

# 17<sup>th</sup> INTERNATIONAL CONFERENCE ON PLASMA PHYSICS AND APPLICATIONS



## Programme



**Organized by:**



National Institute for  
Lasers, Plasma and  
Radiation Physics  
(INFLPR)



“Alexandru Ioan Cuza”  
University



Romanian Physical  
Society

**Sponsorship:**



MINISTERUL CERCETĂRII  
ȘI INOVĂRII



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**Gheorghe Popa**, “Alexandru Ioan Cuza” University of Iasi, Romania

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Conference e-mail address: [cppa2017@infim.ro](mailto:cppa2017@infim.ro)

Conference website: <http://cppa2017.inflpr.ro>

## GENERAL INFORMATION

### Conference location

The Conference will be held in Magurele Campus of Physics. It is located about 12 km from the center of Bucharest. A special bus was appointed in order to facilitate the transport of the participants from the centre of Bucharest to the conference location. In addition, the Conference place is reachable by public transportation. Please, find more details in the section Transportation.

## Registration

The registration desk is open as follows:

Thursday, June 15 <sup>th</sup>	During Welcome Reception (at Hanu Berarilor)	19:00 – 21:00
From Friday, June 16 <sup>th</sup> , till Monday, June 19 <sup>th</sup>	Conference Hall	08:30 – 09:00 and during coffee breaks

## Accommodation

The Local Organizing Committee has negotiated special rates with several hotels. Please, save the address and telephone number of your hotel in order to be able to contact the reception.

Hotel name and address	Telephone, e-mail and website
Europa Royale Bucharest, 4* 60 Franceza Str., Bucharest	+40 21 3191798 <a href="mailto:SM.Bucharest@EuropaRoyale.com">SM.Bucharest@EuropaRoyale.com</a> <a href="http://www.europaroyalebucharest.com">http://www.europaroyalebucharest.com</a> /
Bucharest Comfort Suites, 4* 16 Nicolae Balcescu Blv., Bucharest	+4 021 3102885 <a href="mailto:office@comfort-suites.ro">office@comfort-suites.ro</a> <a href="http://www.comfort-suites.ro/EN/hotel.html">http://www.comfort-suites.ro/EN/hotel.html</a>
IBIS Palatul Parlamentului City Centre, 3* 82-84 Izvor Str., Bucharest	+40 21 4011011 <a href="mailto:H5938-RE@accor.com">H5938-RE@accor.com</a> <a href="http://www.ibishotels.ro/">http://www.ibishotels.ro/</a>
Magurele Hotel, 2* 250A Atomistilor Str., Magurele	+40 21 4575269 <a href="mailto:rezervari@hotelmagurele.ro">rezervari@hotelmagurele.ro</a> <a href="http://hotelmagurele.ro/?lang=2">http://hotelmagurele.ro/?lang=2</a>

Attendees are free to choose their accommodation elsewhere, making direct reservations in other hotels.

## Transportation

*a) from airport to the city centre (Piata Unirii, hotel Europa Royale, Hanul Manuc)*

**By taxi:** Just after exiting, inside the waiting hall, there are automatic machines with touch screens where you can appoint a taxi. Press the screen for a taxi company like Meridian, Cobalcescu, Cristaxi -looking for ones which have a price of 1.39 lei/km (higher prices- up to 10 times more - are also available for more fancy taxis). The machine will provide you a small ticket with the name of the company, taxi numbers – there are two numbers, and the time of arrival after order (usually a few minutes). Take the ticket and go outside the airport door where you will see taxis. Look at the company name and number as inscribed on taxis and go to the one indicated on ticket. Handle the ticket to the driver – your destination is “**Piata Unirii**” – **Hotel Europe Royale (near “Hanul Manuc”)**). Normal taxi is cheap in Romania and you have to pay about 8-10 Euro (35-50 lei) from airport to the hotel.

Please, notice that the local currency is “lei” (RON). Exchange rate is about 1 euro=4.5 lei. We recommend you to change about 15-20 euro in the airport for covering the cost of the taxi or bus.

**By bus:** Alternatively, there are regular buses from airport to the centre. Step down from the arrival hall (level 1) to ground floor (level 0). At level 0 go outside the hall and you are just in the buses station. There is a small office selling tickets (on the right hand). The price of a ticket is about 2 Euro (2 ways). The bus number is 783. For Comfort Suites hotel step down at University stations. Piata Unirii is the last station. Nearby, is the hotel Europe Royale, close to “Hanul Manuc”, where there is a Starbucks coffee shop on the ground floor. More details on the bus are on “[http://www.ratb.ro/v\\_bus\\_expres.php?tlin1=783](http://www.ratb.ro/v_bus_expres.php?tlin1=783)”, where you can find also a map (hartă) with the bus trajectory. On various maps, you can find Piata Unirii 1, or Piata

Unirii 2, or Piata Unirii 3 as name for the bus station. Do not be confused, these points are very closed to each other and to the Europa Royale hotel.

***b) from City centre (Piata Unirii, hotel Europa Royale, Hanul Manuc) to the Conference site in Magurele***

***By CPPA organizers.*** The organizers have appointed a bus in order to facilitate the transport of the participants from the centre of Bucharest to the conference location. You will identify the bus easily as it will be properly signalized on the front window with the conference logo and name.

The basic bus schedule is based on a daily morning departure from Bucharest centre to Magurele and return in the Bucharest at evening.

*Departure from Bucharest:* at 08:00 in the morning.

*Meeting point:* in front of Europa Royale Hotel on Splaiul Independentei Street (turn right and walk 30 m as you exit the hotel, and go in the front of the “DM” market). Please, respect the departure time of the bus, due to the intense traffic it can stop only a few minutes in the front of hotel.

*Departure from Magurele:* at about 18:30, on Friday and Monday, *meeting point* in front of the Conference Hall, and at the lunch time on Saturday and Tuesday.

Please, note that a bus transport will be arranged also each day, at the mid-day time. The detailed schedule of the bus will be provided at registration.

***By public transportation:***

Take the tramway 32 from Piata Unirii and step down to the station “Antiaeriana” (approx. 20 min). Tickets (or cards) from tram should be purchased in advance, from the RATB kiosk situated in the proximity of the station. The cost of a way (should be obliterated at the machine in the tram wagon) is about 1.5 lei (~33 eurocents). From Antiaeriana take a minibus to Magurele. The ticket in minibus are paid directly to the driver (2.5 lei ~ 50 eurocent). Step down at IFA tower, and behind the tower you will see the banner of the Conference.

## **Meals**

The restaurant “Sytago”, placed in the proximity of the Conference Hall, has been appointed for serving the lunch on Friday, June 16<sup>th</sup>; Saturday, June 17<sup>th</sup>; Monday, June 19<sup>th</sup> and Tuesday, June 20<sup>th</sup>. The meal tickets will be prepared for you at the Registration desk, according to the selection you made on your Registration form. Additional tickets, to be purchased one day in advance, will be available at the Registration desk. The price for a lunch ticket is about 7 EUR or equivalent 30 lei. There are also other restaurants available in Magurele.

## **Social Program**

Bucharest is the capital of Romania, a city with rich history and interesting monuments. There are many possibilities for spending your free time in the old city, such as visiting museums, or having a traditional dish in the local restaurants, etc. Free time is provided on Saturday afternoon for visiting the city by yourself.

❖ ***Welcome reception – Thursday, June 15<sup>th</sup>, 19:00-21:00***

The Welcome reception will take place at Hanu’ Berarilor Casa Soare (in the garden) situated on Poenaru Bordea Street, no. 2, just 10 minutes walking distance from the Hotel Europa Royale. Also, we will have a registration desk here. All participants, accompanying persons and sponsors are welcomed to the reception. A person from the organizers will pick you up from the hotel at 18:50.

❖ ***Excursion – Sunday, June 18<sup>th</sup>, 08:00 – 17:30***

The excursion is scheduled on Sunday, June 18<sup>th</sup>, to Prahova Valley. It will combine the visit to Sinaia monastery (1695), the fabulous Peles Castle (a masterpiece of German new-Renaissance architecture, former summer residence of the Royal family), and a wine tasting moment at the Halewood winery.

The departure hours are 08:00 from Bucharest, Europa Royale Hotel and 07:30 from Magurele, Magurele Hotel.

❖ ***Conference dinner – Sunday, June 18<sup>th</sup>, 19:00 – 23:00***

Conference dinner will take place on Sunday evening, at “Caru cu Bere” restaurant, situated on 5 Stavropoleos Street.

## CONFERENCE PROGRAMME

### Joint events:

- 1<sup>st</sup> Workshop on Plasma Coatings for Medical Applications, organized co-jointly by National Institute of Lasers Plasma and Radiation Physics and University of Gent, in the frame of the M-ERA.NET project PlasmaTex.
- Visits at the INFLPR laboratories and at the Extreme Light Infrastructure - Nuclear Physics ELI-NP, at IFIN-HH.
- Exhibition presenting companies products, and recent developments based on Romanian plasma research;

The Conference combines plenary sessions with invited and oral presentations, and two poster sessions. Plenary sessions are held in Magurele in the Conference Hall situated in the proximity of National Library of Physics.

The speakers of the invited and oral presentations are kindly asked to upload their presentations (as PowerPoint file) two sessions in advance, on the technical desk. Due to the tight program and the bus schedule, you are asked not to exceed the time allocated for the presentation, as following:

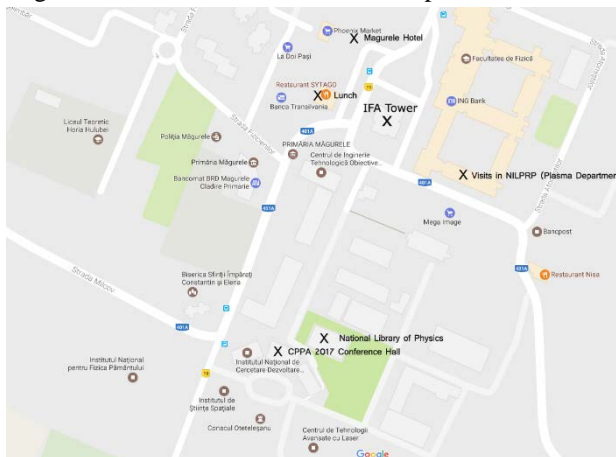
***Duration of invited talks: 25 min + 5 min for discussion***

***Duration of oral presentations: 17 min + 3 min for discussion***

The poster sessions will be accommodated in the National Library of Physics. They are programmed as Session I, on Friday afternoon (Topics 1, 2, 4, 5), respectively Session II, on Monday afternoon (Topics 3, 6, 7, 8). Recommended poster size in A0 (841 x 1189 mm), portrait orientation.

The participants are kindly asked to hang up their posters in the morning of their scheduled session, and to remove them at the end of Poster session.

The location of the buildings of interest for the Conference are presented below:



## CPPA 2017 Conference Programme

### Thursday, June 15<sup>th</sup>

19:00	21:00	Welcome reception/Registration/HANU' BERARILOR, Casa Oprea Soare	
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### Friday, June 16<sup>th</sup>

08:30	09:00	Registration	
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09:00	09:20	Opening	
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#### Morning session 1 – Chair: Farzaneh Arefi-Khonsari

09:20	09:50	I-03	<b>G. Henrion</b> - Plasma electrolytic oxidation: stakes and limits
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09:50	10:20	I-08	<b>J. Pulpytel</b> - Bonding of composite materials by means of atmospheric plasma jet
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10:20	10:40	O-21	<b>C. Vitelaru</b> - Reactive magnetron sputtering of oxides, nitrides and oxy-nitrides: from process characterization to tunable thin films
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10:40	11:00	<i>Coffee break – Conference Hall</i>	
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#### Morning Session 2 – Chair: Gerard Henrion

11:00	11:20	O-17	<b>S. Tabibian</b> - Modeling and experimental Study of a Wurster type fluidized bed reactor coupled with an atmospheric pressure plasma jet (APPJ) for the treatment of polypropylene (PP) powders
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11:20	11:40	O-04	<b>S. Ben Saïd</b> - Study of the plasma polymerization of 3-aminopropyltriethoxysilane (APTES) by an open-air atmospheric arc plasma jet for in-line treatments
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11:40	12:00	O-05	<b>A. Dascalu</b> - Reactive species in water activated by surface DBD plasma in air
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12:00	12:20	O-25	<b>A. Zubarev</b> - Synthesis of exotic carbon material in non-equilibrium dense plasmas
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12:20	13:40	<i>Lunch</i>	
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#### Afternoon session – Chair: Florin Spineanu

15:10	15:30	O-15	<b>L. Sirghi</b> - Stoichiometry of thin oxide films deposited by reactive high power impulse magnetron sputtering
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15:30	15:50	O-13	<b>C. Negrea</b> - Investigating the Seasonal Variability of the Mid-Latitude Traveling Ionospheric Disturbances using Dynasonde Data and a New Spectral Analysis Technique
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15:50	16:10	O-11	<b>C. Iorga</b> - Theoretical investigation of x-ray lasing in argon by photo-ionization from K and L shells
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16:10	16:30	O-02	<b>T. Ahmadi</b> - 1D Particle in Cell (PiC) Simulation of Slow Mode Shock in Magnetized Plasma
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16:30	16:50	<i>Coffee break – National Library of Physics</i>	
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16:50	18:25	Poster session I – National Library of Physics	
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### Saturday, June 17<sup>th</sup>. 1<sup>st</sup> Workshop on Plasma Coatings for Medical Applications

08:45	09:00	Registration	
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#### Morning session 1 – Chair: Cristophe Leys

09:00	09:30	I-06	<b>A. Nikiforov</b> - Plasma deposition of antibacterial coatings
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09:30	10:00	I-01	<b>D. Duday</b> - Antibacterial activity of cold atmospheric plasma jets and novel drug-loaded nanoparticles embedded in scaffolds or patches
10:00	10:20	O-20	<b>A.V. Omran</b> - Atmospheric pressure surface modification and cross-linking of UHMWPE film by transporting discharge
10:20	10:40	<i>Coffee break – Conference Hall</i>	
<b>Morning session 2 – Chair: David Duday</b>			
10:40	11:10	I-02	<b>M. Gherardi</b> - Deposition of polymeric films and co-deposition of nanocomposite coatings by means of a cold atmospheric pressure plasma jet
11:10	11:40	I-10	<b>J.L. Walsh</b> - Plasma biofilm decontamination: What happens to the underlying surface?
11:40	12:00	O-14	<b>A. Palla Papavlu</b> - Laser evaporation of polymers for medical applications
12:00	13:20	<i>Lunch</i>	
<b>Afternoon session – Chair: Anton Nikiforov - PlasmaTex project</b>			
13:20	13:40	O-07	<b>V. Elinson</b> - Study of surface topography and antifungal activity of fluorocarbon nanostructures, formed on polyethylene terephthalate surface by ion-plasma technique
13:40	14:00	O-08	<b>E.R. Ionita</b> - Characterization of a cylindrical shaped plasma jet with axisymmetric injection of precursors
14:00	15:00	Reports and Discussions	

### Sunday, June 18<sup>th</sup>

08:00	17:30	Excursion Prahova Valley	
19:00	23:00	Conference Dinner @ CARU CU BERE	

### Monday, June 19<sup>th</sup>

08:45	09:00	Registration	
<b>Morning session 1 – Chair: Gheorghe Dinescu</b>			
09:00	09:30	I-09	<b>R. van de Sanden</b> - Plasma non-equilibrium at work: key to success of energy technologies?
09:30	10:00	I-04	<b>O. Kylian</b> - Low-pressure plasma synthesis of nanomaterials
10:00	10:20	O-10	<b>C. Grisolia</b> - Estimation of the tritium retention in ITER Tungsten divertor target using macroscopic rate equation simulations
10:20	10:40	O-01	<b>T. Acsente</b> - Tailoring the morphology and structural properties of tungsten nanoparticles produced by magnetron sputtering and gas aggregation
10:40	11:00	<i>Coffee break – Conference Hall</i>	
<b>Morning session 2 – Chair: Gheorghe Popa</b>			
11:00	11:20	O-06	<b>M. Echim</b> - Plasma complexity: methods and observations



11:20	11:40	O-16	<b>F. Spineanu</b> - Formation of an Internal Transport Barrier due to neutral beam injection during current ramp-up in tokamak
11:40	12:00	O-22	<b>M. Vlad</b> - Radial pinch produced by the gradient of turbulence amplitude in tokamak plasmas
12:00	12:20	O-23	<b>G. Voitcu</b> - Kinetic simulations of plasma jets interaction with increasing magnetic fields
12:20	13:40	<i>Lunch</i>	
14:10	14:40	I-11	<b>N.V. Zamfir</b> - Extreme light infrastructure – nuclear physics (ELI-NP): status and perspectives
14:40	16:20	Visit of the ELI-NP facility, IFIN-HH	
16:30	16:50	<i>Coffee break – National Library of Physics</i>	
16:50	18:25	Poster Session II – National Library of Physics	

## Tuesday, June 20<sup>th</sup>

### Morning session 1 – Chair: C. Focsa

09:00	09:30	I-07	<b>N. Puač</b> - Time resolved optical spectroscopy of high frequency atmospheric pressure plasma jets
09:30	10:00	I-05	<b>B. Mitu</b> - Process diagnostics during nanocarbon growth by RF plasma jet
10:00	10:20	O-03	<b>C. Anastassiou</b> - Understanding the bullet evolution and its interaction with dielectrics in a capillary helium plasma jet
10:20	10:40	O-19	<b>I. Topala</b> - Deposition of interstellar carbon dust analogs using barrier discharge driven by nanosecond high voltage pulses
10:40	11:00	<i>Coffee break – Conference Hall</i>	

### Morning session 2 – Chair: C. Grisolia

11:00	11:20	O-09	<b>C. Focsa</b> - Transient plasmas generated by femtosecond laser ablation of selected metals: Influence of the target physical properties on the plume dynamics
11:20	11:40	O-18	<b>C.M. Ticoş</b> - A pulsed plasma jet for dusting off surfaces on Mars
11:40	12:00	O-24	<b>V. Zoita</b> - Performance of the neutron attenuators for the JET gamma-ray cameras
12:00	12:20	O-12	<b>M. Lungu</b> - Non-destructive analysis of fusion relevant tungsten coatings by X-ray methods
12:20	13:00	Best paper award & closing ceremony	

*Note: The code of the presentations is related to the alphabetical order of presenters, as included in the Book of Abstracts of the conference*

Topic 1: Fundamental processes in plasmas, modeling and simulation, space plasmas

- P1-01 Modelling of wall currents excited by plasma wall-touching kink and vertical modes during a tokamak plasma disruption  
**C.V. Atanasiu**, L.E. Zakharov, K. Lackner, M. Hoelzl, E. Strumberger
- P1-02 Simulation of magnetron sputtering deposition of titanium nanopatterns on substrates with colloidal masks  
**C. Costin**, A. Demeter, V. Tiron, L. Sirghi
- P1-03 Transport of cold ions in tokamak microturbulence  
**A. Croitoru**
- P1-04 Self-modulation of the discharge current oscillations in the presence of a complex space charge configuration in low-temperature plasma  
**S.A. Irimiciuc**, D.G. Dimitriu, M. Agop
- P1-05 Numerical and experimental investigation of the effect of N<sub>2</sub> and O<sub>2</sub> admixtures in a helium dielectric barrier discharge  
C. Lazarou, A.S. Chiper, **C. Anastassiou**, V. Pohoata, I. Mihaila, I. Topala and G.E. Georghiou
- P1-06 Momentum Deposition by Acoustic Gravity Waves in the Thermosphere-Ionosphere above Wallops Island, VA.  
**C. Negrea**, N. Zabotin, O. Godin, T. Bullett
- P1-07 Kinetic corrections and rotational flows in the 2D turbulence of quantum plasmas  
**D.I. Palade**, V. Baran
- P1-08 Mathematical modelling of plasma treatment parameters for the hydrophobization process of fabrics  
**I.R. Radulescu**, L. Surdu, L. Dinca, E. Visileanu, V. Satulu, B. Mitu
- P1-09 Turbulence in space plasmas – a statistical approach  
**E. Teodorescu**, M. Echim
- P1-10 Role of textured dielectric layer on the time-space behavior of the barrier discharge  
**I. Topala**, G. Borcia

Topic 2: Gas discharge physics and plasma diagnostics

- P2-01 On the validity of using the spectra of diatomic molecules for determination of gas temperatures in plasmas  
M. Bazavan, **M. Teodorescu**, G. Dinescu
- P2-02 Opto-spectral analysis of a single filament atmospheric plasma jet generated in argon  
**M. Teodorescu**, M. Bazavan, G. Dinescu
- P2-03 Electron temperature determination of Bismuth containing electrodeless light sources during self-modulation regime  
**Z. Gavare**, M. Zinge, A. Skudra, E. Bogans
- P2-04 Studies of thallium containing high-frequency electrodeless lamps  
**Z. Gavare**, G. Revalde, A. Abola, A. Skudra, N. Zorina
- P2-05 Reactive magnetron sputtered SiC<sub>x</sub> thin films: a correlation between their optical properties and OES process characterization  
**I. Pana**, C. Vitelaru, A. Kiss, M. Braic
- P2-06 Influence of C<sub>2</sub>H<sub>2</sub>/H<sub>2</sub> ratio on the plasma parameters and on the morphology of carbon films obtained by PECVD  
**S.D. Stoica**, S. Vizireanu, B. Mitu, G. Dinescu

- P2-07 Reactive sputtering of carbon target under HiPIMS conditions for the deposition of DLC coatings  
**C. Vitelaru**, M. Dinu, A.C. Parau, L. Constantin, A.E Kiss
- P2-08 Rotational and electron temperature determination in argon and hydrogen containing high-frequency electrodeless lamps  
**M. Zinge**, Z. Gavare, A. Skudra

#### Topic 4: Plasma processing, surface modification, deposition, etching

- P4-01 Development of Hybrids Nanocomposites materials based on Graphene and siloxane polymer by Low Pressure and DBD Discharges to Improve the Corrosion Behaviour of Steel  
**A. Anagri**, F. Arefi-Khonsari, C. Debiemme-Chouvy, M. Tran, J. Pulpytel, A. Baitukha
- P4-02 Plasma activation of silica surface for self-assembled monolayer deposition of octadecyltrichlorosilane  
**A. Besleaga**, F. Samoila and L. Sirghi
- P4-03 Hydrogen content of carbon nanowalls obtained by PECVD at different parameters of synthesis  
**M. Acosta Gentoiu**, S. Vizireanu, I. Burducea, S.D. Stoica, B. I. Bitu, I. Mihalache, C. Grigorescu, S. Antohe, G. Dinescu
- P4-04 Sub-micrometric patterns deposited by localized atmospheric pressure plasma enhanced chemical vapor deposition  
**M. Haacké**, A. Boileau, T. Gries, C. Noël and T. Belmonte
- P4-05 Atmospheric pressure etching of silicon surface with fluorine-containing cold plasma jets  
**M.D. Ionita**, E.R. Ionita, G. Dinescu
- P4-06 Deposition of plasma-polymerized hexamethyldisilazane films onto polypropylene track-etched membrane  
**L.I. Kravets**, S.N. Dmitriev, V. Satulu, B. Mitu, G. Dinescu
- P4-07 Evaluation of 3D Thin Film Profile in Magnetron Sputtering Deposition  
**B. Mitu**, R. Coca, G. Dinescu
- P4-08 Dielectric properties of PTFE-like thin films obtained by magnetron sputtering  
**V. Satulu**, V. Ion, B. Mitu, G. Dinescu
- P4-09 Design, deposition and characterization of PVD optical coatings: a systematic experimental approach  
**I. Pana**, C. Vitelaru, N.C. Zoita, A. Kiss, M. Braic
- P4-10 HiPIMS and Reactive Magnetron Sputtering Techniques Used for Obtaining Fusion Related Materials  
**C. Porosnicu**, V. Tiron, P. Dinca, B. Butoi, I. Burducea, O.G. Pompilian, I. Jepu, C. P. Lungu
- P4-11 Cleaning of carbon layers from surfaces by low pressure radiofrequency plasma  
**C. Stancu**, S.D. Stoica, V. Satulu, V. Ion, G. Dinescu
- P4-12 Cleaning of oleic acid contaminant from glass surface by low-pressure discharge plasma  
**F. Samoilă**, L. Sirghi

#### Topic 5: Biological and medical applications of plasmas, plasmas in liquids

- P5-01 Degradation of 2,4-D in water by pulsed corona discharge  
**M. Magureanu**, C. Bradu, D. Dobrin, V.I. Parvulescu
- P5-02 Stimulation of seed germination by non-thermal plasma  
**M. Magureanu**, D. Dobrin, M. Gidea

- P5-03 Plasma spraying on polymers: a study on bioactive and antibacterial coatings  
**L. Barillas**, J.M. Cubero-Sesin, I. Vargas
- P5-04 The effect of a cold atmospheric filamentary plasma jet on stored products pest and wheat germination  
**L.G. Carpen**, C. Chireceanu, M. Teodorescu, A. Chiriloaie, A. Teodoru, G. Dinescu
- P5-05 TVA Obtained Cu/Ag Layers Having Antimicrobial Properties Used in Smart Ventilation Systems  
**B. Butoi**, C. Porosnicu, P. Dinca, I. Jepu, O.G. Pompilian, C. P. Lungu, M Diaconu, G. Soreanu, I. Cretescu
- P5-06 Laser Processing Of Hybrid Biomimetic Coatings  
**M. Icriverzi**, V. Dinca, L. Rusen, S. Brajnicov, V. Marascu, A. Bonciu, A. Cimpean, M. Dinescu, A. Roseanu

### Poster session II, Topics 3, 6, 7 and 8 – Monday, June 19<sup>th</sup>, 16:50 – 18:25

#### Topic 3: Plasma sources and reactors at low and atmospheric pressure, dusty plasma

- P3-01 RF atmospheric pressure plasma jet: a method for synthesis of metallic particles  
**A. Lazea-Stoyanova**, V. Marascu, C. Stancu, G. Dinescu
- P3-02 Light sources based on gas discharges for photodynamic therapy  
**P. Chiru**, P. Dinca, B. Butoi, O. G. Pompilian, I. Jepu, C. Porosnicu, C.P. Lungu
- P3-03 Novel electromagnetic space propulsion with radio frequency (RF) plasma generation and heating- investigation of plasma detachment through magnetic nozzle  
**A.-M.T. Andreescu**, M. Teodorescu, G. Dinescu, D. Ifrim, I.F. Popa, R. Mihalache
- P3-04 High voltage pulses circuit for generating a plasma plume at atmospheric pressure  
**O. S. Stoican**
- P3-05 Experimental set-up for the interaction of electron beams with complex plasmas  
**D. Ticos**, C.M. Ticos, G. Dinescu
- P3-06 Wake-induced oscillations and rotational motion of cylindrical dust particles trapped in the sheath of low density plasma  
**N. Udrea**, C.M. Ticoș

#### Topic 6: Application of plasmas in nanoscience and nanotechnology

- P6-01 Nanomaterials processing by plasma in liquids  
**S. Vizireanu**, M.D. Ionita, E. R. Ionita, S.D. Stoica, L. Carpen, M. Teodorescu, I. Ion, D. Panaitescu, G. Dinescu
- P6-02 Interface characteristics of W/Si multilayers prepared by TVA  
**A. Anghel**, M. Badulescu, M. Vlaicu, C. Logofatu, C. Surdu-Bob

- P6-03 Tailoring sQ2/sQ3 ratio in Diamond -Like Carbon films via deposition parameters in a high voltage anodic vacuum plasma  
**M. Badulescu**, A. Anghel, C.C. Surdu-Bob, C. Logofatu, C. Luculescu
- P6-04 Titanium 2D nanopatterns obtained by magnetron sputtering deposition with colloidal masks  
**A. Demeter**, L. Sirghi
- P6-05 TiO<sub>2</sub> thin films deposited by rf-magnetron sputtering for optoelectronic applications  
**D. Dogaru**, C. Besleaga, A.C. Galca, M. Nistor, L. Ion
- P6-06 The influence of nitrogen doping upon the phase change characteristics of GeSb<sub>2</sub>Te<sub>4</sub>  
**M. Osiac**
- P6-07 InGaZnO thin films grown by pulsed electron beam deposition for electronic applications  
**F. Gherendi**, N.B. Mandache, M. Nistor
- P6-08 Deposition of fluorinated polymer films onto track-etched membrane surface by plasma chemical methods  
**L.I. Kravets**, A.B. Gilman, M.Yu. Yablokov, V. Satulu, B. Mitu, G. Dinescu

#### Topic 7: Fusion plasma physics and technology

- P7-01 ITG driven turbulence: test modes approach  
**V. Baran**, M. Vlad, F. Spineanu
- P7-02 The helical stable structures occurring at q=1 surface in tokamak  
**F. Spineanu**, M. Vlad, V. Baran
- P7-03 High power laser interaction with fusion technology materials  
**C.P. Lungu**, C. Porosnicu, P. Dinca, B. Butoi, O.G. Pompilian, I. Jepu, L. Avotina, A. Marcu
- P7-04 Characteristics of tungsten particles obtained at atmospheric pressure by a plasma jet  
**V. Mărăscu**, A. Lazea-Stoyanova, C. Stancu, S.D. Stoica, B. Mitu, G. Dinescu
- P7-05 Tungsten as a plasma-facing materials in fusion devices: impact of helium high-temperature irradiation on hydrogen retention  
**E. Bernard**, R. Sakamoto, A. Kreter, N. Yoshida, F. Ghiorghiu, R. Bisson, T. Angot, M.F. Barthe, M. Thompson, C. Corr, C. Grisolia
- P7-06 Modification of tungsten surfaces by He and He/H<sub>2</sub> hollow cathode discharges  
**C. Stancu**, E.R. Ionita, M. Teodorescu, S.D. Stoica, V. Marascu, G. Dinescu, S. Peillon, F. Gensdarmes, C. Grisolia
- P7-07 Ion energy distribution function measurements during high power impulse magnetron sputtering of W and Al targets in Ar-He and Ar-D<sub>2</sub> gas mixtures  
V. Tiron, **C. Costin**, I. Mihaila, G. Popa
- P7-08 The influence of nitrogen gas inclusions on deuterium retention and release properties of Be-W mixed layers  
**P. Dinca**, C. Porosnicu, V. Tiron, B. Butoi, I. Jepu, O.G. Pompilian, I. Burducea, C.P. Lungu
- P7-09 Nano-porous coatings for gas retention studies  
**C. Ruset**, E. Grigore, M. Rasinski, E. Fortuna, J. Grzonka, M. Gherendi, C. Luculescu, N.P. Barradas, E.J. da Costa Alves, A. Hakola
- P7-10 Investigation of the He content within W coatings by using GDOES  
**E. Grigore**, C. Ruset, M. Gherendi, M. Firdaouss, A. Weckmann

- P7-11 Thermophysical properties of W based plasma facing materials for fusion reactors  
**M. Galatanu**, M. Enculescu, G. Ruiu, A. Galatanu
- P7-12 Cracks and nanodroplets produced on tungsten surface by dense plasma jets  
**A. Scurtu**, N. Udrea, C. Luculescu, M. Gălățanu, A. Gălățanu, D. Ticoș, C.M. Ticoș
- P7-13 Lost alpha particle monitor for JET. A conceptual design  
**S. Soare**, V.L. Zoita, V. Braic, T. Craciunescu, D. Falie, V. Golonorod'ko, V. Kiptily, I. Lengar, R.C. Pereira, V. Yavorskij, I. Zychor, N. Balshaw, D. Croft, A. Cufar, M. Curuia, A. Fernandes, J. Figueiredo, Y. Krivchenkov, N. Lam, C. Marren, S. Mianowski, V. Riccardo, K. Schoepf, Z. Stancar, L. Swiderski, V. Thompson, and JET contributors (EUROfusion Consortium, JET, Culham Science Centre, Abingdon, OX14 3DB, UK)
- P7-14 JET plasma influence on the beryllium/nickel marker tiles  
**O.G. Pompilian**, I. Jepu, P. Dinca, B. Butoi, C. Porosnicu, A. Niculescu, C.P. Lungu

#### Topic 8: Laser plasmas and their applications

- P8-01 Plasma Diagnostics Interferometry for 10 PW Laser driven electron acceleration  
**S. Balascuta**, G. Acbas
- P8-02 Polylactide-co-caprolactone based coatings deposited by Matrix Assisted Pulsed Laser Evaporation: an optimization study  
**S. Brajnicov**, P. Neacsu, V. Dinca, V. Marascu, A. Bonciu, A. Cimpean, M. Dinescu
- P8-03 Combinatorial deposition by PLD and investigation of W, Mg, C composite for plasma-facing materials (PFM)  
**L.N. Dumitrescu**, V. Ion, A. Moldovan, D. Colceag, A. Bonciu, M. Dinescu
- P8-04 Plasma treatment of layered double hydroxides thin films deposited by laser techniques  
**A. Matei**, R. Birjega, D.D. Baciuc, A. Vlad, A. Marinescu, M. D. Ionita, R. Zavoianu, M. Dinescu
- P8-05 Polymeric guiding system obtained by laser direct writing  
**A. Matei**, F. Jipa, B. Calin, M. Zamfirescu, M. Dinescu, B. Mitu, V. Marascu, J. Heitz, C. Plamadeala
- P8-06 Conceptual design of electron spectrometer for laser-plasma experiments  
**M.L. Mitu**, N. Iacob, C.M. Ticos
- P8-07 Mobilization of tungsten particles by ns laser pulses and imaging of plasma dynamics  
A. Bercea, A. Palla-Papavlu, **F. Stokker-Cheregi**, M. Dinescu, T. Acsente, C. Grisolia, P. Delaporte, G. Dinescu
- P8-08 Effects of excimer laser parameters on carbon laser ablation plasma dynamics  
**C. Ursu**, P.-E. Nica
- P8-09 Modification of Layered Double Hydroxides (LDHs) thin films properties with organic anion chromophore by laser techniques  
I. Tirca, **A. Vlad**, M. Secu, R. Birjega, R. Zavoianu, V. Marascu, A. Marinescu, M. Dinescu

**Contacts:**

In case of need please call one of the following numbers:

004 0743147418 (Gheorghe Dinescu)

004 0742356965 (Daniel Stoica)

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