

Program of the 2 day workshop: "Plasma Science & Interfaces"

Program Morning 18 October 2018

07.30	Hall open for table booth installations	
08.30	Doors open/coffee	
09.00	conference room "C3.11" (ground floor) Welcome & Opening by Chair(s) Philipp Rudolf von Rohr and Dirk Hegemann & Program Director Hugo de Haan	
9.20-9.50	conference room "C3.11" (ground floor) 1 st keynote; Christian Oehr , Fraunhofer Institute for Interfacial Engineering and Biotechnology IGB, Stuttgart, Germany, "Plasma functional thin films - what's about stability regarding biomedical application?"	
9.50-10.10	Coffee / tea at booth area	
Start parallel workshop sessions		
	conference room "C3.11" (ground floor) Plasma medicine, medical and healthcare Moderator: KD Weltmann	conference room "D3.11" (first floor) Plasma surface modification & thin films Moderator: Ken Heaenen
10.10-10.30	KD Weltmann , INP Greifswald, "Development of plasma sources for plasma medicine, clinical results and future applications"	Ken Heaenen , IMO / Uni Hasselt, "Applications of Conductive Nanocrystalline Diamond Films by Plasma-driven Microstructure Tailoring"
10.30-10.50	Paola Brun , University of Padova, "Effects of cold plasma generated by ionization of a helium flow on wound healing"	Patrick Choquet , LIST & Regis Heyberger, "Functional thin films deposited by Plasma-assisted deposition at Atmospheric Pressure using Dielectric Barrier Discharges"
10.50-11.10	Peter Awakowicz , RUB, "Plasma sterilization of thermolabile materials"	Philippe Roquiny , AGC Plasma Technology Solutions, "From Lab to Industrial Scale Plasma Tools"
11.10-11.30	<i>open</i>	Uwe Lommatzsch , Fraunhofer IFAM, Bremen, Germany, "Plasma coating processes at low and atmospheric pressure and the transfer to industrial applications - adhesion promotion, corrosion protection and biocompatible coatings"
11.30-11.50	Coffee Break	
	conference room "C3.11" (ground floor) Plasma medicine, medical and healthcare Moderator: Kerstin Thorwarth	conference room "D3.11" (first floor) Plasma surface modification & thin films Moderator: Fabienne Poncin-Epaillard
11.50-12.10	Kerstin Thorwarth , Empa, CH, "HiPIMS Coatings for MedTech applications"	Fabienne Poncin-Epaillard , Université du Maine / le Mans, France, "Enhancement of practical adhesion of PEEK surfaces thanks to plasma technologies"
12.10-12.30	Ravi Sinha , University Of Maastricht / MERLN, "Additive manufacturing of bulk and surface composition gradients for tissue engineering applications"	Patrice Raynaud , Université Paul Sabatier de Toulouse, "Low pressure PECVD of metal oxide and metal oxide/silica thin films: Comparative study of films deposited from metalorganic precursors Zirconium Tetra tert-Butoxide and Titanium Tetra Isopropoxide"
12.30-12.50	Ainhoa Pardo , Empa, "Interface corrosion and fatigue mechanisms investigations in DLC coated articulating implants"	Lenka Zajíčková , CEITEC, CZ, "Plasma polymer coatings on electrospun polymer nanofibers aimed at biomedical applications"
12.50-13.10	Papken Hovsepian , Sheffield Hallam University, Sheffield, UK, "Development of nanoscale multilayer CrN/NbN coatings for joint replacements deposited by High Power Impulse Magnetron Sputtering"	Patrick Rupper , Empa, CH, "Reduced aging phenomena in graded plasma polymer films"
13.10-14.20	Photo shoot participants & Lunch	

Program Afternoon 18 October 2018

	<p>conference room "C3.11" (ground floor)</p> <p>Atmospheric pressure plasma @ Micro/Nano scale</p> <p>Moderator: David Pai</p>	<p>conference room "D3.11" (first floor)</p> <p>Atmospheric pressure plasma jet (APPJ)</p> <p>Moderator: Judith Golda</p>
14.20-14.40	David Pai , University Poitiers, "In-situ fluid and surface diagnostics of atmospheric-pressure microplasmas"	Judith Golda , Institute of Experimental and Applied Physics, Kiel University, Germany, "The COST-Jet as a versatile tool for science: fundamental research and applications"
14.40-15.00	Gary Eden , Illinois University, USA, "Microwave filters, thin film deposition, and photolithography enabled by arrays of microplasmas"	Iuliia Onyshchenko , Ghent University, Belgium "Improving APPJ treatment with a new design and adjusted operating conditions"
15.00-15.20	Bilel Rais , InnoPhysics, NL, "µPlasmaPrint: digital on-demand surface engineering"	Milan Simek , Academy of Science, Prague, Czech Republic, "Surface DBD based jet system for in-line processing of solid and liquid particles"
15.20-15.40	Thomas Homola , R&D Center for Low-Cost Plasma and Nanotechnology Surface (CEPLANT), Brno, Czech Republic, "Plasma Processing of Surfaces and Nanostructured Coatings for Flexible and Printed Electronics"	Andreas Pfuch , INNOVENT e.V. Technology Development, Jenas, Germany, "Atmospheric pressure plasma jet coatings - overview and possibilities in R&D on the way to industrial application"
15.40-16.10	Coffee Break	

	<p>conference room "C3.11" (ground floor)</p> <p>Plasma surface modification & thin films</p> <p>Moderator: David Duday</p>	<p>conference room "D3.11" (first floor)</p> <p>Nanoparticles generation and particles surface treatment</p> <p>Moderator: Philipp Rudolf von Rohr</p>
16.10-16.30	David Duday , LIST, "Generation of surface chemical gradients by an atmospheric-pressure plasma jet"	Roger Wallimann , ETH, "Nanoparticle Formation from HMDSO in Atmospheric Pressure Plasma for the Enhancement of Powder Flowability"
16.30-16.50	Stefan Nettesheim , Relyon Plasma GmbH, Regensburg, Germany, "Piezoelectric Low-Pressure Plasma"	Stefan G. Mayr , IOM Leipzig "Smart biomaterials: energetic particle assisted synthesis and functionalization"
16.50-17.10	Yuji Ohkubo , Osaka University, Japan, "Adhesive-free strong adhesion between fluoropolymers and other materials via plasma-jet-treated polydimethylsiloxane"	Denis Dowling , School of Mechanical and Materials Engineering, University College Dublin, Ireland "Enhancing the performance of powder particles through atmospheric plasma treatments"
17.10-17.30	Ondrej Kylian , Charles University, Prague, Czech Republic: "Gradient coatings prepared by means of gas aggregation sources"	Ivo Furno , EPFL Lausanne, Swi. "High pressure resonant network antennas for powder treatment"
17.30-17.50	Martin Amberg , Empa, CH, "Plasma Deposition on Fibers by PVD and CVD Processes"	Laszlo Pethö , Empa, CH, "Increasing the thermal stability of thin films by incorporating co-sputtered nanoparticles"
17.50-18.50	Coffee Break, ISC Steering Committee Meeting) & Lab tours	
19.00-23.00	Dinner & musical event at Militärkantine, St.Gallen	

Program Morning 19 October 2018

07.30-8.20	Coffee / tea at booth area	
	<p>conference room "C3.11" (ground floor) Plasma surface modification & thin films</p> <p>Moderator: Marko Eichler</p>	<p>conference room "D3.11" (first floor) Plasma surface modification & thin films</p> <p>Moderator: Thomas Nelis</p>
08.20- 08.40	Marko Eichler , Fraunhofer IST "Plasma jet applications with oxygen-free process gas mixtures"	Thomas Nelis , Berner Fachhochschule , Institute ALPS, Bern, "Microwave Discharge Plasma for carbon containing thin films"
08.40-09.00	François Loyer , Luxembourg Institute of Science and Technology (LIST), Materials Research and Technology (MRT) Department "Atmospheric pressure plasma initiated chemical vapor deposition (AP-PiCVD) – temporally isolated discharges toward conventional polymerization"	Mathis Trant , Empa , "Influence of ion flux density on Growth Morphology and Piezoelectric Properties of AlN Thin Films in DC Magnetron Sputtering"
09.00-09.20	Daniel Haehnel , Plasma Electronic GmbH, Neurenburg, "Gas, aroma and migration barrier by transparent plasma enhanced - silicon oxide coating"	Damien Thiry , Chimie des Interactions Plasma Surface (ChIPS), University of Mons (UMONS), Belgium, "A novel approach for micro/nano structuring functionalized plasma polymer films"
09.20-09.40	Gaffar Hossain , V-trion, AT. "Plasma assisted protective nanocoating of outdoor textiles"	Séverine Wolak , CNRS IS2M, "Nanocomposite plasma polymers: from synthesis to smart surface properties"
09.40-10.20	Coffee Break	
10.20-10.50	<p>conference room "C3.11" (ground floor)</p> <p>2nd keynote: Deborah O'Connell, University of York, "Activation of stem cell identity by plasma generated reactive species in primary prostate cells"</p>	
10.50-11.20	<p>conference room "C3.11" (ground floor)</p> <p>Special lecture: Philipp Rudolf von Rohr, ETH Zurich, CH, "What an individual can contribute to the solution of future problems"</p>	
11.20-11.50	Coffee Break	
	<p>conference room "C3.11" (ground floor) Surface diagnostics, energetics, analytics and –metrology</p> <p>Moderator: Holger Kersten</p>	<p>conference room "D3.11" (first floor) Plasma parameterization, diagnostics, simulation</p> <p>Moderator: Antaryami Mohanta</p>
11.50-12.10	Holger Kersten , Uni Kiel, IEAP, AG Plasmatechnologie, Kiel, Germany, "Calorimetric probes and force probes as non-conventional diagnostics in plasma surface engineering"	Antaryami Mohanta , EMPA, "Spectroscopic investigation of inductively coupled plasma for understanding synthesis process of graphene nano-flakes"
12.10-12.30	Bernard Nisol , Polytechnique Montreal "Energetics of Plasma Polymerization in Atmospheric Pressure Dielectric Barrier Discharges"	Ursel Fantz , Augsburg University "Monitoring plasma parameters via OES at the example of ion sources"
12.30-12.50	Ezgi Bülbül , Empa, CH, "Investigations on the water penetration into hydrophilic/hydrophobic gradient plasma films"	Thomas Gilmore , Impedans Ltd., Plasma Research Group, "On modern fault detection methods for industrial plasmas using intelligent impedance sensors"
12.50-14.00	<p>Poster session & Lunch (when no ISC meeting time 18th; 13.30 meeting International Scientific Committee / ISC)</p> <p>Posters:</p> <ul style="list-style-type: none"> • Tomas Plichta , Brno University of Technology Adhesion and mechanical properties of a-CSi:H and a-CSiO:H thin films prepared by PECVD • Aarati Chacko, Empa • Rajesh Ganesan , Empa • Martin Amberg, Empa • Dirk Hegemann, Empa 	

Program Afternoon 19 October 2018

14.00	Workshop session	
	conference room "C3.11" (ground floor) Plasma for Emission Abatement & CO2 Moderator: Bram Wolf	conference room "D3.11" (first floor) Plasma parameterization, diagnostics, simulation Continued Moderator: Jan Trieschmann
14.00-14.20	Bram Wolf , DIFFER, NL, "CO2 microwave plasma conversion– efficient production of CO at moderate pressures"	Jan Trieschmann , University of Cottbus, "Toward a consistent plasma-surface model for sputter processing using machine learning"
14.20-14.40	Luca Matteo Martini , University of Trento, "Nanosecond discharges for CO2 conversion"	Adam Obrusnik , PlasmaSolve, Brno, Czechia, "Modeling and computer simulation of plasma processing technologies using open-source and the cloud"
14.40-15.00	Vasco Guerra , Instituto Superior Técnico, Lisboa, Portugal, "CO2 plasmas - from solar fuels on Earth to oxygen production on Mars"	Jens Oberrath , Leuphana University Lüneburg, "Industry compatible sensors for dielectric and metallic depositing plasmas",
15.00-15.20	David Martinet , HES-SO Valais-Wallis, CH, "Surface micro-discharge (SMD) plasma reactor for cold atmospheric plasma (CAP) sterilization of powdered products at very low plasma power"	Sandra Gaiser , Empa, CH, "Influence of Gas Flow and Pressure on Plasma Deposition Mechanisms"
15.20-16.00	Plenary Closure @Coffee break Lab tours	