



XXXIII INTERNATIONAL CONFERENCE ON PHENOMENA IN IONIZED GASES

CONFERENCE PROGRAMME

ESTORIL, PORTUGAL
JULY 9-14, 2017

<http://icpig2017.tecnico.ulisboa.pt/>

Sponsors



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General information

The International Scientific Committee (ISC) and the Local Organizing Committee (LOC) are pleased to invite you to the XXXIII International Conference on Phenomena in Ionized Gases (ICPIG), which will be held in Estoril, Portugal, from 9 to 14 July 2017.

Since 1953, ICPIG has been a forum for the discussion of nearly all fields of plasma science, covering modelling and experiments, from the fundamentals of elementary processes, basic data and discharge physics (including transport and interaction with walls), to applications. Topics include plasma processing of surfaces and particles, high pressure and thermal plasma processing, development of radiation sources, plasma medicine, atmospheric and stellar plasmas, environmental protection and pollution control, plasma aerodynamics, and non-thermal plasmas in fusion devices.

Conference Location

Estoril is a village located less than 30 km west of Lisbon, which combines glamour, luxury and tradition. During World War II, Estoril was a place of exile for members of the European high society, such as kings, writers, famous artists and bankers, and naturally it became a main destination for British, Japanese and German spies. Indeed, Estoril was the location of Ian Fleming's famous spy 007 James Bond in the novel "Casino Royale", and the location for scenes in the 1969 James Bond motion picture "On Her Majesty's Secret Service".



Estoril is the ideal surrounding to meet and discuss equally intriguing plasma physics, in a relaxed atmosphere, enjoying the high-quality scientific program of ICPIG 2017.

Eugen Stamate, Chair ISC



Luís L. Alves, Chair LOC



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Conference topics and format

You are kindly invited to communicate the latest results of your scientific work in one of the XXXIII ICPIG topics.

Elementary processes and fundamental data
Modelling and simulation techniques
High frequency discharges
Thermodynamics and transport phenomena
Complex and dusty plasmas, ion-ion plasmas, mixed phase plasmas
Collective and nonlinear phenomena
Astrophysical, geophysical and other natural plasmas
High pressure and thermal plasma processing
Non-equilibrium plasmas and microplasmas at high pressures
Thermal plasmas
Plasma wall interactions, electrode and solid/liquid surface effects
Medical, biological, environmental and aeronautical applications
Plasma diagnostic methods
Plasma lamps and radiation sources
Plasma created by external sources of ionization
Plasma processing of surfaces and particles
Plasma power and pulsed power technology, particle sources
Low pressure plasmas

ICPIG 2017 introduces a **new format in the scientific program**, consisting of

- 6 invited **General Lectures** (GLs, 40+5 min duration), including the von Engel & Franklin Prize Lecture
- 29 invited **Topical Lectures** (TLs, 25+5 min)
- 36 **Oral Contributions** (OCs, 15+5 min)
Oral contributions are new to the ICPIG. The ISC selected papers for oral contributions from the submissions, taking into account the preferences of the authors and the number of slots available. The contributions were evaluated based on their novelty, scientific quality and expected impact on ICPIG audience, considering also the balance between the number of contributions submitted by country or region.
- 4 **Poster Sessions** (2h)
- 1 **Special Session** (2h)

Conference logistics

ICPIG participants are requested to **wear their badges at all times**, while attending the sessions, coffee breaks and social events.

All speakers are asked to upload their presentations by the end of the day before their sessions. The presentations can be uploaded using an USB memory stick (i) at the régie of the auditorium, for presentations in room 1; (ii) directly onto the computer of room 2, for presentations in this room. Members of the Congress Centre and/or of ICPIG staff will be present in the rooms to assist in this process and/or in resolving any technical issues. The use of personal laptop for presentations is discouraged.

All presentation will be displayed in format of 16x9. Please save your presentation as ppt. or pdf. files (be mindful of proprietary fonts; we recommend the ppt. format). When using videos, MPG and AVI are the most used video formats. Movies created in (Apple) QuickTime should be converted to MPG or AVI before inserting the video in your presentation. Save the videos used in your presentation on your USB memory stick.

It is the responsibility of each speaker to check that his/her presentation will display correctly on the conference computers (Windows 7, Microsoft Office 2010, Acrobat Reader).

At the end of the congress, all presentations will be deleted so that no copyright issues will arise.

Poster Sessions

The poster sessions will take place in the Foyer of the Congress Centre. Poster boards are 1 m wide by 2.5 m height, **suitable for an A0 size poster format in portrait orientation**. The posters can be attached with special adhesive clay, which will be available at the Registration Desk. No tacks or other tape should be used.

The presenters in **poster session I** (Monday July 10, 14:00-16:00) and **poster session II** (Tuesday July 11, 14:00-16:00) are requested to **mount their posters prior to 12:30 on Monday**. These presenters should **remove their posters right after the end of poster session II**.

The presenters in **poster session III** (Thursday July 13, 14:00-16:00) and **poster session IV** (Thursday July 13, 17:30-19:30) are requested to **mount their posters prior to 12:30 on Wednesday**. These presenters should **remove their posters right after the end of poster session IV**.

Special Session

“Challenges in Low-Temperature Plasma Modelling”

The scientific program of ICPIG 2017 includes on July 11 (Tuesday) a Special Session on “Challenges in Low-Temperature Plasma Modelling”, dedicated to the memory of Professor Carlos Matos Ferreira.

ICPIG’s von Engel & Franklin prize 2017

The ‘von Engel and Franklin Prize’ was established in 1998. It is sponsored by the ‘Hans von Engel and Gordon Francis Fund’ and is administered by the Board of Physical Sciences, University of Oxford. The prize is named in honour of two distinguished colleagues who had a major role in ICPIG and its community since the original meeting in 1953. The prize, consisting of 1000€ and a certificate, is awarded every two years to an individual for work in the field of physics and technology of plasmas and ionized gases, as covered by ICPIG meetings.

The ISC have chosen Prof. Uwe Czarnetzki. as the 2017 winner of ICPIG’s von Engel & Franklin Prize.

Student Prizes for Best Oral Contribution and Best Poster

The ISC of ICPIG will select the best Oral Contribution and the best Poster presented by PhD students. The student’s supervisor, whether attending ICPIG or not, must nominate her/his student for the prize. Eligible students should not have defended their PhD thesis before January 2017.

The prizes, consisting of 500€, a certificate and a Springer book voucher to the value of 150€, will acknowledge the quality of both the scientific content and the presentation, irrespective of the topic, or whether it is predominantly experimental, computational or theoretical.

The student prizes are sponsored by *Instituto de Plasmas e Fusão Nuclear* (Best Oral Contribution), *Sociedade Portuguesa de Física* (Best Poster) and European Physical Journal D: Atomic, Molecular, Optical and Plasma Physics (both prizes).

Conference Proceedings

The accepted contributions (including General Lectures, Topical Lectures and Special Session) will be published in the conference proceedings, on-line and in digital format (4 GB USB drive) distributed to all registered participants.

The authors of the General Lectures, Topical Lectures and Special Session are invited to submit a full paper for a **regular issue of Plasma Sources Science and Technology (PSST)**. The full papers must be **submitted before October 30th, 2017**. Submitted papers will be subject to the usual peer-review process arranged by the Institute of Physics (IOP).

Social Events

Welcome Reception (Estoril Congress Centre)

On **Monday July 10**, from 19:00 to 20:00, all participants and their companions are kindly invited to attend the ICPIG 2017 Welcome Reception at the Terrace of the foyer of Estoril Congress Centre. The Welcome Reception is included in the registration fee.

Cultural Session (Estoril Congress Centre)

On **Tuesday July 11**, from 19:30 to 20:00, all participants are kindly invited to attend a performance by the MUSAICO choir, at the auditorium of the Estoril Congress Centre.

Musaico is a choir of the *Escola de Música do Conservatório Nacional*. Its members, aged 15 to 30 years old, are students from several different courses. The choir was started in 2008 for the purpose of preparing several high quality musical programmes of different styles every year. Since its founding Musaico has been conducted by Tiago Marques, who also written and arranged several compositions.

Conference Excursion

On **Wednesday July 12**, afternoon, all participants and their companions are kindly invited to the ICPIG 2017 excursion, included in the registration fee (English language guided tours, starting / ending at the conference venue). **There is a choice between the excursions indicated below:**

- **Option 1: Visit to Tomar (3h return travel + 2h tour)**
- **Option 2: Visit to Óbidos (2h30 return travel + 2h30 tour)**

Conference Dinner (Palácio Estoril Hotel)

On **Thursday July 13**, from 20:00 to 22:00, the Conference Dinner of ICPIG 2017 will take place at the Palácio Estoril Hotel.

In the 1940's, the Palácio Hotel welcomed numerous members of the European royalty (Spanish, Italian, French, Bulgarian and Romanian), who chose Estoril for their exile due to Portugal's neutrality during World War II. During this period, the Hotel was also the haunt of British and German spies, who could often be found in its bar. Later, this atmosphere of intrigue and espionage inspired famous novelists and filmmakers and the Hotel even served as the set for James Bond's "On Her Majesty's Secret Service". Hotel Palácio plays a centre role in the recent novel "Estoril" by Dejan Tiago-Stankovic, a Serbian-Portuguese writer.

SCIENTIFIC PROGRAMME

9.00 Registration

OPENING CEREMONY (Room 1)

9.20 E. Stamate, Chair ISC and L. L. Alves, Chair LOC

PLENARY SESSION (Room 1)

Chair: Eugen Stamate

9.45 *Plasma-material interactions: diagnostics and control*
M. Hori

10.30-11.00 *Coffee break*

TOPICAL SESSION (Room 1)

High pressure and thermal plasma processing
Non-equilibrium plasmas and microplasmas at high pressures
Thermal plasmas
Plasma wall interactions, electrode and solid/liquid surface effects
Medical, biological, environmental and aeronautical applications

Chairs: Zdenko Machala, Masaru Hori

11.00 *Gas-liquid interfacial plasmas for novel gene transfer systems*
T. Kaneko

11.30 *Cell death mechanism on human colorectal cancer after PAM
(Plasma Activated Medium) treatment*
J. Chauvin

11.50 *Efficacy of plasma-generated ozone in bioburden
decontamination*
D. Diver

12.10 *Surface-wave-sustained plasma for model biological systems
treatment*
E. Benova

TOPICAL SESSION (Room 2)

Plasma processing of surfaces and particles
Plasma power and pulsed power technology, particle sources
Low pressure plasmas

Chairs: Masaharu Shiratani, Pavel Baroch

- 11.00 *Pulsed electron beams for thin film deposition*
M. Nistor
- 11.30 *Spectroscopic study of low pressure, low temperature H₂-CH₄-CO₂ microwave plasmas used for large area deposition of nanocrystalline diamond films*
J. Röpcke
- 11.50 *In-flight modification of metallic nanoparticles by low pressure RF plasma*
H. Biederman
- 12.10 *Free-standing graphene: synthesis and functionalization using plasma-based methods*
A. Dias

12.30-14.00 *Lunch*

14.00-16.00 **POSTER SESSION I (Foyer)**

16.00-16.30 *Coffee Break*

TOPICAL SESSION (Room 1)

Plasma diagnostic methods
Plasma lamps and radiation sources
Plasma created by external sources of ionization

Chairs: Erik Wagenaars, Achim von Keudell

- 16.30 *Recent developments in probe diagnostics*
C. Ionita
- 17.00 *Diagnosing negative ions using electrical probes*
S. K. Karkari
- 17.30 *Non-conventional plasma and sheath diagnostics*
T. Trottenberg

MONDAY, July 10

- 18.00 *Characterization of electronic transport in semiconductor films during plasma processing*
S. Nunomura
- 18.30 *Electric field measurements in surface discharges in atmospheric air over solid and liquid dielectrics*
I. Adamovich

TOPICAL SESSION (Room 2)

Plasma processing of surfaces and particles
Plasma power and pulsed power technology, particle sources
Low pressure plasmas

TOPICAL SESSION (Room 2)

Complex and dusty plasmas, ion-ion plasmas, mixed phase plasmas
Collective and nonlinear phenomena
Astrophysical, geophysical and other natural plasmas

Chairs: Magdalena Nistor, Victor Herrero

- 16.30 *Pulsed laser and sputtering deposition of optical materials*
M. Chaker
- 17.00 *Nanosecond pulsed discharges: generation, measurements and plasma processing*
T. Huiskamp
- 17.30 *Direct kinetic simulation of nonlinear plasma waves and Hall thruster discharge plasmas*
K. Hara
- 18.00 *Rotating spoke instabilities in standard and wall-less Hall thrusters: experiments and PIC simulations*
S. Tsikata
- 18.30 *Two-dimensional plasma crystals: waves and instability*
L. Couedel

19.00-20.00 WELCOME RECEPTION (Foyer)

PLENARY SESSION (Room 1)

Chair: Ute Ebert

- 9.00 *VUV Radiation from streamers*
 A. Neuber
- 9.45 *Unified theory of the streamer initiated gas breakdown*
 M. Cernak

10.30-11.00 *Coffee Break*

TOPICAL SESSION (Room 1)

Plasma processing of surfaces and particles
Plasma power and pulsed power technology, particle sources
Low pressure plasmas

Chairs: Ken Hara, Mohamed Chaker

- 11.00 *Dynamic of HiPIMS plasmas*
 A. von Keudell
- 11.30 *Quantitative evaluation of high-energy oxygen negative ion flux
in DC magnetron sputtering of indium-tin-oxide*
 H. Toyoda
- 11.50 *Investigation of ion dynamics in collisionless RF sheath*
 Y. Jang
- 12.10 *Effects of plasma-facing materials on the negative ion (H-/D-)
current extracted from an ECR plasma source*
 S. Béchu

TOPICAL SESSION (Room 2)

Plasma diagnostic methods
Plasma lamps and radiation sources
Plasma created by external sources of ionization

Chairs: Eduard Son, Andreas Neuber

- 11.00 *Diagnostics of atmospheric pressure plasma jets*
 E. Wagenaars

TUESDAY, July 11

- 11.30 *Stark broadening of multiple Ar I lines as a diagnostics tool for transient welding arcs containing metal vapor*
M. Kühn-Kauffeldt
- 11.50 *Investigation of the excited state population density of Xe plasma by active and passive spectroscopy*
A. Skrylev
- 12.10 *Sensitivity analysis and uncertainty quantification for electric field determination in air from FNS and SPS intensity ratio*
P. Bílek

12.30-14.00 *Lunch*

14.00-16.00 **POSTER SESSION II (Foyer)**

16.00-16.30 *Coffee Break*

TOPICAL SESSION (Room 1)

Elementary processes and fundamental data
Modelling and simulation techniques
High frequency discharges
Thermodynamics and transport phenomena

Chair: Igor Adamovich

- 16.30 *Reactivity, relaxation and dissociation of molecules in plasma modelling*
F. Esposito
- 17.00 *Electron/molecular-cation collisions in cold plasmas: super-excited states at "zero" energy*
I. Schneider

TOPICAL SESSION (Room 2)

High pressure and thermal plasma processing
Non-equilibrium plasmas and microplasmas at high pressures
Thermal plasmas
Plasma wall interactions, electrode and solid/liquid surface effects
Medical, biological, environmental and aeronautical applications

Chair: Nevena Puac

- 16.30 *Atmospheric pressure plasmas for agriculture, medicine and surface technology*
 J. Pawlat
- 17.00 *Atmospheric pressure plasmas for surface and medical applications*
 K. Kostov

SPECIAL SESSION (Room 1)

Chairs: Luís L. Alves, Annemie Bogaerts

- 17.30 *Opening. Evocation of Carlos Matos Ferreira*
 Luís L. Alves
- 17.40 *Challenges in the kinetic modelling of electrons and ions in gaseous and liquid matter*
 Ron White
- 18.00 *Challenges in PIC modelling: electromagnetic description and resonance phenomena*
 Thomas Mussenbrock
- 18.20 *Advances and challenges in fluid flow models of low-temperature plasmas*
 Juan Pablo Trelles
- 18.40 *Challenges in the modelling of plasma-surface interaction*
 Vasco Guerra
- 19.00 *Challenges in the modelling of reactive plasmas: limitations and opportunities in global modelling*
 Andrew Gibson
- 19.20 *Discussion and closure*

PLENARY SESSION (Room 1)

Chair: Sudeep Bhattacharjee

- 9.00 *Microwave plasma applied for synthesis of 2D nanostructures*
E. Tatarova
- 9.45 *Surface and volume kinetics of molecules in air depollution processes*
A. Rousseau

10.30-11.00 *Coffee Break*

TOPICAL SESSION (Room 1)

Complex and dusty plasmas, ion-ion plasmas, mixed phase plasmas
Collective and nonlinear phenomena
Astrophysical, geophysical and other natural plasmas

Chair: Mirko Cernak

- 11.00 *Plasma generation and processing of interstellar carbonaceous dust analogs*
V. Herrero
- 11.30 *Modelling the chemical and electrical impact of lightning in the upper atmospheric plasma of planetary atmospheres*
F.J. Pérez-Invernón
- 11.50 *Bubble formation in the discharge between planar and needle electrodes via laser ablation-induced cavitation bubble*
K. Sasaki

WEDNESDAY, July 12

TOPICAL SESSION (Room 2)

High pressure and thermal plasma processing

Non-equilibrium plasmas and microplasmas at high pressures

Thermal plasmas

Plasma wall interactions, electrode and solid/liquid surface effects

Medical, biological, environmental and aeronautical applications

Chair: Elena Tatarova

- 11.00 *Mineralization of 2,4-dichlorophenoxyacetic acid by plasma-ozonation*
M. Magureanu
- 11.30 *Electron temperature of thruster plume plasma in far field*
B. Vayner
- 11.50 *AC electric arcs burning in and outside of the discharge channels of high voltage three-phase plasma torches*
A. Surov
- 12.10 *Photoluminescence of plasma produced graphene quantum dots*
S. Espinho

12.30-14.00 *Lunch*

14.00-20.00 *Excursion*

TOPICAL SESSION (Room 1)

Plasma diagnostic methods
Plasma lamps and radiation sources
Plasma created by external sources of ionization

Chairs: Olga de Pascale, Antoine Rousseau

- 9.00 *Simultaneous vacuum UV and broadband UV-NIR plasma spectroscopy for LIBS improvement*
P. Veis
- 9.30 *Ultrafast laser diagnostics to interrogate high pressure, highly collisional plasma environments*
E.V. Barnat
- 9.50 *Active and passive optical diagnostics in a model HV circuit breaker*
E. Panousis
- 10.10 *A novel non-invasive technique for detection and analysis of harmonics in Radio Frequency plasmas*
R. D. Tarey

TOPICAL SESSION (Room 2)

Plasma processing of surfaces and particles
Plasma power and pulsed power technology, particle sources
Low pressure plasmas

Chairs: Tiberiu Minea, Lenaic Couedel

- 9.00 *Specific plasma phenomena in dual magnetron sputtering system*
P. Baroch
- 9.30 *High power impulse magnetron sputtering: an overview on the benefits of ultra-short pulse mode*
I.L. Velicu
- 9.50 *Application of plasma-bullet propagation to hydrophilic treatments of an interconnected porous scaffold*
T. Shirafuji
- 10.10 *Fuzzy nanostructure growth on precious metals by He plasma irradiation*
S. Kajita

10.30-11.00 *Coffee Break***TOPICAL SESSION (Room 1)**

High pressure and thermal plasma processing
 Non-equilibrium plasmas and microplasmas at high pressures
 Thermal plasmas
 Plasma wall interactions, electrode and solid/liquid surface effects
 Medical, biological, environmental and aeronautical applications

Chairs: Remi Dussart, Andrew Gibson

- 11.00 *Plasma and catalyst for the oxidation of NO_x*
 I. Jögi
- 11.30 *O atom kinetics in CO₂ pulsed glow discharges*
 A.S. Morillo-Candas
- 11.50 *Control methods of RONS in Dielectric Barrier Discharge*
 S. Ryu
- 12.10 *Measurement of the CH rotational temperature in DBD
 discharges in CH₄/CO₂/He mixtures and simulation of the gas
 temperature*
 N. Pinhão

TOPICAL SESSION (Room 2)

Elementary processes and fundamental data
 Modelling and simulation techniques
 High frequency discharges
 Thermodynamics and transport phenomena

Chairs: Francisco Gordillo-Vazquez, Ron White

- 11.00 *Electron interactions for plasma diagnostics and modelling*
 P. Papp
- 11.30 *A computational chemical kinetics study of a supersonic
 microwave plasma for CO₂ dissociation*
 V. Vermeiren
- 11.50 *Effect of runaway electron preionization on discharge
 breakdown in air at atmospheric pressure: simulation study*
 Z. Bonaventura

THURSDAY, July 13

12.10 *Flow characterization of the electro-thermal plume induced by nanosecond repetitively pulsed microplasmas*
T. Orriere

12.30-14.00 *Lunch*

14.00-16.00 **POSTER SESSION III (Foyer)**

16.00-16.30 *Coffee Break*

TOPICAL SESSION (Room 1)

Plasma diagnostic methods
Plasma lamps and radiation sources
Plasma created by external sources of ionization

Chair: Tom Huiskamp

16.30 *Generating EUV light from tin plasma for chip manufacturing*
O. Versolato
17.00 *A point-like discharge, sustained by powerful radiation of terahertz gyrotron*
A. V. Vodopyanov

TOPICAL SESSION (Room 2)

High pressure and thermal plasma processing
Non-equilibrium plasmas and microplasmas at high pressures
Thermal plasmas
Plasma wall interactions, electrode and solid/liquid surface effects
Medical, biological, environmental and aeronautical applications

Chair: Carlos Pintassilgo

16.30 *Microhollow cathode discharges on silicon device*
R. Dussart
17.00 *Simulation of glow discharge electrolysis for material processing in liquid*
F. Tochikubo

17.30-19.30 **POSTER SESSION IV (Foyer)**

TOPICAL SESSION (Room 1)

Elementary processes and fundamental data
Modelling and simulation techniques
High frequency discharges
Thermodynamics and transport phenomena

Chairs: Vasco Guerra, Fabrizio Esposito

- 9.00 *Modelling and interpretation of micrometric dust behavior in tokamaks*
F. Ghezzi
- 9.30 *3D modelling of negative ion extraction in ITER-like NBI via massive parallel calculations*
T. Minea
- 9.50 *Kinetic study on gas discharge*
W. Yang
- 10.10 *Realistic 3D particle modelling of discharge inception near ice particles and other dielectric objects*
C. Rutjes

TOPICAL SESSION (Room 2)

High pressure and thermal plasma processing
Non-equilibrium plasmas and microplasmas at high pressures
Thermal plasmas
Plasma wall interactions, electrode and solid/liquid surface effects
Medical, biological, environmental and aeronautical applications

Chairs: Fumiyoshi Tochikubo, Indrek Jögi

- 9.00 *Pre-breakdown phenomena and discharges in gas-liquid systems*
D. V. Tereshonok
- 9.30 *Comparative cross-correlation spectroscopy study of positive and negative polarity transient spark discharge in ambient air*
M. Janda
- 9.50 *On the influence of ferroelectric materials in a packed-bed DBD reactor*
A. Gómez-Ramírez

FRIDAY, July 14

10.10 DBD plasma jet in helium, argon and nitrogen: energy balance
and bactericidal activity
O. Stepanova

10.30-11.00 *Coffee Break*

VON ENGEL AND FRANKLIN PRIZE and STUDENT PRIZES (Room 1)

Chair: Eugen Stamate, Chair ISC ICPIG 2017

11.00 Awards

11.25 The von Engel and Franklin Prize Lecture
Distribution functions in non-equilibrium plasmas
U. Czarnetzki

12.10-12.30 Closure
L. L. Alves, Chair LOC ICPIG 2017

POSTER SESSION I (14.00–16.00)

PI.1	Simulation of Triode High Voltage Glow Discharge Electron Sources With Taking Into Account The Anode Plasma Parameters Igor Melnyk
PI.2	Formation and annihilation of O ₂ ⁻ ions in an oxygen discharge David Arruda Toneli, Rodrigo Savio Pessoa, Marisa Roberto and Jon Tomas Gudmundsson
PI.3	Molecular Dynamics Simulation of Reaction Mechanism between Reactive Oxygen Species and Membrane Lipid Molecules in Moisture Satoshi Uchida, Taketo Yoshida and Fumiyooshi Tochikubo
PI.4	Coarse-Grained Simulation Method for Turbulent Nonequilibrium Plasma Seyedeh Mahnaz Modir Khazeni and Juan Pablo Trelles
PI.5	Ablated mass in high-voltage circuit breakers following the nature of electrode material Maeva Courrege, Jean Jacques Gonzalez and Pierre Freton
PI.6	Calculation of electron velocity distribution function under crossed electric and magnetic fields using a propagator method Hirotake Sugawara
PI.7	Gliding arc plasmatron for CO ₂ splitting: A chemical kinetics modelling perspective Stijn Heijkers, Marleen Ramakers, Georgi Trenchev, Antonin Berthelot and Annemie Bogaerts
PI.8	Internal Pressure Rise due to Arc under Insulating Oil in a Closed Vessel Tomo Tadokoro, Masashi Kotari, Ohtaka Toshiya and Mikimasa Iwata
PI.9	Reduction of heat-fluxes during re-entry using magnetic fields Karl Felix Luskow, Stefan Kemnitz, Gunnar Bandelow, Julia Duras, Daniel Kahnfeld, Paul Matthias, Ralf Schneider and Detlev Konigorski
PI.10	Current Bearing Anti-Force Waves (Lightning Return Stroke) Mostafa Hemmati, Jesse Griffiths and Michael Bowman
PI.11	Theoretical study of the influence of nitrogen admixture on plasma decay rate in argon dc afterglow Nikolay Dyatko and Anatoly Napartovich
PI.12	A modified fluid simulation of an inductively coupled plasma discharge with radio frequency bias considering heat transfer effect Youngdo Jeong, Young Jun Lee, Deuk-Chul Kwon and Heehwan Choe
PI.13	Transport Characteristics of Reactive Oxygen Species in Cell Membranes with Molecular Dynamics - Superposition Effect of Electric Field - Imai Ryota, Satoshi Uchida and Fumiyooshi Tochikubo
PI.14	Simulation Study of Radio Frequency Capacitively Coupled CF ₄ Plasma Discharge Chia-Yu Chen and Keh-Chyang Leou
PI.15	Modeling of self-consistent mode formation in an electrostatic plasma lens Iryna Litovko, Alexey Goncharov, Andrey Dobrovolskiy, Alexey Bugaev, Vasiliy Gushenets and Efim Oks
PI.16	Diffuse discharges in helium and air: role of fast secondary electrons Natalia Babaeva, Dmitry Tereshonok, George Naidis and Eduard Son

POSTER SESSION I (14.00–16.00)	
PI.17	Modelling heat dominated electric breakdown in air with adaptivity to electron or ion timescales Ashutosh Agnihotri, Willem Hundsdorfer and Ute Ebert
PI.18	Modelling of N ₂ -H ₂ capacitively coupled radio-frequency discharges Miguel Jiménez-Redondo, Luís Marques, Nathalie Carrasco, Guy Cernogora and Luís L. Alves
PI.19	RF plasma simulation using semi-analytical sheath model Masaru Miyashita
PI.20	N ₂ influence on the vibrational distribution of the asymmetric level of CO ₂ Loann Terraz, Tiago Silva, Duarte Nina, Nuno Pinhão, Olivier Guaitella and Vasco Guerra
PI.21	Atomic scale study of Al clustering and particle growth Ning Ning and Sergey Khrapak
PI.22	Computer simulation of ion stopping in a dense plasma by the Monte Carlo method Sandugash Kodanova, Tlekkabul Ramazanov, Moldir Issanova, Elnur Shokparbayeva and Sergey Maiorov
PI.23	Development of the LisbOn Kinetics (LoKI) tool A Tejero-Del-Caz, D Nina, S Jacob, D Gonçalves, M Lino Da Silva, L Marques, N Pinhão, C D Pintassilgo, V Guerra and L L Alves
PI.24	Plasma vs combustion in analytical chemistry: comparing the kinetics of DBD plasma and flame-based atomizers Adam Obrusnik, Marek Talaba, Martina Mrkvickova, Jan Kratzer, Pavel Dvorak and Jiri Dedina
PI.25	Sensitivity and uncertainty analysis of a kinetic model for CO ₂ non-equilibrium plasmas Marija Grofulovic, Tiago Silva and Vasco Guerra
PI.26	Understanding the electron and vibration kinetics in CO ₂ plasmas Tiago Silva, Marija Grofulović, Bart Klarenaar, Olivier Guaitella, Richard Engeln, Carlos Pintassilgo and Vasco Guerra
PI.27	Comparison study of different simulation codes for positive streamers propagating into a region below breakdown Behnaz Bagheri, Jannis Teunissen and Ute Ebert
PI.28	Electron trapping in ultra-cold plasma cloud Rolando Ayllon, Hugo Terças and Mendonça
PI.29	ExB-probe modeling for diagnostics of Plasma Propulsion Thruster Timofey Chernyshev, Dariya Krivoruchko and Alexander Skrylev
PI.30	The NH ₃ plasma transition into “ion-ion” or transient H-E plasma mode Jozef Brcka
PI.31	Parallel computing of multidimensional hypersonic re-entry flows considering a state-to-state description Maria Castela, Bruno Lopez and Mario Lino Da Silva
PI.32	Kinetic damping in the admittance and impedance spectra of the spherical impedance probe Jens Oberrath

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PI.33	Model and Simulation of the formation of cathode spot in vacuum arc Lijun Wang, Xiao Zhang and Shenli Jia
PI.34	Simulation on the characteristic of plasma evolution in three electrode gas spark gaps Ao Xu, Lin Yang, Wei Zhong, Yunlong Liu, Dazhi Jin and Lei Chen
PI.35	Study of Turbulent Particle Transport in ETG Dominated Plasma of LVPD P Srivastav, R Singh, L M Awasthi, A K Sanyasi, R Singh and P K Kaw
PI.36	Negative ion mobility and ion-molecule reactions in O ₂ with a trace amount of moisture Yui Okuyama, Kotaro Arai, Susumu Suzuki and Haruo Itoh
PI.37	Transport properties of hot dense plasmas Sandugash Kodanova, Tlekkabul Ramazanov, Moldir Issanova and Elnur Shokparbayeva
PI.38	Radiation trapping in non-equilibrium plasmas: matrix methods and its application to arcs and glow discharges Yuri Golubovskii, Dmitry Kalanov, Vsevolod Maiorov, Margarita Baeva, Dirk Uhrlandt and Sergey Gortschakow
PI.39	The influence of strong magnetic field on the plasma transport Chao Dong, Wenlu Zhang and Ding Li
PI.40	Experimental and numerical study of a bubble plasma gas initiated by a wire explosion in a liquid Zoé Laforest, Jean-Jacques Gonzalez and Pierre Freton
PI.41	Gas temperature determination of non-thermal plasma jets from the collisional broadening of argon atomic emission lines Maria C García, Antonio Rodero, Antonio Gamero and Cristina Yubero
PI.42	Metastable Molecules in O ₂ Plasmas probed by High Resolution Fourier Transform Absorption Spectroscopy Abhyuday Chatterjee, Jean-Paul Booth, Olivier Guaitella, Laurent Nahon, Nelson De Oliveira and Colin Western
PI.43	Analysis of the K-radiation structure for the determination of HED-plasma parameters and their spatial variations along the line of view. Vladimir Bernshtam, Eyal Kroupp, Alexander Starobinets, Oleg Nedostup, Yury Zarnitzky, Yury Kuzminykh and Yitzhak Maron
PI.44	Optimizing the CO ₂ conversion efficiency in a low-pressure pulsed microwave plasma source Nikolay Britun, Thomas Godfroid, Tiago Silva and Rony Snyders
PI.45	Diagnostics on aluminium dust explosion ignited by spark discharge Mamadou Sankhe
PI.46	Astronomical radio-reception techniques for emission spectroscopy of molecular and short lived species in cold plasmas Isabel Tanarro, Belén Alemán, Ramón Javier Peláez, Víctor José Herrero, José Luis Doménech, Pablo de Vicente, Juan Daniel Gallego, Juan Ramón Pardo, Koen Lauwaet, Gonzalo Santoro, José Ángel Martín-Gago and José Cernicharo

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PI.47	Experimental and theoretical study of radial profiles of the Ar metastable atom density in diffuse and constricted dc discharges Galina Grigorian, Nikolay Dyatko and Igor Kochetov
PI.48	A Spiral Microstrip-line Microwave Resonant Probe- for Measurement of Plasma Density Wu Ying-Chieh and Leou Keh-Chyang
PI.49	Electric field strength measurement by Stark polarization spectroscopy in diffuse helium-nitrogen barrier discharges Sebastian Nemschokmichal, Robert Tschiersch and Juergen Meichsner
PI.50	Surface charge measurements on different dielectrics in diffuse and filamentary barrier discharges Robert Tschiersch, Sebastian Nemschokmichal and Jürgen Meichsner
PI.51	State-by-state emission spectra fitting for non-equilibrium plasmas: OH spectra of surface barrier discharge at argon/water interface Jan Vorac, Petr Synek, Vojtech Prochazka and Tomas Hoder
PI.52	Charge transfer and ultra-fast imaging of the surface barrier discharge at argon/water interface Petr Synek, Yuri Semenovich Akishev, Alexander Petryakov, Nikolai Trushkin, Jan Vorac and Tomas Hoder
PI.53	High resolution infrared spectroscopy of ions of astrophysical interest: H35Cl ⁺ and H37Cl ⁺ , investigated in a cold plasma José Luis Doménech, Isabel Tanarro, Brian Drouin, Víctor José Herrero and José Cernicharo
PI.54	Gas temperature distribution in cathode fall region of hydrogen Grimm glow discharge Milica Vasiljević, Gordana Majstorović and Nikola Šišović
PI.55	Optical wave microphone measurements on pressure waves emitted from plasma jets Fumiaki Mitsugi, Shota Kusumegi, Shin-Ichi Aouki, Toshiyuki Nakamiya, Yoshito Sonoda and Toshiyuki Kawasaki
PI.56	Combined electrical and optical diagnostics of surface discharges in high-voltage systems Ruslan Kozakov, Marc Bogaczyk, Saravanakumar Arumugam and Sergey Gortschakow
PI.57	Nitritization of graphite during its interaction with nitrogen plasma jet Valeriy Chinnov, Mikael Sargsyan, Dmitriy Kavyrshin and Andrei Chistolinov
PI.58	The movement of the optical inhomogeneities and the velocity of the plasma jet Valeriy Chinnov, Mikael Sargsyan, Makhach Gadzhiev, Dmitriy Kavyrshin and Max Khromov
PI.59	Removal of supersonic ion singularity in radial Langmuir probe models Guillermo Fernando Regodón, José Ignacio Fernández Palop, Antonio Tejero-Del-Caz, Juan Manuel Diaz-Cabrera, Rafael Carmona-Cabezas and Jerónimo Ballesteros
PI.60	Vibrational excitation kinetics of CO ₂ in a pulsed glow discharge Bart Klarenaar, Richard Engeln, Mark Damen, Richard van de Sanden, Ana-Sofia Morillo-Candas and Olivier Guaitella

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PI.61	Non-intrusive method for electron-density determination in low-pressure microwave plasma Abderrahmane Kais, Juslan Lo, Laurent Therese and Philippe Guillot
PI.62	Departure from Maxwellian electron energy distribution function in microwave argon plasma at atmospheric pressure Antoine Durocher-Jean and Luc Stafford
PI.63	Tangential and Normal Electric Field Imaging using Mueller Ellipsometry for kHz driven Atmospheric Jet in Controlled Environment Elmar Slikboer, Enric Garcia-Caurel, Ana Sobota and Olivier Guaitella
PI.64	Study of electric field distribution in helium and hydrogen DBD at lower pressures Saša Ivković, Bratislav Obradović, Nikola Cvetanović and Milorad Kuraica
PI.65	Studies of laser-induced plasma in argon using emission spectroscopy and laser Thomson scattering: thermodynamic equilibrium and plasma heating by the probe laser beam Mamadou Sankhe
PI.66	Electric field measurements in DBD plasma jet using intensity ratio of helium lines Milorad Kuraica, Goran Sretenović, Vesna Kovačević and Bratislav Obradović
PI.67	High-resolution laser-induced fluorescence in the pre-sheath of a positively biased probe Fred Skiff, Ryan Hood, Robert Merlino and Scott Baalrud
PI.68	Diagnostics of Chemically Active Plasma of RF Capacitive-coupled Discharge in H ₂ +SiF ₄ , H ₂ +GeF ₄ , H ₂ +BF ₃ mixtures Roman Kornev, P Sennikov, A Abramov, S Sintsov and A Vodopyanov
PI.69	Radiation study for DC and microwave (mw) HID lamps Antoine Sahab, Mohamad Hamady and Georges Zissis
PI.70	Radiation of FM-signal by plasma asymmetrical dipole antenna Sergey Andreev, Nikolay Bogachev and Namik Gussein-Zade
PI.71	Performance optimisation of a high-pressure argon dielectric barrier discharge excimer lamp: transient behaviour of the VUV output Robert Carman, Deborah Kane, Noah Goldberg, Stu Hansen and Nigel Gore
PI.72	A study on the characteristics of hollow cathode discharge for the development of VUV lamp Deoggyun Cho, Duksun Han and Se Youn Moon
PI.73	Luminescent spectra of noble gases and their binary mixtures under ion beam excitation Askhat Amrenov and Mendykhan Khassenov

POSTER SESSION II (14.00-16.00)	
PII.1	Influence of the radial plasma non-uniformity on the etch process Violeta Georgieva, Stefan Tinck and Annemie Bogaerts
PII.2	Densities of active species in N ₂ /CH ₄ afterglows with application to nitrogen and carbon doping of anatase nanocrystals and ALD TiO ₂ André Ricard, Jean Philippe Sarrette, Yunfei Wang and Yu Kwon Kim
PII.3	Comparative study on atmospheric-pressure plasma nitriding processes with pulsed-arc jet and barrier discharge Ryuta Ichiki, Keiichi Kitamura, Akihide Maeda, Ryuji Sannomiya, Kenta Yamanouchi, Seiga Chiba, Masayuki Kono, Tatsuro Onomoto, Shuichi Akamine and Seiji Kanazawa
PII.4	Characterization of carbon films by microwave-plasma assisted chemical vapour deposition in open-air system Hidetsugu Yagi, Shinji Yodate, Hideki Motomura and Masafumi Jinno
PII.5	Solution-plasma synthesis of a gold-nanoparticle-containing polymer membrane on aqueous solution Yusuke Nakamura, Shiori Azuma, Toshiyuki Isshiki and Tatsuru Shirafuji
PII.6	Simulation of Plasma Processing with FPS3D Paul Moroz and Daniel J. Moroz
PII.7	Measurements of nitrogen and oxygen atom density in N ₂ /Ar sputtering plasma for fabrication of high-mobility amorphous In ₂ O ₃ :Sn films Masaharu Shiratani, Toshiyuki Takasaki, Han Wang, Koichi Matsushima, Hyunwoong Seo, Kazunori Koga, Keigo Takeda, Masaru Horii and Naho Itagaki
PII.8	Air versus Helium atmospheric-pressure plasma for enhanced adhesion of woven textiles Bogdan George Rusu, Ionut Topala, Catalin Borcia and Gabriela Borcia
PII.9	Calcium phosphate film formation on TiN surface created by atmospheric-pressure plasma Ryuji Sannomiya, Ryuta Ichiki, Katsuhiko Hanada, Syuichi Akamine and Seiji Kanazawa
PII.10	Investigation on local formation of expanded austenite phase by atmospheric-pressure plasma jet Akihide Maeda, Ryuta Ichiki, Ryo Tomizuka, Hiroyasu Nishiguchi, Tatsuro Onomoto, Shuichi Akamine and Seiji Kanazawa
PII.11	Tuning the wettability of metallic surfaces by microwave plasma generated low energy noble gas ion beams Sanghamitro Chatterjee and Sudeep Bhattacharjee
PII.12	Synthesis of titanium particles by RF atmospheric plasma jet: continuous mode vs. pulsed mode Andrada Lazea-Stoyanova, Valentina Marascu, Cristian Stancu and Gheorghe Dinescu
PII.13	Plasma based N-graphene synthesis – in-situ and post treatment approaches Neli Bundaleska, Ana Ines Vieitas de Amaral Dias, Edgar Felizardo, Julio Henriques, Francisco Marques Dias, Nenad Bundaleski, Orlando Teodoro, Miroslav Abrashev, Jivko Kissovski, Uros Cvelbar and Elena Tatarova

POSTER SESSION II (14.00-16.00)	
PII.14	Reactive fluxes and ion activation energy to particulates in air and on dielectric surfaces Natalia Babaeva
PII.15	Surface Properties of Polymer Films obtained by Atmospheric Pressure Plasma Jet on SAE 1020 Steel Leide Lili G. Silva, Nilson A. Ferraz, Vadym Prysiashnyi and Konstantin Kostov
PII.16	Plasma-surface interaction, blister formation and hydrogen retention on ITER relevant materials Catalina Quiros, Guillaume Lombardi, Jonathan Mougenot, Michael Redolfi and Khaled Hassouni
PII.17	Deposition of diamond-like carbon film using high power impulse magnetron sputtering Takayuki Ohta, Atsushi Ishikawa, Akinori Oda and Hiroyuki Kohsaka
PII.18	The Characterization of Sputtered Nickel Oxide Thin Films by DC Reactive Sputtering for Application of an Electrochromic device Won Chang Lee, Eun Chang Choi and Byungyou Hong
PII.19	Fabrication of transparent conductive films with Ag mesh patterns using a monolayer of polystyrene spheres Eun Chang Choi, Won Chang Lee and Byungyou Hong
PII.20	Atmospheric pressure plasma assisted preparation of ceramic submicron fibers Veronika Medvecká, Anna Zahoranová, Dušan Kováčik and Mirko Černák
PII.21	Investigation of optical emission in the plume of the Advanced Plasma Source in argon-oxygen mixtures Jens Harhausen, Jochen Wauer, Detlef Loffhagen and Rüdiger Foest
PII.22	Study on high flow rate F-radical generation by a compact water-cooled surface wave plasma source for remote plasma cleaning process Wonil Choo and Hyun Jong You
PII.23	Dependence of electrode materials and gaseous in serpentine plasma for nano particles preparation Shin-Ichi Aoqui, Fumiaki Mitsugi and Hiroharu Kawasaki
PII.24	Suppression of Si-H ₂ bond formation at P/I interface in a-Si:H solar cells deposited by multi-hollow discharge plasma CVD Susumu Toko, Kazuma Tanaka, Kimitaka Keya, Daisuke Yamashita, Hyunwoong Seo, Naho Itagaki, Kazunori Koga and Masaharu Shiratani
PII.25	Surface Functionalization of Fluoropolymers with Amino and Carboxyl Groups by Atmospheric Pressure Plasma Jets with Substrate Biasing Masaaki Nagatsu and Masahiro Kimpara
PII.26	Direct Synthesis of Nanodiamonds by Ar-H ₂ -CH ₄ Microwave Discharges Ana Dias, Edgar Felizardo, Miroslav Abrashev, Amélia Almeida, Júlio Henriques and Elena Tatarova

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PII.27	Nitrogen-containing plasma polymer nanoparticles produced by means of a gas aggregation cluster source Artem Shelemin, Andrei Choukourov, Daniil Nikitin, Pavel Pleskunov, Danka Slavinska and Hynek Biederman
PII.28	Porous nanostructure thin film titanium dioxide synthesized by atmospheric microwave plasma Mohamed El Shaer, Hassan Afifi, Mona Mobasher, Milad Samir and Mohamed Habib
PII.29	The use of thermally stimulated luminescence for rapid assessment of plasma treated particulate materials Jozef Rahel, Tomas Moravek and Martina Ilcikova
PII.30	Morphological and spectral features of interstellar carbon dust analogues deposited in high power regime DBD Bianca Hodoroaba, Delia Ciubotaru, Bogdan George Rusu, Alina Chiper, Valentin Pohoata, Ilarion Mihaila and Ionut Topala
PII.31	A Numerical and Experimental Study of Ion Impingement from RF Discharge on the Mirror Surface in Strong Magnetic Field Anton A. Kobelev, Alexander S. Smirnov, Nikita A. Babinov, Artem M. Dmitriev, Eugene E. Mukhin and Aleksey G. Razdobarin
PII.32	TiC nanopowder plasma-chemical synthesis with titanium tetrachloride raw material in the DC plasma-arc reactor Andrey Vladimirovich Samokhin, Dmitriy Evgenievich Kirpichev, Nikolay Vasilievich Alekseev and Mikhail Aleksandrovich Sinayskiy
PII.33	The temperature of leucoxene melted zone under DC plasma arc anode spot Andrey Anatolievich Nikolaev, Dmitriy Evgenievich Kirpichev, Anatoliy Vladimirovich Nikolaev and Yuriy Vladimirovich Tsvetkov
PII.34	Synthesis of Metallic Nanoparticles using a Submerged Pulsed Arc Celia L. Rojo Blanco and Stephen Muhl
PII.35	Dielectric Properties of Magnetron Sputtered PTFE Thin Films Veronica Satulu, Valentin Ion, Bogdana Mitu and Gheorghe Dinescu
PII.36	Plasma-Laser Assisted Synthesis of Nanoparticles for Antibacterial Coatings Andrea Jurov, Nikša Krstulović, Martina Modic, Nataša Hojnik, Anton Nikiforov, Andrea Zille, Christophe Leys and Uroš Cvelbar
PII.37	Synthesis and Characterization of Photocatalytic Titanium Oxide Thin Film Deposited on Glass by Atmospheric Pressure Plasma CVD Seongchan Kang, Rodolphe Mauchauffé and Se Youn Moon
PII.38	Similarity of gas discharges at low pressure in the gaps between two plane-parallel electrodes Yangyang Fu, Xinxin Wang, Shuo Yang, Xiaobing Zou and Haiyun Luo
PII.39	Formation of electrical potential profile in DC reflex discharge Gennadii Liziakin, Andrey Gavrikov, Ravil Usmanov and Valentin Smirnov
PII.40	A magnetized RF ion source for space propulsion applications Loïc Dubois, Freddy Gaboriau, Laurent Liard and Jean Pierre Boeuf

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PII.41	Quantification of UV/VUV photon fluxes of hydrogen plasmas by spectroscopy and by collisional radiative modelling Ursel Fantz, Stefan Briefi, Roland Friedl, Caecilia Fröhler, David Rauner and Dirk Wunderlich
PII.42	Characteristics of recombination plasma in divergent magnetic field on the linear divertor simulator TPD-Sheet IV Toshikio Takimoto, Ryuta Endo, Akira Tonegawa, Kohnosuke Sato and Kazutaka Kawamura
PII.43	Uniform and strongly magnetized plasma using a Halbach array Ovidiu Vasilovici, Stefan Costea, Bernd S. Schneider, Roman Schrittwieser and Codrina Ionita
PII.44	Dependence of anode glow on surrounding geometry in a parallel plate glow discharge plasma Prashant Kumar Barnwal, Satyananda Kar, Ramesh Narayanan, Ashish Ganguli and Ram Dattatraya Tarey
PII.45	Dependence of double layer potential on the properties of anode spot plasma Yuna Lee, Kyoung-Jae Chung and Y. S. Hwang
PII.46	Effect of discharge tube temperature on the density of N(4So) in a remote nitrogen plasma source Masaharu Shimabayashi, Kazuaki Kurihara and Koichi Sasaki
PII.47	Fine Structure of Ionisation Patterns and Confinement of Energetic Electrons in Asymmetric Capacitive Radio Frequency Discharges Sebastian Wilczek, Jan Trieschmann, Julian Schulze, Ralf Peter Brinkmann, Zoltán Donkó and Thomas Mussenbrock
PII.48	Rise time of Sabatier process using low pressure and low temperature plasma Susumu Toko, Satoshi Tanida, Kazunori Koga and Masaharu Shiratani
PII.49	Segmented high voltage glow discharge for a controllable ion source Ignacio Gabriel Vicente Gabás, Goesta Mattausch and Ralf Bluethner
PII.50	Influence of pressure on electrical discharge/arc transition Romaric Landfried, Thierry Leblanc, Emmanuel Odic and Philippe Teste
PII.51	Modes of unipolar and bipolar pulsed discharges in CO ₂ Valeriy A. Lisovskiy, Stanislav Dudin, Polina Ogloblina, Nikolay Vusyk, Vladyslav Volkov, Vladimir Yegorenkov and Alexandr Dakhov
PII.52	ESTHER: A laser-ignited, combustion-driven, two-stage shock-tube for the simulation of hyperbolic planetary entries Mario Lino Da Silva, Bernardo Carvalho, Rafael Rodrigues and Maria Castela
PII.53	EHD thruster discharge simulation on N ₂ -O ₂ mixture at low pressure Victor H. Granados, Mario J. Pinheiro and Paulo A. Sá
PII.54	Effect of permanent magnets on plasma confinement and ion beams from a helicon plasma source Erik Varberg and Ashild Fredriksen

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PII.55	W-band Extended Interaction Oscillator based on a pseudospark-sourced electron beam Adrian Cross, Huabi Yin, Liang Zhang, Wenlong He, Yong Yin, Junping Zhao and Alan Phelps
PII.56	Plasma structures induced by external magnetic field Irina Schweigert and Michael Keidar
PII.57	Hydrogen low-pressure pulsed plasma: measurement of H atom decay in the post discharge Xin Yang, Dmitry Kogut, Jean Marc Layet and Gilles Cartry
PII.58	Method of pulsed DC bias for negative-ion production study on surfaces of insulating materials in low pressure H ₂ plasmas Roba Moussaoui, Dmitry Kogut and Jean-Marc Layet
PII.59	Ball lightning as a key for the solution of an energy problem by means of muon-catalyzed fusion Alexander Oreshko, Anna Oreshko and Timur Mavlyudov
PII.60	Effect of the magnetic field on formation of Cu nanoparticles during the magnetron sputtering in a gas aggregation source Mykhailo Vaidulych, Jan Hanus, Stanislav Kadlec, Aleš Marek, Ivan Khalakhan, Ondřej Kylián, Andrei Choukourov and Hynek Biederman
PII.61	Effect of space charge on electron emission in vacuum Benjamin Seznec, Philippe Dessante, Philippe Teste and Tiberiu Minea
PII.62	Micro-glass capillary focusing of plasma ion beams and creation of microstructures Sanjeev Kumar Maurya and Sudeep Bhattacharjee
PII.63	Generation of Terahertz Radiation by Beating of Dark Hollow Laser Beams in Magnetized Plasma Reenu Gill, Sheetal Punia and Hitendra Malik
PII.64	Effect of secondary electron emission on subnanosecond breakdown in high-voltage pulse discharge Irina Schweigert, Andrey Alexandrov, Pavel Gugin, Maxim Lavrukhin, Petr Bokhan and Dmitry Zakrevsky
PII.65	Visualization of particulates distribution from electrode erosion Wei Zhong, Yunlong Liu, Ao Xu and Lei Chen
PII.66	Dynamics of a complex plasma measured with a 3D light field camera Vladimir Nosenko, Martin Jambor, Sergey Zhdanov and Hubertus Thomas
PII.67	Mode conversion characteristics of the electrostatic hybrid waves in a magnetized plasma slab Myoung-Jae Lee, Gwanyong Jung and Young-Dae Jung
PII.68	Compared chemical compositions of grains and thin films produced in a CCP plasma Nathalie Carrasco and Guy Cernogora
PII.69	Steady equilibrium co-rotating dust vortices in a streaming sheared plasma Laiashram Modhuchandra Singh, Dr. Devendra Sharma and Prof. Kaw Predhiman K

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PII.70	Dusty plasma structures in gas- metal vapor mixtures Merlan Dosbolayev, Assan Abdirakhmanov, Tlekkabul Ramazanov and Sergey Maiorov
PII.71	Simulations of dust charging and wake formation in magnetized plasmas Wojciech Miloch
PII.72	Cyclic growth dynamics of nanoparticles in low-pressure rf dusty plasmas Vincent Garofano, Luc Stafford, Rémi Bérard, Kremena Makasheva and Christine Joblin
PII.73	Levitation of Dust in a Magnetised RF Plasma Brandon Harris and Paul Bryant
PII.74	Remote sensing of plasma phenomena in the upper atmosphere of the Earth by ground-based optical emission spectroscopy Francisco J Gordillo-Vázquez, María Passas, Justo Sánchez, Alejandro Luque, Oscar Van Del Velde and Joan Montanya
PII.75	Bell's instability in the laboratory: pre-experiment simulation study Chun-Sung Jao, Ye Chen, Matthias Gross, Gregor Loisch, Alberto Martinez de La Ossa, Jacek Niemiec, Jens Osterhoff, Martin Pohl, Frank Stephan and Sergei Vafin
PII.76	Towards a fluid model for the streamer-to-leader transition in lightning channels Alejandro Malagón and Alejandro Luque
PII.77	A study of N ₂ H ⁺ dominated afterglow plasma using cavity ring-down spectroscopy Petr Dohnal, Ábel Kálosi, Štěpán Roučka, Radek Plašil and Juraj Glosík
PII.78	PTR-TOF analysis of glow discharge products in Titan related atmosphere Stanislav Chudjak, Frantisek Krcma and Vera Mazankova

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PIII.1	Observation of the spin polarization of 87Rb atoms during collisions with oriented metastable helium atoms Victor Kartoshkin
PIII.2	Determination of collisional quenching rate coefficients of metastable excited atoms $\text{Ar}(3\text{P}2)$ by Ar and H_2O Susumu Suzuki, Youhei Usui and Haruo Itoh
PIII.3	Excitation, recombination and dissociation of molecular cations by electron-impact in cold plasmas: Application to H_2^+ , HD^+ , BeD^+ and BF^+ Nicolina Pop, Janos Zsolt Mezei, Florian Colboc, Youssef Moulane, Sebastien Niyonzima, Michel Douglas Epée Epée, Ousmanou Motapon, Felix Iacob, Remus Boata, Vicenzo Laporta, Kalyan Chakrabarti, Jonathan Tennyson and Ioan F. Schneider
PIII.4	Mobility of Kr^+ ions in Kr for cold plasma modelling Cyril Van de Steen, Malika Benhenni and Kalus René
PIII.5	Complete and consistent set of electron-neutral scattering cross sections for carbon monoxide Polina Ogloblina, Antonio Tejero-Del-Caz, Vasco Guerra and Luís L. Alves
PIII.6	Role of spectral region of discharge emission on initial electron generation for inducing surface discharge in air Yasuhide Kashiwagi
PIII.7	Electron collision cross section set of C_2F_4 gas Satoru Kawaguchi, Kazuhiro Takahashi and Kohki Satoh
PIII.8	Simulation of prebiotic atmospheres by atmospheric pressure glow discharge generated in nitrogen-methane gas mixture David Trunec, Vera Mazankova, Lucie Torokova and Nigel Mason
PIII.9	Measurements and kinetic computations of electron transport parameters in CO_2 in an extended E/N range Igor Korolov, Mate Vass, Detlef Loffhagen, Nuno Pinhão and Zoltan Donkó
PIII.10	Continual radiation of H_2 and D_2 ($a_3 \Sigma_g^+ \rightarrow b_3 \Sigma_u^+$) induced by electron impact Juraj Orszagh, Marian Danko, Michal Durian and Stefan Matejcik
PIII.11	Comparisons and scaling rules between $\text{N}+\text{N}_2$ and N_2+N_2 collision induced dissociation cross sections from atomistic studies Fabrizio Esposito, Ernesto Garcia and Antonio Laganà
PIII.12	Investigation of collisional processes in dense semiclassical plasma Turekhanova Kunduz and Kaliyeva Dameli
PIII.13	O_2 dissociation in plasma and problem of O_2 cross sections set Jean-Paul Booth, Olivier Guaitella, A Chatterjee, Sergey Zyryanov, Dmitry Lopaev, Dmitry Voloshin and Tatyana Rakhimova
PIII.14	A reinvestigation on the energy levels of CO_2 up to the dissociation limit Joao Vargas, Bruno Lopez and Mario Lino Da Silva
PIII.15	Mobility of negative ions in H_2O -He mixtures Jaime de Urquijo, Eduardo Basurto and Olmo González-Magaña

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PIII.16	Probing internal excitation of trapped O+(4S, 2D, 2P) ions by reaction with N ₂ Radek Plašil, Artem Kovalenko, Thuy Dung Tran, Serhiy Rednyk, Štěpán Roučka, Petr Dohnal and Juraj Glosik
PIII.17	On the axial and radial streamer dynamics in dielectric barrier discharges Hans Höft and Manfred Kettlitz
PIII.18	Investigation of streamer propagation and discharge development on dielectric surfaces Manfred Kettlitz, Hans Höft and Ronny Brandenburg
PIII.19	Optical measurement of meter-scale microwave line plasma under atmospheric pressure Haruka Suzuki, Yuto Tamura, Yaoki Inomata and Hirotaka Toyoda
PIII.20	Decay of radiation of the sliding surface discharge and the combined volume discharge Alexander Kuznetsov, Irina Mursenkova and Irina Znamenskaya
PIII.21	Ignition behaviour of atmospheric-pressure dielectric barrier discharges in argon with admixtures of hexamethyldisiloxane and tetramethylsilane Markus Becker, Jens Philipp, Andreas Czerny, Claus-Peter Klages and Detlef Loffhagen
PIII.22	Energy dependence of intensity ratio between nitrogen spectral lines of N II and N I from electrostatic discharge in air Takashi Miura
PIII.23	Time-space behaviour of barrier discharge ionization front in presence of 3D textured dielectric layer Ionut Topala and Gabriela Borcia
PIII.24	Numerical study on the dynamics of He plasma jets with N ₂ or O ₂ admixtures Pedro Viegas and Anne Bourdon
PIII.25	Radial and temporal density profiles of Ar(1s ₅) metastables in a nanosecond pulsed plasma jet impinging on different dielectric surfaces Kristaq Gazeli, Gérard Bauville, Michel Fleury, Olivier Neveu, Pascal Jeanney, Stéphane Pasquiers and Joao Santos Sousa
PIII.26	Controlling Atmospheric-Pressure Plasma Reactive Species Densities by means of Modulated Sinusoidal High Voltage Panagiotis Svarnas, Maria Mitronika, Dimitrios Athanasopoulos, Epaminondas Mitronikas and Kristaq Gazeli
PIII.27	Effect of accumulated charge desorption in atmospheric pressure dielectric barrier discharges Haruaki Akashi and Tomokazu Yoshinaga
PIII.28	Comparative analysis of properties of helium and argon atmospheric pressure plasma jets Yerbolat Ussenov, Azmuhammed Pazyl, Ainur Akildinova, Merlan Dosbolayev, Maratbek Gabdullin, Talgat Daniyarov and Tlekkabul Ramazanov

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PIII.29	Research on Active Species Production Mechanism of an Atmospheric He-Water Plasma Jet Jingjing Liu
PIII.30	Influence of humidity on formation of pulsed atmospheric pressure plasma streamers Nenad Selaković, Jan Voráč, Nevena Puač, Gordana Malović, Pavel Dvořák and Zoran Petrović
PIII.31	Two-Dimensional Electron Density Distribution over Positive Primary Streamer Propagating in Atmospheric-Pressure Air Yuki Inada, Ryo Ono, Akiko Kumada, Kunihiko Hidaka and Mitsuaki Maeyama
PIII.32	Comparison of two electric field measurement methods for a kHz microsecond atmospheric pressure plasma jet Xavier Damany, Goran Sretenović, Sylvain Iséni, Vesna Kovačević, Ivan Krstić, Sébastien Dozias, Jean-Michel Pouvesle, Milorad Kuraica and Eric Robert
PIII.33	Experimental study of ns pulsed microdischarges arrays reactor in nitrogen Kasri Salima, Gérard Bauville, Michel Fleury, Kristaq Gazeli, Joao Santos Sousa, Stéphane Pasquiers, Xavier Aubert, Guillaume Lombardi, Ludovic William and Claudia Lazzaroni
PIII.34	Relaxation of electronic excitation in nitrogen discharge plasma at high specific deposited energy Nikita Lepikhin, Nikolay Popov and Svetlana Starikovskaia
PIII.35	Control of charged species dynamics in atmospheric pressure plasmas using tailored voltage waveforms Andrew Gibson, Layla Alelyani, Scott Doyle, Jerome Bredin, Jean-Paul Booth, James Dedrick, Timo Gans and Deborah O'Connell
PIII.36	Discharge properties in gas filled micro voids in XLPE material Sergey Gortschakow, Marc Bogaczyk and Ruslan Kozakov
PIII.37	The memory effect of pulsed plasma jets in He, Ar and N2 Marc van der Schans, Joran Savenije, Laurens van Mouche, Mark van Ommeren, Rick Jongen, Wilbert Ijzerman and Sander Nijdam
PIII.38	The influence of air impurities on the evolution of plasma species in a capillary helium plasma jet Constantinos Lazarou, Charalambos Anastassiou, George Georghiou, David Klute and Joachim Franzke
PIII.39	Rotational, vibrational and electronic temperatures of pulsed corona discharge at atmospheric pressure in humid air Hasna Guedah, Alyen Abahazem, Nofel Merbahi and Mohamed Yousfi
PIII.40	Influence of target on electric field in kHz-driven atmospheric pressure plasma jet in Helium A. Sobota, V.V. Kovačević, G.B. Sretenović, I. B. Krstić, B. M. Obradović, M.M. Kuraica, Elmar Slikboer and Olivier Guaitella
PIII.41	Spatial and temporal analysis of acetone decomposition and subsequent OH formation in nanosecond diffuse discharge K Ouaras, L Magne, P Tardiveau, A Brisset and S Pasquiers

POSTER SESSION III (14.00-16.00)	
PIII.42	Numerical modelling of glow corona discharges by means of stationary solvers of COMSOL Multiphysics Pedro Almeida, Nuno Ferreira and Mikhail Benilov
PIII.43	Characterization of a ferro-electric packed bed plasma reactor Antonio Mendez, Ana Maria Gomez-Ramirez, Victor Rico, Agustin R Gonzalez-Elipe and Jose Cotrino
PIII.44	Numerical investigation of stability of glow corona discharges and corona-to-streamer transition Nuno Ferreira, Pedro Almeida, George Naidis and Mikhail Benilov
PIII.45	Kinetics of Neon Atmospheric Pressure Plasma Jets Susumu Kato, Masanori Fujiwara, Hiromasa Yamada, Yutaka Fujiwara, Satoru Kiyama and Hajime Sakakita
PIII.46	Memory effect in a dielectric barrier discharge in N ₂ : phenomena in the gas bulk versus phenomena on the dielectric surfaces Clémence Tyl, Xi Lin, Nicolas Naudé, Simon Dap and Nicolas Gherardi
PIII.47	Memory effect in Dielectric Barrier Discharge in N ₂ /O ₂ mixture: absolute atom density measurements by Two-photon Absorption Laser-Induced Fluorescence (TALIF) spectroscopy Xi Lin, Clémence Tyl, Simon Dap, Nicolas Naudé and Nicolas Gherardi
PIII.48	Dynamics of a nanosecond diffuse pin-to-plane discharge – Effects of pin material at high overvoltage Pierre Tardiveau, Alexandra Brisset and Pascal Jeanney
PIII.49	Influence of water temperature on stability of three dimensional atmospheric plasma using water-dielectric multi layer electrode Tatsuya Misawa
PIII.50	Ionic composition of the spatial afterglow of an atmospheric pressure He/CO ₂ plasma jet by mass spectrometry Ante Hecimovic, Emile Carbone, Gert Willems, Kerstin Sgonina and Jan Benedikt
PIII.51	Investigation of arc binding to the hafnium cathode at atmospheric pressure M. Kh. Gadzhiev, M. A. Sargsyan, D. V. Tereshonok and A. S. Tyuftyaev
PIII.52	Experimental and numerical study of electrical arc movement Jean Quéméneur, Pierre Freton, Jean-Jacques Gonzalez and Patrice Joyeux
PIII.53	Collisional-radiative model of iron vapour released in thermal arc plasma from molten electrodes Margarita Baeva, Dirk Uhrlandt and Anthony Murphy
PIII.54	Experimental and numerical study of arc commutation and restrikes in Low-Voltage Circuit Breaker (LVCB) Jean Quéméneur, Jean-Jacques Gonzalez, Pierre Freton and Patrice Joyeux
PIII.55	Numerical modelling of high-pressure arc discharges: matching LTE arc core with the electrodes Marina Lisnyak, Mario Cunha, Jean-Marc Bauchire and Mikhail S. Benilov

POSTER SESSION III (14.00-16.00)	
PIII.56	Behaviour of a short electric arc between bus-bars electrodes: numerical and experimental study Marina Lisnyak, Moussa Chnani, Alain Gautier and Jean-Marc Bauchire
PIII.57	Collisional-radiative modelling for multi-temperature plasma composition calculation Julien Annaloro, Philippe Teulet, Arnaud Bultel, Yann Cressault and Alain Gleizes
PIII.58	Numerical modelling of high-pressure arc discharges: computing anode heating voltage Nelson Almeida, Mário Cunha and Mikhail Benilov
PIII.59	Diagnostics of vicinity of thermal plasma jet by electric probes Oleksiy Hurba and Milan Hrabovsky
PIII.60	Optical Emission Spectroscopy Investigations in a Non-Transferred DC Plasma Torch Vidhi Goyal, P. Bharathi and G. Ravi
PIII.61	Development and further improvement of a heat-treatment system using arc driven by alternating magnetic field Koichi Takeda
PIII.62	Property of high-pressure Ar plasma induced by femtosecond laser Keisuke Tsuchida, Norio Tsuda and Jun Yamada
PIII.63	Direct synthesis of hydrogenated graphene using decomposition of hydrocarbons in plasma jet Ravil Amirov, Emin Isakaev and Marina Shavelkina
PIII.64	Anomalous nonlinear effects in a weakly ionized gas exposed to a strong shock wave Valery Pavlov and Jaroslav Triaskin
PIII.65	Study of variation of hysteresis effects in self-excited amplitudes of a coaxial DC electrode system Rahul Kumar, Ramesh Narayanan, Ram Dattatraya Tarey and Ashish Ganguli
PIII.66	Experimental studies of mechanisms of positive column constriction in argon and neon Yuri Golubovskii, Aleksei Siasko, Dmitry Kalanov and Vladimir Nekuchaev
PIII.67	Self-consistent modelling of spot patterns on anodes of DC glow discharges Matthew Bieniek, Mikhail Benilov and Pedro Almeida
PIII.68	Instantaneous charge state of Uranium projectiles in fully ionized plasmas from energy loss experiments Roberto Morales, Manuel D. Barriga-Carrasco and Ignacio Moreno
PIII.69	On steep gradients in plasmas confined at convex-concave magnetic field lines near the minimum in the longitudinal adiabatic invariant Mikhail Tsventoukh and Andrey Kaziev
PIII.70	The collisionless transient pinch John Allen and Joseph Gibson

POSTER SESSION IV (17.30-19.30)	
PIV.1	Development of ambient desorption/ionization source using ultrafast laser and nonthermal atmospheric pressure helium plasma jet for ambient imaging mass spectrometry Jae Young Kim, Eun Seok Seo, Hyunmin Kim, Dong-Kwon Lim and Dae Won Moon
PIV.2	Mechanistic studies of H ₂ production from H ₂ O using a low power Al/Al ₂ O ₃ microplasma chip reactor Zachary Wiersma, Zhen Dai, Sung-Jin Park and J. Gary Eden
PIV.3	Effect of nitric oxide radicals on the proliferation of budding yeast Masafumi Ito, Masashi Okachi, Jun-Seok Oh, Hiroshi Hashizume and Masaru Hori
PIV.4	Flow Circulation and Ozone Concentration Generated by Plasma Actuator in a Closed Circuit Pipe Youhwan Shin
PIV.5	Enhancement of catalytic activity and stability during PPC for total oxidation of TCE in humid air over Fe-doped cryptomelane Sharmin Sultana, Nicolas Nuns, Pardis Simon, Jean-Marc Giraudon, Jean-Francois Lamonier, Nathalie De Geyter and Rino Morent
PIV.6	Water treatment using micro-bubble assisted three dimensionally integrated micro solution plasma Yodai Ishida and Hiroto Masunaga
PIV.7	Rate equation analysis of ROS/RNS in plasma-treated water Kazuhiro Takahashi, Satoru Kawaguchi, Kohki Satoh, Hideki Kawaguchi, Igor Timoshkin, Martin Given and Scott MacGregor
PIV.8	Emergency & critical care medicine for brain disease by irradiation / inhalation of atmospheric pressure plasma flow Takamichi Hirata, Chihiro Kobayashi, Hiroki Watanabe, Sayaka Matsuda, Satoshi Wakita, Akira Mori, Yoshiki Kudo and Mitsutoshi Iwashita
PIV.9	Plasma activated water – stability and antimicrobial effect Iulia-Elena Vlad, Cristiana Martin, Akos Roland Toth, Judit Papp and Sorin Dan Anghel
PIV.10	Activity of catalase enzyme in <i>P. tomentosa</i> seeds after direct plasma treatments and treatments with plasma activated water Nevena Puac, Nikola Skoro, Kosta Spasic, Suzana Zivkovic, Milica Milutinovic, Vuk Sasic, Gordana Malovic and Zoran Lj. Petrovic
PIV.11	Gasification of crude glycerine: experimental and theoretical study Quirion Follador, Douglas Leite and Alexei Essiptchouk
PIV.12	Effect of non-thermal plasma on the germination and early growth of tomato seeds Monica Magureanu, Daniela Dobrin and Mihai Gidea
PIV.13	Microwave capillary discharge as way to influence biological objects Artur Akopdzhanov, Konstantin Artemyev, Nikolay Bogachev, Alexey Davydov, Irina Egorova, Namik Gusein-Zade, Igor Kossyi and Nikolay Shimanowski

POSTER SESSION IV (17.30-19.30)	
PIV.14	Human Stratum Corneum Epidermidis modification by means of atmospheric-pressure cold plasma treatment Dimitrios Athanasopoulos and Panagiotis Svarnas
PIV.15	Structure at the top of premixed burner flame with the superposition of pulsed dielectric barrier discharge Koichi Sasaki and Kazunori Zaima
PIV.16	Study on the Generation Rate of Chemical Reactive Species in Dielectric Barrier Discharge depending on External Flow Rate Sangheum Eom, Sung-Young Yoon, Changho Yi, Hyeongwon Jeon, Seong Bong Kim, Suk Jae Yoo and Seungmin Ryu
PIV.17	Time-evolution of ONOO ⁻ concentration in the water treated with air plasma and its relationship to the production of OH radicals Shoma Miyamoto, Kentaro Nishimoto, Shin-Ichi Imai and Tatsuru Shirafuji
PIV.18	Investigation of compositions in plasma-irradiated buffer evoking TRP-channel mediated calcium response Shota Sasaki, Yuexing Zheng, Makoto Kanzaki and Toshiro Kaneko
PIV.19	PECVD of DLC & N-doped DLC Thin Films for Biomedical Applications Hyun-Jin Seo, Aiping Zeng, Sang-Hun Nam, Byungyou Hong and Jin-Hyo Boo
PIV.20	Development of electric propulsion using ICR heating on TPD-Sheet IV Miku Nishimura, Toshikio Takimoto, Akira Tonegawa, Hideyuki Horisawa, Kohnosuke Sato and Kazutaka Kawamura
PIV.21	Antibacterial and non-fouling Cu/C:F nanocomposites deposited onto poly(ether-ether-ketone) foils Anna Kuzminova, Jiří Kratochvíl, Ondrej Kylian, Vitezslav Stranak, Hynek Biederman, Helena Langhansová, Jaroslava Lieskovská and Ján Štěrba
PIV.22	Evidence of the paracetamol's aromatic ring breaking thanks to a non-thermal plasma Yasmine Baloul, Cyril Colas, Olivier Aubry, Hervé Rabat, Benoit Maunit and Dunpin Hong
PIV.23	Effects of Air, N ₂ , and CO ₂ Plasma Irradiation to Seeds of Radish Sprouts, Potato and Soybean Masaharu Shiratani
PIV.24	Decomposition of Acetic Acid Solution by Dielectric Barrier Discharge Kenji Teranishi, Keisuke Murata, Masahiro Yonezawa and Naoyuki Shimomura
PIV.25	Effects of the Driving Frequency on Generation of O ₃ , NO _x in DBD plasma Hyeongwon Jeon, Sangheum Eom, Hyewon Mun, Seong Bong Kim, Suk Jae Yoo and Seungmin Ryu
PIV.26	Measurement of reactive species in Plasma Babbled-up Water affecting human cultured cells Jumpei Hosoda, Tomoko Miyake, Hiroaki Kawano, Mikio Shimada, Yuriko Matsumura, Hidekazu Miyahara, Atsuro Iwasawa, Yoshihisa Matsumoto and Akitoshi Okino

POSTER SESSION IV (17.30-19.30)	
PIV.27	LIBS technique, a useful tool for a rapid discrimination between meteorite and meteor-wrong Giorgio Senesi, Paola Manzari, Gioacchino Tempesta, Giovanna Agrosi, Ahmed Touchnt, Abderrahmane Ibhi and Olga De Pascale
PIV.28	Influence of dielectric barrier thickness on the reactor temperature of glass beads packed bed DBD reactor Savita Kaliya Perumal Veerapandian, Anton Nikiforov, Christophe Leys, Nathalie De Geyter, Jean-Marc Giraudon, Jean-Francois Lamonier and Rino Morent
PIV.29	Experimental Investigation of the Asymmetric Surface Dielectric Barrier Discharge Driven by AC/DC Voltage Farshad Sohbatzadeh Lonbar, Hoda Mahdavi and Mostafa Mehdipour
PIV.30	Weakly ionized plasma effects on mitigation of shock waves Farshad Sohbatzadeh Lonbar, Mostafa Mehdipour and Hoda Mahdavi
PIV.31	Study of water treatment effects by a ball-lightning like discharge Yoshimitu Takatori, Hitoshi Suzuki, Kimio Tokaji, Yuuki Inada and Mitsuaki Maeyama
PIV.32	Gas flow modifications by a kHz microsecond atmospheric pressure plasma jet Xavier Damany, Pedro Viegas, Sébastien Dozias, Jean-Michel Pouvesle, Anne Bourdon and Eric Robert
PIV.33	Atmospheric pressure cold plasma driven Ni/ γ -Al ₂ O ₃ catalytic reactor for methanation of CO ₂ Loganathan Sivachandiran, Patrick Da Costa and Ahmed Khacef
PIV.34	Study of chemical modifications induced by an APPJ on an ultra-pure water target Cristina Muja, Laurent Invernizzi, Florent Sainct and Philippe Guillot
PIV.35	Parameters of tap water treated by cold plasma discharges over the surface and inside water Mohamed El Shaer, Mona Mobasher, Mohamed Habib and Milad Samir
PIV.36	Quantification of free radicals species generates by He cold atmospheric plasma jet in different liquid media Julie Chauvin, Florian Judée, Mohammed Yousfi, Patricia Vicendo and Nofel Merbahi
PIV.37	Isotope labelling: A new technique to analyse reaction mechanisms in plasma-gas processes Ana Gómez-Ramírez, Antonio M. Montoro-Damas, Agustín R. González-Elípe and José Cotrino
PIV.38	Flame initiation in C ₂ H ₂ -air mixture in the cathode layer of nanosecond SDBD Elena Filimonova, Aleksey Bocharov and Valentin Bityurin
PIV.39	Effect of Plasma Activated Medium on human Head & Neck cancerous Tumor Spheroids Julie Chauvin, Nofel Merbahi, Florian Judée and Patricia Vicendo

POSTER SESSION IV (17.30-19.30)	
PIV.40	Atmospheric pressure plasma treatment of agricultural seeds with effect on wettability and surface chemical changes Vlasta Štěpánová, Pavel Slaviček, Jakub Kelar, Jan Prášil, Milan Smékal, Monika Stupavská, Jana Jurmanová and Mirko Černák
PIV.41	Role of intracellular RONS in plasma-based cancer treatment Emilio Martines, Paola Brun, Riccardo Artico, Paola Brun, Roberto Cavazzana, Luigi Cordaro, Gianluca De Masi, Daniele Fischetto, Andrea Zuin and Matteo Zuin
PIV.42	Bio-relevant NO _x generated by transient spark in atmospheric dry air and air with water electrospray Zdenko Machala, Karol Hensel, Barbora Tarabova and Mario Janda
PIV.43	Microcrater formation model under cathode spot plasma of a vacuum arc Igor Uimanov and Gennady Mesyats
PIV.44	Electronic response of a plasma-facing dielectric solid Franz Xaver Bronold and Holger Fehske
PIV.45	Simulating Ignition and Development of Cathode Spots in Vacuum Arcs Helena Kaufmann, Mário Cunha, Mikhail Benilov, Werner Hartmann and Norbert Wenzel
PIV.46	Ecton processes in the generation of picosecond runaway electron beams Gennady A. Mesyats
PIV.47	Time- and space-resolved optical emission spectroscopy on dielectric barrier discharge of helium gas in contact with water Shohei Kito, Tatsuru Shirafuji and Kazuhiko Obana
PIV.48	Simulating Propagation of Spots over Cathodes of High-Power Vacuum Circuit Breakers Mário Cunha, Norbert Wenzel, Mikhail Benilov and Werner Hartmann
PIV.49	Plasma sheath and pre-sheath in front of a ceramic wall: experimental and theoretical study Valentin Pigeon, Claire Nicolas, Arnas Cécile and Lénaïc Couëdel
PIV.50	On the mechanism of retrograde motion of vacuum arc cathode spot in external magnetic field Sergey A. Barengolts, Vadim G. Mesyats and Mikhail M. Tsventoukh
PIV.51	Growth of nano-tendrils bundles on tungsten in impurity-rich helium plasmas Dogyun Hwangbo, Shin Kajita, Shota Kawaguchi, Hirohiko Tanaka and Noriyasu Ohno
PIV.52	Analysis of secondary electron emission coefficients from Paschen curves using Monte Carlo simulations Tomokazu Yoshinaga and Haruaki Akashi
PIV.53	Near-cathode layers of arc discharges and diffuse mode of current transfer to cathodes of vacuum arcs Mikhail Benilov and Larissa Benilova

POSTER SESSION IV (17.30-19.30)	
PIV.54	STUDY OF PROCESSES OF DUST FORMATION IN TNER ON MODEL SET OF PULSED PLASMA ACCELERATOR Merlan Dosbolayev, Aigerim Tazhen, Almasbek Utegenov and Tlekkabul Ramazanov
PIV.55	Retention and transmission properties of deuterium in tungsten on D-He mixture plasma Tatsuya Hayashi, Toshikio Takimoto, Akira Tonegawa, Yoshihito Matsumura, Kohnosuke Sato and Kazutaka Kawamura
PIV.56	Effect of humidity on Partial Discharge Inception Voltage Loucif Benmamas, Redouane Boukadoum, Romaric Landfried, Thierry Leblanc, Emmanuel Odic and Philippe Teste
PIV.57	The Influence of a Positively Biased Electrode Matthew Hopkins, Brett Scheiner, Edward Barnat, Benjamin Yee and Scott Baalrud
PIV.58	Evaluation of plasma parameters during the explosive electron emission pulse of vacuum arc cathode spot cell Mikhail Tsventoukh
PIV.59	Formation of Molten Metal Jets and Droplets in the Cathode Spot of Vacuum Arc Discharge Mikhail Gashkov, Gennady Mesyats, Igor Uimanov and Nikolay Zubarev
PIV.60	Investigation of magnetic sheath effect on angle of incident ion at graphite wall Nam-Kyun Kim, Jaemin Song, Younggil Jin, Ki-Baek Roh and Gon-Ho Kim
PIV.61	Theoretical and experimental study of plasma jet interaction with surface Irina Schweigert, Li Lin and Michael Keidar
PIV.62	Understanding the nature of near-anode plasma conditions in DC atmospheric pressure glows and the role that it may play in plasma self-organization Yao Kovach, Maria Carmen Garcia and John Foster
PIV.63	Study of Coupling of 2.45 GHz Electromagnetic Waves with Dense Plasma in Strong Magnetic Field Sergey Polosatkin, Vladimir Batkin, Alexander Burdakov, Ivan Ivanov, Peter Kalinin, Igor Kotelnikov, Konstantin Mekler, Nikita Melnikov, Vladimir Postupaev and Eugeny Sidorov
PIV.64	Investigation of the RF power transfer efficiency of a planar ICP operated in Hydrogen Stefan Briefi, David Rauner and Ursel Fantz
PIV.65	Molecules Radicals and Ions produced in a N ₂ -H ₂ CCP RF Nathalie Carrasco, David Dubois, Audrey Chatain, Ludovic Vettier and Guy Cernogora
PIV.66	H atom generation and loss kinetics in VHF plasmas Shota Nunomura, Hirotaka Katayama and Isao Yoshida
PIV.67	Theoretical study on plasma pattern formation and propagation during air breakdown by three intersecting microwave beams Qianhong Zhou, Zhiwei Dong and Wei Yang

POSTER SESSION IV (17.30-19.30)	
PIV.68	Production and study of a plasma confined by a dipole magnet: optical emission spectroscopy and electron energy distribution Anuj Ram Baitha, Ashwani Kumar and Sudeep Bhattacharjee
PIV.69	Development of a compact water-cooled surface wave plasma source for remote plasma processing Hyun Jong You and Wonil Choo
PIV.70	Dusty Plasma Manipulation via Driving Voltage Waveform Tailoring in an RF discharge Nuriya Bastykova, Zoltan Donko, Sandugash Kodanova, Tlekkabul Ramazanov and Merlan Dosbolayev
PIV.71	Optical emission and mass spectrometric characterization of an atmospheric microwave plasma jet Juslan Lo, Laura Chauvet, Cristina Muja, Louis Latrasse and Philippe Guillot
PIV.72	Study of ECR plasma expansion in diverging magnetic field geometry Anshu Verma, Ashish Ganguli, Ramesh Narayanan, Ram Dattatraya Tarey and Debaprasad Sahu
PIV.73	Characterization of ECR produced hydrogen plasma for H- generation Priti Singh, Rahul Gaur, Debaprasad Sahu, Ramesh Narayanan, Ashish Ganguli and Ram Dattatraya Tarey
PIV.74	Electronegativity and negative ion kinetics in O ₂ ICP during E-H transition Thomas Wegner and Juergen Meichsner
PIV.75	Distributed microwave plasma sources: coupling modes and operation at high pressure for large area deposition Álvaro Martín Ortega, Alexandre Bès, Stéphane Béchu and Ana Lacoste
PIV.76	Experimental study of microwave plasma breakdown in microstrip devices for power limiting applications Antoine Simon, Romain Pascaud, Thierry Callegari, Laurent Liard and Olivier Pascal
PIV.77	On the electrical properties of the surface DBD and its effect on the resonant power source operation Igor Selivonin and Ivan Moralev

Useful Information

Conference venue

The ICPIG 2017 will be held in the **Estoril Congress Centre**, located on a very prominent tourist site known as the Estoril Coast. The site is a 25 km drive from the Lisbon airport.

Travel

Lisbon is one of Europe's cosmopolitan centres, easy accessible from all around the world.

By plane: Lisbon Airport (<https://www.aeroportoisboa.pt/en/lis/home>) is linked to all major airports in the world. The airport connects directly to the city centre by the Lisbon Metro.

By train: Lisbon is connected by train to Madrid, by the Lusitânia Comboio Hotel (<https://www.cp.pt/passageiros/en/how-to-travel/lusitania>), and to Hendaye, by the Sud Expresso (<https://www.cp.pt/passageiros/en/how-to-travel/sud-expresso>). The different train-stations in Lisbon connect directly to the city centre by the Lisbon Metro.

There are multiple ways to access the Estoril Congress Centre from Lisbon, using public transportation.

Lisbon Metro (<http://www.metrolisboa.pt/eng/>): go until *Cais do Sodré* Station. From the airport, take the red line until *Alameda* station, and change to green line until *Cais do Sodré* station.

AeroBus (<https://www.aerobus.pt/en-GB/Home-2.aspx>): from the airport, take Line 1 that terminates at *Cais do Sodré*.

From *Cais do Sodré*, there is a **regular train service** directly to Estoril (Cascais line, <https://www.cp.pt/passageiros/en/how-to-travel/urbanos-lisboa>).

Shuttles: several companies offer connections between the airport and Estoril, at prices between 30-60€.

[Lisbon Low Cost Transfers](#)

Suntransfers.com

[Shuttle direct](#)

Taxis: There are always plenty of taxis waiting outside Lisbon's Airport arrivals terminal. For the 28km between Estoril and the airport, the price is estimated at 40-50€.

Internet Access

Wifi is available in the Estoril Conference Centre, accessing the **LAN ICPIG2017**

Username: **icpig**

Password: **icpig**

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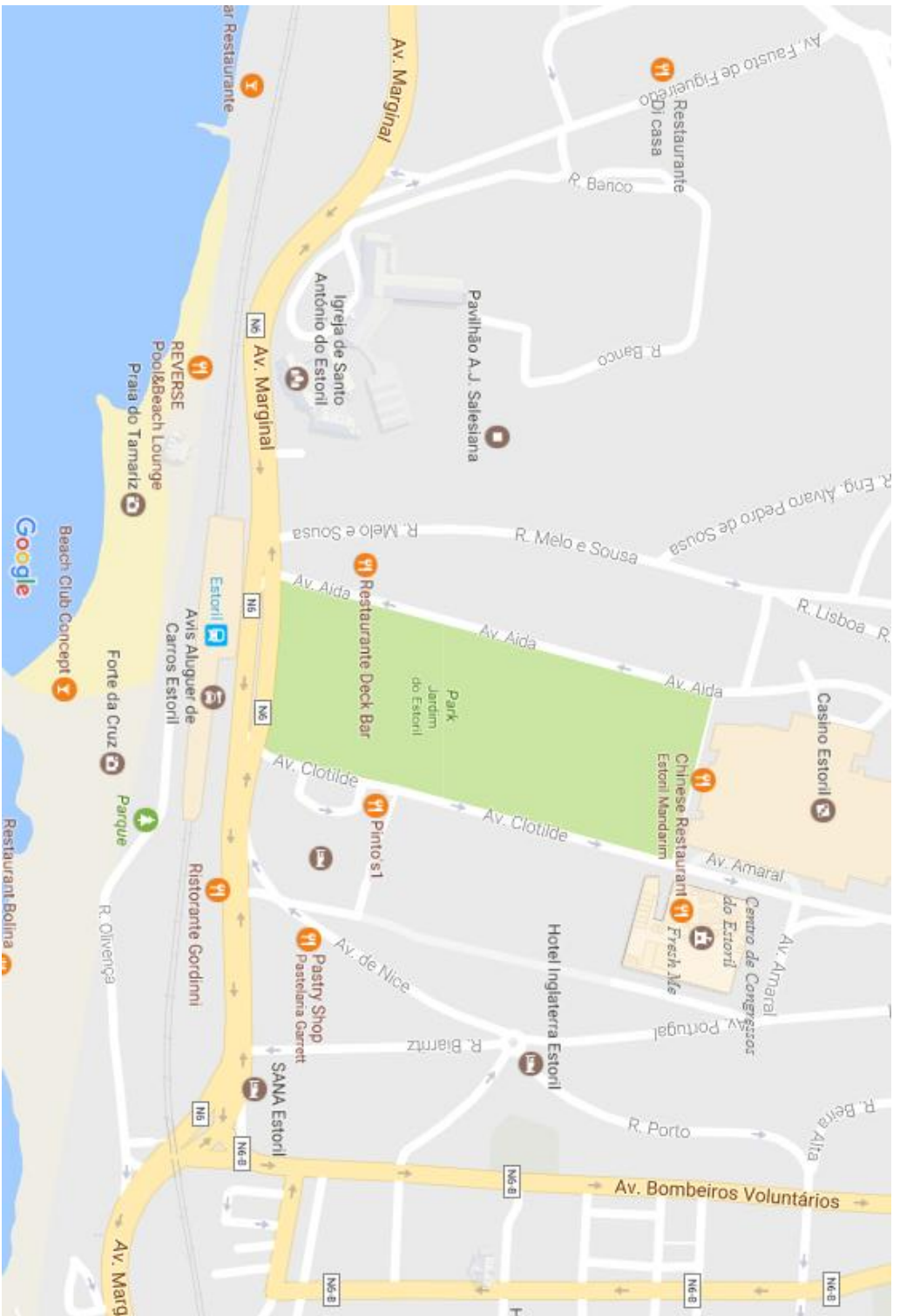
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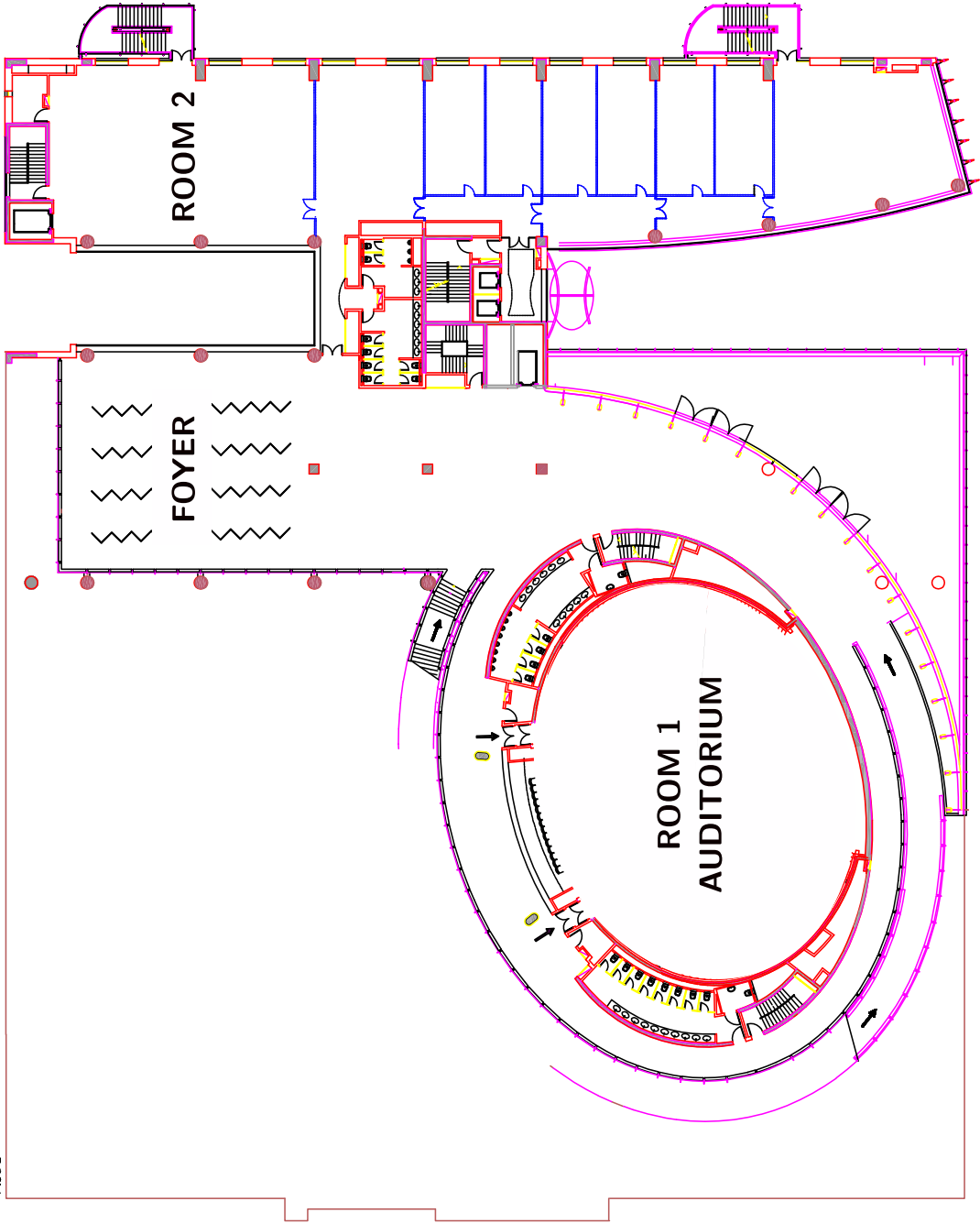
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XXXIII International Conference on Phenomena in Ionized Gases

9-14 July 2017, Estoril / Lisbon, Portugal

CONFERENCE PROGRAM

	MONDAY July 10		TUESDAY July 11		WEDNESDAY July 12		THURSDAY July 13		FRIDAY July 14			
09:00 - 09:10	Registration		Neuber (GL) Room 1		Tatarova (GL) Room 1		Veis (TL) Room 1	Baroch (TL) Room 2	Ghezzi (TL) Room 1	Tereshonok (TL) Room 2		
09:10 - 09:20							Hori (GL) Room 1		Černák (GL) Room 1		Rousseau (GL) Room 1	
09:20 - 09:30	OPENING Room 1						Panousis (OC) Room 1	Shirafuji (OC) Room 2	Yang (OC) Room 1	Gómez-Ramírez (OC) Room 2		
09:30 - 09:40							Tarey (OC) Room 1	Kajita (OC) Room 2	Rutjes (OC) Room 1	Stepanova (OC) Room 2		
09:40 - 09:50												
09:50 - 10:00												
10:00 - 10:10												
10:10 - 10:20												
10:20 - 10:30												
10:30 - 11:00	COFFEE BREAK											
11:00 - 11:10	Kaneko (TL) Room 1	Nistor (TL) Room 2	Von Keudell (TL) Room 1	Wagenaars (TL) Room 2	Herrero (TL) Room 1	Magureanu (OC) Room 2	Jögi (TL) Room 1	Papp (TL) Room 2	Czarnetzki von Engel & Franklin prize (+ poster prizes) Room 1			
11:10 - 11:20												
11:20 - 11:30												
11:30 - 11:40	Chauvin (OC) Room 1	Röpcke (OC) Room 2	Toyoda (OC) Room 1	Kühn-Kauffeldt (OC) Room 2	Pérez-Invernón (OC) Room 1	Vayner (OC) Room 2	Morillo-Candas (OC) Room 1	Vermeiren (OC) Room 2				
11:40 - 11:50												
11:50 - 12:00	Diver (OC) Room 1	Biederman (OC) Room 2	Jang (OC) Room 1	Skrylev (OC) Room 2	Sasaki (OC) Room 1	Surov (OC) Room 2	Ryu (OC) Room 1	Bonaventura (OC) Room 2				
12:00 - 12:10												
12:10 - 12:20	Benova (OC) Room 1	Dias (OC) Room 2	Béchu (OC) Room 1	Bilek (OC) Room 2		Espinho (OC) Room 2	Pinhão (OC) Room 1	Orriere (OC) Room 2				
12:20 - 12:30									CLOSURE Room 1			
12:30 - 14:00	LUNCH											
14:00 - 16:00	POSTER SESSION I		POSTER SESSION II		EXCURSION		POSTER SESSION III					
16:00 - 16:30	COFFEE BREAK						COFFEE BREAK					
16:30 - 17:00	Ionita (TL) Room 1	Chaker (TL) Room 2	Esposito (TL) Room 1	Pawlat (TL) Room 2			Versolato (TL) Room 1	Dussart (TL) Room 2				
17:00 - 17:30	Karkari (TL) Room 1	Huiskamp (TL) Room 2	Schneider (TL) Room 1	Kostov (TL) Room 2			Vodopyanov (TL) Room 1	Tochikubo (TL) Room 2				
17:30 - 18:00	Trottenberg (TL) Room 1	Hara (TL) Room 2	SPECIAL SESSION "Challenges in Low-Temperature Plasma Modelling" Room 1				POSTER SESSION IV					
18:00 - 18:30	Nunomura (TL) Room 1	Tsikata (TL) Room 2										
18:30 - 19:00	Adamovich (TL) Room 1	Couedel (TL) Room 2										
19:00 - 19:30	WELCOME RECEPTION		CULTURAL SESSION									
19:30 - 20:00												
20:00 - 22:00							CONFERENCE DINNER					