

Venue	Time	Abstract No.	Presenting Author (Affiliation, Country)	Title
CHAIR: Masaharu Shiratani				
Plenary				
Room A	09:15-10:00	19-PL01	Masaru Hori (Nagoya University, Japan)	Bridge the Gap between Plasma and Medical Sciences towards Future Medical Care
CHAIR: Kai Mazur				
Invited				
Room A	10:20-10:50	19-AI01	Hans-Robert Metelmann (Greifswald University, Germany)	Plasma-Jet supported surgery of advanced head and neck cancer - Requirements and first steps for proof of concept
	10:50-11:20	19-AI02	Tomoko Ohshima (Tsurumi University, Japan)	Possible dental applications of plasma-based sterilization using the reduced pH method : treatment of dental caries and root canal infection
	11:20-11:50	19-AI03	Julia Bandow (Ruhr University Bochum, Germany)	Modulation of protein activity by atmospheric pressure plasmas
Oral (Contributed)				
Room A	11:50-12:05	19-AO01	Gregory Fridman (Drexel Plasma Institute, USA)	Effect of Reactive Nitrogen Species Produced in Water by Reverse Vortex Gliding Arc Plasmatron on Plant Germination and Growth Rate
	12:05-12:20	19-AO02	Uta Schnabel (INP Greifswald e.V., Germany)	Non-thermal atmospheric pressure plasmas for food decontamination
	12:20-12:35	19-AO03	Kamonporn Panngom (Plasma Bioscience Research Center, Kwangwoon University, Republic of Korea)	Induction of Fungal Cell Death and Enhancement of Host Resistance by Non-thermal Dielectric Barrier Discharge (DBD) Plasma
CHAIR: Richard Satava				
Oral (Contributed)				
Room A	16:00-16:15	19-AO04	Simon Schneider (Ruhr-University Bochum, Germany)	Detailed Study of Plasma-Surface Interactions with an Atmospheric Pressure Plasma Jet (APPJ) as Selective Source for O, O ₃ and N
	16:15-16:30	19-AO05	Endre J. Szili (University of South Australia, Australia)	Synthetic biological sensors and their role in unraveling mechanisms of plasma medicine
	16:30-16:45	19-AO06	Chanchai Chutsirimongkol (Thailand Center of Excellent for Life Science, Thailand)	Non-Thermal Plasma for Acne and Aesthetic Skin Improvement

Monday, May 19

Venue	Time	Abstract No.	Presenting Author (Affiliation, Country)	Title
Special Session: "Challenges in Industry"				
Room A	16:45-17:05	19-AO07	Ammon Lam (IonMed LTD., Israel)	Preliminary Evaluation of Novel Skin Closure of Pfannenstiel Incisions Using Cold Helium Plasma and Chitosan Films
	17:05-17:25	19-AO08	Miriam Mann (Leibniz Institute for Plasma Science and Technology (INP Greifswald), Germany)	Standards in Plasma Medicine: Development, Contents and Importance of the first German DIN Specification.
Room A	17:25-17:45	19-AO09	Tetsuji Shimizu (terraplasma GmbH, Germany)	Activities of terraplasma GmbH
	17:34-18:05	19-AO10	Lionel Duvillaret (Kapteos, France)	Cold Plasma Diagnostic Using Vectorial Electrooptic Probe

Venue	Time	Abstract No.	Presenting Author (Affiliation, Country)	Title
CHAIR: Victor Vasilets				
Invited				
Room B	10:20-10:50	19-BI01	Masaharu Shiratani (Kyushu University, Japan)	Enhancement of food energy efficiency using plasmas
	10:50-11:20	19-BI02	Steven Shannon (North Carolina State University, U.S.A.)	Large scale low operating cost plasma sources for agricultural water treatment
Oral (Contributed)				
Room B	11:20-11:35	19-BO01	Jean-Michel Pouvesle (Université d'Orléans, France)	<i>In vivo</i> tissue oxygenation triggered through Plasma Gun treatment
	11:50-12:05	19-BO02	Kim Rouven Liedtke (University of Greifswald, Germany)	The effect of plasma activated medium on pancreatic cancer cells
	11:35-11:50	19-BO03	Mohammed Yousfi (CNRS, Toulouse University, France)	Genotoxic and cytotoxic effects on multi cellular tumor spheroids exposed to low temperature plasmas
	12:05-12:20	19-BO04	Seth Norberg (University of Michigan, USA)	Controlling Plasma Jets with Gas Shields and Their Interactions with Water Covered Tissue
	12:20-12:35	19-BO05	Tomy Abuzairi (Shizuoka University, Japan)	Surface Modification of Dot-arrayed Carbon Nanotubes for Multifunctional Bio-chip Sensors Using Atmospheric Pressure Plasma Jet
CHAIR: Eric Robert				
Oral (Contributed)				
Room B	16:00-16:15	19-BO06	Jong-Shinn Wu (National Chiao Tung University, Taiwan)	Hybrid Plasma Fluid Modeling and Gas Flow Simulation of Atmospheric-Pressure Plasmas
	16:15-16:30	19-BO07	Han S. Uhm (Kwangwoon University, Republic of Korea)	Mass decontamination of biological warfare agents by plasmas
	16:30-16:45	19-BO08	Yasushi Nishida (National Cheng Kung University, Taiwan)	Air Cleaning System with Use of High Electric Field Plasma without Discharges
	16:45-17:00	19-BO09	Gyungsoon Park (Kwangwoon University, Republic of Korea)	Ionic strength of solutions can modulate the anti-microbial effects of non thermal atmospheric pressure plasma
	17:00-17:15	19-BO10	Hachiro Yasuda (Toyohashi University of Technology, Japan)	Analysis of Plasma-Decontamination Process in Solution Using Bacterial Spores Differentially Labeled with GFP
	17:15-17:30	19-BO11	Daniela Boehm (Dublin Institute of Technology, Ireland)	In-package dielectric barrier discharge atmospheric cold plasma (DBD ACP) for inactivation of <i>Pseudomonas aeruginosa</i> biofilms

Monday, May 19

Venue	Time	Abstract No.	Presenting Author (Affiliation, Country)	Title
Room B	17:30-17:45	19-BO12	Masafumi Ito (Meijo University, Japan)	Inactivation process of <i>P. digitatum</i> spores evaluated by dose of ground-state atomic oxygen
	17:45-18:00	19-BO13	Taichi Miura (Soka University, Japan)	Effects of Low-Temperature Atmospheric-Pressure Plasma Irradiation on the Differentiation of Mouse Embryonic Stem Cells

Venue	Time	Abstract No.	Presenting Author (Affiliation, Country)	Title
CHAIR: Mark Kushner				
Plenary				
Room A	09:00-09:45	20-PL01	Eun Ha Choi (Kwangwoon University, Korea)	Plasma Physics and Chemistry for Biological Cell Interactions and Healing Diseases by Nonthermal Atmospheric Pressure Plasma
Tutorial				
Room A	09:45-10:15	20-AT01	David Graves (University of California at Berkeley, USA)	Mechanisms of plasma biomedicine: what do we know?
CHAIR: Svetlana Ermolaeva				
Invited				
Room A	10:35-11:05	20-AI01	Akira Myoui (Osaka University Hospital, Japan)	Biological Effect of Plasma Processing on Ceramics Artificial Bone
	11:05-11:35	20-AI02	Georg Isbary (Department of Dermatology, Hospital Schwabing, Germany)	Cold atmospheric plasmas for dermatologic and oncologic purposes
	11:35-12:05	20-AI03	Jennifer Shin (KAIST, KOREA)	HEALING OF WOUNDS BY ATMOSPHERIC PRESSURE PLASMA
	12:05-12:35	20-AI04	Jing Fang (Peking University, China)	Researches on Applying Atmospheric-Pressure Non-thermal Plasmas to Dental Medicine
CHAIR: Klaus-Dieter Weltmann				
Invited				
Room A	16:00-16:30	20-AI05	Lars Ivo Partecke (University of Greifswald, Germany)	Treatment options of atmospheric pressure plasma in GI-Cancer
Special Session: "COST Activities Overview"				
Room A	16:30-16:50	20-AO01	Miles Turner (Dublin City University, Ireland)	COST Action MP1101: Biomedical Applications of Atmospheric Pressure Plasmas
	16:50-17:10	20-AO02	Deborah O'Connell (University of York, UK)	An atmospheric pressure plasma reference source and protocols for biomedical applications
	17:10-17:30	20-AO03	Kai Masur (INP Greifswald, Germany)	Biological Standard Tests for an Evaluation of Different Plasma Sources and Treatment Regimes
	17:30-17:50	20-AO04	Stephan Reuter (ZIK plasmatis at the INP Greifswald, Germany)	Introduction to the EU COST Action TD1208 - Electrical discharges with liquids for future applications

Tuesday, May 20

Venue	Time	Abstract No.	Presenting Author (Affiliation, Country)	Title
CHAIR: Farzaneh Arefi-Khonsari				
Invited				
Room B	10:35-11:05	20-BI01	Krasimir Vasilev (University of South Australia, Australia)	Nanoengineered plasma polymer films for antibacterial coatings
	11:05-11:35	20-BI02	Cristina Canal (Universitat Politècnica de Catalunya, Spain)	Plasma modification of biomaterials for hard and soft tissue repair: relevance for drug delivery
	11:35-12:05	20-BI03	Fabio Palumbo (CNR-IMIP Bari, Italy)	Atmospheric plasma deposition of biocomposite coatings
	12:05-12:35	20-BI04	Sudhir Bhatt (University Pierre and Marie CURIE, France)	Nanometric thick copolymers elaborated by low and atmospheric pressure non-equilibrium plasmas for biomedical applications
CHAIR: Pietro Favia				
Oral (Contributed)				
Room B	16:00-16:15	20-BO01	Yuichi Setsuhara (Osaka University, Japan)	Behaviors of Atmospheric-Pressure Discharge and its Interaction with Soft Materials as a Basis for Plasma Medicine
	16:15-16:30	20-BO02	Yong Wang (University of Missouri, USA)	Non-thermal Atmospheric Plasmas in Dental Restoration: Improved Resin Adhesive Penetration
	16:30-16:45	20-BO03	Robert D. Short (University of South Australia, Australia)	A biological "tissue model" to study the plasma delivery of reactive oxygen species
	16:45-17:00	20-BO04	Anchu Viswan (Shizuoka University, Japan)	Simulation Study of Virus Concentration Using Plasma-functionalized Graphite-encapsulated Magnetic Nanoparticles with Biotin-Avidin System
	17:00-17:15	20-BO05	Farazaneh Arefi-Khonsari (University Pierre and Marie Curie, France)	Biodegradable copolymer coatings deposited by low pressure plasma polymerization for controlled drug delivery - first <i>in vivo</i> results
	17:15-17:30	20-BO06	Beate Haertel (University of Greifswald. Institute of Pharmacy, Germany)	Plasma-based stimulation of biotechnological processes in medicinal mushroom mycelia
	17:30-17:45	20-BO07	Yoko Yamanishi (Shibaura Institute of Technology, Japan)	Electrically-driven micro-bubbles assisted protein crystallization
	17:45-18:00	20-BO08	Kaori Sano (Department of Environmental and Life Sciences, Toyohashi University of Technology, Japan)	Measurement of reactive oxygen species in plasma-treated water

Venue	Time	Abstract No.	Presenting Author (Affiliation, Country)	Title
CHAIR: William Graham				
Plenary				
Room A	09:00-09:45	21-PL01	Michael Keidar (George Washington University, USA)	Towards understanding mechanism of cold atmospheric plasma in cancer treatment
CHAIR: Georg Isbary				
Invited				
Room A	10:05-10:35	21-AI01	Jürgen Schlegel (Technische Universität München, Germany)	Plasma Cancer Therapy - state of the art and path forward
	10:35-11:05	21-AI02	Hiroaki Kajiyama (Department of Obstetrics and Gynecology, Nagoya University Graduate School of Medicine, Japan)	New strategic plasma therapy for advanced and/or refractory epithelial ovarian cancer
	11:05-11:35	21-AI03	Kiwon Song (Yonsei University, South Korea)	Non-thermal atmospheric pressure plasma preferentially induces apoptosis in p53-mutated cancer cells by activating ROS-responsive pathways
CHAIR: Katsuhisa Kitano				
Invited				
Room B	10:05-10:35	21-BI01	Vittorio Colombo (Alma Mater Studiorum - University of Bologna, Italy)	Investigation of the effectiveness of a low power inductively coupled plasma source for biomedical applications
	10:35-11:05	21-BI02	XinPei Lu (HuaZhong University of Science and Technology, P.R. China)	Room Temperature Plasma Jets and Active Species Diagnostics
	11:05-11:35	21-BI03	Eric Robert (University of Orleans, France)	Understanding of gas flow, plasma and target interplay: a key prerequisite for the optimization of plasma jet treatments

Thursday, May 22

Venue	Time	Abstract No.	Presenting Author (Affiliation, Country)	Title
CHAIR: Jean-Michel Pouvesle				
Plenary				
Room A	09:00-09:45	22-PL01	Jürgen Lademann (Charité-University Medicine Berlin, Germany)	Application of tissue-tolerable plasma in dermatology: Risk assessment and prospects
Tutorial				
Room A	09:45-10:15	22-AT01	Klaus-Dieter Weltmann (Leibniz Institute for Plasma Science and Technology (INP), Germany)	Plasmas sources for medical use
CHAIR: Alexander Fridman				
Invited				
Room A	10:35-11:05	22-AI01	Yuzuru Ikehara (National Institute for Advanced Industrial Science and Technology (AIST), Japan)	An application of low temperature plasma to achieve minimal invasive surgery
	11:05-11:35	22-AI02	William Graham (Queen's University Belfast, UK)	Collaborative studies of a helium-based kHz jet.
	11:35-12:05	22-AI03	Theresa Freeman (Thomas Jefferson University, USA)	Microsecond DBD Plasma for Differentiation, Development and Regeneration
CHAIR: Stephan Reuter				
Oral (Contributed)				
Room A	14:00-14:15	22-AO01	Jörn Winter (Centre for Innovation Competence (ZIK) plasmatis at the INP Greifswald, Germany)	Tracking plasma generated H ₂ O ₂ from gas into liquid phase and revealing its dominant effect on human skin cells
	14:15-14:30	22-AO02	João Santos Sousa (Laboratoire de Physique des Gaz et des Plasmas, CNRS and Univ. Paris-Sud, France)	Degradation of DNA and Proteins Induced by Microplasma Jets
	14:30-14:45	22-AO03	Toshiro Kaneko (Tohoku University, Japan)	Minimally-Invasive Gene Transfection Using Atmospheric Pressure Plasma
	14:45-15:00	22-AO04	Kristian Wende (INP Greifswald, ZIK plasmatis, Germany)	Differential protein expression and thiol oxidation pattern in human keratinocytes in response to non-thermal plasma to reveal activation route

Venue	Time	Abstract No.	Presenting Author (Affiliation, Country)	Title
Room A	15:00-15:15	22-AO05	Jue Zhang (Peking University, China)	A genome-wide profiling of response genes in eukaryotic cells to non-thermal atmospheric pressure plasma treatment
	15:15-15:30	22-AO06	Svetlana A. Ermolaeva (Gamaleya Institute of Epidemiology and Microbiology, Russia)	Effects of microwave argon plasma on cell-wall-lacking <i>Mollicutes</i> bacteria
	15:30-15:45	22-AO07	Matteo Gherardi (Alma Mater Studiorum - University of Bologna, Italy)	Non-Thermal Plasma Promotes Apoptosis and Cell-Cycle Arrest in a Lymphoma Cell Line
	15:45-16:00	22-AO08	Jan-Wilm Lackmann (Ruhr University Bochum, Germany)	RNase A is Permanently Inactivated by a Dielectric Barrier Discharge by Chemical Modifications
CHAIR: Tomoyuki Murakami				
	16:30-16:45	22-AO09	Katsuhisa Kitano (Osaka University, Japan)	Cryopreservation of plasma treated water (PTW) for disinfection
	16:45-17:00	22-AO10	Kai Masur (INP Greifswald, Germany)	Modulation of Cell Activities by Changing the Plasma Composition
	17:00-17:15	22-AO11	Atsushi Tani (Osaka University, Japan)	Selective Supply of Active Species using Plasma Treated Water (PTW) for Effective and Safety Disinfection

Thursday, May 22

Venue	Time	Abstract No.	Presenting Author (Affiliation, Country)	Title
CHAIR: Timo Gans				
Invited				
Room B	10:35-11:05	22-BI01	Mark Kushner (University of Michigan, USA)	Progress and Needs in Modeling of Plasma Interactions with Tissue: Wet, Dry, Direct and Indirect
	11:05-11:35	22-BI02	Anne Bourdon (Ecole Centrale Paris, France)	Simulation of atmospheric pressure helium discharges in capillary tubes and in plasma jets
	11:35-12:05	22-BI03	Zdenko Machala (Comenius University, Slovakia)	Identification of RONS in water induced by air plasmas and their biomedical effects
CHAIR: Zdenko Machala				
Oral (Contributed)				
Room B	14:00-14:15	22-BO01	Rene Bussiahn (Leibniz Institute for Plasma Science and Technology (INP Greifswald), Germany)	Plasma therapy for large-scale wound treatments: development of a flexible plasma source
	14:15-14:30	22-BO02	Oleg Petrov (Joint Institute for High temperatures, RAS, Russia)	Cold atmospheric plasma sources, plasma diagnostics and plasma factors at medical applications
	14:30-14:45	22-BO03	Xiao Tan (Huazhong University of Science & Technology, China)	Single-cell-level Mobile Microplasma Jet For Cancer Cell Apoptosis
	14:45-15:00	22-BO04	Takehiko Sato (Tohoku University, Japan)	Generation of micro plasma in water for biomedical applications
	15:30-15:45	22-BO05	Norimitsu Takamura (Kumamoto University, Japan)	Propagation Difference of Atmospheric-pressure Helium Plasma jets Using Different Dielectric Materials
	15:45-16:00	22-BO06	Tomoko Ito (Osaka University, Japan)	Mass spectrometry of ions formed in atmospheric-pressure plasma jets
	15:00-15:15	22-BO07	David B. Graves (University of California at Berkeley, USA)	Atmospheric Pressure Dielectric Barrier Discharges in Air: Chemistry and Antimicrobial Effects
	15:15-15:30	22-BO08	Tomoyuki Murakami (Tokyo Institute of Technology, Japan)	Biologically Relevant Species in Atmospheric Pressure Helium-Oxygen Plasmas Operated in Ambient Air

Venue	Time	Abstract No.	Presenting Author (Affiliation, Country)	Title
CHAIR: Deborah O'Connell				
	16:30-16:45	22-BO09	Miles Turner (Dublin City University, Ireland)	Plasma chemistry modelling in atmospheric pressure plasmas: Errors and uncertainty
	16:45-17:00	22-BO10	Christof C. W. Verlackt (University of Antwerp, Belgium)	Reactive Molecular Dynamics Simulations for the Interaction of Reactive Oxygen Species with Biomolecules
	17:00-17:15	22-BO11	Tatsuru Shirafuji (Osaka City University, Japan)	Numerical Simulation of Electric Double Layer in Contact with DBD - Effects of Mobility and Diffusion Coefficient of Liquid Ions -

Friday, May 23

Venue	Time	Abstract No.	Presenting Author (Affiliation, Country)	Title
CHAIR: David Graves				
Invited				
Room A	09:00-09:30	23-AI01	Sophie Lerouge (Ecole de technologie superieure (ETS), Canada)	Primary-amine rich coatings to enhance the biocompatibility of cardiovascular implants
	09:30-10:00	23-AI02	Sarah Cousty (Centre hospitalier universitaire de Toulouse, France)	Medical applications of plasma technology: welcome to the future
Oral (Contributed)				
Room A	10:20-10:35	23-AO01	Kenji Ishikawa (Nagoya University, Japan)	Electron Spin Resonance Study of Plasma-Biological Surface Interactions under Atmospheric Pressure Plasmas
	10:35-10:50	23-AO02	Kohei Soga (Tokyo University of Science, Japan)	Atmospheric Plasma Processing to Form Organic Coating on Ceramic Nanoparticles for Biomedical Imaging
	10:50-11:05	23-AO03	Hiromasa Tanaka (Nagoya University, Japan)	Diagnostics of intracellular signaling systems of glioblastoma brain tumor cells treated with plasma-activated medium
	11:05-11:20	23-AO04	Michael V. Autieri (AJ Drexel Plasma Institute, Drexel University, USA)	Plasma Stimulates Angiogenesis
	11:20-11:35	23-AO05	Nozomi Takeuchi (Tokyo Institute of Technology, Japan)	Two-Dimensional Numerical Simulation of Mass Transfer of Reactive Species through Plasma-Liquid Interface

Venue	Time	Abstract No.	Presenting Author (Affiliation, Country)	Title
CHAIR: Toshiro Kaneko				
Invited				
Room B	09:00-09:30	23-BI01	Peter Bruggeman (University of Minnesota, United States)	Gas phase diagnostics of plasma jets and their induced liquid phase chemistry in the context of interactions with prokaryotic and eukaryotic cells
	09:30-10:00	23-BI02	Valeriy Titov (G.A. Krestov Institute of Solution Chemistry RAS, Russia)	Properties and Some Possible Applications of Gas Discharges Contacting with Liquids
Program Change				
		(23-BI02)	Svetlana A. Ermolaeva (Gamaleya Institute of Epidemiology and Microbiology, Russia)	Effects of the non-thermal argon plasma on intracellular bacteria: biological mechanisms and feasible applications
Oral (Contributed)				
Room B	10:20-10:35	23-BO01	Stephan Reuter (ZIK plasmatis at the INP Greifswald, Germany)	Tailored Reactive Oxygen Species and their generation mechanisms from the plasma, the gas and the liquid phase to human cells
	10:35-11:50	23-BO02	Timo Gans (York Plasma Institute, University of York, UK)	Key reactive species in cold atmospheric pressure plasmas: absolute measurements
	10:50-11:05	23-BO03	Helena Tresp (Center for Innovation Competence plasmatis at INP Greifswald e.V., Germany)	Plasma Jet (V)UV-Radiation Impact on Biorelevant Liquids and Cell Suspension
	11:05-11:20	23-BO04	Petr Lukes (Institute of Plasma Physics AS CR, Czech Republic)	Evidence about Formation of Peroxynitrite in Air Plasma-Treated Water through a Second-Order Post-Discharge Reaction of H ₂ O ₂ and HNO ₂
	11:20-11:35	23-BO05	Sybille Hasse (ZIK plasmatis, INP Greifswald e.V., Germany)	PLASMA TREATMENT OF HUMAN SKIN TISSUE