Room Glorias C

Session's Chairs:
Prof. Joachim Albrecht, Aalen University, Germany
Prof. Mitjan Kalin, University of Ljubljana, Slovenia

17:00 - 17:15	Effect of humidity on capillary adhesion and friction at silicon-on-silicon multi-asperity interfaces L. Peng, F.-C. Hsia, S. Woutersen, B. Weber and, D. Bonn	Mr. Liang Peng, University of Amsterdam, The Netherlands
17:15 - 17:30	Frictional properties and nano-mechanical analysis of surface-attached hydrogels R. Maraula and J. Rühle	Mr. Renato Maraula, Albert Ludwig University, Freiburg, Germany
17:30 - 17:45	Ti3C2Tx Nano-Sheets: Substrate-Dependent Tribo-Chemical Reactions A. Rota, N. Bellina and A. Rosenkranz	Dr. Alberto Rota, University of Modena and Reggio Emilia, Italy
17:45 - 18:00	A Novel Restrictor Design for Hydrostatic Bearing S. C. Lin, Y. H. Lo, Y. H. Lin, W. T. Tung and T. H. Lai	Prof. Shih-Chieh Lin, National Tsing Hua University, Taiwan
18:00 - 18:15	Skin friction: mechanical and tribological characterization of different papers used in everyday life L.M. Vilhena and A. Ramalho	Dr. Luis Vilhena, University of Coimbra, Portugal

29 April 2022

SICT Session II: Coatings for Energy and Environmental Applications

Onsite Conference Room Glorias B

Session's Chairs:

Prof. Iñigo Gómez Alonso, Public University of Navarre, Spain

Prof. Maria Gioti, Aristotle University of Thessaloniki, Greece

08:30 - 09:00	Optical design, microstructural characterization and high-temperature in-air stability study of solar selective coatings based on aluminium- (titanium, chromium) oxynitride multilayers R. Escobar Galindo , I. Heras, E. Guillén, F. Munnik, I. Azkona, A. Caro, T.C. Rojas, J.C. Sánchez-López and M. Krause	Dr. Ramon Escobar Galindo , University of Seville, Spain
09:00 - 09:30	Nature-Inspired Coating Technologies for Global Food-Water Security H. Mishra	Dr. Himanshu H Mishra , King Abdullah University of Science & Technology, KSA
09:30 - 09:45	Synthesis of Graphene-suspensions by plasma-in-liquid process for thin film coatings of polymer-membranes for fuel cell application. C. Rojas , T. Schulz, F. Käufer, , P. Quarz, V. Bravo, J. Kapp, V. Lukasek, T. Sommer, P. Scharfer, C. Scheu, J. Wartmann, W. Schabel and A. Kruth	Mrs. Camila A. Rojas Nuñez , Leibniz Institute for Plasma Science and Technology, Germany
09:45 - 10:00	Impact of Crosslinker Chemistry and Concentration on Reinforcement of GO Composites for Water Filtration Applications P. Kaur , R.L. Thompson, L.R. Hutchings, M.U. Chaudhary and T. Pugh	Ms. Purneema Kaur , Durham University, UK

10:00 - 10:30

Coffee Break

Plasma Tech Session IV: Plasma application in Energy and environment

Onsite Conference Room Glorias B

Session's Chairs:

Prof. Holger Kersten, University Kiel, Germany

Dr. Minkwan Kim, University of Southampton, UK

10:30 - 11:00	Validation of complex plasma chemistries: CO ₂ as a case study V. Guerra , T. Silva, C. Fromentin, T. C. Dias, A. S. Morillo-Candas and O. Guaitella	Prof. Vasco Guerra , Technical University of Lisbon, Portugal
11:00 - 11:15	Plasma-ammonia formation integrating high-temperature hydrogen plasma formation and biomass gasification N.V.D. Long , K. van 't Veer, J. Osorio Tejada, N, N. Tran, L. Fulcheri, B. Patil, V. Hesse, A. Bogaerts	Dr. Long Nguyen , University of Warwick, UK
11:15 - 11:30	Plasma-catalytic coupling in a nanosecond pulsed discharge plasma for CO ₂ recycling M. Faedda , B. Samojeden, L.M. Martini, M. Motak and P. Tosi	Ms. Marzia Faedda , AGH University of Science and Technology, Poland
11:30 - 11:45	Effect of morphology of nanostructured CeO ₂ supports on plasma-assisted CO ₂ methanation B. Musig , M.E. Gálvez and M.V. Navarro	Ms. Beatrice Musig , Instituto de Carboquímica-Zaragoza, Spain
11:45 - 12:00	Study on the mechanism of plasma-assisted CO ₂ methanation over Ru-zeolite catalysts in a DBD <i>operando</i> FTIR cell D. Aceto , F. Azzolina-Jury and C. Henriques	Mr. Domenico Aceto , IST Lisbon, Portugal
12:00 - 12:15	Plasma-liquid catalysis for CO ₂ conversion J. Barauna , T. M. García, M. Magureanu and V. I. Parvulescu	Mr. Jairo Barauna , University of Bucharest, Romania .
12:15 - 12:30	In-situ water purification method using plasma activated microbubbles for remote environments with limited resources M. Kim	Dr. Minkwan Kim , University of Southampton, UK
12:30 - 12:45	Kinetic mechanisms in CO ₂ -N ₂ plasmas C. Fromentin , T. Silva, T. C. Dias, E. Baratte, O. Guaitella, O. Biondo and V. Guerra	Mrs. Chloé Fromentin , Technical University of Lisbon, Portugal

29 April 2022

SICT 2022 / Tribology 2022 Session III: Lubricants and hydrodynamic lubrication

Onsite Conference Room Glorias C

Session's Chairs:

Prof. Giuseppe Carbone, Polytechnic University of Bari, Italy
Prof. Helena Ronkainen, VTT Technical Research Centre, Finland

08:30 - 09:00	Green Tribology: an appraisal of current status and future needs M. Kalin	Prof. Mitjan Kalin , University of Ljubljana, Slovenia
09:00 - 09:30	The Active Role of Lubricating Grease as a Tribological System- An Energetic Approach E.Kuhn	Prof. Erik Kuhn , Hamburg University of Appl. Sc, Germany
09:30 - 09:45	Development of tribological testing procedure for lubricating oil used in weaving machines. E. Colombo and M. Toscanini	Ms. Eleonora Colombo , R&D downstream research center-Eni SpA, Italy .
09:45 - 10:00	Tribological Performance of Lubricating Greases Composed by Different Bio-based Polymer Thickeners under EHL Conditions S. Vafaei , G. Jacobs, F. König and R. Weberskirch	Mr. Seyedmohammad Vafaei , RWTH Aachen University, Germany
10:00 - 10:30	Coffee Break	
Session's Chairs:		
Dr. Chen Xiao, Advanced Research Center for Nanolithography, The Netherlands		
10:30 - 10:45	Development of sustainable and effective water-based metalworking fluid for titanium machining E. Benedicto , E.M. Rubio, L. Aubouy and M.M. Marín	Mrs. Elisabet Benedicto , Leitat Technological Center, Spain
10:45 - 11:00	Development of HPDC system for lubricants evaluation L. Batlle , E. Benedicto, D. Cecilia, L. Muntada and W. Ajana	Ms. Laura Batlle , Leitat Technological Center, Spain .
11:00 - 11:15	Study of friction reducers obtained from Sargassum algae: Effect of the structure on the tribological performances of the carbon phases A.Molza , P.Bilas, T.Cesaire, P.Thomas and Y.Bercion	Dr. Audrey Molza , University of the French West Indies and Guiana- Guadeloupe, France
11:15 - 11:30	Mechanism analysis of tribological performance enhancement using MoS ₂ and h-BN nanomaterials as nano-additives into poly alpha olefin H. Jiang , X. Hou and K. D. Dearn	Mr. Hua Jiang , Wuhan University of Technology, China
11:30 - 11:45	Tribological response of self-mated Zircaloy-4 under dry and water submerged conditions B. Kumar , D. Kumar and V. Chaudhry	Mr. Bharat Kumar , Indian Institute of Technology Delhi, India
11:45 - 12:00	Performance of non-toxic, corrosion resistance, and lubricious metalworking fluid under machining A.P.S. Lodhi and D. Kumar	Mr. Ajay Lodhi , Indian Institute of Technology Delhi, India

Virtual Presentations Sessions

The virtual presentations are to be held through the Whova Virtual event solution and can be joined online. Any onsite participant wishing to take part of these virtual sessions, will have a room available for seating.

27 April 2022		
SICT 2022 / Plasma Tech 2022 joint virtual session		
Virtual Conference Session		
Session's Chairs: Prof. Eloisa Sardella, CNR- Institute of Nanotechnology, Italy		
14:00 - 14:30	Biobased functional coatings for cellulosic substrates M.B.Coltelli , L.Panariello, V.Gigante, L. Aliotta, S. Giangrandi, Ahdi Harich, I. Canesi, A. Lazzeri and P. Cinelli	Dr. Maria Beatrice Coltelli , University of Pisa, Italy
14:30 - 14:45	Growth of carbon-based fibrous nanostructures via Chemical Vapor Deposition on half-Heusler alloys A. Manasi, I.G. Aviziotis, A.F.A. Trompeta, A. Ntziouni, S.Deligiannis, A. Alexandratou, E.P. Koumoulos and C.A. Charitidis	Prof. Costas Charitidis , National Technical University of Athens, Greece
14:45 - 15:00	Fabrication of worm-like carbon fibers from Oligomer-rich soot generated by Solution Plasma A. E. Romero Valenzuela , C: Chokradjaroen and N. Saito	Mr. Andres E. R. Valenzuela , Nagoya University, Japan
15:00 - 15:15	Fabrication of Anti-Wetting Coatings for Cold Environments A. Corozzi , F. Veronesi, J. Mora, M. Caruso and M. Raimondo	Dr Alessandro Corozzi , Institute of Science and Technology for Ceramics, National Research Council (ISTEC- CNR), Italy
15:15 - 15:30	Combination of Coagulation, Adsorption, and Ultrafiltration Processes for Organic Matter Removal from Peat Water M Elma , A E Pratiwi, A Rahma, E L A Rampun, Mahmud, C Abdi, R Rosadi, D H Y Yanto and M R Bilad	Prof. Muthia Elma , Lampung mangkurat University, Indonesia
15:30 - 15:45	Control of metal ion release from magnetron sputtered Ag-Cu coatings on textiles S. Sonay Özbay , G.T. Pourian Azar, J. Sharp, G.D. Rajmohan and A. Cobleby	Mr. Serdar Sonay Özbay , Coventry University, UK
15:45 - 16:00	Atmospheric pressure plasma superhydrophobic bilayer coatings to limit dairy fouling adhesion M. Saget , N. Nuns, L. Azevedo-Scudeller, G. Delaplace, V. Thomy, Y. Coffinier and M. Jimenez	Mrs. Manon Saget , Univ Lille, France
16:00 - 16:15	Evaluation of galvanic anodes capacity as per NACE TM0190-98 test methods N. Rasheedi and S. Al Mutairi	Mr. Nayif Rasheedi , Saudi Aramco, Saudi Arabia
16:15 - 16:30 Coffee Break		
Session's Chairs: Dr. Maria Beatrice Coltelli, University of Pisa, Italy		
16:30 - 17:00	Breakdown criteria in air: critical analysis and applications O. Eichwald , O. Ducasse and M. Yousfi	Prof. Olivier Eichwald , Paul Sabatier Univ. Toulouse, France
17:00 - 17:15	Active Janus Particles in a Complex Plasma V. Nosenko	Dr. Volodymyr Nosenko , German Aerospace Center DLR, Germany
17:15 - 17:30	Plasma based CO ₂ Utilization – A Comparison S. Renninger, P. Rößner , J. Stein, M. Lambarth and P. Birke	Mr. Paul Rößner , University of Stuttgart, Germany
17:30 - 17:45	Investigation of Temporal Evolution of Vacuum Arc with Heated Cathode Made of Cerium Dioxide A.D Melnikov , R.A. Usmanov, V.P. Polishchuk, N.N. Antonov, A.V. Gavrikov and G.D. Liziakin	Mr. Anton Melnikov , Joint Institute for High Temperatures of the Russian Academy of Sciences, Russia
17:45 - 18:00	Pb+Ag mixture space separation in crossed fields of background discharge at the LaPlaS setup	Dr. Gennadii Liziakin , Joint Institute for High

	G. Liziakin , N. Antonov, A. Gavrikov, A. Oiler, A. Melnikov, V. Smirnov, R. Timirkhanov, R. Usmanov, L. Volkov and N. Vorona	Temperatures of the Russian Academy of Sciences, Russia
18:00 - 18:15	Optimization of PECVD SiO _x passivation of GaN for interface charge control O. Richard , V. Aimez and A. Jaouad	Mr Olivier Richard , Sherbrooke University, Canada
18:15 - 18:30	Dynamic properties of dust particles in a DC glow discharge in an external magnetic field A.R. Abdirakhmanov , N.Kh. Bastykova, S.Kh. Kodanova and T.S. Ramazanov	Mr. Assan Abdirakhmanov , Al-Farabi Kazakh National University, Kazakhstan
18:30 - 18:45	Plasma assisted CO ₂ dissociation in pure and gas mixture streams at ambient conditions P. Navascués, M Oliva-Ramírez, J. Cotrino, A. R. González-Elipe and A. Gómez-Ramírez	Dr. Ana Gómez-Ramírez , University of Seville, Spain
18:45 - 19:00	Plasma Diagnostics in Glow Discharge Emission Spectroscopy: a Glimpse into the Excitation Processes Involved Z. Weiss	Dr. Zdenek Weiss , Institute of Physics of the Czech Academy of Sciences, Czech Republic

28 April 2022

Tribology 2022 Virtual Session

Virtual Conference Session

Session's Chairs:

Prof. Maria Clelia Righi, University of Bologna, Italy
Dr. María J. García Guimarey, Bournemouth University, UK

08:00 – 08:30	Graphene Coatings: A Disruptive Approach to Remarkable Corrosion Resistance R. Singh	Prof. Raman Singh , Monash University, Australia
08:30 - 09:00	How to Slide (almost) without Friction from Boundary to Hydrodynamic Lubrication J. Cayer-Barrioz	Prof. Juliette Cayer-Barrioz , University of Lyon, France
09:00 - 09:30	Modeling of Lubrication between Parallel Rough Surfaces: Challenges and New Solutions N. Brunetière	Dr. Noel Brunetière , University of Poitiers, France
09:30 - 09:45	Study on the Effect of Water Content on Tribological Performance of Grease S. Y. Chern, W. L. Liu and M. F. Gu	Mr. Wei-Lun Liu , National Formosa University, Taiwan
09:45 - 10:00	Influence of Laser Cladding on the Tribological and Microstructural Properties of Ex-Service Light Rails P. Fasihi , O. Kendall, R. Abrahams, C. Qiu, P. Mutton and W. Yan	Ms. Panahsadat Fasihi , Monash University, Australia
10:15 – 10:30	Study on the Deterioration of Lubricating Oils with Environmental Particles J. H. Horng, J. L. Lin , Y. Y. Lin	Mr. Jin-Long Lin , National Formosa University, Taiwan
10:30 -10:45	Defining a shear hardness: a computational approach R. Capozza and K. J. Hanley	Dr. Rosario Capozza , The University of Edinburgh, UK

10:30 - 11:00

Coffee Break

Session's Chairs:

Prof. Juliette Cayer-Barrioz, University of Lyon, France
Prof. Jason Stokes, The University of Queensland, Australia

11:00 - 11:30	Advancing Solid Interfaces and Lubricants by First principles Materials Design M. Clelia Righi	Prof. Maria Clelia Righi , University of Bologna, Italy
11:30 - 12:00	Detection and Prevention of Early Surface Degradation Z. Tian, P. Lu, J. Grundy, S. Wang and R. Wood	Prof. Robert Wood , Univ. of Southampton, UK
12:00 - 12:15	Triboscopy of Carbon Coatings Under Dry Friction Conditions L. Lorenz , F. Härtwig, S. Makowski, M. Krause and A. F. Lasagni	Mr. Lars Lorenz , Dresden Univ. of Technology, Germany
12:15 - 12:30	Hydrostatic load on wavy sealing surfaces D. Huang , X. Yan, R. Larsson and A. Almqvist	Mr. De Huang , Luleå University of Technology, Sweden
12:30 - 12:45	Laser-based processing of polymeric tribological coatings for lightweight applications M. Dahmen , C. Vedder and J. Stollenwerk	Mr. Marius Dahmen , Fraunhofer Institute for Laser Technology (ILT), Germany
12:45 - 13:00	Weighted LASSO feature selection for the analysis of FT-IR spectra applied to relate engine oil degradation patterns P. Pfeiffer , B. Ronai, G. Vorlauffer, N. Dörr and P. Filzmoser	Ms. Pia Pfeiffer , Vienna University of Technology, Austria
13:00 - 13:15	Analysis of the incomplete film in journal bearings using computational fluid dynamic S. Wei , Y. Kligerman, R. Goltsberg and I. Etsion	Dr. Roman Goltsberg , Technion, Israel
13:15 - 13:30	Unexpected low friction property of brass on ta-C in vacuum and atmospheric conditions F. Härtwig , L. Lorenz, S. Makowski, M. Krause, C. Habenicht and A. Fabián Lasagni	Mr. Fabian Härtwig , Fraunhofer Institute for Material and Beam Technology IWS, Germany

13:30 - 14:00

Lunch Break

Plasma Tech 2022 Virtual Session

Virtual Conference Session

Session's Chairs: Prof. Eloisa Sardella, CNR- Institute of Nanotechnology, Italy Prof. Jason H.C. Yang, Feng Chia University, Taiwan		
14:00 - 14:30	Electron Dynamics and Abnormal Target Erosion in RF Magnetron Discharges Qi Hua Fan and Bocong Zheng	Dr. Qi Hua Fan , Michigan State University, USA
14:30 - 15:00	Aerosol assisted plasma deposition of composite coatings: from biomaterials to catalysis F. Palumbo , C. Lo Porto and P. Favia	Dr. Fabio Palumbo , CNR Institute of Nanotechnology, Italy
15:00 - 15:15	Correlation of Excited Chemical Species by Solution Plasma in Cyclic Organic Compounds and the synthesized Carbon-based structure J. Niu , C.Chokradjaroen and N. Saito	Dr. Jiangqi Niu , nagoya university, Japan
15:15 - 15:30	Reduction Synthesis of High-Entropy Alloy Nanoparticles in the Plasma Ionic Liquid System and their Application to Hydrogen Evolution Reaction G. Lee , V.-T. Nguyen, L. Larina, N.-A. Nguyen, H.-S. Choi and M. Keidar	Prof. Ho Suk Choi , Chungnam National University, Rep. of Korea
15:30 - 15:45	Synthesis of SiC Nanopowder by DC Plasma for Nuclear Fuel Applications G. Cota-Sanchez , D. McDonald, J. Mouris and N. Lee	Dr. German Cota-Sanchez , Canadian Nuclear Laboratories, Canada
15:45 - 16:00	Effect of crosslinker on the wettability and mechanical properties of hydrophobic coatings deposited via atmospheric pressure plasma C. Rendon-Piedrahita , K. Baba, R. Quintana, J. Bardon, R. Heyberger, J. Borek-Donten and P. Choquet	Dr Camilo Rendon Piedrahita , Luxembourg Institute of Science and Technology, Luxembourg
16:00 - 16:15	Solution Plasma for Enhanced Phosphorus Doping in TiO ₂ Nanoparticles C. Chokradjaroen , J. Niu and N. Saito	Dr. Chayanaphat Chokradjaroen , Nagoya University, Japan
16:15 - 16:30	Coffee Break	
Chairs: Prof. Olivier Eichwald, Paul Sabatier Univ. Toulouse, France Dr. Fabio Palumbo, CNR Institute of Nanotechnology, Italy Dr. Qi Hua Fan, Michigan State University, USA		
16:30 - 17:00	Adaptive Plasmas and Recent Developments in Plasma Medicine M. Keidar	Prof. Michael Keidar , George Washington Univ., USA
17:00 - 17:30	The plasma produced long-lived RONS as allies in biomedicine and food storage. E. Sardella	Prof. Eloisa Sardella , CNR-Institute of Nanotechnology, Italy
17:30 - 18:00	With Plasma from Medicine to Hydrogen K.D. Weltmann , T.v. Woedtke, J.F. Kolb, R. Brandenburg, T. Gerling, S. Bekeschus, R. Bansemer, V. Hahn, J. Ehlbeck, H. Brust, K. Zocher, V. Brüser, A. Kruth and R. Clemen	Prof. Klaus-Dieter Weltmann , Leibniz Institute for Plasma Science and Technology e.V. Germany
18:00 - 18:15	Plasma-Induced Graft Polymerization of Polyethylenimine onto Poly-caprolactone Composite Membrane for Heavy Metal Pollutants Treatment in Industrial Wastewater S-L. Tu and J.H.C. Yang	Prof. Jason H.C. Yang , Feng Chia University, Taiwan
18:15 - 18:30	Application of continuous flow plasma brushes for inactivation of antibiotics from communal and industrial wastewaters W. Babinska , A. Motyka-Pomagruk, D. Terefinko, M. Caban, P. Jamroz, P. Pohl, E. Lojkowska, W. Sledz and A. Dzimitrowicz	Mrs. Weronika Babińska , University of Gdansk, Poland
18:30 - 18:45	The Physical Effects of Plasma Medicine on Cells: Radio Frequency Stimulated Intercellular and Innercellular Mechanical Waves L. Lin , X. Yao, D. Yan and M. Keidar	Dr. Li Lin , The George Washington University, USA
18:45 - 19:00	Antibacterial, biodegradable nanohybrids for therapy of chronic wounds. A. Manakhov , E. Permyakova and A. Solovieva	Mr. Anton Manakhov , Research Institute of Clinical and Experimental Lymphology Russia

29 April 2022

Tribology 2022 Virtual session: Biotribology/ Green Tribology

Virtual Conference Session

Session's Chairs:

Prof. Robert Wood, University of Southampton, UK
Prof. Jason Stokes, The University of Queensland, Australia

09:00 - 09:30	Learning from Nature: Discovering and Designing Bio-inspired Solutions in Tribology D. Dini	Prof. Daniele Dini , Imperial College London, UK
09:30 - 10:00	Soft tribology, biotribology and viscoelastic lubrication: interpretation and application J.R. Stokes and Y. Xu	Prof. Jason Stokes , The University of Queensland, Australia
10:00 - 10:30	Coffee Break	
Session's Chairs: Prof. Jason Stokes, The University of Queensland, Australia		
10:30 – 11:00	Using tribology to prevent skin injury and improve comfort M.A. Masen , J. Hayes, R.D. Jobanputra, K.K. Yap, M. Murali and Z. Tan	Prof. Marc Marsen , Imperial College London, UK
11:00- 11:30	How to go green in tribology? Sustainability and resource efficiency do matter in the 21st century! C. Gachot	Prof. Carsten Gachot , Vienna University of Technology, Austria

SICT 2022 / PlasmaTech 2022 / Tribology 2022 Joint Conferences Posters

Posters are being displayed through the Virtual event solution.

Discussions are to be done through the system chat features available to the attendees.

N.	Poster Title	Author, Affiliation, Country
1.	Modeling of surface morphology kinetics and nanostructures formation during binray thin film deposition A. Galdikas and G. Kairaitis	Prof. Arvidas Galdikas , Kaunas University of Technology, Lithuania
2.	Development of functional coatings with anti-abrasion and anti-icing properties J. P. Sousa and Y. Kolen'ko	Dr. Juliana Sousa , International Iberian Nanotechnology Laboratory, Portugal
3.	Functional nanomaterial-based coatings for automotive industry C. Ponte and J. P. Sousa	Dr. Clara Ponte , International Iberian Nanotechnology Laboratory, Portugal
4.	Synthesis and characterization of GaN/ReS ₂ , ZnS/ReS ₂ and ZnO/ReS ₂ core/shell nanowire heterostructures E. Butanovs, A. Kuzmin, S. Piskunov, K. Smits, A. Kalinko and B. Polyakov	Dr. Boris Polyakov , University of Latvia, Latvia
5.	Surface chemical and physical modification of PAM film induced by ion-beam irradiation for liquid crystal alignment D. W. Lee , J. H. Won, D. H. Kim, J. Y. Oh and D.-S. Seo	Mr. DongWook Lee , Yonsei University, Rep of Korea
6.	Self-improving of Protective Thin Films Based on Perhydropolysilazane E. Shmagina , M. Danilson, V. Mikli and S. Bereznev	Ms. Elizaveta Shmagina , Tallinn University of Technology, Estonia
7.	Fabrication Multilayer Nanocoating for Marine Applications M. Caruso , A. Corozzi, F. Veronesi, M. Raimondo, V. Piazza, F. Garaventa and F. Castelli	Mrs. Maria Caruso , CNR-ISTEC Institute of Science and Technology for Ceramic, Italy
8.	Steam-corrosion resistance of polycrystalline Ag thin optical coatings improving by grain-boundary segregation effect G. Marchii , D. Samsonov, I. Tereschenko, A. Guba and E. Mukhin	Mr. Georgiy Marchiy , Ioffe Institute, Russia
9.	The Effect of Carbon Nanotubes on the Corrosion Resistance of Waterborne Polyurethane-Acrylate Coatings J. T. Corredor and L.F. Giraldo	Dr. Jeaneth Corredor , Antioquia University, Colombia
10.	Adhesion of polyurethane coatings with powder fillers on composite substrates P. Mayer, H. Kapłon , A. Dmitruk, M. Lubecki, K. Rosochacka and P. Kus	Mrs. Honorata Kapłon , Wrocław University of Science and Technology, Poland
11.	Interactions of poly(ethyl-cyanoacrylate) with surfaces of aluminium oxide and titanium oxide P. Moritz , L. Wegewitz and W. Maus-Friedrichs	Mr. Philipp Moritz , Clausthal University of Technology, Germany
12.	Light Activated Inorganic Agents - the next generation of photocatalytic paints R. Bucureşteanu, V. Chihaiia, B. Cojocar, M. Ioniță, A. Ficai, L.M. Ditu and G. Mihăescu	Prof. Lia-Mara Ditu , University of Bucharest, Romania
13.	Colloidal and Thermal stability of Hybrid Waterborne Polyurethane Dispersions Prepared by Grafting Method L. F. Giraldo , Jeaneth T. Corredor, Esneyder Ruiz, Victor H. Orozco	Prof. Luis Fernando Giraldo , University of Antioquia, Colombia
14.	Antibacterial SnO ₂ coatings applied on Ti6Al7Nb alloy for applications in bone surgery M. Basiaga , W. Walke and J. Lisoń	Prof. Marcin Basiaga , Silesian University of Technology, Poland
15.	Ti13Zr13Nb alloy modified of tin dioxide by means of nanoPVD and ALD methods for an implant used in the skeletal system W Walke , M. Basiaga and K. Goldsztajn	Prof. Witold Walke , Silesian University of Technology, Poland
16.	Optimization of laser parameters for the injection moulds cleaning R. Santos, I. Marcelino, T. Ferreira, L. Pereira, F.M. Costa, N. M. Ferreira	Dr. Nuno Ferreira , Aveiro University, Portugal
17.	Design of polymeric coatings based on pH-sensitive acrylic terpolymers with potential application in the treatment of colonic diseases. L.M Suárez Giraldo , V. Orozco López and L.F Giraldo Morales	Ms. Lina M. Suarez Giraldo , University of Antioquia, Colombia

18.	Enhancing sensitivity and reducing unspecific adsorption in fiber-attached polymer hydrogels A. Luongo , T. Brandstetter and J. Rühle	Dr. Anna Luongo , University of Freiburg, Germany
19.	The Influence of Yarn Fineness in Layer Interchanging Double Cloth on Woven Fabric Roughness I. Schwarz , T. Badrov, S. Kovačević	Prof. Ivana Schwarz , University of Zagreb, Croatia
20.	Woven Fabric Roughness Conditioned by Weave S. Brnada , A. Kalazić, S. Sabljak and T. Kaurin	Dr. Snjezana Brnada , University of Zagreb, Croatia
21.	Plasma vortices in the near Earth environment K. Elbakidze	Dr. Khatuna Elbakidze , Tbilisi State University, Georgia
22.	A plasma diagnostic package for spacecrafts with electric propulsion systems V. Schneider , T. Trottenberg, H. Kersten, J. Laube, H. Henkel and R. Wimmer-Schweingruber	Dr. Viktor Schneider , University Kiel, Germany
23.	Experimental Observation of plasma parameter and photoresist ashing in an inductively coupled plasma sources with MRWPT antenna J-H. Kim , Y-H. Hong and C-W. Chung	Dr. Ju Ho Kim , Hanyang University, Rep. of Korea
24.	Experimental observation of hysteresis in a neon inductively coupled plasma at low pressure Y-H. Hong, T-W. Kim, M-Y. Lee, J-H. Kim and C-W. Chung	Mr. Young-Hun Hong , Hanyang University, Rep. of Korea
25.	Spatial and Temporal Characterization of NO and OH Concentration in a Nanosecond Pulsed Surface Dielectric Barrier Discharge Plasma Using Picosecond Laser Induced Fluorescence L. Ibba , P. F. Ambrico, F. Avino and I. Furno	Mr. Lorenzo Ibba , EPFL University, Switzerland
26.	Dielectric barrier discharge plasma reduction of iron oxides V. Udachin , S. Dahle and W. Maus-Friedrichs	Mr. Viktor Udachin , Clausthal University of Technology, Germany
27.	Deposition in silicon trenches and porous substrate using Bipolar High power impulse magnetron sputtering S. Atmane, N. Rochdi and A. Caillard	Mr. Caillard Amael , University of Orléans, France
28.	Plasma / liquid interactions during low pressure plasma sputtering deposition of Pt nanoparticles on liquid glycerol S. Atmane , P. Brault and A. Caillard	Mrs. Soumya Atmane , University of Orléans, France
29.	Kinetic Monte-Carlo modeling of SiN:H thin film deposition by PECVD on complex substrates: characterization of air-connected porosity and improvement by ion beam assisted deposition J. Müller , P. Moskovkin and S. Lucas	Dr. Jerome Muller , University of Namur, Belgium
30.	The influence of the RF- power on the photocatalytic properties of thin PE-ALD ZnO films deposited at room temperature D. Jardas , R. Peter, I. Turel, M. Petravić and A. Omerzu	Ms. Daria Jardas , University of Rijeka, Croatia
31.	Influence of adatoms on the titanium nano-cone formation during helium ion bombardment F. Sanchez , L. Marot, R. Antunes, R. Steiner, J. Spicher, P. Lattner, M. Kisiel, D. Mathys, E. Meyer, M. Astasov-Frauehoffer, I. Hauser-Gerspach, S. Kühl, J. Köser, R. Wagner, J. Hofstetter and K. Mukaddam	Mr. Fabien Sanchez , University of Basel, Switzerland
32.	Properties of (W,Zr)B ₂ -z Protective Coatings Deposited by RF Magnetron Sputtering Method T. Mościcki , R. Psiuk and J. Chrzanowska-Giżyńska	Dr. Tomasz Moscicki , Institute of Fundamental Technological Research PAS, Poland
33.	Adsorption of Organic Components from Fluid Mixtures on Cold Plasma Coated Aerogels in Supercritical Fluid Chromatography: Experiment and Simulation I. Jung , B. Schroeter, P. Gurikov and I. Smirnova	Mrs. Isabella Jung , Hamburg University of Technology, Germany
34.	Photoreactive pressure sensitive adhesives - bacterial and fungal properties K. Mozelewska and P. Niezgoda	Ms. Karolina Mozelewska , West Pomeranian University of Technology in Szczecin, Poland
35.	Decontamination of Drosophila suzukii Infested Blueberries with Low-pressure Cold Plasma Treatment P. Starič , N. Cvelbar Weber, M. Resnik, K. Vogel Mikuš and I. Junkar	Ms. Pia Staric , Jožef Stefan Institute, Slovenia

36.	Deposition of microencapsulated essential oil extracted from Neem seeds on the surface of plasma pretreated cellulose knitwear T. Perinović , A. Ludaš and S. Ercegović Ražić	Ms. Tihana Perinović , University of Zagreb Faculty of Textile Technology, Croatia
37.	Implementation of a Non-Thermal Atmospheric Pressure Plasma for Eradication of Plant Pathogens from a Surface of Economically Important Seeds J. Orłowski , A. Motyka-Pomagruk, A. Dzimitrowicz, W. Babinska, D. Terefinko, M. Rychłowski, M. Prusinski, P. Pohl, E. Lojkowska, P. Jamroz and W. Sledz	Mr. Jakub Orłowski , University of Gdansk, Poland
38.	Slip Resistance Improvement for Shoe Outsoles through Atmospheric-Pressure Plasma Treatments R. Múgica-Vidal, I. Muro-Fraguas, A. Sainz-García, E. Sainz-García, A. González-Marcos and F. Alba-Elías	Dr. Fernando Alba-Elías , University of La Rioja, Spain
39.	Tribological Performance of 2D Nano-coated Steel Surfaces M.J.G. Guimarey , M. Hadfield and A. Abdelkader	Dr. María J. García Guimarey , Bournemouth University, UK
40.	Effect of electrochemistry on tribochemical wear of monocrystalline silicon C. Xiao , F-C. Hsia, B. Weber and S. E. Franklin	Dr. Chen Xiao , Advanced Research Center for Nanolithography, The Netherlands
41.	Tribological and corrosion properties of coating systems dried by infrared radiation I. Stojanović, L. Turkalj , I. Cindrić, I. Juraga and D. Rakela Ristevski	Mr. Lovro Turkalj , University of Zagreb, Croatia
42.	Nonlinear Dynamic Analysis of Slot-Type Externally Pressurized Air Bearing System C.C. Wang	Prof. Cheng-Chi Wang , National Chin-Yi University of Technology, Taiwan
43.	Characterization and simulation of tribological behaviour for WC spherical surfaces with AlTiSiN coating M. Marqués , A.Claver, J.A.García, D. Salcedo, A. Tellez and I. Quintana	Mr. Mikel Marqués , Public University of Navarre, Spain
44.	Optimized surface engineering solutions for glass mould industry J. Costa , J.P. Dias and A. Cavaleiro	Dr. João Costa , Pedro Nunes Institute, Portugal
45.	Tool condition monitoring of self-lubricating nitride coatings to improve the lifetime of cutting tools in the manufacturing industry J. Perdigoto , B. Martins, J. Dias, D. Silva, T. Todo Bom, R. Curado, N. Alves, P. Rodrigues and D. Fonseca	Dr. José Perdigoto , Pedro Nunes Institute, Portugal
46.	Challenges on Protein Bioencapsulation in Transparent Nanoporous carbothermal reduction of mill scales formed on steel billets during continuous casting S.M. Espinoza Suarez , L.E. Borja-Castro, M. I. Valerio-Cuadros, A. Bustamante Domínguez, H.A. Cabrera-Tinoco, E. Huaman, R.A. Valencia-Bedregal, X. Zhao and L. De Los Santos Val-ladares	Ms. Silvia M.E. Suarez , National Mayor de San Marcos University, Peru
47.	Study of Mill Scale Surface Morphology and Iron Oxide Layers Obtained During Quenching of Steel Billets in The Continuous Casting R. A. Valencia-Bedregal , L. E. Borja-Castro, M. I. Valerio-Cuadros, S. M. Espinoza Suarez, A. G. Villasante Miranda, E. Y. Huaman Enriquez, A. Bustamante Dominguez and L. De Los Santos Valladares	Mr. Renato A.V. Bedregal , National Mayor de San Marcos University, Peru
48.	Surface and structural characterization of recycled HRB335 steel from black slags obtained from Electric Arc Furnace E.Y. Huaman Enriquez , S.M Espinoza Suarez, A.G. Villasante Miranda L.E. Borja-Castro, R.A. Valencia-Bedregal, M.I. Valerio-Cuadros, A. Bustamante Domínguez, X. Zhao, D. Zhang and L. De Los Santos Valladares	Ms. Evelin Yenifer Huaman Enriquez , National Mayor de San Marcos University, Peru
49.	Surface morphology of an Extruded Q235 Steel Rod Fabricated from Rolling Billets Scales A. G. Villasante Miranda , E. Y. Huaman Enriquez, L.E. Borja Castro, R. Valencia Bedregal, S.M. Espinoza Suarez, M.I. Valerio Cuadros, X. Zhao, A. Bustamante Dominguez and L. De Los Santos Valladares	Mr. Alejandro Germán Villasante Miranda , National Mayor de San Marcos University, Peru
50.	Morphological and Mineral characterization of Mill Scales obtained by rolling process L.E. Borja Castro , J. Kargin, R.A. Valencia Bedregal, S.M Espinoza Suarez, A.G. Villasante Miranda, M.I. Valerio-Cuadros, A. Bustamante Domínguez and L. De Los Santos Valladares	Mr. Luis Borja Castro , National Mayor de San Marcos University, Peru

51	Hydrophobic concrete based on hydrophobic sand A. Seralin , A. Kurbanova, T. Khassenova, O. Ualibek, G. Sugurbekova and O. Toktarbaiuly	Mr. Aidar Seralin , Nazarbayev University, Kazakhstan
52	A microfluidic non-thermal plasma reactor equipped with inline emission spectroscopy. P. Roszkowska , A. Slater, J. Walsh, A. Dickenson and T. Easun	Ms. Patrycja Roszkowska , University of Liverpool, UK
53	Remotion of the degraded coating of the polymer injection moulds for their reuse. R. Santos , T. Ferreira, L. Pereira, F. Costa and N. M. Ferreira	Mr. Rodrigo Santos , University of Aveiro, Portugal