International Symposium on Plasma Chemistry 19

Scientific Program

27.-31. July 2009
Bochum, Germany

Achim von Keudell & Jörg Winter
Chairmen
Ruhr-University Bochum
Center for Plasma Science and Technology (CPST)

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Dear Members and Guests of the International Plasma Chemistry Society,

As Minister for Innovation, Science, Research and Technology of the State of North Rhine-Westphalia I am pleased to act as patron for your International Symposium on Plasma Chemistry ISPC19.

Plasma science and technology is a key research area of the 21st century. Many products of our daily life depend on successful plasma processes, ranging from computers to energy saving lamps. Plasmas are used for the creation of nanostructures with unrivalled precision and for functional coatings to give products superior surface properties. The newest development is the use of plasmas in life science as sterilisation tools or as methods to generate biocompatible medical devices and materials. All these applications are realized to date, because plasmas are extremely versatile and can be adapted to many different tasks. This success story over the past few decades was only possible because many disciplines ranging from physics and chemistry to electrical engineering and biology worked together in a truly world-wide interdisciplinary effort.

The International Symposium on Plasma Chemistry, being the largest conference in this field, will provide you with an opportunity to present and review new research on both fundamental and applied topics, to exchange ideas, and to promote international cooperation. Ruhr University Bochum is an excellent choice for the venue of your conference. Plasma Science is one of the key research areas of Ruhr University as being expressed by the establishment of the interdisciplinary research group "Center for Plasma Science and Technology" and the upcoming Research Department "Plasmas with Complex Interactions". They are an integral part and parcel of teaching and research activities at Ruhr University Bochum.

I would like to wish you a most successful conference, and I hope you'll participate in stimulating lectures and discussions. The City of Bochum and the Ruhr area offer their own special brand of hospitality and a unique atmosphere which you will enjoy and always remember.

Prof. Dr. Andreas Pinkwart
Minister of Innovation, Science, Research and Technology
North-Rhine Westphalia, Germany

Dear Colleagues,

we would like to welcome you to the 19th International Symposium on Plasma Chemistry (ISPC). The Bochum *Center for Plasma Science and Technology* as being one of the largest university based plasma groups in Europe is honored to host this symposium 2009 and we wish you interesting and inspiring lectures, most fruitful discussions and a wonderful stay on the campus of *Ruhr-University Bochum*.

Plasma physics and technology at Bochum has a tradition of more than 40 years, with subjects evolving from fundamental fusion research to more applied topics today. In 1991, the Ruhr-Bochum university already hosted ISPC 10 (Chairman Prof. K. Wiesemann) and many scientists, especially from eastern Europe share good memories, as it has been their first chance to travel to the west after the end of the cold war.

The current field of plasma chemistry is lively and evolving, and crosses the borders between many disciplines ranging from natural to engineering sciences. It is a true key technology and the stepping stone for numerous applications of our daily life. This is reflected in the scientific program of the symposium, which encompasses a broad range of topics from fundamentals to applied research. The International Organizing Committee (IOC) invited key experts to present the recent progress and to highlight exiting new developments in the field. In addition, the IOC introduces also new elements starting with ISCP 19 to make the scientific exchange at this conference series even more efficient:

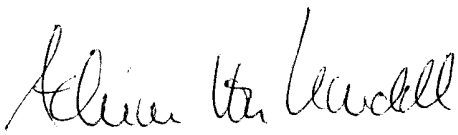
- The website of the International Symposium on Plasma Chemistry will stay permanently online at *www.ispc-conference.org*. It will serve as the central access point for this and future ISPC meetings. In addition, an online version of the proceedings of ISPC 19 is provided, which remains available via internet after the symposium. Thanks to a great effort by Prof. K. Tachibana, the proceedings of all previous ISPC conferences may be reached via *www.ispc-conference.org* as well.

- Two special sessions *Plasma-ALD* and *Plasma Modeling: Nuts and Bolts* with a tutorial character are arranged to highlight the recent progress in this field and to educate the attendees.

- This years Plasma Chemistry Award recipient (Prof. J. Heberlein) is honored by a special plenary award lecture, scheduled for Wednesday July 29, 9:20 a.m., Audimax. The IOC also pre-selected a series of best paper finalists, as being highlighted in the scientific program. The awards are selected among these finalists, and will be presented at the social dinner on July 30.

The International and the Local Organizing Committees wish you a most enjoyable meeting in Bochum.

with best wishes



Achim von Keudell
Ruhr-University Bochum
Chair

Jörg Winter
Ruhr-University Bochum
Co-Chair

Contents

General Information

Conference Registration

IPSC 19 - Office

mailing address:
Marc Böke, Petra Burkhardt
ISPC 19 Secretary, Ruhr-University Bochum
NB 7 / 166 Universitätsstr. 150 D-44780 Bochum, Germany
E-mail: info@ispc-conference.org
FON: +49 (0)234 32 28757
FAX: +49 (0)234 32 14958

During the conference:
FON: +49 (0)234 32 25000 FAX: +49 (0)234 32 14399

Location - Opening Hours

All sessions are held at the Campus of Ruhr-University Bochum. Please register first at the registration desk, which is situated in the **Foyer of Audimax**, to receive your conference materials. The office hours of the registration and information desks are as follows:

July	26 (Sunday)	16:00-21:00 h
	27 (Monday)	07:30-21:00 h
	28 (Tuesday)	07:30-18:00 h
	29 (Wednesday)	07:30-12:00 h
	30 (Thursday)	07:30-18:00 h
	31 (Friday)	07:30-14:00 h

At registration, you will receive a badge, which gives you access to all official activities and events. Please wear it throughout the symposium and social events.

Welcome Party

During registration hours on July 26th, a small snack and drinks will be provided in the **foyer of the Audimax** (18:00-21:00 h).

Conference Fees

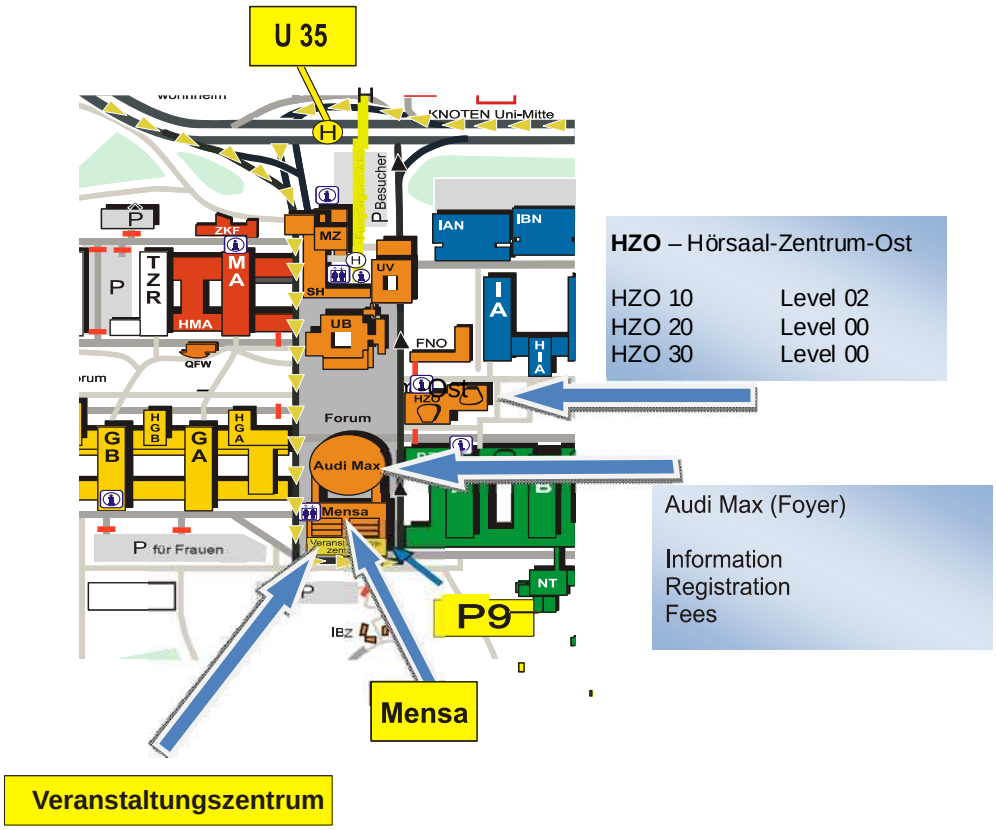
The symposium fee includes the book of abstracts, an USB-stick containing the proceedings, all coffeebreaks and a lunch ticket during the conference week.

Workshop fee is included in the symposium fee.

	before June 15th	on site
Symposium (regular)	350 €	400 €
Symposium (student)	180 €	230 €
Symposium Dinner	50 €	50 €
Summer School	280 €	280 €
Excursion	30 €	30 €
Workshop*	(30 €)	(30 €)

Getting around

Lecture Halls - Locations



The plenary lectures will take place in the **Audimax** at the center of the Campus. The invited and contributed lectures will take place in the **HZO (Hörsaal Zentrum Ost)**. The poster sessions will take place in the **foyer of the Audimax**.

Message Board

A message board os provided near the registration desk for announcements.

Internet Access

Wireless LAN environment is available on the campus (excluding inside of the Audimax lecture hall). In addition, a central plugin station is provided in the **foyer of Audimax** to hook up your laptop. An Access ID is provided with your conference material.

Lunch

You receive with your conference material a personalized lunch ticket, which you may use in the **central dining area (Mensa)**. This lunch ticket is only valid during central opening hours (11:00-14:00) of the **Mensa**.

Daily Transfer from Downtown to the Campus

You may reach the campus of Ruhr-University Bochum easily via the subway U35 direction **Bochum Hustadt** until the stop **Universität**. If you buy a single ticket you need *Preisstufe A*. The subway runs during rush hour every 5 min and it takes $\sim$ 9 minutes from the Bochum main station to the campus.

	Hotel to Bochum Main Station		Bochum Main Station to Campus
Hotel	Bus	Tram	Underground
Renessaince Bochum Hotel ****		308/318	U 35
Courtyard by Marriot Bochum Stadtpark ****		308/318	U 35
Ramada Bochum ****		308/318	U 35
Renessaince Bochum Hotel ****		308/318	U 35
Park Inn Bochum ****			U 35
Wald- & Golfhotel Lottental **** (walking distance)	375		
Achat Bochum ****	368		U 35
Acora ***			U 35
Ostmeier ***			U 35
Plaza ***			U 35
Ibis Zentrum **			U 35

With your conference material you receive a weekly pass of the local transportation system, which allows you unlimited travel within the region A of the local Bochum transportation system.

Business Meetings

General Assembly

The registered participants at the biennial ISPC are automatically members of the International Plasma Chemistry Society (IPCS) for the two years following the Symposium. Membership fee is included in the registration fee of the ISPC. The IPCS General Assembly will be held in the Audimax at 13:00 on Friday, July 31. All members are requested to attend the General Assembly for the purpose of approvals of the election of the Board of Directors, operating principles and future plans of the ISPC, etc.

An official ballot is included in your registration material as a color sheet. A ballot box is placed at the registration desk from 09:00 on Monday, 27 July, to 12:00 on Thursday, 30 July. Delayed ballots are invalid.

Business Meetings

Individual board meetings and business meetings are held in **Seminarraum 1..4 on level 1 of the central dining area (Mensa)**. Directions to these room are indicated on site. The attendees of those meetings are informed individually.

Author guidelines

Oral presentations

The length of the plenary lectures is 40 + 5 min discussion, of the topical invited lectures 25 + 5 min discussion, and of the contributed lectures 15 + 5 min discussion. As format, we only allow Powerpoint- or PDF-files. To upload your presentation via CD or USB stick, please contact the ISPC staff member in the session room at least a half day before your talk. If you wish to test your talk before uploading (in case you have movies etc.), please contact the staff at the registration desk.

Poster Sessions

Three poster sessions are arranged on Monday, Tuesday and Thursday afternoon. The format of the poster boards allows poster sizes with a width of $\sim$ 90 cm and a height of $\sim$ 130 cm (DIN A0 portrait). Please put up your poster during the morning coffee breaks prior to your assigned poster session. The number, as being indicated in the final program, is attached to the poster board. Please remove your poster after the poster session. We take no responsibility for left poster.

Social Program

The conference will provide a social program for the participants and for their companions. Wednesday afternoon is reserved for an excursion to the *Open-Air Museum Hagen* including

guided tours and a barbecue. A social dinner will take place on Thursday evening. The excursion and the social dinner need to be booked in advance via the website. You may also get additional tickets for these activities at the registration desk until Tuesday noon.

In addition, a diverse social program for accompanying persons is organized with tours into the region on Monday, Tuesday and Thursday.

Excursion - Open Air Museum Hagen Wednesday, July 29, 2009

The Open Air Museum Hagen provides a hands on experience on the history of crafts and industrialization. Embedded into a beautiful valley of the 'Bergische Land', over 60 historical buildings are collected from all over North-Rhine-Westfalia and reconstructed in their original states. Visitors can watch craftsmen to perform old skills in over 20 historic shops. The *Open-Air Museum Hagen* was founded in 1960. Thirteen years later it was opened to the public. In contrast to many other open air museums, where the history of farming is in the focus of the exhibition, the *Open Air Museum Hagen* emphasizes the history of technology. Beginning with the end of the 18th century, over the early industrialization until its full development in the beginning of the 20th century, the visitors experience the advent of craftsmanschip and commerce in the region. The excursion will begin with guided tours through the exhibition and into the workshops, where old crafts are on display. In the later afternoon, (about 17:00) a barbecue and drinks will be provided for all participants. The fee for the excursion is 30 € (including transportation, fees, barbecue).

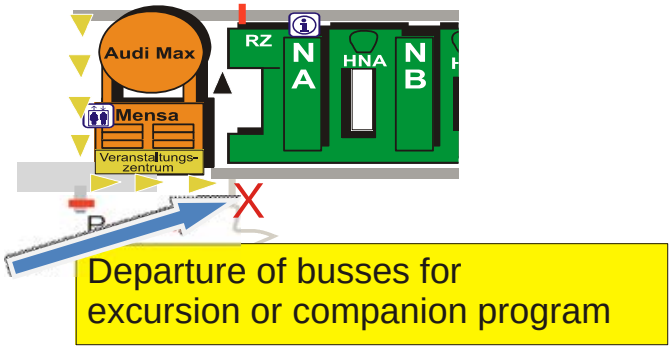


Figure 1: Departure Buses to the Excursion

The buses to the open air museum Hagen start at 13:30 from the *N-Südstrasse*, as indicated on Fig. 1. You are invited to join a guided tour through the exhibition (length 1 hour) or to explore the museum on your own. The guided tours start at 15:00 and at 16:00 (you will find more detailed information in your conference material). *Please select one tour !* The title of the guided tour and the spoken language of the tour guide is indicated on the bus. Please step into the bus, which matches your choice. A staff member in each bus will assist you throughout the trip.

The buses will return from the open air museum starting at 19:30. You can expect your arrival in Bochum at 20:00.

Social Dinner Thursday, July 30, 2009

The social dinner (19:30) takes place in the central dining hall of the Campus of Ruhr-University Bochum featuring great food and spectacular music. During the social dinner the Plasma Chemistry Award will be presented as well as the winners of the best paper awards. The fee for the social dinner is 50 € (all inclusive).

Companion Program

A diverse social program for accompanying persons is organized with tours into the region on Monday, Tuesday and Thursday. You are asked to register and pay the fee for the trip at the registration desk during the conference. The buses for these trips start on the *N-Südstrasse* (see map on Fig. 1).

- *Monday, July 27, 2009* - **Münster and Moated Castle Nordkirchen, the Versailles of North-Rhine Westphalia.**
  Departure 9.00 - Return 18.30. Daytrip by bus to the city of Münster (85 km north of Bochum). Guided tour through the town, entry and guided tour in the Water Castle Nordkirchen. Fee: 27 € / person
- *Tuesday, July 28, 2009* - **Cologne.**
  Departure 9.00 - Return 18.30. Daytrip by bus to Cologne (80 km south-west of Bochum), guided tour through the cathedral, tour through downtown, entry and guided tour through the Chocolate Museum. Fee: 40 € / person
- *Thursday, July 30, 2009* - **Industrial Heritage**
  Departure 9.00 Uhr - Return 17.00 Uhr Guided tour through the monumental Coal Mine Zollverein, (one of the UNESCO World Cultural Heritage), entry and guided tour Villa Hügel (well-known for great exhibitions, currently: Renoir, Monet, van Gogh, Gaugin, Matisse, Dali), lovely Lake Baldeney including boat trip. 35 € / person

Symposium Program

Scope of the conference

The International Symposium on Plasma Chemistry is a bi-annual international conference with topics encompassing the complete areas of plasma chemistry and plasma processing science. The aim of the Symposium is to present the recent progress in plasma chemistry and its applications. 6 plenary speakers and 22 topical invited speakers cover a broad range of topics. The official language of the Symposium is English, and will be used for all presentations and printed materials.

Special Session "Plasma-assisted ALD"

Atomic Layer Deposition (ALD) is a well established technology to deposit thin films by using alternating chemical reactions and precursors. Thereby, a pure layer-by-layer growth is realized reaching excellent growth control and conformity as mandatory for future device generations in the semiconductor industry and the upcoming field of nanotechnology. Over the recent years ALD has been expanded towards plasma-assisted ALD to improve the flexibility in materials and to enable lower growth temperatures. This session is chaired by Anjana Devi (RUB) and Erwin Kessels (TU Eindhoven) and is devoted to introduce basic concepts of ALD and plasma-assisted ALD and to highlight the recent progresses in that field.

Special Session "Plasma Simulation: Nuts and Bolts"

The combination of experiments and their theoretical description and prediction by plasma modelling is essential for the progress in plasma science. Over the recent years, several commercial and open source tools with a convenient user interface became available. This session is devoted to introduce these plasma simulation tools to experimentalist as being non-experts in modelling and to motivate them to benchmark and to validate their experimental data. This session is chaired by Ralf Peter Brinkmann/Thomas Mussenbrock (RUB) and Boris Potapkin (Kurchatov Institute).

Industrial Workshop: Plasmas interacting with biological systems

A half-day workshop on plasmas for biomedical applications will be organized on Friday, July 31st. This emerging field is currently at a stage between exploring the fundamentals and developing first prototypes for industry. Guest speakers will present the current status of understanding of plasmas interacting with biological matter. Success stories regarding the implementation of plasma technology for biomedical applications will be highlighted. The workshop is organized by Peter Awakowicz (Ruhr-University Bochum, Bochum) and Francois Rossi (Joint Research Centre, Ispra).

Awards

Plasma Chemistry Award 2009

The Board of Directors of the International Plasma Chemistry Society (IPCS) is pleased to announce the winner of the 2009 Plasma Chemistry Award, the highest recognition awarded by the IPCS for lifetime achievements in the field of Plasma Chemistry.

The winner of the 2009 Plasma Chemistry Award is

Professor Joachim V. R. Heberlein,
University of Minnesota, USA

for his significant contributions to thermal plasmas science, in particular, the understanding of plasma arc-electrode effects, and his achievements in the area of thermal plasma processing.

Professor Heberlein received his Diploma in Physics from the University of Stuttgart, Germany, in 1966, and his Ph.D. from the University of Minnesota in 1975. From 1975 to 1989 he was first senior engineer and then manager for applied plasma research at the Westinghouse Research and Development Center in Pittsburgh, PA. He joined the Department of Mechanical Engineering at the University of Minnesota in 1989. Professor Heberlein has authored and co-authored more than 138 journal papers in the field of thermal plasma science and graduated 23 Ph.D. students and 28 M.S. students. Professor Heberlein is a Fellow of the International Union of Pure and Applied Chemistry (IUPAC) and served on the IUPAC Subcommittee for Plasma Chemistry from 1984-1994; he chaired the committee from 1992-1993. He was Chairman of the organizing committee of the 12th International Symposium on Plasma Chemistry in Minneapolis, Minnesota, in 1995. Professor Heberlein was one of the founders of the International Plasma Chemistry Society and served the IPCS as treasurer until 2008.

A special award lecture is scheduled on Wednesday morning to honor this years recipient.

Best paper finalist

The IOC of ISPC 19 selected 17 best paper finalists. These contributions are highlighted in the program. Among these finalists, a number of best papers will be selected and presented at the social dinner on Thursday evening.

Wettability, Flowability and Compactibility of Polymer Powders as a Function of the Plasma Treatment in the Down-Stream Reactor *C. Roth, A. Sonnenfeld, P. Rudolf von Rohr* ETH Zürich, Zürich, Switzerland
Measurement of the gas temperature in plasmas in and in contact with liquids *P. Bruggeman, T. Verreycken, D. Schram, M. Kong, C. Leys* Ghent University, Ghent, Belgium
Surface modification of polystyrene dishes using plasma techniques to enhance cell adhesion and proliferation *Y. Sasai, N. Matsuzaki, S. Kondo, Y. Yamauchi, M. Kuzuya* Gifu Pharmaceutical University, Gifu, Japan
Elaboration of a new kind of stimuli responsive surfaces by combining plasma polymerization and mechanically dependent chemistry *A. Geissler, V. Roucoules, M. Vallat, P. Schaaf, J. Hemmerlé, B. Frisch* Institut de Chimie des Surfaces et Interfaces, Mulhouse, France
CF radical kinetics in the afterglow phase of pulsed $CF_4 + H_2$ RF plasmas *S. Stepanov, J. Meichsner* Institute of Physics, University of Greifswald, Greifswald, Germany

Generation of Low Frequency Atmospheric-Pressure Uniform Discharge in Air *N. Osawa, Y. Yoshioka, Y. Mochizuki, Y. Kobayashi, Y. Yamada, R. Hanaoka, S. Takata* Kanazawa Institute of Technology, Ishikawa, Japan
Linear-field and cross-filed cold atmospheric plasma jets *J. Walsh, M. Kong* Loughborough University, Loughborough, UK
Plasma-Enhanced Electron Emission from Carbon Nanotube Array Cathodes *M. Dionne, S. Coulombe, J. Meunier* McGill university, Montréal, Canada
Effect of plasma power and precursor size distribution on alumina nanoparticles produced in an inductively coupled plasma (ICP) reactor *F. Marion, R. Munz, R. Dolbec, M. Boulos* McGill University, Montreal, Canada
Coupling between pressure oscillations and electric arc instabilities in dc plasma torches *V. Rat, J. Coudert* SPCTS-CNRS-University of Limoges, Limoges, France
Investigations of energy and flux of ions for diamond nucleation in microwave plasma chemical vapor deposition *K. Nose, Y. Mitsuda* The University of Tokyo, Tokyo, Japan
Plasma modification of PCL porous scaffolds fabricated by Solvent Casting/Particulate Leaching for Tissue Engineering *F. Intranuovo, E. Sardella, R. Gristina, M. Nardulli, G. Ceccone, P. Favia, R. d'Agostino* Università degli Studi di Bari, Bari, Italy
Pt-containing plasma-deposited hydrocarbon films as catalysts for fuel cells *E. Dilonardo, A. Milella, F. Palumbo, R. d'Agostino, F. Fracassi* Università degli studi di Bari, Bari, Italy
The plasma chemistry in an atmospheric pressure CH_4 dielectric barrier discharge described using a two dimensional fluid model *C. de Bie, T. Martens, D. Petrovic, D. Mihailova, J. van Dijk, A. Bogaerts* University of Antwerp, Wilrijk, Belgium
Study of dichloromethane decomposition in DBD plasma reactors using advanced spectroscopic diagnostics techniques *Z. Abd Allah, D. Sawtell, R. Ibrahim, V. Kasyutich, P. Martin* University of Manchester, Manchester, UK
Control of fluid dynamic instability in oxygen plasma arc cutting *S. Kim, J. Heberlein, J. Lindsay, J. Peters* University of Minnesota, Minneapolis, US
Thin films of plasma-synthesized germanium nanocrystals for electronic applications *Z. Holman, U. Kortshagen* University of Minnesota, Minneapolis, US

Monday, 27. July 2009

Auditorium

8:30-9:00 General Assembly, Chairperson: A. von Keudell

Opening Ceremony

9:00-9:50 Plenary 1, Chairperson: A. von Keudell

New Frontiers from Old Ideas in Plasma-Surface Chemistry
D. Graves
Berkeley, US

HZO 10	HZO 20	HZO 30
10:00-12:40 O5 **Plasma Sources: design and characterization I** *Chairperson: F. Massines, J. Meichsner*	**10:00-12:40 O8** **Plasma deposition and treatment of polymers I** *Chairperson: D. Hegemann, H. Biederman*	**10:00-12:40 O3** **Non-equilibrium effects and AP plasma processes I** *Chairperson: U. Czarnetzki, G. Dinescu*
10:00-10:30 Invited I5.1 **Modeling of the plasma chemistry and plasma-surface interactions in reactive plasmas** *A. Bogaerts, E. Neyts, M. Eckert, M. Mao, C. de Bie, S. Tinck, F. Gou* University of Antwerp, Antwerp, Belgium	**10:00-10:30 Invited I8.1** **Plasma Functionalization of Textiles: Specifics and Possibilities** *S. Guimond, B. Hanselmann, M. Amberg, D. Hegemann* Empa, St.Gallen, Switzerland	**10:00-10:30 Invited I3.1** **Theoretical study of the dielectric barrier discharge at atmospheric pressure** *V. Mayorov* SPb State University, St. Petersburg, Russia
10:30-10:50 O5.1 **Experimental investigations of the Electrical Asymmetry Effect** *J. Schulze, E. Schüngel, Z. Donko, D. Luggenhölscher, U. Czarnetzki* Institute for Plasma and Atomic Physics, Bochum, Germany	**10:30-10:50 O8.1** **Plasma polymers from RF sputtering of nylon in a mixture of N_2/H_2** *J. Hanuš, J. Kousal, O. Kylián, D. Slavínská, H. Biederman* Charles University, Prague, Czech	**10:30-10:50 O3.1** **Simulation of streamer dynamics in atmospheric pressure plasma jets** *G. Naidis* Joint Institute for High Temperatures RAS, Moscow, Russia

10:50-11:20

Coffee Break

HZO 10	HZO 20	HZO 30
11:20-11:40 O5.2 **Double layer formation in a two-region electronegative plasma** *M. Lieberman, E. Kawamura, A. Lichtenberg, J. Verboncoeur* University of California, Berkeley, Berkeley, CA, US	**11:20-11:40 O8.2** **Surface Oxygen in Plasma Polymerized Films** *H. Jiang, J. Grant, J. Enlow, W. Su, R. Jakubiak, T. Bunning* MSTA, Daytom, US	**11:20-11:40 O3.2** **Characteristics of atmospheric dielectric barrier discharge towards plasma-catalytic dry reforming of methane** *X. Tu, B. Verheyde, S. Paulussen, B. Sels, P. Jacobs* KU Leuven, Heverlee, Belgium
11:40-12:00 O5.3 **Plasma series resonance and E to H mode transitions in low-pressure rf inductively coupled plasmas** *P. Kempkes, H. Soltwisch* Ruhr-Universität Bochum, 44780, Germany	**11:40-12:00 O8.3** **Relationship between structure and ammonia absorption properties of pulsed plasma polyaniline and polyfluoroaniline** *D. Debarnot, T. Merian, V. Rousseau, F. Poncin-Epaillard* Université du Maine, Laboratoire PCI, Le Mans, France	**11:40-12:00 O3.3** **Diagnostics of DBD Plasma Produced Inside a Closed Package** *E. Stamate, A. Chiper, W. Chen* Risø National Laboratory for Sustainable Energy, Roskilde, Denmark
12:00-12:20 O5.4 **Reactive Magnetron Sputtering of Sulfides for Thin Film Solar Cells: Plasma Characterization and Measurement of Energetic Species** *K. Ellmer, S. Brunken, S. Seeger* Helmholtz-Zentrum für Materialien und Energie, Berlin, Germany	**12:00-12:20 O8.4** **Thermal stability of plasma polymerized nanocomposits** *E. Kovacevic, J. Berndt, T. Strunskus, M. Haass, W. Unger, L. Boufendi* GREMI, Orleans, Cedex 2, France	**12:00-12:20 O3.4** **Experimental and Non-Equilibrium Numerical Investigations of a Transferred Argon Electric Arc** *C. Chazelas, H. Li, G. Mariaux, G. Wu, L. Benilova, H. Wang, M Benilov, A. Vardelle* Limoges University, SPCTS Laboratory, Limoges, France
12:20-12:40 O5.5 **The beam-plasma source for technologies of the proteins modification** *T. Vasilieva* Moscow Institute of Physics and Technology, Dolgoprudny, Moscow region, Russia	**12:20-12:40 O8.5 Best Paper Finalist** **Pt-containing plasma-deposited hydrocarbon films as catalysts for fuel cells** *E. Dilonardo, A. Milella, F. Palumbo, R. d'Agostino, F. Fracassi* Università degli studi di Bari, Bari, Italy	**12:20-12:40 O3.5** **Adhesive-free lamination technique using a plasma surface treatment at atmospheric pressure** *M. Kogoma, A. Manabe, K. Tanaka* Sophia University, Tokyo, Japan

12:40-14:00

Lunch

HZO 10	HZO 20	HZO 30
14:00-15:50 SP1 **Special - Plasma-enhanced atomic layer deposition** *Chairperson: E. Kessels, A. Devi*	**14:00-15:50 O5** **Plasma Sources: design and characterization II** *Chairperson: H. Kersten*	**14:00-15:50 O3** **Non-equilibrium effects and AP plasma processes II** *Chairperson: J. Pouvesle*
14:00-14:20 Invited SP1.1 **Introduction to (plasma-enhanced) atomic layer deposition** *W. Kessels, A. Devi* Eindhoven University of Technology, Eindhoven, Netherlands	**14:00-14:30 O5.6** **Transition of thermal plasma jet from subsonic to supersonic regime** *T. Kavka, M. Hrabovsky, O. Chumak, A. Maslani, V. Kopecky, P. Krenek* IPP CAS CR, Prague 8, Czech	**14:00-14:30 Invited I3.2** **Dynamics of radio-frequency driven microplasmas** *T. Gans, J. Waskoenig, K. Niemi, S. Reuter, L. Graham, L. Schaper, H. Böttner, N. Knake, V. Schulz-von der Gathen* Queenś University Belfast, Belfast, UK
14:20-14:50 SP1.2 **Plasma Enhanced Atomic Layer Deposition of SiO_2, Ta_2O_5 and TaCN** *J. Maes, Y. Kim, H. Park, B. Milligan, S. Marcus* ASM Belgium, Leuven, Belgium	**14:30-14:50 O5.7** **Carbonaceous Gases for DC Plasma** *L. Pershin, J. Mostaghimi, N. Grisha* University of Toronto, Toronto, Canada	**14:30-14:50 O3.6** **Investigation on the growth of high quality-SiO2 films on polymers in atmospheric pressure PECVD** *P. Antony Premkumar, S. Starostin, H. de Vries, R. Paffen, M. Creatore, M.C.M. van de Sanden* Eindhoven University of Technology, Eindhoven, Netherlands
14:50-15:20 SP1.3 **Emerging applications of plasma assisted ALD** *C. Hodson, Q. Fang, S. Shabbir, O. Thomas* Oxford Instruments Plasma Technology, Bristol, UK	**14:50-15:10 O5.8** **Non-self-sustained atmospheric pressure glow discharges in helium and ambient air maintained by the DC helium glow discharge** *V. Arkhipenko, T. Callegari, Y. Safronau, L. Simonchik* Stepanov Institute of physics NASB, Minsk, Belarus	**14:50-15:10 O3.7** **Study of Plasma Enhanced Chemical Vapor Deposition of Oxide Films by Non-thermal Plasma Jet at Atmospheric Pressure** *Y. Ito, Y. Fukui, K. Urabe, K. Tachibana* Kyoto University, Kyoto, Japan
	15:10-15:30 O5.9 **Oxygen radical density in atmospheric pressure Ar-O2 microwave plasma for plasma cleaning** *S. Ono, T. Suganume, Y. Suzuki* Musashi Institute of Technology, Tokyo, Japan	**15:10-15:30 O3.8** **Atmospheric Pressure PECVD of Silicon Nitride for photovoltaic applications** *B. Dresler, J. Roch, G. Mäder, I. Dani, S. Kaskel* Fraunhofer IWS, Dresden, Germany
15:20-15:50 SP1.4 **Reaction mechanisms during plasma-assisted atomic layer deposition** *E. Langereis* Eindhoven University of Technology, Eindhoven, Netherlands	**15:30-15:50 O5.10 Best Paper Finalist** **Control of fluid dynamic instability in oxygen plasma arc cutting** *S. Kim, J. Heberlein, J. Lindsay, J. Peters* University of Minnesota, Minneapolis, US	**15:30-15:50 O3.9** **Influence of the substrate on the properties of the thin film deposited from a dielectric barrier discharge in HMDSO/N_2** *R. Maurau, A. Dembele, N. Boscher, D. Duday, P. Choquet, F. Arefi-Khonsari* CRP Gabriel Lippmann, Belvaux, Luxemburg

15:50-16:20

Coffee Break

Auditorium
16:20-17:30 **Poster Session 1** Plasma Sources: design and characterization Plasma deposition and treatment of polymers Non-equilibrium effects and atmospheric pressure plasmas Fundamentals of plasma surface interaction
17:30-18:00 **Drinks and Pretzels**
18:00-19:00 **Poster Session 1 (contd.)**

Tuesday, 28. July 2009

Auditorium

8:30-9:20 Plenary 2, Chairperson: F. Gitzhofer

Liquid materials processing: A challenge for thermal plasmas

A. Vardelle, C. Chazelas, C. Marchand, G. Mariaux, H. Lorcet, D. Guenadou

University of Limoges, Limoges, France

HZO 10	HZO 20	HZO 30
9:30-12:30 O2 **Diagnostics and modeling in plasma chemistry I** *Chairperson: R. Engeln, Y. Pu*	**9:30-12:30 O8** **Plasma deposition and treatment of polymers II** *Chairperson: P. Favia, C. Oehr*	**9:30-12:30 O11** **Plasma spray and thermal plasma material processing** *Chairperson: T. Murphy, J. Heberlein*
9:30-10:00 Invited I2.1 **Gas phase kinetics and surface interaction in a hydrogen plasma jet** *O. Gabriel, W. van Harskamp, J. van den Dungen, D. Schram, R. Engeln* Eindhoven University of Technology, Eindhoven, Netherlands	**9:30-10:00 Invited I8.2** **Plasmas facing Semiconductors and Oxides: Key issues to control and tailor their Interaction** *M. Losurdo, M. Ambrico, G. Bottaro, M. Giangregorio, A. Sacchetti, P. Capezzuto, G. Bruno* RUB, Bochum, Germany	**9:30-10:00 Invited I11.1** **Innovative In-Flight Glass Melting Technology Using Thermal Plasmas** *T. Watanabe* Tokyo-Inst. of Technology, Yokohama, Japan
10:00-10:20 O2.1 **Development of a fluid code for fast simulation of high-density ECWR plasmas** *S. Sfikas, E. Amanatides, D. Mataras, D. Rapakoulias* Plasma Technology Lab., Patras, Greece	**10:00-10:20 O8.6** **APGD and APTD for the deposition of silicon based thin films from N_2O/HMDSO mixtures: application to gas-barrier layers** *N. Gherardi, L. Maechler, C. Sarra-Bournet, N. Naudé, F. Massines* LAPLACE ; CNRS, Toulouse Cedex 09, France	**10:00-10:20 O11.1 Best Paper Finalist** **Coupling between pressure oscillations and electric arc instabilities in dc plasma torches** *V. Rat, J. Coudert* SPCTS-CNRS-University of Limoges, Limoges, France
10:20-10:40 O2.2 **Chemical and gas-phase kinetics in a CHF_3 + argon plasma** *J. Barz, A. Lunk, C. Oehr* Fraunhofer IGB, Stuttgart, Germany	**10:20-10:40 O8.7** **Pressure Dependent Transition of Single-Walled Carbon Nanotube Growth Mode in Atmospheric Pressure Plasma Enhanced CVD** *T. Nozaki, T. Karatsu, K. Ohnishi, K. Okazaki* tokyo institute technology, tokyo, Japan	**10:20-10:40 O11.2** **Effect of current modulation on nanopowder synthesis using induction thermal plasmas** *Y. Tanaka, T. Nagumo, H. Sakai, Y. Uesugi, Y. Sakai, K. Nakamura* Kanazawa University, Kanazawa, Japan
10:40-11:10 Coffee Break		
HZO 10	HZO 20	HZO 30
11:10-11:30 O2.3 **The spatial distribution of radicals in the dual frequency (1.76 MHz / 81 MHz) capacitive discharge in CHF_3/Ar and CF_4/Ar mixtures** *E. Malykhin, O. Braginsky, A. Kovalev, D. Lopaev, O. Proshina, T. Rakhimova, A. Rakhimov, A. Vasilieva, S. Zyryanov* Skobeltsyn Institute of Nuclear Physics of Moscow State University, Russia	**11:10-11:30 O8.8** **Porous plasma stamps for patterned surface coating** *U. Stöhr, A. Dohse, P. Hoppe, A. Gehringer, M. Thomas, H. Reinecke, C.P. Klages* Freiburg University, Freiburg, Germany	**11:10-11:30 O11.3 Best Paper Finalist** **Effect of plasma power and precursor size distribution on alumina nanoparticles produced in an inductively coupled plasma (ICP) reactor** *F. Marion, R. Munz, R. Dolbec, M. Boulos* McGill University, Montreal, Canada
11:30-11:50 O2.4 **Reasons for the usage of the LMEA instead of the LFA** *G. Grubert, M. Becker, D. Loffhagen* INP Greifswald, Greifswald, Germany	**11:30-11:50 O8.9** **Mechanisms of adhesion promotion of polyolefins- and aluminum-epoxy joints by atmospheric plasma jet treatment** *U. Lommatzsch, J. Ihde* Fraunhofer IFAM, Bremen, Germany	**11:30-11:50 O11.4** **Determination of thermal resistance between millimetre scale alumina splat and stainless steel substrate** *S. Goutier, M. Vardelle, J. Labbe, P. Fauchais* SPCTS -UMR CNRS 6638, Limoges, France
11:50-12:10 O2.5 Best Paper Finalist **The plasma chemistry in an atmospheric pressure CH_4 dielectric barrier discharge described using a two dimensional fluid model** *C. de Bie, T. Martens, D. Petrovic, D. Mihailova, J. van Dijk, A. Bogaerts* University of Antwerp, Wilrijk, Belgium	**12:10-12:30 O8.11** **Investigations on Polymerizing Plasmas by Means of Imaging Optical Emission Spectroscopy** *F. von Fragstein, W. Michaeli* Institut für Kunststoffverarbeitung , Aachen, Germany	**11:50-12:10 O11.5** **Operational characteristics of atmospheric pressure microwave plasma spraying onto low melting point materials** *T. Yasui, K. Tsujimoto, T. Kondo, M. Fukumoto* Toyohashi University of Technology, Toyohashi, Aichi, Japan
12:10-12:30 O2.6 **Negative oxygen ion density measurements by photo-detachment in RF and Pulsed DC magnetron discharges** *J. Bradley, S. You, R. Dodd, P. Bryant* University of Liverpool , Liverpool , UK	**11:50-12:10 O8.10 Best Paper Finalist** **Elaboration of a new kind of stimuli responsive surfaces by combining plasma polymerization and mechanically dependent chemistry** *A. Geissler, V. Roucoules, M. Vallat, P. Schaaf, J. Hemmerlé, B. Frisch* Institut de Chimie des Surfaces et Interfaces, Mulhouse, France	**12:10-12:30 O11.6** **Multidimensional ceramic nanocomposite coatings by hypersonic plasma particle deposition** *A. Beaber, S. Girshick, W. Gerberich* University of Minnesota, Minneapolis, US
12:30-14:00 Lunch		

HZO 10	HZO 20	HZO 30
14:00-15:50 SP2 **Special - Plasma Modeling: Nuts and Bolts** *Chairperson: T. Mussenbrock, B. Potapkin*	**14:00-15:50 O15** **Plasmas in liquids** *Chairperson: S. Hamaguchi*	**14:00-15:50 O14** **Environmental applications: combustion, abatement, cleaning, recycling** *Chairperson: P. Awakowicz*
14:00-14:10 Invited SP2.1 **Plasma Simulation and Modeling: Nuts and Bolts (Introduction)** *T. Mussenbrock, B. Potapkin*	**14:00-14:30 Invited I15** **Liquid-phase laser ablation** *K. Sasaki* Nagoya University, Nagoya, Japan	**14:00-14:30 Invited I14** **Plasma-catalysis: a solution for environmental problems ?** *C. Whitehead* University of Manchester, UK
14:10-14:35 SP2.2 **Computer Simulation: Particle-in-Cell Simulation of Collisional Plasmas** *J. Verboncoeur* Univ. California, Berkeley, US	**14:30-14:50 O15.1** **Role of solution conductivity in the electron impact dissociation of H_2O induced by plasma processes in the pulsed corona discharge in water** *P. Lukes, M. Clupek, V. Babicky, M. Simek, I. Tothova, V. Janda, T. Moucha, M. Kordac* Institute of Plasma Physics AS CR , Prague 8, Czech	**14:30-14:50 O14.1** **Bio-oils Reforming into Syngas by Non-Thermal Plasma** *J. Luche, A. Khacef, O. Aubry, K. Arabi, J. Cormier, J. Leininger, J. Lede* GREMI, Orleans, France
14:35-15:00 SP2.3 **Supporting Technology Development Through Modeling Fundamental Plasma Processes** *M. Kushner* Univ. Michigan, Ann Arbor, US	**14:50-15:10 O15.2** **Selective surface functionalization using underwater plasma technique** *R. Joshi, J. Friedrich* Bundesanstalt für Materialforschung und -prüfung, Berlin, Germany	**14:50-15:10 O14.2** **Decomposition of Fluorinated Compounds by Water Plasma** *Narengerile, H. Saito, T. Watanabe* Tokyo Institute of Technology, Machida City , Japan
15:00-15:25 SP2.4 **Plasimo under the Hood - The LinSys framework** *J. van Dijk, K. Peerenboom, M. Jimenez, J. van der Mullen* Eindhoven University of Technology, Eindhoven, Netherlands	**15:10-15:30 O15.3** **Simultaneous Production of Hydrogen and Carbon Nanotubes in a Conventional Microwave Oven** *S. Nomura, H. Yamashita, H. Toyota, S. Mukasa, Y. Okamura* Ehime University, Matsuyama, Japan	**15:10-15:30 O14.3** **Optimization of Single-Stage Plasma-Driven Catalyst Process for the Decomposition of Volatile Organic Compounds** *H. Kim, J. Kim, A. Ogata* AIST, Tsukuba, Japan
15:25-15:50 SP2.5 **Plasma-chemical mechanism understanding via partial modeling** *M. Deminsky* RRC Kurchatov Institute, Moscow, Russia	**15:30-15:50 O15.4 Best Paper Finalist** **Measurement of the gas temperature in plasmas in and in contact with liquids** *P. Bruggeman, T. Verreycken, D. Schram, M. Kong, C. Leys* Ghent University, Ghent, Belgium	**15:30-15:50 O14.4** **Conversion of CH_4 to CO and oxygenates from exhaust gases by discharges of streamer-to-spark transition type.** *M. Janda, D. Kunecova, Z. Machala, M. Morvova* Faculty of Mathematics, Physics and Informatics, Bratislava, Slovakia

15:50-16:20

Coffee Break

Auditorium

16:20-17:30

Poster Session 2

Diagnostics and modeling in plasma chemistry
Microplasmas and Microdischarges
Plasma in liquids
Plasma spray and thermal plasma material processing
Environmental applications: combustion, abatement, cleaning

17:30-18:00

Drinks and Pretzels

18:00-19:00

Poster Session 2 (contd.)

Wednesday, 29. July 2009

Auditorium

8:30-9:20 Plenary 3, Chairperson: U. Kortshagen
Microplasma generation in artificial media and its potential applications
K. Tachibana
Ehime University, Matsuyama, Japan

9:20-10:10 Plenary 4, Plasma Chemistry Award Lecture, Chairperson: U. Kortshagen
Arc electrodes - where the plasma meets the wall
J. Heberlein
University of Minnesota, Minneapolis, US

10:10-10:40

Coffee Break

HZO 10	HZO 20	HZO 30
10:40-12:30 O10 **Plasma chemical synthesis** *Chairperson: B. Potapkin*	**10:40-12:30 O4** **Microdischarges and microplasmas** *Chairperson: M. Kong*	**10:40-12:30 O1** **Fundamentals of plasma surface interactions** *Chairperson: K. Okazaki*
10:40-11:10 Invited I10 **Induction plasma nano-particles synthesis modelling - review and applications** *P. Proulx, F. Gitzhofer* University of Sherbrooke, Sherbrooke, Canada	**10:40-11:10 Invited I4** **Atmospheric-pressure radio-frequency microdischarges** *F. Iza, D. Liu, J. Walsh, M. Kong* Loughborough University, Loughborough, UK	**10:40-11:10 Invited I1** **Experimental and modeling study of recombination reactions on dynamic surfaces in low-pressure plasmas** *L. Stafford, O. Boudreault, R. Khare, V. Donnelly* Université de Montréal, Montréal, Canada
11:10-11:30 O10.1 **Synthesis of nanostructured materials by hot and cold plasma** *X. Li, J. Zheng, R. Yang, L. Xie* Peking University, Beijing, China	**11:10-11:30 O4.1** **Ionisation Dynamics in Single and Dual Radio-Frequency Atmospheric Pressure Microplasma Jets** *J. Waskoenig, T. Gans* Queens University Belfast, Belfast, UK	**11:10-11:30 O1.1** **Chemical Erosion of Carbon Material Irradiated with Low Energy Atomic Hydrogen Neutrals** *Y. Takeguchi, M. Kyo, Y. Uesugi, Y. Tanaka, S. Masuzaki* Kanazawa University, Kanazawa city, Japan
11:30-11:50 O10.2 **Plasma-assisted synthesis of porphyrin-based catalysts** *N. Savastenko, V. Brüser, K. Anklam* INP, Greifswald, Germany	**11:30-11:50 O4.2** **Electric field measurement in repetitively pulsed nanosecond discharges in a high pressure hydrogen environment** *T. Ito, K. Kobayashi, U. Czarnetzki, S. Hamaguchi* Osaka University, Suita, Osaka, Japan	**11:30-11:50 O1.2** **Modification of the surface chemistry and band gap engineering of semiconducting passive films on metals and metal alloys** *M. Giza, J. Otte, M. Maxisch, G. Grundmeier* University of Paderborn, Paderborn, Germany
11:50-12:10 O10.3 **Plasma Catalytic Conversion of Hexane in a Dielectric Barrier Discharge** *A. Agiral, C. Boyadjian, K. Seshan, L. Lefferts, J. Gardeniers* Twente University, Enschede, Netherlands	**11:50-12:10 O4.3** **Quantitative CD ATR-FTIR and CD SEM-EDX analyses for locally amino-functionalized polymer surfaces** *A. Hinze, N. Lucas, S. Büttgenbach, K. Schiffmann, P. Willich, C.P. Klages* Institut für Oberflächentechnik, Technische Univer, Braunschweig, Germany	**11:50-12:10 O1.3** **Thermal flux measurements in high power impulse magnetron sputtering** *D. Lundin, M. Stahl, H. Kersten, U. Helmersson* Linköping University, Linköping, Sweden
12:10-12:30 O10.4 **Reaction of Organic compound Induced by Pulse Discharge Plasma in Subcritical Water** *M. Goto, M. Mitsugi, A. Yoshida, M. Sasaki, T. Kiyan, T. Namihira, H. Akiyama* Kumamoto University, Kumamoto, Japan	**12:10-12:30 O4.4** **Array of capillary tube based micro-plasma system for the sterilization of bacteria-containing water droplet** *C. Weng, W. Huang, T. Lin, H. Chen, J. Liao, C. Ho, Y. Ho* National Cheng Kung University , Tainan, TW	**12:10-12:30 O1.4** **Investigations on the plasma-surface interaction during DBD-treatment for low-temperature direct silicon wafer bonding** *B. Michel, M. Eichler, C. Klages* Institut für Oberflächentechnik, Braunschweig, Germany

12:30-13:30

Lunch

13:30-20:00

Outing

The buses to the open air museum Hagen start at 13:30 from the *N-Südstrasse*, as indicated on Fig. 1. You are invited to join a guided tour through the exhibition (length 1 hour) or to explore the museum on your own. The guided tours start at 15:00 and at 16:00 (you will find more detailed information in your conference material). *Please select one tour !* The title of the guided tour and the spoken language of the tour guide is indicated on the bus. Please step into the bus, which matches your choice. A staff member in each bus will assist you throughout the trip. The buses will return from the open air museum starting at 19:30. You can expect your arrival in Bochum at 20:00.

Thursday, 30. July 2009

Auditorium

8:30-9:20 Plenary 5, Chairperson: F. Arefi-Khonsari
High voltage short pulse discharges: "old" tool, bright future ?
J.-M. Pouvesle
GREMI, Orleans, France

HZO 10	HZO 20	HZO 30
9:30-12:30 O2 **Diagnostics and modeling in plasma chemistry II** *Chairperson: K. Tachibana, K. Hassouni*	**9:30-12:30 O7** **Plasma deposition of inorganic films and hard coatings** *Chairperson: J. Bradley, M. Hrabovsky*	**9:30-12:30 O13** **Biomedical applications I** *Chairperson: S. Neogi, A. Fridman*
9:30-10:00 Invited I2.2 **Optical diagnostics of atmospheric pressure dielectric barrier discharges** *G. Dilecce, P. Ambrico, S. de Benedictis* IMIP-CNR, Bari, Italy	**9:30-10:00 Invited I7** **Dynamics and chemistry of High Power Impulse Magnetron Sputtering Discharges** *A. P. Ehiasarian, A. Vetushka, A. Hecimovic* Sheffield Hallam University, Sheffield, UK	**9:30-10:00 Invited I13.1** **Biomaterial interactions at plasma polymer interfaces** *R. Förch* Max-Planck-Institute for Polymer Research, Mainz, Germany
10:00-10:20 O2.7 **Study of fast plasma chemistry in atmospheric pressure air discharges by emission, absorption and fluorescence spectroscopy** *G.D. Stancu, F. Kaddouri, D. Lacoste, C. Laux* Ecole central Paris, Paris, France	**10:00-10:20 O7.1** **Comparison between a DC reactive magnetron sputtering discharge in an Ar/NH_3 and Ar/H_2/N_2 gas mixture** *F. Henry, A. Batan, F. Reniers* ULB, Bruxelles, Belgium	**10:00-10:20 O13.1** **Plasma assisted development of new blood compatible fluorocarbon polymer materials** *V. Vasilets, V. Sevastianov* IEPCP Russian Academy of Sciences, Chernogolovka, Russia
10:20-10:40 O2.8 **SiO_x thin films deposition from organosilicon-containing feeds: low pressure vs. atmospheric pressure operation** *F. Fracassi, F. Fanelli, S. Lovascio, R. d'Agostino* Department of Chemistry, University of Bari, Italy	**10:20-10:40 O7.2** **Studies on plasma diagnostics and ITO film deposition using an RF plasma assisted closed-field dual magnetron sputtering system** *L. Meng, R. Raju, R. Flauta, T. Dockstader, H. Shin, D. Ruzic* University of Illinois at Champaign and Urbana, Urbana, US	**10:20-10:40 O13.2** **Interaction of plasmas and photons with human skin cells** *M. Born, U. Niemann, P. Awakowicz, N. Bibinov, D. Wandke, C. Suschek, C. Opländer, V. Kolb-Bachofen, J. Liebmann, B. Busse* Philips Research, Aachen, Germany

10:40-11:10

Coffee Break

HZO 10	HZO 20	HZO 30
11:10-11:30 O2.9 **High Speed Imaging of transient phenomena in PAC** *V. Colombo, A. Concetti, E. Ghedini, S. Dallavalle, M. Vancini* University of Bologna, Bologna, Italy	**11:10-11:30 O7.3** **Microstructure characterization of plasma- deposited SiO_2-like films: a detailed study by means of ellipsometric porosimetry** *M. Creatore, N. Terlinden, M.C.M. van de Sanden* Eindhoven University of Technology, Eindhoven, Netherlands	**11:10-11:30 O13.3 Best Paper Finalist** **Plasma modification of PCL porous scaffolds fabricated by Solvent Casting/Particulate Leaching for Tissue Engineering** *F. Intranuovo, E. Sardella, R. Gristina, M. Nardulli, G. Ceccone, P. Favia, R. d'Agostino* Università degli Studi di Bari, Bari, Italy
11:30-11:50 O2.10 **Integrated parametric study of hybrid-stabilized argon-water arc under subsonic and supersonic regimes** *J. Jeništa, H. Takana, H. Nishiyama, M. Bartlová, V. Aubrecht, P. Křenek, T. Kavka, V. Sember, A. Mašláni* Institute of Plasma Physics AS CR, Praha, Czech	**11:30-11:50 O7.4** **Gas dilution effect on Si film deposition by gas-jet electron beam plasma CVD method** *S. Khmel, A. Fedoseev, G. Shukhinin* Institute of Thermophysics SB RAS, Novosibirsk, Russia	**11:30-11:50 O13.4** **Plasma-Induced Nanotexturing of Polymers for the Fabrication of Protein and DNA Arrays** *K. Tsougeni, M. Vlachopoulou, P. Petrou, S. Kakabakos, A. Tserepi, E. Gogolides* NCSR DEMOKRITOS, Aghia Paraskevi, Greece
11:50-12:10 O2.11 **Experimental and modelling studies of plasma and catalyst material interaction in an atmospheric pressure plasma** *X. Duten, M. Redolfi, K. Hassouni* LIMHP - CNRS, Villetaneuse, France	**11:50-12:10 O7.5** **Atomic-Scale Numerical Simulations of Structural Properties in Carbon-Based Thin Film Deposition Processes** *Y. Murakamo, S. Horiguchi, S. Hamaguchi* CANON ANELVA CORPORATION, Kanagawa, Japan	**11:50-12:10 O13.5** **Surface amination of 3-dimensional substrates by RotoTEC plasma treatment under defined gas atmospheres at ambient pressure** *M. Thomas, K. Lachmann, A. Dohse, M. Thrane, J. Morlock, C. Klages* Fraunhofer IST, Braunschweig, Germany
12:10-12:30 O2.12 **Numerical Investigations of Diffusion of Metal Vapour and its Influence on Arc Behaviour in Gas Metal Arc Welding** *M. Schnick, U. Füssel, M. Hertel, A. Spille-Kohoff, A. Murphy* TU Dresden, Dresden, Germany	**12:10-12:30 O7.6** **Role of Oxygen in Plasma Processing of Materials and its Control in Plasma Reactors** *S. Veprek, M. Veprek-Heijmann, A. Fernandez, M. Jilek, A. Bergmann, F. Mirabella* Technical University Munich, Garching, Germany	**12:10-12:30 O13.6** **Ultra-thin plasma polymerized allylamine films for cardiovascular stent coating** *E. Gallino, M. Tatoulian, F. Arefi-Khonsari, D. Mantovani* UPMC-ENSCP/Université Laval, Paris, France

12:20-14:00

Lunch

HZO 10	HZO 20	HZO 30
14:00-15:50 O9 **Clusters, particles and powders I** *Chairperson: S. Girshick*	**14:00-15:50 O6** **Plasma processing for micro-electronics and -mechanics** *Chairperson: A. Bogaerts*	**14:00-15:50 O16** **Plasmas and renewable energies** *Chairperson: M.C.M. van de Sanden*
14:00-14:30 Invited I9.1 **Synthesis and processing of carbon nanotubes by plasma technologies** *Lenka Zajickova, O. Jasek, M. Elias, P. Synek, Z. Kucerova, L. Lazar* Dept. Phys. Electronics, Masaryk University, Brno, Czech	**14:00-14:30 Invited I6** **Discriminating the impact of UV, ions and radicals on the linewidth roughness of 193 nm resist patterns exposed to reactive plasmas** *E. Pargon, M. Martin, O. Luere, L. Azarnouche, K. Menguelti, O. Joubert* LTM/CNRS, grenoble, France	**14:00-14:30 Invited I16** **Plasma physics and chemistry for processing high quality thin film silicon at high deposition rates** *M. Kondo, S. Nunomura, T. Matsui* AIST Tsukuba, Japan
14:30-14:50 O9.1 **Deposition of metal nanoparticules on multiple wall carbon nanotubes (MWCNT) using atmospheric plasma** *F. Reniers, F. Demoisson, N. Claessens, J. Guillot, J. Pireaux, A. Felten* Université Libre de Bruxelles, Brussels, Belgium	**14:30-14:50 O6.1** **Development of Novel Etching Process based on Real-time Monitoring of Substrate Temperature** *M. Hori, H. Kuroda, M. Ito, T. Ohta, K. Takeda, M. Sekine* Nagoya University, Aichi, Japan	**14:30-14:50 O16.1** **Rare earth - doped silicon nitride layers for solar cell applications** *M. Petcu, A. Sarkar, M. Creatore, H. Hintzen, M.C.M. van de Sanden* Eindhoven University of Technology, Eindhoven, Netherlands
14:50-15:10 O9.2 Best Paper Finalist **Thin films of plasma-synthesized germanium nanocrystals for electronic applications** *Z. Holman, U. Kortshagen* University of Minnesota, Minneapolis, US	**14:50-15:10 O6.2** **Mass spectrometry investigations of metalorganic etch products: example of HgCdTe Inductively Coupled Plasma etching in CH_4-H_2 based chemistry.** *F. Boulard, J. Baylet, C. Cardinaud* CNRS IMN, Nantes, France	**14:50-15:10 O16.2** **Oxidation of methane using CH_4/O_2/He and CH_4/CO_2/He mixtures in DBD discharges** *N. Pinhão, A. Janeco, J. Branco, A. Ferreira, L. Redondo* ITN - Nuclear and Technological Institute, Sacavém, Portugal
15:10-15:30 O9.3 Best Paper Finalist **Wettability, Flowability and Compactibility of Polymer Powders as a Function of the Plasma Treatment in the Down-Stream Reactor** *C. Roth, A. Sonnenfeld, P. Rudolf von Rohr* ETH Zürich, Zürich, Switzerland	**15:10-15:30 O6.3** **Plasma enhanced chemical vapor deposition of advanced a-SiC:H barriers for microelectronics interconnections** *C. Charles-Alfred, V. Jousseaume, A. Granier* STMicroelectronics, Crolles, France	**15:10-15:30 O16.3** **Hydrogen formation in pure water by non-thermal plasma treatment** *R. Burlica, B. Hnatiuc, E. Hnatiuc, B. Locke* Electrotechnical Faculty of TU Gh.Asachi Iasi, Iasi, Romania
15:30-15:50 O9.4 **Plasma synthesis of functionalized metal nanoparticles: from improved dispersion properties to enhanced biomaterials** *J. Tavares, E. Swanson, S. Coulombe* McGill University, Montreal, Canada	**15:30-15:50 O6.4** **Plasma CVD of Nano-particle Composite Porous SiOCH Films** *M. Shiratani, S. Iwashita, H. Miyata, K. Koga, H. Matsuzaki, M. Akiyama* Kyushu University, Fukuoka, Japan	**15:30-15:50 O16.4** **Conversion of waste Glycerol into Synthesis Gas** *A. Czernichowski* ECP - GlidArc Technologies, La Ferte St Aubin, France

15:50-16:20

Coffee Break

Auditorium

16:20-17:30

Poster Session 3

Plasma chemical synthesis
Biomedical applications
Plasma aided combustion and aerodynamics
Cluster, particles and powders
Plasmas and renewable energies
Plasma processing for micro-electronics and -mechanics
Plasma deposition of inorganic films and hard coatings

17:30-18:00

Drinks and Pretzels

18:00-19:00

Poster Session 3 (contd.)

19:30-00:00

Conference Dinner

Friday, 31. July 2009

Auditorium

8:30-9:20 Plenary 6, Chairperson: J. Winter

Atmospheric pressure plasma sources - prospective tools for plasma-medicine

K. Weltmann, R. Brandenburg, J. Ehlbeck, E. Kindel, M. Stieber, T. von Woedtke

INP Greifswald, Greifswald, Germany

HZO 10	HZO 20	HZO 30
9:30-12:10 O13 **Biomedical applications II** *Chairperson: F. Rossi, M. Wertheimer*	**9:30-12:10 O9** **Clusters, particles and powders II** *Chairperson: L. Boufendi*	**9:30-12:10 O12** **Plasma aided combustion and aerodynamics** *Chairperson: C. Laux*
9:30-10:00 O13.7 **Deposition of SiO_x Films by PECVD on Coronary Stents** *P. Rudolf von Rohr, P. Reichen, A. Sonnenfeld, S. Hoerstrup, G. Zünd* ETH Zurich, Zurich, Switzerland	**9:30-10:00 Invited I9.2** **Dust particles in low-pressure plasmas: Formation and induced phenomena** *M. Mikikian, M. Cavarroc, L. Couëdel, Y. Tessier, L. Boufendi* GREMI, Orleans Cedex 2, France	**9:30-10:00 Invited I12** **Plasma chemistry in space propulsion using the Helicon Double Layer Thruster** *C. Charles* The Australian National University, Canberra, Australia
10:00-10:20 O13.8 **Degradation and removal of proteinaceous matter using cold atmospheric plasmas** *D. Bayliss, J. Walsh, Z. Cao, F. Iza, G. Shama, M. Kong* Loughborough University, Loughborough, UK	**10:00-10:20 O9.5** **The influence of dust particles concentration on glow discharge parameters and dust particle charge** *G. Sukhinin, A. Fedoseev* Institute of Thermophysics, Novosibirsc, Russia	**10:00-10:20 O12.1** **Experiments and simulation of plasma actuators with enhanced thrust** *U. Kortshagen, S. Guo, M. Mamunuru, D. Ernie, T. Simon* University of Minnesota, Minneapolis, US
10:20-10:40 O13.9 **Surface Modification of Polypropylene using Argon Plasma for Biomedical Applications** *S. Neogi , N. Gomathi, D. Mishra, T. Maity* Indian Institute of Technology, Kharagpur, Kharagpur, India	**10:20-10:40 O9.6** **Dust particle agglomeration in microplasma** *T. Antonova, B. Annaratone, H. Thomas, G. Morfill* Max-Planck-Institut für extraterrestrische Physik, Garching, Germany	**10:20-10:40 O12.2** **Ignition of propane-air mixtures by rf spark discharge** *A. Frederic, M. Maxime, N. Georgy* Renault SAS, Guyancourt, France
10:40-11:10 Coffee Break		
HZO 10	**HZO 20**	**HZO 30**
11:10-11:30 O13.10 **Plasma processes for cell-adhesive and antimicrobial titanium surfaces** *K. Schröder, B. Finke, M. Polak, A. Ohl, G. Lukowski, B. Nebe, R. Bader, M. Schlosser, K. Weltmann* INP Greifswald, Greifswald, Germany	**11:10-11:30 O9.7** **In-flight microplasma synthesis of silicon nanocrystals in macroscopic quantities** *T. Nozaki, T. Nakamuta, M. Sagawa, K. Okazaki* Tokyo Institute of Technology, Tokyo, Japan	**11:10-11:30 O12.3** **Numerical simulation of plasma-assisted ignition in CH_4:air mixtures** *N. Aleksandrov, S. Kindysheva, I. Kosarev, E. Kukaev, S. Starikovskaia, A. Starikovskii* Moscow Institute of Physics and Technology, Dolgoprudny, Russia
11:30-11:50 O13.11 **Influence of plasma nanocomposite structure on the Ag release** *E. Körner, A. Ritter, P. Rupper, E. Michel, D. Hegemann* Empa, 9000, Switzerland	**11:30-11:50 O9.7** **Silyl effusion from plasma-produced silicon nanocrystals** *R. Anthony, U. Kortshagen* University of Minnesota, Minneapolis, US	**11:30-11:50 O12.4** **Rate of Thermal Energy Release in Nanosecond Pulse Burst Air and Ethylene-Air Plasmas** *I. Choi, M. Uddi, Y. Zuzeek, A. Dutta, Z. Yin, W. Lempert, I. Adamovich* The Ohio State University, Columbus, OH, US
11:50-12:10 O13.12 **Hemocompatible plasma polymers by vacuum thermal degradation of PEO** *A. Choukourov, A. Grinevich, O. Polonskyi, J. Hanuš, J. Kousal, D. Slavinska, H. Biederman* Charles University in Prague, Prague, Czech	**11:50-12:10 O9.8** **Plasma deposition on SiC crystalline nanoparticles in a novel powder reactor** *H. Hody, J. Pireaux* University of Namur, Namur, Belgium	**11:50-12:10 O12.5** **Gradient Mechanism of Detonation Initiation by Nonequilibrium Nanosecond Discharges** *A. Rakitin, A. Starikovskii* NEQLab Research BV, Delft, Netherlands

Auditorium

12:20-13:00

General Assembly

13:00-14:00

Farewell Party

Central Dining Area (Mensa) level 1, Seminarraum 2

14:00-17:00

Industrial Workshop - Plasmas Interacting with Biological Matter: form Biomolecules to Organisms

14:00-14:30 W1
Biological effects of nitric oxide generated by an atmospheric pressure gas-plasma on human skin cells
Joerg Liebmann, Victoria Kolb-Bachofen
Institute for Molecular Medicine, Research Group Immunobiology, Heinrich-Heine-University of Duesseldorf, Germany

14:30-15:00 W1
Interaction of plasma with human skin cells and reduction of germs by using dielectric barrier discharges
D. Wandke, B. Busse
Cinogy GmbH/Duderstadt Germany, Zellkontakt GmbH Nörten-Hardenberg, Germany

15:00-15:30 W2
Nitrogen Monoxide (NO) Production for the Medical Treatment of Human Skin Using an integrated Microwave Microplasma Source
Roland Gesche, Reinhold Kovacs, Joachim Scherer
FBH Berlin, Fa. Aurion/Seligenstadt, Germany

15:30-16:00

Coffee Break

16:00-16:30 W3
Treatment of microorganisms with UV-light sources
Helmut Halfmann
Osram Radium, Germany

16:30-17:00 W1
Elementary Mechanisms of Plasma Sterilisation: Concepts towards an industrial implementation
Jan Benedikt
Ruhr-University Bochum, Germany

Poster Session 1, Monday 27. July 2009

Auditorium

Plasma Sources: design and characterization

P1.5.1	**Pulsed Atmospheric Pressure Plasma Jet (PAPPJ)** *G. Elaragi* atomic energy authority, Cairo, Egypt
P1.5.2	**Control of Large Diameter ECR Plasma for Application** *Y. Kawai, K. Uchino, H. Muta, M. Koga, S. Kawai, T. Röwf* Kyushu University, Kasuga, Japan
P1.5.3	**Characterization of a surface dielectric barrier discharge** *A. Pemen, F. Beckers, G. Winands, E. Heesch, P. Blom* Eindhoven University of Technology, Eindhoven, Netherlands
P1.5.4	**Probe Measurements of Parameters of Cathode-directed Single Streamers in a Multipoint Corona Discharge System** *V. Melńikov, A. Ponizovsky, S. Gosteev, V. Maevsky, L. Ponizovsky* FMDB "Horizont" FSUE MMBPP "Salut", Moscow, Russia
P1.5.5	**Experimental observation of the electromagnetic effects in very high frequency CCP discharge** *V. Volynets, A. Ushakov, G. Lim, H. Shin, J. Woo, K. Kim, S. Sung* Samsung Electronics, Suwon, South Korea
P1.5.6	**Spatiotemporal evolution of electron density in a cylindrical inductively coupled afterglow neon plasma** *D. Hu, X. Zhu, Y. Pu* Tsinghua University, Beijing, China
P1.5.7	**Plasma chemical reactor using high pressure pulsed breakdown in gases** *A. Beylin, M. Balezin, S. Sokovnin* Solar & Plasma Technologies, Moscow, Russia
P1.5.8	**Double resonance phenomenon and microwave plasma source on its basis** *A. Davydov, I. Kossyi, S. Gritsinin* Prokhorov General Physics Institute, Russian Aca, Moscow, Russia
P1.5.9	**Interaction between a CO_2 laser beam and an atmospheric pressure argon plasma jet** *C. de Izarra, E. Langlois-Bertrand* Université dÓrléans, Bourges, France
P1.5.10	**Selective mass production of carbon nanotubes by using multi-layered and multi-electrodes AC arc plasma reactor** *T. Matsuura, Y. Kondo, N. Maki* Industrial Technology Center of Fuku Prefecture, Fukui, Japan
P1.5.11	**Optical emission spectroscopy characterization of ethanol vapor inductively coupled RF plasma** *S. Milosevic, N. Glavan-Vukelic, Z. Kregar, N. Krstulovic* Institute of Physics, Zagreb, Croatia
P1.5.12	**Experimental study of a radial plasma source** *G. Makrinich, M. Fruchtmann* H.I.T.-Holon Institute of Technology, Holon, Israel
P1.5.13	**Time resolved imaging of a dielectric barrier discharge by using pulse power supply** *L. Doanh, S. Bhosle, A. Dagang, G. Zissis* Paul Sabatier University, Toulouse, France
P1.5.14	**Magnetron race track in plasma polymerization processes** *L. Ledernez, F. Olcaytug, H. Yasuda, G. Urban* Chair of Sensors, IMTEK, University of Freiburg, Freiburg, Germany
P1.5.15	**Experimental Studies on the Dual-Frequency, Atmospheric-Pressure, Dielectric Barrier Discharge Plasmas** *H. Li, G. Li, P. Le, S. Wang, C. Bao* Tsinghua University, Beijing, China
P1.5.16	**Effect of arc current modulation on plasma jet fluctuations in plasma spraying torch** *V. Kopecky, M. Hrabovsky* Institute of Plasma Physics AS CR, Prague 8, Czech
P1.5.17	**Neutral depletion in unmagnetized and magnetized plasmas** *A. Fruchtman, G. Makrinich* H.I.T.-Holon Institute of Technology, Holon , Israel
P1.5.18	**Development and diagnostics of a plasma source for the production of atomic nitrogen** *A. Lunk, I. Vinogradov* Institut für Plasmaforschung, Stuttgart, Germany
P1.5.19	**Plasma Source and Process to Minimize Electrical Contact Resistance** *N. Mainusch, F. Voigts, L. Beuermann, W. Maus-Friedrichs, W. Viöl* University of Applied Sciences and Arts, Göttingen, Germany

P1.5.20	**Dielectric barrier discharge system with catalytically active porous segment for improvement of water treatment** *P. Baroch, N. Saito* University of West Bohemia, Department of Physics, Plzen, Czech
P1.5.21	**Plasimo simulations of sputtering hollow cathode discharge: optimization of the cathode length** *D. Mihailova, J. van Dijk, G. Hagelaar, M. Grozeva, J. van der Mullen* Technische Universiteit Eindhoven, Eindhoven, Netherlands
P1.5.22	**Influence of internal aerodynamics on the efficiency of vortex plasma torch** *G. Petraconi, L. Charakhovski, A. Essiptchouk, H. Maciel, C. Otani* ITA, São José dos Campos, Brasilia
P1.5.23	**Multiple hollow cathode: a novel discharge design for sputtering metal vapour ion lasers** *M. Grozeva, D. Mihailova, N. Sabotinov* Institute Solid State Physics,Bulg.Acad.Sci., Sofia, Bulgaria
P1.5.24	**Modeling of the negative ions extraction from a hydrogen plasma source. Application to ITER Neutral Beam Injector** *S. Mochalskyy, A. Lifschitz, T. Minea* LPGP Orsay University Paris-Sud, Orsay, France
P1.5.25	**The spectroscopic study of a glow discharge generated between pin electrode and water in open air atmosphere** *P. Jamroz, W. Zyrnicki* Wroclaw University of Technology, Wroclaw, Poland
P1.5.26	**3-D Numerical simulation of a manual plasma cutting torch** *G. Cantoro, V. Colombo, E. Ghedini, S. Dallavalle, M. Vancini* University of Bologna, Bologna, Italy
P1.5.27	**Corona discharge as a diagnostic probe for temperature measurements of atmospheric microwave plasma** *L. Lestinska, Z. Machala* Faculty of Mathematics, Physics and Informatics, Bratislava, Slovakia
P1.5.28	**Fluctuations in a direct current argon plasma jet at reduced pressure** *H. Huang, W. Pan, Z. Guo, C. Wu* Institute of Mechanics, Chinese Academy of Science, Beijing, China
P1.5.29	**Reactor configurations for the plasma treatment of waste air** *S. Müller, R. Zahn, K. Anklam, M. Langner* INP, Greifswald, Germany
P1.5.30	**Experimental analysis of the behaviour of high current electrodes** *V. Colombo, A. Concetti, E. Ghedini, S. Dallavalle, M. Vancini, F. Rotundo, C. Chiavari* Alma Mater Studiorum-Università di Bologna, Bologna, Italy
P1.5.31	**Atmospheric plasma source for polymerization reactions. Electrical and optical diagnostics** *I. Topala, M. Asandulesa, V. Pohoata, A. Carpov, N. Dumitrascu* Alexandru Ioan Cuza Univeristy, Faculty of Physics, Iasi, Romania
P1.5.32	**Role of anode attachment and hydrodynamic instabilities in disturbing of thermal plasma flow** *O. Chumak, V. Kopecky, T. Kavka, M. Hrabovsky* Institute of Plasma Physics AS CR, v.v.i., Prague, Czech
P1.5.33	**Influence from the characteristics from micro hollow cathode on efficiency of sputtering** *C. Alves-Junior, E. de Almeida, H. Maciel* Federal Universitiy of Rio Grande do Norte (UFRN), Natal, Brasilia
P1.5.34	**PIC simulations of the separate control of ion flux and energy in capacitively coupled RF discharges via the Electrical Asymmetry Effect** *J. Schulze, Z. Donko, B. Heil, U. Czarnetzki* Institute for Plasma and Atomic Physics, Bochum, Germany
P1.5.35	**The Electrical Asymmetry Effect in capacitively coupled RF discharges - Analytical model and fluid simulation** *E. Schüngel, U. Czarnetzki, B. Heil, T. Mussenbrock, R. Brinkmann, J. Schulze* Institute for Plasma and Atomic Physics, Bochum, Germany
P1.5.36	**Argon ion velocity distributions in a helicon discharge measured by laser induced fluorescence** *D. Luggenhölscher, Y. Celik, Y. Pu, U. Czarnetzki* Insitute for Experimental Physics V, Bochum, Germany
P1.5.37	**Wave Heating in Neutral Loop Discharges** *Y. Celik, D. Crintea, C. Isenberg, R. Fainblat, D. Luggenhölscher, U. Czarnetzki* Institute for Plasma and Atomic Physics, Bochum, Germany
P1.5.38	**Standing Waves and Landau Damping in a Flat Coil Helicon Discharge** *Y. Celik, D. Crintea, C. Isenberg, R. Fainblat, D. Luggenhölscher, U. Czarnetzki* Institute for Plasma and Atomic Physics, Bochum, Germany
P1.5.39	**Compact pulsed electron beam source ELIS** *V. Uvarin, D. Kuznetsov, S. Lyubutin, B. Slovikovskii* Institute of electrophysics , Ekaterinburg, Russia
P1.5.40	**Cold atmospheric plasma jets arranged in a honeycomb array** *Z. Cao, N. Nie, M. Kong* Loughborough University, Loughborough, UK

P1.5.41	**Effects of electrode configurations in atmospheric plasma jets** *Q. Nie, Z. Cao, M. Kong* Loughborough University, Loughborough, UK
P1.5.42	**Power efficiency AC and DC liquid discharges in atmospheric pressure** *J. Liu, P. Bruggeman, J. Walsh, M. Kong* Loughborough University, Loughborough, UK
P1.5.43	**How would you like your plasma today? Multiple-frequency Plasma equipment from industry.** *H. Grünwald, C. Diener, J. Krzysztof* Diener electronic GmbH + Co. KG, 72202 Nagold, Germany.
P1.5.44	**A cold atmospheric pressure plasma jet with high concentration of oxygen atom** *C. Ren, D. Wang* School of Physics and Optoelectronic Technology, Dalian , China
P1.5.45	**Electrical and Spectral Characteristics of Falling Film DBD in different gases** *B. Obradovic* Faculty of Physics University of Belgrade, Belgrade, YU
P1.5.46	**Atmospheric pressure air plasma jet from microdischarge in porous ceramics** *J. Kim, S. Cho, S. Kim, W. Lee* Energy Utilization Research Laboratory, Suwon, KR
P1.5.47	**Development of surface DBD in different gases** *S. Starikovskaia, O. Guaitella, K. Allegraud, A. Rousseau* LPTP Ecole Polytechnique, Palaiseau, France
P1.5.48	**Nanosecond Repetitively Pulsed Spark Discharges in Ambient Air** *D. Pai, M. Cappelli, C. Laux* EM2C, Ecole Central Paris, Paris, France

Plasma deposition and treatment of polymers

P1.8.1	**The Improvement of Adhesion Properties of Fluoropolymer Films by DC Discharge Modification** *A. Gilman, M. Piskarev, M. Yablokov, N. Shmakova, A. Kuznetsov* Enikolopov Institute of Synthetic Polymer Material, Moscow, Russia
P1.8.2	**Formed high hydrophilic/ hydrophobic contract surface on a PET substrate by ECR SF_6 plasma** *M. Chuang, W. Lin, H. Changchien, H. Huang, C. Wen* Chienkuo Technology University, Changhua, Taiwan
P1.8.3	**Investigation of changes in plasma polymer growth using macroscopic kinetics** *D. Hegemann, U. Schütz, E. Körner, S. Guimond* Empa, St.Gallen, Switzerland
P1.8.4	**Plasma Deposition of Nanocomposite Thin Films made of Copper and Polypyrrole** *M. Wolf, E. Schultheiß, R. Schmittgens* TU Dresden, Dresden, Germany
P1.8.5	**Surface hardness improvement of PMMA by low energy ion irradiation** *Y. Sakurabayashi, T. Iwao, M. Yumoto* Tokyo City University, Setragaya, Japan
P1.8.6	**Plasma polymer thin films acting as a coupling agent in substrate/elastomer joints** *V. Roucoules, A. Airoudj, A. Ponche, M. Vallat* Institut de Chimie des Surfaces et Interfaces, Mulhouse, France
P1.8.7	**Improve the loading of nano-objects onto textile materials by plasma polymerization to control their final properties** *A. Airoudj, V. Roucoules, M. Vallat* Institut de Chimie des Surfaces et Interfaces, Mulhouse, France
P1.8.8	**Determination of Conductivity and Biomolecule Immobilisation Properties of Polymeric Membrane Surfaces Patterned by Plasma Polymerization Technique** *N. Şir, M. Mutlu* Hacettepe University, Ankara, Turkey
P1.8.9	**Influence of pretreatment on adhesion and protective properties of a plasma polymer film deposited by an AP plasma jet on Ag and Cu surfaces** *C. Regula, J. Ihde, A. Keil, R. Wilken, A. Hartwig, U. Lommatzsch* Fraunhofer Institute IFAM, Bremen, Germany
P1.8.10	**Atomic layer deposition Al_2O_3 thin films on plastic films in ECR plasma source** *Q. Chen, L. Sang, Y. Zhang, L. Yang, X. Li, Y. Hao* Beijing Institute of Graphic Communication, Beijing, China
P1.8.11	**Structure an physical-mechanical properties of nanocomposite combined coatings Ti-N-Si/WC-Co-Cr** *A. Shypylenko, A. Pogrebnjak* Sumy Institute for Surface Modification, Sumy, Ukraine
P1.8.12	**Plasma processing of polymer fibers and films using dielectric barrier discharges for composite applications** *D. Pappas, K. Strawhecker, A. Bujanda, J. Orlicki, B. Stein, J. Demaree* United States Army Research Laboratory, Aberdeen Proving Ground, US

P1.8.13	**Plasma deposition of nanoscale difluoromethylene-dominated coatings** *A. Quade, K. Schröder, A. Ohl* INP Greifswald, Greifswald, Germany
P1.8.14	**Obtaining better surface properties of polymer film by plasma postdischarge** *L. Hongxia, C. Jierong* Xián Jiaotong University, Xián, China
P1.8.15	**Significance of ion with wide energy distribution at PTFE surface under high E/n discharge** *A. Nakayama, T. Iwao, M. Yumoto* Tokyo City, Setagaya, Japan
P1.8.16	**Increased adhesion on thick substrates by plasma treatment at atmospheric pressure** *R. Dams, R. Rego* VITO, Mol, Belgium
P1.8.17	**Gas and radiation barrier coatings** *A. Sonnenfeld, L. Körner, P. Rudolf von Rohr* ETH Zurich - Institute of Process Engineering, Zurich, Switzerland
P1.8.18	**Effect of Low Pressure N_2 and Ar Plasma on Wettability and Optical Properties of BOPP , PMMA and PVC Films** *S. Mortazavi, A. Sari, M. Ghoranneviss, S. Esmaeeli* plasma physics research center, Tehran, Iran
P1.8.19	**Optical characterization of plasma-deposited SiO_2-like layers on anisotropic polymeric substrates** *G. Aresta, P. Antony Premkumar, A. Sarostine, M.C.M. van de Sanden, M. Creatore* Eindhoven Universitiy of Technology, Eindhoven, Netherlands
P1.8.20	**Comparison between wet and plasma deposition of silane coatings on aluminium** *A. Batan, F. Brusciotti, I. De Graeve, J. Vereecken, H. Terryn, M. Wenkin, M. Piens, J. Pireaux, F. Reniers* Université Libre de Bruxelles, Brussels, Belgium
P1.8.21	**Improved Biocompatibility of PLLA/MWCNT Composites** *X.J. Dai, H. Xu, L. Li, J. Zhao, P. Yang, P. Lamb, B. Fox, W. Michalski* CSIRO, Geelong, Australia
P1.8.22	**Adhesion of Silver film on PET fibers** *M. Amberg, C. Kasdallah, A. Ritter, D. Hegemann* EMPA Swiss Federal Laboratories for Materials, St. Gallen, Switzerland
P1.8.23	**Nanocomposite structured thin films by magnetron sputtering at glancing angle deposition** *P. Solar, A. Choukourov, J. Hanuš, D. Slavinska, H. Biederman* Charles University in Prague, Prague, Czech
P1.8.24	**Effect of low pressure HMDSO/ Ar plasma treatment on the wettability PET and PVC films** *S. Mortazavi, H. Ghomi, A. Sari, M. Ghoranneviss* plasma physics research center, Tehran, Iran
P1.8.25	**Membrane surface modification by plasma polymerization of ethylenediamine for fractination of saccharides** *H. Gulec, A. Topacli, C. Topacli, Y. Sen, N. Albayrak, M. Mutlu* Yuzuncu Yil University, Van, Turkey
P1.8.26	**Atmospheric Pressure Dielectric Barrier Discharge Deposition of Organosilicon Thin Films for Aluminium Corrosion Protection** *N. Boscher, P. Choquet, D. Duday, H. Migeon, S. Verdier* Centre de Recherche Public Gabriel Lippmann, Belvaux, Luxemburg
P1.8.27	**Three-dimensional fluorescence imaging of DBD-plasma aminated porous polypropylene** *J. Ehlers, A. Hinze, C. Klages, K. Gericke* TU Braunschweig - Inst. f. Physik u. Theoretische Chemie, Braunschweig, Germany
P1.8.28	**Formation of nitrogen functional groups on plasma treated surface polymers** *C. López-Santos, F. Yubero, J. Cotrino, A. Rodríguez-Elipe* iInstituto de Ciencia de Materiales de Sevilla, sevilla, Spain
P1.8.29	**Comparison of chemical surface modification by Atmospheric Pressure micro-Plasma Jet (APPJ) on different polymers** *K. Fricke, A. Quade, K. Schröder, A. Ohl, T. von Woedtke* INP Greifswald e.V., Greifswald, Germany
P1.8.30	**Fabrication of copper polypyrrole films by dual PECVD/PVD process** *C. Walter, V. Brüser, A. Quade* INP Greifswald, Greifswald, Germany
P1.8.31	**Polymer composite track nanomembranes with asymmetry of conductivity** *L. Kravets, S. Dmitriev, V. Satulu, T. Acsente, G. Dinescu* Joint Institute for Nuclear Research, Dubna, Russia
P1.8.32	**Analysis of air entrainment into an atmospheric pressure microplasma jet and its effects on surface modification** *A. Vogelsang, A. Ohl, H. Steffen, J. Schäfer, R. Foest* INP Greifswald, Greifswald, Germany
P1.8.33	**Silicon oxide permeation barrier coating of PET bottles and foils deposited by hexamethyldisiloxan-oxygen plasmas** *S. Steves, M. Deilmann, P. Awakowicz* AEPT, Ruhr-Uni-Bochum, Bochum, Germany

P1.8.34	**High activity antimicrobial textiles achieved by immobilization of quaternary ammonium compounds by means of plasma-assisted grafting** *M. Simor, D. Alkema, T. Huijser, L. Peppel, R. Mars* TNO, Rijswijk, Netherlands
P1.8.35	**Plasma coating of glass fibers used for polymer composites** *L. Hoferek, L. Sedmikova, V. Cech* Brno University of Technology,Faculty of Chemistry, Brno, Czech
P1.8.36	**Synthesis of polystyrene thin films by atmospheric RF plasma torch and by dielectric barrier discharge** *D. Merche, C. Poleunis, P. Bertrand, M. Sferrazza, F. Reniers* Université Libre de Bruxelles (ULB)-CHANI, Brussels, Belgium
P1.8.37	**Growth mechanism of graphene sheets in initial phase** *M. Hiramatsu, S. Kondo, K. Yamakawa, K. Takeda, M. Hori* Nagoya University, Nagoya, Japan
P1.8.38	**Control of the non-adhesion of specific proteins thanks of the plasma treatment onto polymers strips** *F. Poncin-Epaillard, T. Vrlinic, D. Derbanot, G. Legeay, A. Coudreuse* Université du Maine, Laboratoire PCI, Le Mans, France
P1.8.39	**Plasma Polymerisation of PTFE-like Films on Various Substrates by Atmos-pheric plasma** *E. Gerritsma, N. Vandencasteele, F. Reniers* ULB, Brussels, Belgium
P1.8.40	**Surface properties of plasma polymerized tetravinylsilane** *S. Lichovnikova, L. Hoferek, R. Trivedi, V. Cech* Brno University of Technology,Faculty of Chemistry, Brno, Czech
P1.8.41	**Positive ion mass spectrometry detection from the atmospheric pressure plasma treatment of polymers** *Y. Aranda Gonzalvo, A. Beck, A. Pilkington, A. Yerokhin, A. Matthews* Hiden Analytical Ltd., Warrington, UK
P1.8.42	**Polymer surface nano-texturing by combined etching/treatment processes** *R. di Mundo, F. Palumbo, R. d'Agostino* Department of Chemistry, University of Bari, Bari, Italy
P1.8.43	**Plasma deposited fluorocarbon thin film coatings on ceramics** *D. Mataras, E. Farsari, E. Amanatides* University of Patras, Patras, Greece
P1.8.44	**Mechanical properties of the oxygen barrier dyad system of a pp-HMDSO and a silica-like thin film** *L. Körner, A. Sonnenfeld, Y. Leterrier, P. Rudolf von Rohr* ETH Zürich, Zürich, Switzerland
P1.8.45	**Characterization of conductive layer on carbon electrodes by plasma polymerization technique** *Y. Cakir, H. Catalkaya, S. Mutlu* Engineering Faculty, Hacettepe University, Beytepe, Ankara, Turkey
P1.8.46	**Improvement of an electron transfer mediated carbon electrode surface by plasma polymerization technique for biofuel cell applications** *G. Bilge, C. Buyuknohutcu, S. Mutlu* Hacettepe University, Ankara, Turkey
P1.8.47	**Metallisation of carbon nanofibres by Physical Vapour Deposition** *V. Brüser, S. Kutschera, H. Steffen, T. Schubert* INP, Greifswald, Germany
P1.8.48	**Surface Modification of Multi-Walled Carbon Nanotubes for Enhanced Dispersion and Stability Using a RF Glow Discharge** *L. Vandsburger, J. Tavares, S. Coulombe, J. Meunier* McGill University, Montreal, Canada
P1.8.49	**Polythiophene thin films deposited in various RF plasma polymerization configurations** *G. Dinescu, V. Satulu, A. Galca, B. Mitu* National Institute for Laser, Plasma and Radiation, Magurele-Bucharest, Romania
P1.8.50	**Fragmentation of tetravinylsilane by electron impact** *O. Struzinsky, H. Sahankova, F. Krcma, J. Cayao, J. Kocisek, S. Matejcik* Brno University of Technology, Brno, Czech
P1.8.51	**Effects of ozone generated by dielectric barrier discharge on water-solubility of single-walled carbon nanotubes** *W. Sun, K. Usama, H. Tomita, K. Imasaka, J. Suehiro* Kyushu University, Fukuoka, Japan
P1.8.52	**Plasma polymerization: Correlation between internal plasma parameters and film characteristics** *X. Gillon, Z. Li, M. Diallo, L. Houssiau, J. Pireaux* University of Namur, Namur, Belgium
P1.8.53	**Study of Thin Plasma Polymerized Acrylic Acid Films for Control of Wettability Properties of a PDMS Surface** *N. Vo Tan Tho, H. Willaime, P. Tabeling, F. Arefi-Khonsari, D. Mantovani, M. Tatoulian* UPMC-ENSCP, Paris, France
P1.8.54	**High rate MW-PCVD processes for transparent hard coatings on PC plastic foils: first results and calculations for an up-scaling** *R. Dreher, K. Nauenburg, M. Graf, R. Emmerich, R. Bräuning* Private, Hanau, Germany

P1.8.55	**Novel possibilities for creating functional layers on different surfaces using atmospheric pressure plasma CVD** *A. Pfuch, K. Horn, M. Günther, J. Weisser* Innovent, Jena, Germany

Non-equilibrium effects and atmospheric pressure plasmas

P1.3.1	**Gliding Arc Discharge (GAD) Experiment** *G. Elaragi* atomic energy authority, Cairo, Egypt
P1.3.2 Best Paper Finalist	**Generation of Low Frequency Atmospheric-Pressure Uniform Discharge in Air** *N. Osawa, Y. Yoshioka, Y. Mochizuki, Y. Kobayashi, Y. Yamada, R. Hanaoka, S. Takata* Kanazawa Institute of Technology, Ishikawa, Japan
P1.3.3	**Planarization process of electrode groove on single crystalline silicon solar cell using surface discharge plasma** *T. Hamada, M. Otsubo, T. Sakoda* University of Miyazaki, Miyazaki, Japan
P1.3.4	**The transfer processes of charge and neutral species and plasma-solution interface properties** *A. Khlyustova, A. Maximov* Institute Solution of Chemistry of RAS, Ivanovo, Russia
P1.3.5	**Modelings of atmospheric-pressure plasmas** *S. Lee, Y. Hong, G. Park, Y. Seo, H. Lee, J. Sim, J. Lee* POSTECH, Pohang, South Korea
P1.3.6	**Hydrophilization of steel surface using an atmospheric damage-free plasma source** *A. Okino, R. Sasaki, S. Yamasaki, H. Miyahara, R. Shimada, E. Hotta* Tokyo Institute of Technology, Yokohama, Japan
P1.3.7	**Non-equilibrium Plasmas Technology for Quality of Life and Safety** *C. Zhang, Y. Bai, J. Chen, Y. Liu* Xian Jiaotong University, Xian , China
P1.3.8	**The discharge characteristics of atmospheric-pressure radio-frequency discharge with and without dielectric barriers** *L. Bin, C. Qiang* beijing institute of graphic communication, Beijing, China
P1.3.9	**Plasma nonequilibrium in self-sustained normal DC atmospheric pressure glow discharges in noble and molecular gases** *L. Simonchik, V. Arkhipenko, A. Kirillov, Y. Safronau, S. Zgirouski* Stepanov Institute of Physics NAS of Belarus, Minsk, BY
P1.3.10	**Dissociation of H_2S in Non-equilibrium Gliding Arc "Tornado" Discharge** *T. Nunnally, A. Rabinovich, A. Fridman, A. Starikovski, A. Gutsol, R. Potter* Drexel University, Philadelphia, US
P1.3.11	**Hydrolysis of TTIP Solution and Laser Measurement** *S. Parajulee, M. Hayakawa, I. Shunjiro* Chubu University, Kasugai, Japan
P1.3.12	**Diagnostics of Dielectric Barrier Discharges at Atmospheric Pressure by Laser Spectroscopic Measurements** *K. Urabe, J. Choi, Y. Ito, K. Tachibana, Sakai, O.* Kyoto University, Kyoto, Japan
P1.3.13	**Combined Plasma Laser Removal of Parylene Coatings** *C. Schmiedel, A. Schmiedel, W. Viöl* HAWK HHG, Fakultät N , Göttingen, Germany
P1.3.14	**Spatial distribution of light emission intensity of the surface discharge with multi-stripped electrode in dry Air and in Ar** *M. Sokolova, K. Kozlov, S. Krivov, P. Manylov, V. Samoilovich* Moscow Power Engineering Institute, Moscow, Russia
P1.3.15	**Mass spectrometric detection of N, O and NO radicals generated by a plasma needle** *N. Puac, S. Lazovic, D. Maletic, G. Malovic, Z. Petrovic* Institute of Physics, Belgrade, Germany
P1.3.16	**Radio-frequency glow discharges in narrow gaps at atmospheric pressure** *J. Laimer, H. Reicher, Q. Ain* Vienna University of Technology, Wien, Austria
P1.3.17	**Surface Functionalization of Polymer Powders using Dielectric Barrier Discharges** *C. Nessim, U. Kogelschatz, M. Boulos* Universite de Sherbrooke, Sherbrooke, Canada
P1.3.18	**Metal Surface Treatment for the Enhancement of Hydrophilic Property Using Atmospheric-Pressure Dielectric Barrier Discharge** *H. Kim, W. Kang, S. Hong* Seoul National University, Seoul, South Korea
P1.3.19	**Estimation of two-temperature field of Ar-CH_4-O_2 ICPs with non-chemical and non-thermal equilibrium approach** *S. Mamun, Y. Tanaka, Y. Uesugi* Kanazawa University, Kanazawa, Japan

P1.3.20	**CF_4 Treatment Using an Elongated Arc Reactor** *K. Kim, D. Lee, J. Lee, M. Cha, Y. Song* Korea Institute of Machinery & Materials, Daejeon, South Korea
P1.3.21	**Two-Dimensional, Non-Equilibrium Modeling of a Gas Tungsten Arc** *H. Li, G. Wu, L. Benilova, M. Benilov, X. Chen* Tsinghua University, Beijing, China
P1.3.22	**Analysis of the deposition of Si-based coatings by a cold plasma jet at atmospheric pressure** *D. Debrabandere, J. Crahay, F. Reniers* CRM, Liege, Belgium
P1.3.23	**Surface modification process for organic material and glass in nonequilibrium atmospheric-pressure pulsed remote plasma** *K. Takeda, H. Inui, Y. Matusdaira, T. Yara, T. Uehara, M. Sekine, M. Hori* Nagoya University, Nagoya, Japan
P1.3.24	**Modeling of deposition patterns for plasma enhanced CVD processes at atmospheric pressure** *G. Mäder, I. Dani, S. Kaskel* Fraunhofer IWS, Dresden, Germany
P1.3.25	**Thermovision diagnostic of temperature distribution in the chamber of gliding arc discharge plasma** *J. Diatczyk, J. Józwik, H. Stryczewska, G. Komarzyniec* Lublin University of Technology, Lublin, Poland
P1.3.26	**Crystalline silicon wafer processing by plasma-chemical etching at atmosheric pressure and in-line FTIR spectroscopic process monitoring** *S. Kaskel, D. Linaschke, M. Leistner, P. Grabau, G. Mäder, W. Grählert, I. Dani, A. Poruba, R. Barinka* Fraunhofer IWS Dresden, Dresden, Germany
P1.3.27	**Investigation of the atmospheric pressure glow discharge utilized for thin silica-like film deposition on polymeric webs** *S. Starostin, P. Antony Premkumar, M. Creatore, H. de Vries, R. Paffen, M.C.M. van de Sanden* Eindhoven University of Technology, Eindhoven, Netherlands
P1.3.28	**Plasma-chemical reactions at polyphenolic surfaces- Influence of non-thermal plasma with respect to fresh produce processing** *F. Grzegorzewski, O. Schlüter, J. Ehlbeck, L. Kroh, S. Rohn* TU Berlin, Chair of Food Analysis, Berlin, Germany
P1.3.29	**Nonisothermal Diffusion Processes in the H_2O-Ar Plasma Torch** *P. Kŕenek* Institute of Plasma Physics ASCR, Praha 8, Czech
P1.3.30	**The study of electromagnetic perturbations in steady state conditions for cold plasma electrochemical reactors GLIDARC type** *G. Todirasi, E. Hnatiuc, B. Hnatiuc, B. Gavril* Electrotechnical Faculty - G̈h. AsachiT̈.U. Ias, Iasi, Romania
P1.3.31	**Induced effects by GlidArc treatment on the mitotic division and on the growth process in Triticum aestivum L.** *S. Padureanu, E. Hnatiuc, S. Oancea, B. Hnatiuc, B. Gavril* Electrotechnical Faculty G̈h. AsachiT̈asi, Iasi, Romania
P1.3.32	**Carboxylic functionalization by means of a VTMS-MA copolymerization in a DBD plasma at atmospheric pressure** *H. Hody, M. Moreno, P. Choquet, J. Pireaux* Centre de Recherche Public Gabriel Lippmann, Belvaux, Luxemburg
P1.3.33	**Electrical and optical characterization of gliding arc discharge in air** *J. Sagás, A. Hadade Neto, A. Pereira Filho, H. Maciel* Technological Institute of Aeronautics - ITA, São José dos Campos, Brasilia
P1.3.34	**Hydrogen generation in self-sustained normal DC atmospheric pressure glow discharge in helium-ammonia mixture** *L. Simonchik, V. Arkhipenko, A. Kirillov, S. Zgirouski* Stepanov Institute of Physics NAS of Belarus, Minsk, Belarus
P1.3.35	**Numerical modeling of electron processes and current of pulsing corona** *V. Chyhin, P. Gorun, S. Karpyak* National University Lviv Polytechnic, Lviv, Ukraine
P1.3.36	**Fluorocarbon-containing atmospheric pressure DBD's for surface treatment of materials** *F. Fanelli, F. Fracassi, R. d'Agostino* Department of Chemistry, University of Bari, Italy
P1.3.37	**Influence of processes of negative ions formation on the emission properties of non-equilibrium plasma in electronegative media. Example of Ar-SnI_2 glow discharge.** *M. Tudorovskaya, M. Deminsky, A. Zaitsevskii, B. Potapkin, I. Chernysheva* RRC Kurchatov Institute, Moscow, Russia
P1.3.38	**Optical emission spectroscopic study of a steam arc cutting torch** *V. Sember, A. Mašláni, P. Kŕenek, M. Hrabovsky* Institute of Plasma Physics AS CR, Prague, Czech
P1.3.39	**An Enhanced Global Model for High Pressure Microwave-Driven Gaseous Breakdown** *J. Verboncoeur, S. Nam* Univ. California - Berkeley, Berkeley, US
P1.3.40	**Kinetics of energy exchange in mixture CO_2-N_2-H_20 of atmospheric gases under interacting with IR laser pulse** *A. Glushkov, A. Svinarenko, N. Serbov* Odessa University, Odessa-9, Ukraine

P1.3.41	**Determination of O_2-O_2+ and O_2-O_2- interaction potential from gaseous ion mobility data** *A. Jalili, N. Seyed-Matin, H. Bozorgzadeh* Research Institute of Petroleum Industry, Tehran, Iran
P1.3.42	**Experimental and numerical study of rf atmospheric plasmas** *J. Walsh, D. Liu, Y. Zhang, F. Iza, M. Kong* Loughborough University, Loughborough, UK
P1.3.43	**Modelling current transfer to thermionic cathodes in a wide range of conditions** *M. Benilov, M. Cunha, M. Faria* Universidade da Madeira, Funchal, PT
P1.3.44	**A new biomolecule immobilization strategy using atmospheric pressure plasma technology** *A. Van Hoeck, S. Paulussen, P. Heyse, B. Sels* VITO, mol, Belgium
P1.3.45	**Determination of and He-O2+ and Ne-O2+ interaction potential from gaseous ion mobility data** *H. Behnejad, A. Jalili, A. Abbaspour* University of Tehran, Tehran, Iran
P1.3.46	**The Spherical Kadomtsev-Petviashvili Equation In Dusty Plasma** *K. Annou, S. Bahamida, R. Annou* usthb, Bab ezzouar, Algeria

Fundamentals of plasma-surface interaction

P1.1.1	**Dry Etching Induced Damage in Wurtzite-Type GaN Crystal** *K. Harafuji, K. Kawamura* Ritsumeikan University, Shiga, Japan
P1.1.2	**Numerical Analysis of Anode Melting and Evaporation Subjected to Vacuum Arc** *L. Wang, S. Jia, D. Yang, G. Su, K. Liu, Z. Shi* Xián Jiaotong University, Xián, China
P1.1.3	**Ion Temperature Effect on Magnetized DC Plasma Sheath** *M. Khoramabadi, H. Ghomi, M. Ghoranneviss* Science & Research Campus-Islamic Azad University, Tehran, Iran
P1.1.4	**Microphysics of electrons at plasma boundaries** *F. Bronold, H. Fehske, H. Deutsch* IfP, EMAU Greifswald, Greifswald, Germany
P1.1.5	**Determination of N atom heterogeneous recombination probability γ_N by the use of TALIF atomic concentration profiles at surfaces vicinity** *J. Sarrette, B. Rouffet, F. Gaboriau* LAPLACE, Toulouse, France
P1.1.6	**Growth of vertically aligned carbon nanofibers in plasma-enhanced chemi-cal-vapor deposition** *I. Denysenko, K. Ostrikov, N. Azarenkov* V. N. Karazin Kharkiv National University, Kharkiv, Ukraine
P1.1.7	**Investigations of plasma treated binary and ternary aminostyrene-containing polymer materials** *N. Palistrant, A. Gilman, L. Kravets* Instutute of Applied Physics, Academy of Sciences , Chisinau, Moldova
P1.1.8	**Thin film formation and layer structure degradation due to blistering as results of plasma surface interaction** *A. Bondareva, G. Zmievskaya, A. Ivanov* Keldysh institute of applied mathematics, Moscow, Russia
P1.1.9 Best Paper Finalist	**Plasma-Enhanced Electron Emission from Carbon Nanotube Array Cathodes** *M. Dionne, S. Coulombe, J. Meunier* McGill university, Montréal, Canada
P1.1.10	**Dependences of growth process of amorphous carbon films on the different source gases: methane and acetylene** *M. Shinohara, H. Kawazoe, T. Inayoshi, Y. Matsuda, H. Fujiyama, Y. Nitta, T. Nakatani* Dep. of EEE, Nagasaki Univ.,Nagasaki, Japan
P1.1.11	**Characterization of Carbon Dust Particles Formed under Low Energy and High Flux Atomic Hydrogen Irradiation** *M. Kyo, Y. Takeguchi, Y. Uesugi, Y. Tanaka, S. Masuzaki* Kanazawa University, Kanazawa, Japan
P1.1.12	**Introduction of an experimental low-temperature plasma reactor for simulating parasitic discharges such as those expected under Tokamak divertor dome** *G. Lombardi, L. Colina Delacqua, M. Redolfi, A. Michau, X. Bonnin, H. Khaled* CNRS LIMHP, Villetaneuse, France
P1.1.13	**Amorphous hydrogenated carbon etching with a plasma jet** *T. Hansen, P. Colsters, J. Weber, M.C.M. van de Sanden, R. Engeln* Eindhoven University of Technology, Eindhoven, Netherlands
P1.1.14	**Investigation of the anodic and cathodic emitter-effect in high-intensity-discharge (HID) lamps** *J. Reinelt, M. Westermeier, C. Ruhrmann, T. Styrnoll, J. Mentel, P. Awakowicz* Ruhr-Uni Bochum, AEPT, Bochum, Germany

P1.1.15	**Radio frequency APPJ afterglow investigation and study of polymeric surfaces modification by Ar and Ar/O2 plasmas** *E. Carbone, E. Iordanova, N. Boucher, N. Vandencasteele, M. Sferrazza, J. van der Mullen, F. Reniers* Université Libre de Bruxelles, Brussels, Belgium
P1.1.16	**Modeling of fluorine based high density plasma for the etching of silicon and silica glasses** *L. Lallement, A. Rhallabi, C. Cardinaud, M. Peignon-Fernandez* CNRS-Université de Nantes, Nantes, France
P1.1.17	**Stearic Acid interaction with Ar/N_2 and Ar/O_2 AP Microwave Post Discharges: a new way to follow organic compound plasma degradation** *D. Duday, C. Noël, G. Frache, P. Choquet, T. Belmonte, H. Migeon* CRP Gabriel Lippmann, Belvaux, Luxemburg
P1.1.18	**The role of neutrals during the erosion of carbonaceous surfaces with oxygen discharges** *T. Schwarz-Selinger, U. von Toussaint, W. Jacob* Max-Planck-Institut für Plasmaphysik, Garching, Germany
P1.1.19	**Initiation of anode material evaporation in a transferred arc device** *M. Tanaka, J. Heberlein, T. Watanabe* Tokyo Institute of Technology, Kanagawa, Japan
P1.1.20	**Mechanism of Cathode Erosion in Trichel Pulse Negative Corona** *A. Petrov, R. Amirov, I. Samoylov* JIHT RAS, Moscow, Russia
P1.1.21	**A New Simulation Method for Analysis of Ionic Phenomena in Plasmas Using Technique of Wave Digital Filters** *T. Utsunomiya* National Defense Academy, Yokosuka, Japan
P1.1.22	**Modification of Wool Fibers by Atmospheric Pressure Plasma Treatment** *M. Mori* Mori Consultant Engineering Office, Ichinomiya, Japan
P1.1.23	**Production of molecules on surfaces under plasma exposure: example of NO on pyrex** *D. Marinov, O. Guaitella, A. Rousseau* LPTP, Ecole Polytechnique, CNRS, Palaiseau, France
P1.1.24	**Influence of dielectric material on chemistry reactivity in dielectric barrier discharges (DBD)** *J. Youssef, K. Bouamra, M. Makarov, O. Guitella, A. Rousseau* LPTP, EcolePolytehcnique, CNRS, Palaiseau, France
P1.1.25	**Structure of La1-X-Ray satellites lines of 40Zr, 41Nb, 42Mo, 44Ru, 45Rh, 46Pd, 47Ag and 48Cd** *S. Poonia* Central Arid Zone Research Institute, India, Jodhpur, IN
P1.1.26	**Investigation of the anodic and cathodic emitter effect in high-intensity-discharge (HID) lamps** *J. Reinelt, M. Westermeier, C. Ruhrmann, T. Styrnoll, J. Mentel, P. Awakowicz* Ruhr-Universität Bochum, Bochum, Germany
P1.1.27	**Scavenger Experiments at PILOT PSI:the role of remotely injected species on the film inhibition efficiency** *F. Tabares, J. Ferreira, A. Ramos, G. van Rooij, J. Westerhout, R. Al, J. Rapp* CIEMAT. Fusion Division, Madrid, ES

Poster Session 2, Tuesday 28. July 2009

Auditorium

Diagnostic and Modeling in Plasma Chemistry

P2.2.1	**Influence of Helium as buffer gas on the 253nm/ 320nm xenon-iodine excimer spectral lines in a DBD at moderate pressure** *I. Ciobotaru, C. Porosnicu* National Institute of Lasers, Plasma and Radiation, Magurele, Romania
P2.2.2	**Active species in Ar-O_2 and Ar-O_2-N_2 flowing microwave discharges and post-discharges** *K. Kutasi, V. Guerra, P. Sá, J. Loureiro* RISSPO, Budapest, Hungary
P2.2.3	**A comparative study of plasma parameters and gas phase compositions in HCl and HBr direct current glow discharges** *A. Efremov, A. Beylin, A. Smirnov* SP Technologies, ISUCT, Ivanovo, Russia
P2.2.4	**Influence of a pulse current on plasma frequency** *D. Sergeyev, K. Shunkeyev* Military Air Force Institute, Aktobe, Kazakhstan
P2.2.5	**Investigation on the atomic density of metastable and resonance levels in inductively coupled argon plasma** *J. Li, X. Zhu, Y. Pu* Tsinghua University, Beijing, China
P2.2.6	**Possibilities of positron diagnostics for research of dust space plasma** *E. Prokopiev* SSC of Russian Federation A.I.Alihanov Institute, Moscow, Russia
P2.2.7	**Electron density measurement with a hairpin probe in argon and neon afterglows** *W. Tian, Y. Pu* Tsinghua University, Beijing, China
P2.2.8	**Investigation on ion energy distribution of a capacitively coupled plasma in Ar/CF_4/O_2 gas mixture** *W. Chen, X. Zhu, Y. Pu* Tsinghua University, Beijing, China
P2.2.9	**Simulation and observation of emission molecular spectra: red and green systems of MgO at high temperature (1000 K - 9000 K)** *E. Langlois-Bertrand, C. de Izarra* Université dÓrléans, Bourges, France
P2.2.10	**Problem of Reduction of Reaction Mechanisms in Plasma Chemistry** *R. Hrach, J. Legrand, V. Hrachova, A. Diamy* Charles University, Prague 8, Czech
P2.2.11	**Neutral and Ionic Chemistry in Low Pressure DC Plasmas of Hydrogen** *V. Herrero, I. Tanarro* Instituto de Estructura de la Materia (CSIC), Madrid, Spain
P2.2.12	**Electrical characterization of SF_6/O_2/Ar 13.56Mhz plasma by harmonics voltage and current discharge analysis** *R. Tadjine, H. Lahmar* Centre de Développement des Technologies Avanceés, Algiers, Algeria
P2.2.13	**Detection of NH Molecular Spectra in Expanding Thermal Plasma Jet** *A. Maslani, V. Sember* Institute of Plasma Physics, Prague, Czech
P2.2.14	**RF magnetron sputtering of nylon in N_2/H_2 discharge mixtures: Process characterisation by means of mass spectroscopy** *O. Kylián, J. Kousal, J. Hanuš, H. Biederman* Charles University in Prague, Prague 8, Czech
P2.2.15	**Transport coefficients for electron scattering in mixtures of CF_4, Ar and O_2** *Z. Nikitovic, V. Stojanovic, Z. Petrovic* Institute of Physics, Belgrade, Serbia
P2.2.16	**Study of T and H Form of Oxygen Discharge in Silica and Pyrex Discharge Tube** *L. Schmiedt, V. Hrachová, A. Kavka* Charles University in Prague, Praha 8, Czech
P2.2.17	**1D fluid model of the xenon barrier discharge: LFA and n-LFA** *S. Avtaeva, A. Skornyakov* Kyrgyz-Russian Slavic University, Bishkek, Kirghizia
P2.2.18	**Electron swarm parameters in Xe-Ne mixtures** *S. Avtaeva* Kyrgyz-Russian Slavic University, Bishkek, KG
P2.2.19	**Dynamical study of plasma-surface interactions in chemically active plasma** *P. Cerný, S. Nova´k, R. Hrach, V. Hrachová, L. Schmiedt* J. E. Purkinje University, Usti nad Labem, Czech

P2.2.20	**Diagnostic Study of ICP Assisted Sputter-Deposition of Al-doped ZnO Thin Films** *Y. Matsuda, R. Kan, T. Iwata, K. Komine, K. Uehara, T. Shibasaki, M. Shinohara* Nagasaki University, Nagasaki, Japan
P2.2.21	**Optical and Langmuir Probe Diagnostics of Low-pressure Inductively Coupled Nitrogen-Argon Plasmas** *T. Chung, J. Park, S. Kim, S. Bae* Dong-A University, Busan, South Korea
P2.2.22 Best Paper Finalist	**CF radical kinetics in the afterglow phase of pulsed $CF_4 + H_2$ RF plasmas** *S. Stepanov, J. Meichsner* Institute of Physics, University of Greifswald, Greifswald, Germany
P2.2.23	**Determination of Argon metastables from relative emission intensity measurements combined with optical emission cross section data** *S. Adams, J. Miles, A. Laber, V. Demidov, J. Williamson, B. Tolson* Air Force Research Laboratory, WPAFB, OH, US
P2.2.24	**A three-dimensional model of a DC plasma torch used in waste treatment applications** *N. Mendoza Gonzalez, R. Lakshminarayana, P. Carabin, J. Meunier* McGill University, Montreal (Quebec), Canada
P2.2.25	**Comparative Study between He/O_2 and Ar/O_2 Plasma in Atmospheric-Pressure Glow Dielectric Barrier Discharge** *W. Kang, H. Kim, S. Hong* Seoul National University, Seoul, South Korea
P2.2.26	**Modeling of silicon etching under high density plasma of $CF_4/H_2/Ar$** *M. Peignon-Fernandez, A. Rhallabi, L. Lallement, C. Cardinaud* Institut des Matériaux Université de Nantes, CNRS, Nantes, France
P2.2.27	**Influence of additives on the radiative properties of thermal carbon plasma during fullerene production** *A. Keszler, I. Mohai, T. Solymosi, J. Szepvölgyi* IMEC CRC HAS, Budapest, Hungary
P2.2.28	**Ba atom emission and electrode temperature distribution in a low-pressure fluorescent lamp** *Y. Yamagata, M. Kai, H. Shinozaki, M. Naka, K. Tomita, K. Uchino, Y. Manabe* Kyushu University, Kasuga, Fukuoka, Japan
P2.2.29	**Modelling of transport phenomena in low-pressure plasmas** *Y. Golubovskii, S. Gorchakov, D. Loffhagen, A. Timofeev, D. Uhrlandt* St. Petersburg State University, St. Petersburg, Russia
P2.2.30	**Validation of ICP model for Low Pressure High Density Chlorine Plasma** *M. Megahed, K. Shah, A. Bhoj* ESI Group, Essen, Germany
P2.2.31	**Rotational Temperatures in a RF Nitrogen Plasma Jet at Low Pressure** *B. Mitu, M. Bazavan, I. Luciu, T. Acsente, G. Dinescu* Nat. Inst. for Lasers, Plasma & Radiation Physics, Magurele - Bucharest, Romania
P2.2.32	**Photo-detachment of H^- in a magnetized hydrogen plasma expansion** *W. Harskamp, O. Gabriel, M.C.M. van de Sanden, R. Engeln* TU/e, Eindhoven, Netherlands
P2.2.33	**Measurement of gas temperature in a laminar plasma jet generated at reduced pressure** *X. Meng, W. Pan, X. Chen, C. Wu* Institute of Mechanics, Chinese Academy of Science, Beijing, China
P2.2.34	**Temperature measurements in a laminar plasma jet generated at reduced pressure** *X. Meng, W. Pan, Z. Guo, C. Wu* Institute of Mechanics, Chinese Academy of Science, Beijing, China
P2.2.35	**Modeling of reactive magnetron sputtering deposition process - different target utilization, situation when O_2 and H_2 are added simultaneously** *P. Vasina, T. Schmidtova* Masaryk University, Department of Physical Electro, Brno, Czech
P2.2.36	**Calculations of cross sections data for scattering of electrons on BF_3** *M. Radmilovic-Radjenovic, Z. Petrovic, M. Vranic, H. Varambhia, J. Tennyson* Institute of Physics, Belgrade, Serbia
P2.2.37	**Higher harmonic frequencies of discharge voltages as tool to control accurately state of RF sputtering deposition process** *P. Dvorak, P. Vasina* Masaryk University, Brno, Czech
P2.2.38	**Degradation of acetylene in a non thermal plasma pulsed discharge at atmospheric pressure** *M. Redolfi, C. Klett, S. Touchard, A. Vega, X. Duten, K. Hassouni* LIMHP - CNRS, Villetaneuse, France
P2.2.39	**Radical Production in RF CCP Discharge at 81 MHz Frequency in Ar/CF_4 and Ar/CHF_3 Mixtures. Theory and Experiment** *O. Braginsky, K. Klopovskiy, A. Kovalev, D. Lopaev, O. Proshina, A. Rakhimov, A. Vasilieva, D. Voloshin, T. Rakhimova* Skobeltsyn Institute of Nuclear Physics (MSU SINP), Moscow, Russia
P2.2.40	**An experimental and modelling study of acetaldehyde oxidation by an atmospheric non-thermal plasma discharge** *C. Klett, S. Touchard, A. Vega, M. Redolfi, X. Duten, K. Hassouni* LIMHP-CNRS, Villetaneuse, France

P2.2.41	**Comparison of the beam and plasma characteristics of a deuterium or lithium-based neutraliser** *F. Duré, A. Lifschitz, G. Maynard, T. Minea* LPGP - UMR8578 - CNRS, Orsay, France
P2.2.42	**3-D simulations of particle heating in ICP torches with reaction chamber: effect of flow rate, composition, power and frequency** *P. Sanibondi, V. Colombo, E. Ghedini* University of Bologna, Bologna, Italy
P2.2.43	**Influence of collisions on temporal and spatial damping of electrostatic electron waves in a low - pressure plasma** *J. Oberrath, R. Brinkmann* Theoretical Electrical Engineering, Bochum, Germany
P2.2.44	**3D MHD Modeling of outside vapor deposited silicon dioxide** *M. Baeva, D. Uhrlandt, K. Weltmann* INP, Greifswald, Germany
P2.2.45	**Dynamics of argon metastable atoms in dusty plasmas** *I. Stefanovic, N. Sadeghi, J. Winter* Ruhr University Bochum, Bochum, Germany
P2.2.46	**Dielectric barrier discharges at TGS crystal surface; a role of electric field of domain structure** *H. Janus, K. Biedrzycki, J. Halenka* Intitute of Physics, University of Opole, Opole, Poland
P2.2.47	**The simulation of atmospheric pressure dielectric barrier discharges in helium with nitrogen** *T. Martens, W. Brok, J. van Dijk, A. Bogaerts* University of Antwerp, Wilrijk, Belgium
P2.2.48	**Plasma diagnostic and analysis for the polymerization on low pressure indutively-coupled plasma** *Z. Li, M. Diallou, X. Gillion, L. Houssiau, J. Pireaux* LISE, Namur, Belgium
P2.2.49	**Influence of gas pressure on kinetic processes in nitrogen post-discharge** *V. Mazankova, F. Krcma, M. Zakova, I. Soural* Brno University of Technology, Brno, Czech
P2.2.50	**Radio Frequency Modulation Spectroscopy (RF-MOS) in Inductively Coupled Plasmas** *D. Winter, Y. Celik, D. Luggenhölscher, U. Czarnetzki* Institute for Plasma and Atomic Physics, Bochum, Germany
P2.2.51	**New optimal schemes for gases and isotopes optically discharged separation** *O. Khetselius* Odessa University, Odessa-9, Ukraine
P2.2.52	**Enhancement of OH Production Rate in Plasma on Water by Mixing Ar** *T. Shirafuji, T. Morita, O. Sakai, K. Tachibana* Innovative Collaboration Center, Kyoto University, Kyoto, Japan
P2.2.53	**Magnetohydrodynamic-Thermal behavior Finite Element Method Analysis in a Inductively Coupled Plasma Torch** *N. Ikhlef, M. Mekideche, O. Leroy, A. Rezik* LPGP laboratoiry, Orsay, France
P2.2.54	**Monitoring of EEDF Variation of Low Temperature Plasma Using OES Diag-nostics** *S. Park, J. Choe, G. Kim* Seoul National University, Seoul, South Korea
P2.2.55	**Detection of High Energy Negative Ions in an RF Magnetron Sputter Plasma** *H. Toyoda, K. Goto, T. Ishijima, N. Ohshima, K. Kinoshita* Nagoya University, Nagoya, Japan
P2.2.56	**Simulation of Atomic Emission Spectra with the PLASMAKIN software package** *N. Pinhão* ITN - Nuclear and Technological Institute, Sacavém, Portugal
P2.2.57	**Temporal distributions of radiative Ti, Ti^+ and Ar densities in pulsed-modulated rf magnetron sputtering plasmas** *N. Nafarizal, N. Takada, K. Sasaki* Universiti Tun Hussein Onn Malaysia, Johor, Malaysia
P2.2.58	**Optical emission and absorption spectroscopy of carbon arc plasma during synthesis of single walled carbon nanotubes** *H. Lange, O. Labedz, A. Huczko, M. Bystrzejewski* Department of Chemistry, Warsaw University, Warsaw, Poland
P2.2.59	**Chemical model of Ar/O_2 microwave plasma with nanoparticle formation from metal precursors** *H. Mätzing, W. Baumann, H. Paur, H. Seifert* Forschungszentrum Karlsruhe GmbH, ITC-TAB, Karlsruhe, Germany
P2.2.60	**Optimized Plasma Absorption Probe for the Electron Density Determination in Reactive Plasmas** *M. Böke, C. Scharwitz, J. Winter* Ruhr-University Bochum, Bochum, Germany
P2.2.61	**Optical and Probe Diagnostics of Low-pressure Inductively Coupled Nitrogen-Argon Plasmas** *T. Chung, J. Park, S. Kim, S. Bae* Dong-A University, Busan, South Korea

P2.2.62	**Electric Field Distribution in DBD in Helium** *S. Ivkovic, B. Obradovic, M. Kuraica* Faculty of Physics, University of Belgrade, Belgrade, Serbia
P2.2.63	**Vibrational Kinetics in a Nanosecond Discharge Afterglow in Air** *S. Abbate, D. Packan, C. Laux* ONERA, Palaiseau, France
P2.2.64	**Measurement of Plasma Power Consumption in Dielectric Barrier Discharges** *A. Janeco, N. Pinhão, J. Branco, A. Ferreira* ITN - Nuclear and Tecnological Institute, Sacavém, PT
P2.2.65	**Numerical modeling of negative corona discharge in pure carbon dioxide** *K. Yanallah, F. Pontiga, A. Fernández-Rueda, A. Castellanos, Y. Meslem* Université de Tiaret, Tiaret, Algeria
P2.2.66	**Diagnostics of a pulsed filament discharge using laser Thomson scattering** *K. Uchino, K. Tomita, Y. Yamagata* Kyushu University, KASUGA, FUKUOKA, Japan
P2.2.67	**Production of molecule on surface under plasma exposure: Example of NO on pyrex** *D. Marinov, O. Guaitella, A. Rousseau* LPP, Ecole Polytechnique, Palaiseau, France
P2.2.68	**Modelling of magnetron sputter processes** *M. Holik, V. Bellido-Gonzalez, J. Bradley, D. Monaghan* University of Liverpool, Liverpool, UK

Plasmas in liquids

P2.15.1	**Organic Dye Decomposition by DC Diaphragm Discharge: Comparison of UV, Electrolytic and Ozone Effect** *Z. Kozakova, J. Pajurkova, J. Davidova, F. Krcma* Brno University of Technology,Faculty of Chemistry, Brno, Czech
P2.15.2	**Atmospheric pressure discharge with liquid cathode: physical properties and some chemical applications** *V. Titov, V. Rybkin, T. Shikova, S. Smirnov, T. Ageeva, A. Beylin* ISUCT, Ivanovo, Russia
P2.15.3	**Electrical discharge plasma in liquid for nanoparticles fabrication** *N. Tarasenko, A. Nevar, N. Savastenko, M. Nedelko* Institute of Physics, Minsk, Belarus
P2.15.4	**Oxidizing potential of liquid plasma discharge - OH radical in plasma and liquid solution** *Š. Potocký, N. Saito, O. Takai* EcoTopia Science Institute, Nagoya University, Nagoya , Japan
P2.15.5	**Organic Template Removal of Single Crystal Mesoporous Silica using Solution Plasma Process** *P. Pootawang, N. Saito, O. Takai* Graduate School of Engineering, Nagoya University, Nagoya, Japan
P2.15.6	**Generation of In-liquid Plasma using a Coaxial Electrode** *Y. Hattori, H. Toyota, S. Mukasa, S. Nomura* Ehime University, Matsuyama, Japan
P2.15.7	**Removal of nonylphenol by pulsed corona discharge in water** *I. Tothova, P. Lukes, M. Clupek, V. Babicky, V. Janda* Institute of Chemical Technology in Prague, Praha 6 - Dejvice, Czech
P2.15.8	**pH dependence of water-solubility of single-walled carbon nanotubes treated by microplasma in aqueous solution** *K. Imasaka, U. Khaled, S. Wei, J. Suehiro* Kyushu University, Fukuoka, Japan
P2.15.9	**Solution plasma fabrication of Au/Pt bimetallic nanoparticles** *J. Hieda, N. Saito, O. Takai* Graduate School of Engineering, Nagoya University, Nagoya, Japan
P2.15.10	**Electric Discharge in the Gas - Water System as a Source of Oxidative Reagents** *S. Temchin, E. Barkhudarov, Y. Kozlov, I. Kossyi, M. Taktakishvili* A.M.Prokhorov General Physics Institute of RAS, Moscow, Russia
P2.15.11	**Kinetics analysis of iron ion reduction in liquid plasma** *M. Bratescu, N. Saito, O. Takai* Nagoya University, Nagoya, Japan
P2.15.12	**Solution plasma synthesis and catalytic property of platinum nanoparticles supported on carbon nanoballs** *Y. Ichino, K. Mitamura, N. Saito, O. Takai* Nagoya University, Nagoya, Japan
P2.15.13	**Spectroscopic investigations of chemical reactions in liquids plasma** *C. Miron, M. Bratescu, N. Saito, O. Takai* Nagoya University, Nagoya, Japan

P2.15.14	**High-current commutation arc in conditions of a submerged liquid streams** *A. Emelyanov, E. Azizov, N. Rodionov* TRINITI, Troitsk, Russia
P2.15.15	**Underwater chemical reactions by microplasmas inside microbubbles generated through electrolysis** *T. Morita, O. Sakai, T. Shirafuji, K. Tachibana* Kyoto Univ., Kyoto, Japan
P2.15.16	**Generation mechanism and spectral properties of an AC underwater discharge** *A. Nikiforov, C. Leys, A. Maximov* Institute of Solution Chemistry RAS, Ivanovo, Russia
P2.15.17	**Decomposition of Organic Solute with Microwave Bubble Plasmas** *T. Ishijima, R. Saito, H. Sugiura, H. Toyoda* Nagoya University, Nagoya, Japan
P2.15.18	**Onset and evolution of a vapour layer and plasma generation in a conducting liquid.** *L. Schaper, W. Graham, K. Stalder* Queenś University Belfast, Belfast, UK
P2.15.19	**Experimental study of a pulsed electric breakdown in conductive liquid** *D. Medvedev, D. Sapunov, M. Deminsky, S. Korobtsev, M. Krotov, B. Potapkin* Moscow institute of Physics and Technology, Moscow, Russia
P2.15.20	**Investigation of sample preparing methods for determining the elements of Pb, Cd, Zn and Cu in Mint by induction couple plasma apparatus (ICP)** *M. Keshavarz, M. Ardeshirzadeh* Department of Chemistry, Islamic Azad University, , Isfahan, Iran
Plasma spray and thermal plasma processing	
P2.11.1	**Theoretical study of the expansion of metallic vapour plasma produced by a nanosecond laser pulse.** *S. Aggoune, E. Amara, F. Vidal* Advanced Technologies Development Center, Algiers, Algeria
P2.11.2	**Numerical Simulation of Powder Flow in a Thermal Plasma Reactor Assisted by a Magnetic Mirror Configuration** *J. Puerta, G. Torrente, N. Labrador* Universidad Simon Bolivar, Caracas, Venezuela
P2.11.3	**Plasma System for Element Separation** *G. Paskalov, A. Wong* Non-Linear Dynamics, Torrance, US
P2.11.4	**Preparation of Nano-structured Dense and Thin Electrolyte for SOFCs by Suspension Plasma Spraying** *L. Jia, F. Gitzhofer* Université de Sherbrooke, Sherbrooke, Quebec, Canada
P2.11.5	**Symmetry disturbance and rotational instabilities in a thermal plasma jet** *Z. Sekeresova, J. Hlína, J. Sonsky* Institute of Thermomechanics ASR, Praha 8, Czech
P2.11.6	**Measurement of time-resolved cross-sectional temperature distributions in a thermal plasma jet** *J. Hlína, J. Sonsky, J. Slechta* Institute of Thermomechanics AS CR, Praha 8, Czech
P2.11.7	**Liquid - thermal plasma interactions and deposition mechanisms of nanometer - sized ceramic coatings** *P. Fauchais, G. Montavon, V. Rat, J. Coudert, O. Tingaud* SPCTS -UMR CNRS 6638, Limoges, France
P2.11.8	**External magnetic field effects over growth morphology during materials synthesis in thermal plasma reactor** *J. Puerta, G. Torrente, N. Labrador* Simon Bolivar University, Caracas, Venezuela
P2.11.9	**Phase and Composition Alteration during Thermal Plasma Processing of Perovskites** *S. Song, D. Shin, J. Jurewicz, M. Boulos* Université de Sherbrooke, Sherbrooke, Canada
P2.11.10	**Evaluating the mechanical properties of plasma sprayed coatings by nanoin-dentation** *W. Guo, F. Gitzhofer, L. Jia, G. Rauchs, W. Zhang, J. Ponthot* University of Liège, Liège, Belgium
P2.11.11	**The influence of the arc plasma on the weld pool in simulations of arc welding** *A. Murphy, M. Tanaka, K. Yamamoto, S. Tashiro, J. Lowke* CSIRO Materials Science & Engineering, Lindfield NSW, Australia
P2.11.12	**Calculation of diffusion coefficients in air-metal thermal** *Y. Cressault, A. Gleizes, J. Gonnet* LAPLACE, France, France
P2.11.13	**Deposition of carbide and nitride based composite coating by Atmospheric Plasma Spraying** *Z. Károly, B. Cecilia, I. Mohai, I. Sajo, L. Boros, J. Szepvölgyi* IMEC CRC HAS, Budapest, Hungary

P2.11.14	**Direct Measurement of the Gas Entrainment into a Plasma Jet** *F. Wei, X. Meng, Y. Zhang, H. Wang, W. Pan, X. Chen, H. Tang* Beijing University of Aeronautics and Astronautics, Beijing, China
P2.11.15	**Measurements of particle velocities and accelerations in thermal plasma jet** *J. Šonský* Institute of Thermomechanics AS CR, Prague, Czech
P2.11.16	**Temperature control of modulated thermal plasmas with molecular gases** *Y. Tanaka, Y. Tsubokawa, F. Ezwan, Y. Uesugi* Kanazawa University, Kanazawa , Japan
P2.11.17	**Thermal plasma jet stability estimations by correlation dimensions - comparison with FFT and wavelet analysis** *J. Gruber, J. Hlína, J. Šonský* Institute of Thermomechanics of the ASCR, v. v. i., Praha 8, Czech
P2.11.18	**In-flight Al_2O_3 spheridization process with a constant small power DC-RF hybrid Ar/He plasma flow system** *H. Takana, J. Igawa, J. Jang, T. Nakajima, O. Solonenko, H. Nishiyama* Institute of Fluid Science, Tohoku University, Sendai, Japan
P2.11.19	**Characteristics of Zr-Based Metallic Glass Coating Produced by Gas Tunnel TypePlasma Spraying** *A. Kobayashi, T. Kuroda, H. Kimura, A. Inoue* JWRI Osaka University, Ibaraki, Japan
P2.11.20	**Effects of Shroud Gas Velocity on Thermal Diffusivity of Plasma Spray Coated W for Plasma Facing Components in a Fusion Reactor** *S. Kim, S. Choi, H. Han, G. Kim, S. Hong* Seoul National university, Seoul, South Korea
P2.11.21	**Gas Tungsten Arc Welding of Titanium Nickel Overlay on Carbon Steel and Stainless Steel** *J. Chen, J. He, K. Chen, J. Chang* Feng Chia University, Taichung, Taiwan
P2.11.22	**Solution plasma spraying: in-flight mechanisms** *C. Marchand, M. Vardelle, A. Vardelle, P. Lefort* Laboratory of SPCTS, Limoges, France
P2.11.23	**Fabrication of Nano-grained SnO_2 Gas Sensors by Plasma Spray Physical Vapor Deposition** *S. Sekiguchi, F. Molliet, K. Iizuka, M. Kambara, T. Yoshida* The Univ. of Tokyo, Tokyo, Japan
P2.11.24	**Two-Dimensional modeling on the Entrainment of the Surrounding Gas in a Counter-Flow Gas Injection Plasma Reactor** *H. Li, G. Wu, X. Chen, C. Bao* Tsinghua Unversity, Beijing, China
P2.11.25	**Generation and Characterization of Multi-Phase AC Arc for In-Flight Melting of Granulated Glass Raw Materials** *T. Watanabe, Y. Yao, K. Yatsuda, T. Matsuura* Tokyo Institute of Techology, Yokohama, Japan
P2.11.26	**3-D unsteady analysis of a particles stream in a DC plasma spraying torch** *E. Ghedini, V. Colombo* University of Bologna, Bologna, Italy
P2.11.27	**Comparison between direct and reverse polarity in GMAW** *B. Puyrenier, F. Valensi, S. Pellerin, N. Pellerin, F. Briand* GREMI Université d'Orléans, Bourges, France
P2.11.28	**Phase Formation and Magnetic Properties of Nb and Fe Co-Doped TiO_2 Nanoparticles Prepared in Ar/O_2 RF Induction Thermal Plasma** *C. Zhang, T. Ishigaki, M. Ikeda, M. Isobe, J. Li, Y. Moriyoshi, H. Hamanaka* National Institute for Materials Science, Tsukuba, Ibaraki, Japan
P2.11.29	**Understanding Solution Plasma Spraying: from Sprays to Deposits** *Y. Shan, Y. Wang, T. Coyle, J. Mostaghimi* College of Power Engineering, Shanghai, China
P2.11.30	**Optical emission spectroscopic diagnostic of a GMAW plasma column** *F. Valensi, S. Pellerin, A. Boutaghane, K. Dzierzega, B. Puyrenier, F. Briand* GREMI - Université dÓrléans, Bourges, France
P2.11.31	**Anode processes during pilot arcing in cutting torch** *T. Kavka, M. Hrabovsky, O. Chumak, M. Konrad, V. Kopecky* IPP CAS CR, Prague 8, Czech
P2.11.32	**Localization of reactive gases into inductive thermal plasma** *J. Degoulange, B. Bournonville, G. Chichignoud, Y. Delannoy* SIMaP lab, group EPM, St Martin dHeres, France
P2.11.33	**In-Situ Plasma Micro-Metallurgy and Heterogeneous Plasma Chemistry in Mechanically Agglomerated Reacting Powder Particles** *O. Solonenko, V. Poluboyarov, A. Cherepanov* ITAM SB RAS, Novosibirsk, Russia
P2.11.34	**Unsteady convective mixing in melt droplets treated in plasma flows** *I. Gulyaev, O. Solonenko* Institute of Theoretical and Applied Mechanics, Novosibirsk, Russia

P2.11.35	**Fabrication of Aluminum Nitride Coating by Atmospheric Plasma Spray** *M. Yamada, M. Shahien, T. Yasui, M. Fukumoto* Toyohashi University of Technology, Toyohashi, Japan
P2.11.36	**Calculation of diffusion coefficients in air-metal thermal** *Y. Cressault, A. Gleizes, J. Gonnet* LAPLACE, Toulouse, France
P2.11.37	**Synthesis of alloyed metal powders produced by induction plasma** *I. Bolduc, F. Gitzhofer, P. Proulx* University of Sherbrooke, Canada

Environmental applications: combustion, abatement, cleaning

P2.14.1	**Drinking Water Analysis after Treatment by Corona Discharge** *G. Elaragi* atomic energy authority, Cairo, Egypt
P2.14.2	**Application of Dielectric Barrier Discharge Reactor to the Decolorization of Azo Dye Acid Light Yellow 2G in Water** *J. Zhao, J. Chen, J. Gao, W. Yuan* Xián Jiaotong University, Xián, China
P2.14.3	**Effect of polarity and photocatalyst on DC corona discharge ozone production** *S. Pekárek* Czech Technical University in Prague, Prague 6, Czech
P2.14.4	**Innovative industrial plasma torch for converting biomass into high purity syngas** *A. Hacala, U. Michon* Europlasma, Bordeaux, France
P2.14.5	**Cleaning of Air and Exhaust Gases from Nitrogen Oxides** *A. Ponizovsky* FMKB
P2.14.6	**Effect of temperature on the removal of formaldehyde and ethane by a dielectric barrier discharge in air** *N. Blin-Simiand, O. Koeta, S. Pasquiers, A. Bary, F. Jorand, L. Magne, C. Postel* CNRS, Orsay, France
P2.14.7	**A Plasma Scrubber as POU exhaust gas abatement system** *B. Glocker, B. Aburass, V. Cheng, K. Guo* PlasmaAir AG, Weil der Stadt, Germany
P2.14.8	**Decomposition of organic dyes in water using non-thermal plasma** *M. Magureanu, D. Piroi, N. Mandache, V. Parvulescu* NILPRP, Bucharest-Magurele, Romania
P2.14.9	**Naphthalene destruction by atmospheric pressure gliding arc discharge** *L. Yu, J. Yan, X. Li, X. Tu, S. Lu, M. Ni, Y. Chi, K. Cen* Zhejiang University, Hangzhou, China
P2.14.10	**Conversion of SF6 by thermal plasma at atmospheric pressure** *S. Han, H. Seon, P. Shin, D. Park* Inha University, Incheon, KR
P2.14.11	**Application of Arc-Driving Discharge to Igniting** *K. Korytchenko, V. Lisovskiy* National Technical University ЎhPІ; Kharkov, Ukraine
P2.14.12	**Degradation of phenol in aqueous solution using a gas phase dielectric barrier discharge reactor** *J. Zhang, X. Li, J. Chen* Xián Jiao Tong University, Xián, China
P2.14.13	**Plasma degradation of anthraquinonic dye (Alizarin Red S), Azo dye (Orange G) and their mixtures** *F. Abdelmalek, R. Merouani, M. Ghezzar, A. Addou* University, Mostaganem, Algeria
P2.14.14	**Reduction of SO_2 in a pulsed corona discharge reactor: nitrogen, oxygen and hydrogen sulfur effect** *B. Sierra, A. Cabrera, B. Mendez, R. Callejas, S.R. Barocio, R. Alvarado, R. Eguiluz, A. Castro* Instituto Nacional de Investigaziones Nucleares , MEXICO, Mexico
P2.14.15	**Atmospheric Plasma-catalytic Treatment of Methyl Orange** *B. Benstaali, S. Haji, N. Al-Bastaki, J. Brisset, A. Addou* University of Bahrain, Isa Town, Bahrain
P2.14.16	**Environmental odour control by atmospheric dielectric barrier discharge** *A. Cabrera, B. Sierra, S.R. Barocio, R. Alvarado, M. Pacheco, R. Eguiluz, R. Callejas, A. Castro* Instituto Nacional de Investigaciones Nucleares, MEXICO, Mexico
P2.14.17	**Gerdien Arc as a Tool for Decomposition of Water-soluble Organic Compounds** *M. Hlína, V. Brozek, J. Domlatil, M. Hrabovsky* UFP, Prague 8, Czech

P2.14.18	**Decomposition of VOC in surface discharge combined with photocatalysis** *J. Vyhnalikova, L. Polachova, F. Krcma, R. Balastikova, M. Budik, M. Bartlová* Brno University of Technology, Brno, Czech
P2.14.19	**Characteristics of atmospheric reactive air jet generated by dielectric barrier discharge for industrial applications** *H. Nishiyama, H. Takana, Y. Iwabuchi, H. Shimizu* Institute of Fluid Science, Tohoku University, Sendai, Japan
P2.14.20	**Light hydrocarbons conversion in a pulsed DBD: effect of the temperature** *O. Aubry, A. Khacef, J. Cormier* GREMI - Université d'Orléans, Orleans , France
P2.14.21	**Performance of ozone decomposition catalyst in hybrid plasma reactor for VOC decomposition** *A. Ogata, K. Saito, H. Kim, M. Sugasawa, H. Aritani, H. Einaga* AIST, Tsukuba, Japan
P2.14.22	**Packed Bed Corona Discharge reactor for gas-phase acetylene Decomposition at atmospheric pressure and ambient temperature** *C. Klett, M. Redolfi, A. Vega, S. Touchard, X. Duten, K. Hassouni* LIMHP - CNRS, Villetaneuse, France
P2.14.23	**The First Step of Development of Carbon Nanotubes Preparation Process by Plasma Treatment Exhaust Gas for Carbon Source** *S. Aoqui, I. Muramoto, T. Ueda, H. Kawasaki, T. Ohshima, T. Sakai* Sojo University, Kumamoto, Japan
P2.14.24	**Conversion of Trichloromethane in Plasma-Catalytic System** *K. Krawczyk, B. Ulejczyk, H. Song, A. Lamenta, T. Birnbaum, K. Schmidt-Szalowski* Warsaw University of Technology, Warszawa, Poland
P2.14.25	**Theoretical study of Diesel fuel reforming by a non-thermal arc discharge** *A. Lebouvier, G. Petitpas, J. Gonzalez-Aguilar, A. Darmon, L. Fulcheri* CEP - MINES ParisTech, Sophia Antipolis, France
P2.14.26	**Plasma Conversion of Methane Slip from Combined Heat and Power Plants** *R. van de Peppel, J. Oonk, Y. Creyghton* TNO Defence, Security and Safety, Rijswijk, Netherlands
P2.14.27 Best paper Finalist	**Study of dichloromethane decomposition in DBD plasma reactors using advanced spectroscopic diagnostics techniques** *Z. Abd Allah, D. Sawtell, R. Ibrahim, V. Kasyutich, P. Martin* University of Manchester, Manchester, UK
P2.14.28	**Combined plasma-melt approach of hydrogen rich gas production** *V. Zhivotov, M. Deminsky, A. Babaritsky, F. Chebankov, S. Korobtsev, S. Dyomkin, I. Kirillov, B. Potapkin* RRC Ќurchatov Institute, Moscow, Russia
P2.14.29	**Recent experiments with pilot-scale plasma-chemical hybrid NOx reduction system for commercial heavy oil fired boiler** *M. Okubo, H. Fujishima, T. Kuroki, A. Tatsumi, K. Ostuka* Osaka Prefecture University, Sakai, Japan
P2.14.30	**Experimental study and theoretical modeling of process of ethanol reforming into synthesis gas in DGCLW** *V. Yukhymenko, V. Chernyak, S. Olszewski, M. Verovchuck, D. Levko, A. Shchedrin, V. Demchina, V. Kudryavtsev* Taras Shevchenko Kyiv National University, Kyiv , Ukraine
P2.14.31	**Characterization of an atmospheric pressure microwave plasma torch for the abatement of halogenated VOC by means of OES** *M. Leins, M. Kaiser, A. Schulz, M. Walker, U. Schumacher, U. Stroth* Institut für Plasmaforschung, 70569, Germany
P2.14.32	**Plasma assisted coal gasification** *A. Baranov, A. Vetchinkin, M. Deminsky, B. Potapkin, E. Rykova, S. Umanski* RRC Ќurchatov Institute, Moscow, Russia
P2.14.33	**In-Flight Melting for Waste Treatment by Multi-Phase AC Arc** *T. Matsuura, T. Watanabe* Industrial Technology Center of Fuku Prefecture, Fukui, Japan
P2.14.34	**GlidArc-assisted cleaning of flue gas from chemical weapons destruction** *A. Czernichowski, P. Czernichowski* ECP - GlidArc Technologies, La Ferte St Aubin, France
P2.14.35	**The effect of plasma modified carbon on cigarette smoke filtration** *M. Mola, N. De Vietro, P. Favia, R. d'Agostino* BAT, Southampton, UK
P2.14.36	**Regeneration of adsorbent/catalytic material by Dielectric Barrier Discharge (DBD)** *J. Youssef, K. Bouamra-Benzahra, M. Makarov, O. Guaitella, A. Rousseau* LPP, Palaiseau, France
P2.14.37	**Investigation of pesticide treatment process in a triple torch plasma reactor** *V. Sauchyn, I. Khvedchyn, A. Mosse, D. Skamarokhau, L. Lozhachnik, S. Zhdanok* A.V. Luikov Heat and Mass Transfer Institute, Minsk, BY
P2.14.38	**Measurement of heavy elements in Zayandehrood River and Gavkhooni pond by atomic absorption technique** *M. Keshavarz, A. Mahdavi* Islamic Azad University, Shahreza Branch, Isfahan, Iran

P2.14.39	**Diesel Engine NO_x Reduction using Adsorption/Desorption and N_2 Plasma** *T. Yamamoto, K. Maeda, H. Sato, Y. Ehara* Tokyo City University, Tokyo, Japan
P2.14.40	**Influence of dielectric material on chemistry reactivity in Dielectric Barrier Discharge (DBD)** *Y. Joseph, K. Bouamra-Benzahra, M. Makarov, O. Guaitella, A. Rousseau* LPP, Ecole Polytechnique, Palaiseau, France
P2.14.41	**Nitric oxide decomposition induced by DC corona discharge** *F. Pontiga, H. Moreno, M. Lemerini, S. Medjahdi , A. Castellanos* Universidad de Sevilla, Sevilla, ES
P2.14.42	**Reduction of Water Hardness and Prevention of Mineral Fouling by Pulsed Spark Discharge in Water** *Y. Yang, H. Kim, A. Starikovskiy, Y. Cho, A. Fridman* A. J. Drexel Plasma Institute, Philadelphia, US
P2.14.43	**Comparison of the initial decomposition steps of halogenated and non-halogenated hydrocarbons in air under different plasma regimes** *M. Schiorlin, E. Marotta, M. Rea, C. Paradisi* University of Padova, Padova, Italy

Microplasmas and Microdischarges

P2.4.1	**Absolute atomic oxygen density measurements inside the core and effluent of a micro scaled atmospheric pressure plasma jet** *N. Knake, V. Schulz-von der Gathen, J. Winter* Ruhr-Universität Bochum, Bochum, Germany
P2.4.2	**Comparative investigation on the excited-atom kinetics in low- and atmospheric-pressure argon plasmas** *Y. Pu, X. Zhu* Tsinghua university, Beijing, China
P2.4.3	**Improvement of Non-Oxidative Methane Reforming Using Microsize of Gliding Arc Discharge** *S. Chavadej, N. Rueangjitt, T. Sreethawong, H. Sekiguchi* Chulalongkorn University, Bangkok, Thailand
P2.4.4	**Experimental analysis of the temperature conditions of a miniaturized atmospheric pressure plasma jet during thin film deposition** *J. Schäfer, A. Vogelsang, R. Foest, A. Ohl* INP Greifswald e.V., Greifswald, Germany
P2.4.5	**Fundamentals of Collisional Electron Spectroscopy (CES) for gas analysis** *A. Kudryavtsev, A. Tsyganov* St.Petersburg State University, St.Petersburg, Russia
P2.4.6	**Electric field measurements in near-atmospheric pressure nitrogen and air based on a four-wave mixing scheme** *S. Müller, T. Ito, K. Kobayashi, D. Luggenhölscher, U. Czarnetzki, S. Hamaguchi* Experimental physics V, Ruhr-University Bochum, Bochum, Germany
P2.4.7	**Emission spectrometry of microplasma for NO_x removal process** *M. Blajan, T. Ishii, H. Mimura, K. Shimizu* Shizuoka University, Hamamatsu, Japan
P2.4.8	**Large volume treatment of formaldehyde using atmospheric microplasma** *K. Shimizu, M. Kanamori, M. Blajan* University of Shizuoka, Hamamatsu, Japan
P2.4.9	**Microplasmas for functionalization of surfaces inside small capillaries** *S. Panowitz, M. Müller, J. Franzke, C. Oehr* Fraunhofer IGB, IGVT University of Stuttgart, Stuttgart, Germany
P2.4.10	**Effect of Noble Gases and Water Vapor on Discharge in Porous Ceramics** *K. Hensel, H. Kim* Comenius University, Bratislava, Slovakia
P2.4.11	**Statistical Description of Micro Barrier Discharges in High Velocity Flows for O_2, CO_2, and Synthetic Air** *P. Reichen, A. Sonnenfeld, P. Rudolf von Rohr* ETH Zurich, Zurich, Switzerland
P2.4.12	**On the spatial and temporal development of repetitive microdischarges in a one-sided barrier discharge arrangement in air at AP** *R. Brandenburg, T. Hoder, R. Basner, K. Weltmann* INP Greifswald, Greifswald, Germany
P2.4.13	**Two-dimensional simulations of atmospheric pressure methane hydrogen microdischarge for thin film depositon** *T. Farouk, B. Farouk, A. Gutsol, A. Fridman* Drexel University, Drexel Plasma Institute, Philadelphia, US
P2.4.14	**Micro Bubble Formation on sub-mm Tip Electrode Discharge** *S. Park, S. Yoon, G. Kim* Seoul National University, Seoul, South Korea
P2.4.15	**Self-pulsing of a micro hollow cathode discharge** *B. Du, S. Mohr, D. Luggenhölscher, U. Czarnetzki* Institute for Plasma and Atomic Physics, Bochum, Germany

P2.4.16 Best Paper Finalist	**Linear-field and cross-filed cold atmospheric plasma jets** *J. Walsh, M. Kong* Loughborough University, Loughborough, UK
P2.4.17	**Molecular-beam mass spectrometry of atmospheric pressure microplasmas** *D. Ellerweg, J. Benedikt, A. von Keudell* Ruhr-Universität Bochum, Bochum, Germany
P2.4.18	**Dynamics of micro-structured atmospheric pressure plasma arrays** *H. Boettner, J. Waskoenig, V. Schulz-von der Gathen, J. Winter* Institut für Experimentalphysik II, Bochum, Germany
P2.4.19	**Vacuum Ultraviolet (VUV) Emission of an Atmospheric Pressure Plasma Jet (μ-APPJ) operated in Helium-Oxygen mixtures in ambient air** *H. Bahre, H. Lange, V. Schulz-von der Gathen, R. Foest* RUB, Bochum, Germany
P2.4.20	**Numerical Simulation of Microhollow Cathode Discharge in Argon** *G. Xia, G. Mao, M. Chen, A. Sun* Dalian University of Technology, Dalian, China
P2.4.21	**Discharge properties of CVD diamond electrodes by O2 plasma treatment** *T. Misu, T. Uehara, S. Ono, M. Goto, T. Arai* Kanagawa Institute of Technology, Atsugi, Japan
P2.4.22	**Generation of Discharges inside the Honeycomb Monolith Assisted by Diffuse Coplanar Surface Barrier Discharge** *K. Hensel, M. Janda, J. Rahel* Comenius University, Bratislava, SK

Poster Session 3, Thursday 30. July 2009

Auditorium

Biomedical Applications

P3.13.1	**The adsorptive characteristic of serum proteins and bacteria on the PET treated by remote air plasma** *L. Yang, J. Chen, Y. Guo, J. Gao* Xián Jiaotong Univeristy, Xián , China
P3.13.2	**A plasma chemistry model for the atmospheric pressure plasma needle including biomaterial interactions** *Y. Sakiyama, D. Graves* University of California at Berkeley, Berkeley, US
P3.13.3	**The inactivation of Staphylococcus aureus by remote air plasma** *Z. Zhang, J. Chen* Xián Jiaotong University, Xián, China
P3.13.4	**Plasma- and Vacuum-ultraviolet (VUV) Photo-polymerisation of N- and O-rich "Mono-functional" Thin Films** *J. Ruiz, P. Girard-Lauriault, S. Poulin, F. Truica-Marasescu, M. Wertheimer* École Polytechnique de Montréal, Montreal, Canada
P3.13.5	**Non-thermal plasma devices at atmospheric pressure for biomedical applications** *Y. Hong, Y. Seo, G. Kim, H. Lee, J. Choi, S. Kang, A. Mohamed, J. Lee* POSTECH, Pohang, South Korea
P3.13.6	**Deposits of silver nanoparticle-containing plasma polymer. Prevention of biological surface contamination.** *B. Despax, C. Saulou, M. Mercier-Bonin, P. Raynaud, S. Zanna, P. Marcus, C. Le Pen, P. Choquet* Université Paul Sabatier , Toulouse, France
P3.13.7	**Sterilization of Staphylococcus aureus using low pressure Ar and Ar/O_2 plasma** *A. Sureshkumar, R. Sankar, N. Gomathi, S. Neogi* Indian Institute of Technology, Kharagpur, Kharagpur, India
P3.13.8	**Bacterial Inactivation by DBD Plasma in Atmospheric Pressure** *H. Ghomi, N. Navab Safa, A. Ramazani, M. Karimi* Laser Research institute, Tehran, Iran
P3.13.9	**Characterization of Dielectric Barrier Discharge in air for biomedical application** *P. Rajasekaran, N. Bibinov, D. Wandke, W. Vioel, P. Awakowicz* AEPT, Bochum, Germany
P3.13.10	**Characterization of HF-microdischarge for biomedical application** *N. Bibinov, S. Kühn, R. Gesche, P. Awakowicz* AEPT Ruhr university, Bochum, Germany
P3.13.11 Best paper Finalist	**Surface modification of polystyrene dishes using plasma techniques to enhance cell adhesion and proliferation** *Y. Sasai, N. Matsuzaki, S. Kondo, Y. Yamauchi, M. Kuzuya* Gifu Pharmaceutical University, Gifu, Japan
P3.13.12	**Plasma polymer deposition for improved cell differentiation control** *B. Finke, C. Bergemann, F. Lüthen, K. Schröder, J. Rychly, A. Ohl* INP, Greifswald, Hansestadt, Germany
P3.13.13	**Low Dose Non-Thermal Plasma Interacts with Mammalian Cells Indirectly through Modification of the Cell Culture Medium** *S. Kalghatgi, C. Kelly, E. Cerchar, A. Fridman, J. Azizkhan-Clifford, G. Friedman* A.J. Drexel Plasma Institute, Drexel University, Philadelphia, US
P3.13.14	**Characterization of functional plasma polymer thin films obtained by AP DBD in N_2 with admixtures of C_2H_4 and H_2 for biomedical applications** *C. Sarra-Bournet, N. Gherardi, K. Vallières, S. Turgeon, G. Laroche, F. Massines* Université Laval, Quebec, Canada
P3.13.15	**Electrical and Optical study of a DBD reactor in Ar/(O_2-N_2) mixtures and in pulsed conditions. Application to E. Coli decontamination** *F. Clément, B. Rouffet, J. Sarrette, S. Cousty, A. Ricard, M. Yousfi, E. Panousis, B. Held* Pau University - LEGP, Pau, France
P3.13.16	**Tailor-made surface coatings for cell cultivation in a closed plastic bag system** *K. Lachmann, M. Thomas, A. Dohse, K. Dittmar, W. Lindenmaier, N. Zghoul, C. Klages* TU Braunschweig, Braunschweig, Germany
P3.13.17	**Effects of Atmospheric-Pressure, Non-Thermal Plasmas Acting on Proteins** *H. Li, G. Li, L. Wang, S. Wang, H. Zhao, X. Xing, C. Bao* Tsinghua University, Beijing, China
P3.13.18	**Cytocompatibility of a-C:H films deposited on polymeric fibrous scaffold** *A. Toriu, H. Matsuo, K. Kanasugi, K. Nonaka, Y. Ohgoe, K. Hirakuri, A. Funakubo, Y. Fukui* Tokyo Denki University, Saitama, Japan
P3.13.19	**Plasma decontamination of surfaces pre-treated with mild disinfectant spray** *T. Huijser, H. Oudmaijer, Y. Creyghton* TNO, Rijswijk, Netherlands

P3.13.20	**Ultra-water repellent modification of biological soft-materials using atmospheric plasma and self-assembled monolayer** *M. Kawaguchi, T. Murakami, Y. Ishiguro, T. Takeuchi, A. Shimokawara, N. Saito, O. Takai* Nagoya University, Nagoya, Japan
P3.13.21	**Investigation on the sterilization mechanisms of medical surfaces in a double inductively coupled plasma** *B. Denis, H. Halfmann, N. Bibinov, J. Wunderlich, P. Awakowicz* Institute for Electrical Engineering and Plasma Te, Bochum, Germany
P3.13.22	**Study of the biocompatibility of atmospheric plasma polymerized-PEG films obtained by the means of a liquid precursor spray** *B. Nisol, C. Poleunis, P. Bertrand, F. Reniers* Université Libre de Bruxelles - CHANI, Bruxelles, Belgium
P3.13.23	**Hydrophylisation of collagen samples for medical application** *D. Spridon, A. Ungureanu, I. Topala, I. Alupei, N. Dumitrascu* Alexandru Ioan Cuza Univeristy, Faculty of Physics, Iasi, Romania
P3.13.24	**Interaction of DBD plasma with DNA and amino acids** *A. Tsapin* JPL/Caltech, Pasadena, US
P3.13.25	**Inactivation of Bacillus spores in Water using a Pulsed Spark Plasma Discharge** *K. Arjunan, Y. Cho, Y. Mukhin, A. Gutsol, S. Anandan, A. Fridman* Drexel Plasma Institute, Philadelphia, US
P3.13.26	**Plasma-radiowave stimulation of plant seeds germination and inactivation of pathogenic microorganisms** *I. Filatova, V. Azharonok, E. Gorodetskaya, L. Melńikova, A. Shik* B.I.Stepanov Institute of Physics NAS Belarus, Minsk, Belarus
P3.13.27	**Cytocompatibility of aH-CN_x films deposited by CH_4/N_2 dielectric barrier discharge plasmas with respect to HEK, PC 12 and Cancer cell lines** *A. Majumdar, R. Ummani, K. Schröder, R. Walther, R. Hippler* Institut for Physics, Greifswald, Germany
P3.13.28	**Spectroscopic characteristics in non-equilibrium atmospheric pressure plasma for inactivation of micro-organism** *T. Ohta, S. Iseki, M. Ito, H. Kano, Y. Higashijima, M. Hori* Meijo University, Nagoya, Japan
P3.13.29	**Chemical sputtering as important etching mechanism in plasma sterilization** *J. Benedikt, C. Flötgen, L. Byelykh, O. Kylián, F. Rossi, V. Raballand, A. von Keudell* Ruhr-Universität Bochum, Bochum, Germany
P3.13.30	**Low surface energy fluorocarbon coatings via plasma polymerization process: process optimization and protein repellent study** *V. Kumar, J. Pulpytel, I. Mannelli, F. Rossi , H. Rauscher, F. Arefi-Khonsari* LGPPTS, ENSCP, UMPC, Paris, France
P3.13.31	**Comparative experimental study of biological activity different kinds of none-quilibrium plasmas** *D. Medvedev, V. Petyaev, S. Korobtsev, M. Krotov, B. Potapkin* KRC, Moscow, Russia
P3.13.32	**Investigation of the Sample Preparing Method for Determining the Amount of some Heavy Metals in Borage by Induction Coupled Plasma Apparatus (ICP)** *M. Keshavarz, F. Amir gholami* Department of Chemistry, Islamic Azad University, Isfahan, Iran
P3.13.33	**Concentrate and Measurement of Scopolamine n-butyl Bromide (Hyoscine) by Spectrophotometry** *M. Keshavarz, F. Romiani* Islamic Azad University, Shahreza, Isfahan, Iran
P3.13.34	**Development of biofunctional coatings on titanium implants to improve biocompatibility and osteoinductivity** *C. Schrader, J. Bossert, U. Finger, A. Henning, A. Hüppner, K.-D. Jandt, M. Pfister1, J. Schmidt und S. Zankovych* CIEMAT. Fusion Division, Madrid, ES
P3.13.35	**Invasive in vivo study of cold spark discharge plasma treatment of ulcerative colitis in mouse model** *D. Dobrynin, K. Chakravarthy, G. Fridman, G. Friedman, S. Murthy, A. Fridman* Drexel University, Philadelphia, US
P3.13.36	**Development and characterization of a new VHF-CCP for sterilization** *K. Stapelmann, N. Bibinov, P. Awakowicz* Ruhr University Bochum, Germany

Plasma aided combustion and aerodynamics

P3.12.1	**Ignition of propane-air mixtures by rf spark discharge** *A. Frederic, M. Maxime, N. Georgy* Renault SAS, Guyancourt, France
P3.12.2	**Augmentation of pre-mixing process of combustion using dielectric barrier discharges** *S. Xia, J. He, X. Lu* Huazhong University of Science and Technology, Wuhan, China
P3.12.3	**The influence of CD electrical field on the plasma flames and structure of soot.** *I. Krasotkina, A. Shvedchicov, V. Bekeshev, A. Ponizovsky* Institute of Chemical Fisics of RAS, Moscow, Russia

P3.12.4	**Gas discharges with high specific energy release like igniters of closed volumes or fluxes of combustible gases** *N. Berezhetskaya, S. Gritsinin, A. Davydov, I. Kossyi, V. Kopev, N. Tarasova* Prokhorov General Physics Institute of RAS, Moscow, Russia
P3.12.5	**Nanosecond surface discharge at high pressures** *I. Kosarev, P. Sagulenko, V. Khorunzhenko, S. Starikovskaia* LPTP Ecole Polytechnique, Palaiseau, France
P3.12.6	**Effects of Propellant Type on Low Power Arcjet Thruster Performance** *X. Zhang, H. Tang, Y. Liu, H. Wang, X. Chen* Beijing University of Aeronautics and Astronautics, Beijing, China
P3.12.7	**Combustion enhancement by electrical-discharge-excited oxygen molecules** *A. Starik, B. Loukhovitsky, N. Titova, L. Bezgin, V. Kopchenov* Central Institute of Aviation Motors, Moscow, Russia
P3.12.8	**Development of arc root attachment in the nozzle of a 1 kW H_2-N_2 arcjet thruster** *H. Huang, W. Pan, X. Meng, C. Wu* Institute of Mechanics, Beijing, China
P3.12.9	**A small arc-heated plasma testing facility for thermal protection materials** *Z. Fu, W. Pan, H. Huang, C. Wu* Institute of Mechanics,Chinese Academy of Sciences, Beijing, China
P3.12.10	**Mechanism of influence of the pulse-periodic discharge on low temperature oxidation of hydrocarbons** *M. Deminsky, I. Kochetov, A. Napartovich, M. Brukov, B. Potapkin* RRC Ќurchatov Institute, Moscow, Russia
P3.12.11	**High-Voltage Nanosecond Pulse Discharge Assisted Gasoline to Syngas Reforming** *A. Nikipelov, A. Ratikin, A. Starikovskii* Neqlab Research BV, Delft, Netherlands
P3.12.12	**Spectroscopic and Langmuir Probe Measurement of Butane Combustion with Electrostatic Discharges** *Y. Kawashita, S. Ono, Y. Uesugi, Y. Tanaka* Kanazawa University, Kanazawa, Japan
P3.12.13	**Effective Ionization Coefficients and Breakdown Time for Ignition of Air and n-Butane Mixtures** *A. Kudryavtsev, S. Popugaev, S. Adams, V. Demidov, C. Jiao* St.Petersburg State University, St.Petersburg, Russia
P3.12.14	**Development of Nanosecond Pulsed Surface Discharge and Fast Plasma Thermalization** *M. Nudnova, A. Starikovekiy* Drexel University, Philadelphia, US
P3.12.15	**Kinetics of plasma assisted combustion below self-ignition threshold** *L. Wu, A. Fridman, A. Starikovskiy* Drexel University, Philadelphia, US

Cluster, particles and powders

P3.9.1	**Characterization of titanium deposit by laser ablation** *Y. Belaroussi, T. Kerdja, S. Malek* Centre de Developpement des Technologies Avancées, Algiers, Algeria
P3.9.2	**Chemical analysis of dust produced in a N_2-CH_4 RF plasma discharge** *N. Carrasco, I. Schmitz-Afonso, R. Thissen, A. Buch, C. Szopa, G. Cernogora* Service dÁéronomie, Verrières le Buisson, France
P3.9.3	**The influence of the triple N atoms recombination on the Magnetic Resonance Signal of Cs Atoms in the Afterglow in an N_2-Ar Mixture** *V. Kartoshkin, S. Dimitriev, N. Dovator* Ioffe Physico-Technical Institute, St Petersburg, Russia
P3.9.4	**Characteristics of ZnO and ZnS Nanopowders Production by a Pulsed Electron Beam Evaporation** *S. Sokovnin, V. Ilves, Y. Kotov* Institute of ElectroPhysics, Yekaterinburg, Russia
P3.9.5	**Using Nanosecond Electron Beam to Produce a Silver Nanopowder** *M. Balezin, O. Timoshenkova, S. Sokovnin* Institite of ElectroPhysics, Yekaterinburg, Russia
P3.9.6	**Functionalization of carbon nanotubes using an atmospheric pressure plasma jet** *D. Kolacyak, J. Ihde, A. Hartwig, U. Lommatzsch* Fraunhofer Institute IFAM, Bremen, Germany
P3.9.7	**The effects of External magnetic field over the nanometric growth morphology on materials synthesised in plasma reactor** *G. Torrente, J. Puerta, N. Labrador* Universidad Simon Bolivar, Caracas, Venezuela
P3.9.8	**Powder growth in low pressure Ar/CH4 and Ar/C2H2 rf discharges** *J. Beckers, M. Wolter, W. Stoffels, G. Kroesen* Eindhoven University of Technology, Eindhoven, Netherlands

P3.9.9	**Two-directional nodal model for silicide nanoparticle growth in thermal plasma processing** *M. Shigeta, T. Watanabe* Tohoku University, Sendai, Japan
P3.9.10	**Tuning size and shape of metal nanoparticles on carbon nanotubes using low pressure plasma treatment** *A. Felten, C. Bittencourt, X. Ke, G. Van Tendeloo, J. Pireaux* University of Namur, Namur, Belgium
P3.9.11	**The potential and Ar density profile in current carrying expanding plasmas with sheath formation in a cylindrical vessel.** *R. Westermann, M.C.M. van de Sanden* Technical University Eindhoven, Eindhoven, Netherlands
P3.9.12	**Particles generated in a low pressure radio frequency nitrogen-rich methane discharge** *V. Massereau-Guilbaud, J. Péreira, I. Géraud-Grenier, A. Plain* LASEP Univ Orleans, Bourges, France
P3.9.13	**The effects of process conditions on the spatiotemporal evolution of a nanodusty plasma** *S. Girshick, L. Ravi* University of Minnesota, Minneapolis, MN, US
P3.9.14	**Investigations of growth and structure of a-C:H:N nanoparticles by means of Rayleigh-Mie scattering ellipsometry and s-SNIM** *R. Meißner, S. Hong, J. Ränsch, M. Böke, J. Winter, J. Samson, E. Bründermann, M. Havenith* Ruhr-Universität Bochum, Bochum, Germany
P3.9.15	**Plasma coating for powders** *R. van de Peppel, E. Abadjieva, A. van der Heijden, Y. Creyghton* TNO Defence, Security & Safety, Rijswijk, Netherlands
P3.9.16	**Levitation and movement of elongated macroparticles in RF plasma** *A. Pal, A. Filippov, Y. Mankelevich, T. Rakhimova, A. Ryabinkin, A. Serov, A. Starostin* Institute of Nuclear Physics, Moscow State Univers, Moscow, Russia
P3.9.17	**Setup for FIR-Scattering on 3D Plasma Cystals** *A. Aschinger, J. Ränsch, J. Winter* EP2, Ruhr-University Bochum, Bochum, Germany
P3.9.18	**physical properties of dust produced in a N_2-CH_4 RF plasma discharge** *G. Cernogora, G. Alcouffe, E. Hadamcik, J. Renard, M. Carrasco, C. Szopa* Université de Versailles St Quentin, Verrières le Buisson, France
P3.9.19	**Carbon-Carbon nanocomposite thin films based on fullerene-like powder in hydrocarbon matrix formed in ECR plasma** *R. Clergereaucx, M. Calafat, P. Raynaud, F. Gaboriau* LAPLACE, Toulouse, France
P3.9.20	**Chemical and morphological modification of expanded graphite by thermal and non-thermal plasmas compared to plasma-thermal expansion of graphite intercalation compounds** *A. Meyer-Plath, R. Mach, H. Maneck, F. Oleszak, S. Benemann, J. Friedrich* BAM - Fed. Inst. f. Materials Research and Testing, Berlin, Germany
P3.9.21	**Fabrication of metalocarbon particles perspective to creation of highly-efficient hydrogen storage** *I. Veremii, V. Chernyak, S. Filatov, S. Olszewski, V. Yukhymenko, E. Safonov* Taras Shevchenko Kyiv National University, Kyiv, Ukraine
P3.9.22	**Modification of Polyethylene Powder in a Spiral Conveyor by Hollow Cathode Glow Discharge** *M. Quitzau, M. Wolter, H. Kersten* IEAP, University of Kiel, Kiel, Germany
P3.9.23	**H-atom interaction with a-C:H films deposited in MMP-DECR plasma: Effect of surface temperature, H flux and exposure time** *A. Erradi, R. Clergeraux, F. Gaboriau* Laplace, Toulouse, France
P3.9.24	**Nonthermal plasma synthesis of size-tunable, photoluminescent InP nanocrystals and incorporation into hybrid solar cells with P_3HT** *R. Gresback, C. Liu, U. Kortshagen* University of Minnesota, Minneapolis, US
P3.9.25	**Application of high-voltage nanosecond pulses to complex plasmas** *M. Pustylnik, A. Ivlev, H. Thomas, G. Morfill, L. Vasilyak, S. Vetchinin, D. Polyakov, V. Fortov* MPI für Extraterrestrische Physik, Garching, Germany
P3.9.26	**Dust formation in a pulsed discharge** *J. Berndt, E. Kovacevic, L. Boufendi* GREMI, Orleans, Cedex 2, France
P3.9.27	**On particle formation graphite cathode Argon DC discharges** *A. Michau, G. Lombardi, C. Arnas, X. Bonnin, K. Hassouni* CNRS-Universite Paris 13, Villetaneuse, France
P3.9.28	**Dispersion of Sputtered Fine Metal Particles into Oil and Its Application to CNT Growth** *A. Hatta, T. Harigai, M. Murao, S. Kagiyama* Kochi University of Technology, Kami, Japan
P3.9.29	**Generation of Si:C:N particles in an inductively coupled plasma** *A. Consoli, A. von Keudell* Ruhr-Universität Bochum, Bochum, Germany

P3.9.30	**Carbon fine particle growth with levitating in dust plasmas** *S. Shimizu, T. Shimizu, H. Rothermel, H. Thomas, G. Morfill* MPI für extraterrestrische Physik, Garching, Germany
P3.9.31	**Surface research of plasma crystal particles** *A. Semenov, A. Khakhaev, A. Sherbina, A. Velichkko* Petrozavodsk State University, Petrozavodsk, Russia
P3.9.32	**Nanostructure and texture of carbon dust particles as signature of a given growth phase** *C. Arnas* CNRS-Universite de Provence, MARSEILLE, France
P3.9.33	**Rapid synthesis of large-quantities of one-dimensional nanostructures by thermal plasma** *P. Hu, Y. Bai, L. Li, L. Yuan, F. Chen* Chinese Academy of Sciences, beijing, China
P3.9.34	**Fullerene-like powder in hydrocarbon matrix nanocomposite formed in ECR plasma** *R. Clergereaux, M. Calafat, P. Raynaud, F. Gaboriau* LAPLACE, Toulouse, France

Plasmas and renewable energies

P3.16.1	**The Synthesis and Functionalization of Nanostructured Carbon Black by Thermal Plasma for Use in PEM Fuel Cells** *R. Pristavita, J. Meunier, D. Berk* McGill University, Montreal, Canada
P3.16.2	**Using reactive plasma processing for hydrogen fuel cells** *R. Boswell, C. Charles, C. Corr, P. Brault, A. Caillard* Australian National University, Canberra, Australia
P3.16.3	**Optimisation of the Working Parameters for Gasification of a Bio-Oil in a Thermal Plasma** *D. Guénadou, H. Lorcet, S. Poulain, J. Peybernès* CEA Cadarache, Saint Paul lez Durance, France
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