

CONFERENCE PROGRAMME

TUESDAY, JUNE 27TH - AFTERNOON

14:00 *Opening Ceremony*

Thierry Belmonte, Chair of CIP 2017
Tiberiu Minea, Chair of MIATEC 2017

Plenary #1 - Topic #6 - Plasma for surface engineering

Clio Room

14:10 #S01.1-2O013 - Understanding the effect of Plasma surface charging on the catalytic surface activation of CO₂ from Quantum chemical modelling.

Plenary speaker

K.M. Bal, E.C. Neyts

Univ. Antwerp, Dep. of Chemistry, Research group PLASMANT (BE)

S01.1 - Plasma sources and electrical discharges –Part I

Clio Room

14:55 #S01.1-1I065 - Gasless sputtering – a source of dense metal plasma.

Invited speaker

J. Andersson

Solid State Electronics - Uppsala (SE)

15:30 #S01.1-2O013 - Modelling of subnanosecond discharges in air.

G. Naidis, N. Babaeva

Joint Institute for High Temperatures Russian Academy of Sciences - Moscow (RU)

15:50 #S01.1-3O093 - Simulations of magnetron plasmas with an energy-conserving particle-in-cell code.

D. Eremin

Ruhr-Univ. Bochum (DE)

16:10 Coffee break 30'

SVTM Exhibition hall – Level 2

CONFERENCE PROGRAMME

TUESDAY, JUNE 27TH - AFTERNOON

14:00 *Opening Ceremony*

Thierry Belmonte, Chair of CIP 2017
Tiberiu Minea, Chair of MIATEC 2017

Plenary #1 - Topic #6 - Plasma for surface engineering

Clio Room

14:10 **#S01.1-20013 - Understanding the effect of Plasma surface charging on the catalytic surface activation of CO₂ from Quantum chemical modelling.**

Plenary speaker

K.M. Bal, E.C. Neyts

Univ. Antwerp, Dep. of Chemistry, Research group PLASMANT (BE)

S02.1 - Plasma and process modeling – Part I

Thalie Room

14:55 **#S02.1-11086 - The role of vibrational kinetics in pulsed discharge.**

Invited speaker

G. Colonna

PLASMI Lab at CNR-NANOTEC - Bari (IT)

15:30 **#S02.1-20016 - Gas heating mechanisms in N₂ plasmas.**

C. Pintassilgo¹, V. Guerra²

¹ *Instituto de Plasmas e Fusão Nuclear, Instituto Superior Técnico, Univ. Lisboa and Dep. de Engenharia Física, Faculdade de Engenharia, Univ. Porto (PT)*

² *Instituto de Plasmas e Fusão Nuclear, Instituto Superior Técnico, Univ. Lisboa (PT)*

15:50 **#S02.1-30049 - Diffusion model for carbon dioxide vibrational kinetics in low temperature plasmas.**

P. Diomede¹, R. van De Sanden¹, S. Longo²

¹ *DIFFER – Dutch Institute for Fundamental Energy Research - Eindhoven (NL)*

² *Dipartimento di Chimica, Università degli Studi di Bari (IT)*

16:10 *Coffee break 30'*

SVTM Exhibition hall – Level 2

- 16:40 #S01.2-1O126 - Cathode sheath characteristics in a non-sputtering magnetron discharge.
A. Kaziev
National Research Nuclear Univ. MEPhI (Moscow Engineering Physics Institute) (RU)
- 17:00 #S01.2 -2O041 - Magnetron plasma heating facilitated by a double layer of spoke.
M. Panjan¹, **A. Anders**²
¹ *Jozef Stefan Institute - Ljubljana (SI)*
² *Lawrence Berkeley National Lab. - Ljubljana (SI)*
- 17:20 #S01.2-3O070 - Suppression of target poisoning in reactive HiPIMS discharges
V. Stranak¹, **Z. Hubicka**², **M. Cada**², **P. Ksirova**², **J. Kratochvil**¹, **P. Sezemsky**¹, **J. Olejnicek**²
¹ *University of South Bohemia - Ceske Budejovice (CZ)*
² *Academy of Science of the Czech republic - Prague (CZ)*
- 17:40 #S01.2-4O104 - High temperature magnetron sputtering of a Nickel target above the Curie Temperature.
A. Caillard, **M.E. El'mokh**, **T.L. Lecas**, **A.L. Thomann**
GREMI CNRS/Univ. Orléans (FR)
- 18:00 #S01.2-5O105 - Investigations into the relationship between hipims pulse current characteristics, microturbulence and plasma self-organization: experiments and pseudo-3D simulations.
S. Tsikata¹, **T. Minea**², **A. Revel**²
¹ *ICARE, CNRS UPR 3021 - Orléans (FR)*
² *LPGP, Univ. Paris-Sud, Univ. Paris-Saclay (FR)*

19:45 Gala Dinner*«Palais de la Méditerranée» - 13 Promenade des Anglais (Nice)*

S02.2 - Plasma and process modeling – Part II**Thalie Room**

- 16:40 #S02.2-1O061 - A complete simulation of deep Silicon etching using Bosch process.
G. Le Dain¹, **A. Rhallabi**², **M. Boufnichel**³, **F. Roqueta**³
¹ CNRS-IMN/STMicroelectronics - Nantes (FR)
² CNRS-IMN - Nantes (FR)
³ STMicroelectronics - Tours (FR)
- 17:00 #S02.2-2O081 - Lumped circuit model for radio frequency magnetron discharges.
D. Engel, **D. Krueger**, **R.P. Brinkmann**
¹ Institute of Theoretical Electrical Engineering, Ruhr-Univ. Bochum (DE)
- 17:20 #S02.2-3O091 - A study of the oxygen dynamics in a reactive Ar/O₂ high power impulse magnetron sputtering discharge using an ionization region model.
T. Minea¹, **J.T. Gudmundsson**², **N. Brenning**³, **M. Raadu**³, **D. Lundin**¹
¹ Lab. de Physique des Gaz et Plasmas - LPGP, Univ. Paris-Sud, Univ. Paris-Saclay(FR)
² Science Institute, Univ. of Iceland,- Reykjavik (IS)
³ Dep. of Space and Plasma Physics, School of Electrical Engineering, KTH - Royal Institute of Technology - Stockholm (SE)
- 17:40 #S02.2-4O095 - Model based optimization of the film thickness homogeneity in sputter processes.
A. Pflug¹, **T. Melzig**¹, **M. Siemers**¹, **T. Zickenrott**¹, **S. Bruns**¹, **C. Britze**¹, **M. Vergöhl**¹,
V. Kirschner²
¹ Fraunhofer IST - Braunschweig (DE)
² ESTEC - Noordwijk (NL)
- 18:00 #S02.2-5O097 – 2D pic-mcc modeling of HiPIMS plasma including sputtered particles
A. Revel¹, **T. Minea**¹, **L. De Poucques**², **J. Bougdira**²
¹ LPGP, Univ. Paris-Sud, Univ. Paris-Saclay - Orsay (FR)
² Univ. de Lorraine, Institut Jean Lamour, Faculté des Sciences et Technologies - Vandoeuvre-Lès-Nancy (FR)
- 19:45 Gala Dinner**
«Palais de la Méditerranée» - 13 Promenade des Anglais (Nice)

WEDNESDAY, JUNE 28TH - MORNING

Plenary #2 - Topic #3 - Plasma diagnostics and plasma processes

Clio Room

08:30 #PL2-03_085 - Self-organisation phenomenon in magnetron sputtering plasmas.

Plenary speaker

A. Hecimovic, C. Maszl, V. Schulz-Von Der Gathen, A. von Keudell

Ruhr-Univ. Bochum (DE)

S05.1 - Plasma-deposited coatings for optical, electronical and other functionalities – Part I

Clio Room

09:15 #S05.1-1I027 - Pulsed Laser Deposition: a flexible tool for the synthesis of advanced functional materials.

Invited speaker

M. Chaker, N. Emond, B. Torriss

INRS-EMT - Varennes (CA)

09:50 #S05.1-2O078 - Titanium dioxide films deposited by atmospheric pressure PECVD torch: comparison of the static and the dynamic modes

A. Perraudau, C. Dublanche-Tixier, C. Chazelas, P. Tristant

Univ. Limoges (FR)

10:10 *Coffee break 20'*

SVTM Exhibition hall – Level 2

WEDNESDAY, JUNE 28TH - MORNING

Plenary #2 - Topic #3 - Plasma diagnostics and plasma processes

Clio Room

08:30 #PL2-03_085 - Self-organisation phenomenon in magnetron sputtering plasmas.

Plenary speaker

A. Hecimovic, C. Maszl, V. Schulz-Von Der Gathen, A. von Keudell

Ruhr-Univ. Bochum (DE)

S03.1 - Plasma diagnostics and plasma processes – Part I

Thalie Room

9:15 #S03.1-11067 - Electric field measurements in atmospheric pressure plasmas.

Invited speaker

A. Sobota¹, **E. Slikboer**², **Y. Nguyen**¹, **M. Hofmans**¹, **G. Sretenovic**³, **V. Kovacevic**³,
I. Krstic³, **A. Obrusnik**⁴, **O. Guaitella**⁵, **E. Garcia-Caurel**⁶

¹ Eindhoven Univ. of Technology (NL)

² UPMC, Univ. Paris-Saclay (FR)

³ Univ. of Belgrade, Faculty of Physics (RS)

⁴ Dep. of Physical Electronics at the Faculty of Science, Masaryk Univ. - Brno (CZ)

⁵ LPP, CNRS, Ecole Polytechnique, UPMC, Univ. Paris-Saclay (FR)

⁶ LPICM, CNRS, Ecole Polytechnique, Univ. Paris-Saclay (FR)

9:50 #S03.1-20004 - Reactive HiPIMS process characterisation by temporally resolved ion flux and impedance measurements.

M. Cada¹, **D. Lundin**², **Z. Hubicka**¹

¹ Institute of Physics of the AS CR - Prague (CZ)

² Lab. de Physique des Gaz et des Plasmas, CNRS - Univ. Paris-Sud (FR)

10:10 **Coffee break 20'**

SVTM Exhibition hall – Level 2

- 10:30 #S05.2-1O025 - Barrier properties of silicon oxide film deposited by RF plasma polymerization.
T. Tran¹, **F. Poncin-Epaillard**¹, **D. Debarnot**¹, **S. Marais**², **K. Fatyeyeva**², **B. Diawara**²
¹ Lab. of Polymères Colloïdes Interfaces (PCI)-IMMM, Univ. Maine (FR)
² Lab. of Polymères, Biopolymères, Surfaces (PBS), Univ. Rouen - (FR)
- 10:50 #S05.2-2O026 - Synthesis, structural and morphological characterizations of plasma polymers / metal nanocomposites.
A. Mansour, **F. Poncin-Epaillard**, **D. Debarnot**
Lab. of Polymères Colloïdes Interfaces (PCI) - Le Mans (FR)
- 11:10 #S05.2-3O031 - Copper nanoparticle-based composites for the production of antibacterial and non-fouling surfaces
D. Nikitin¹, **A. Choukourov**¹, **P. Pleskunov**¹, **V. Titov**², **E. Sysolyatina**³, **S. Ermolayeva**³,
J. Hanus¹, **A. Shelemin**¹, **D. Slavínská**¹, **H. Biederman**¹
¹ Charles Univ. in Prague, Faculty of Mathematics and Physics - Prague (CZ)
² G. A. Krestov Institute of Solution Chemistry of the Russian Academy of Sciences - Ivanovo (RU)
³ Gamaleya Institute of Epidemiology and Microbiology - Moscow (RU)
- 11:30 #S05.2-4O032 - Monodispersed plasma polymer nanoparticles with tailored chemical composition.
A. Shukurov, **D. Nikitin**, **P. Pleskunov**, **A. Shelemin**, **J. Hanus**, **D. Slavinska**, **H. Biederman**
Charles Univ., Faculty of Mathematics and Physics, Dep. of Macromolecular Physics - Prague (CZ)
- 11:50 #S05.2-5O094 - Study of the first growth steps of carbonitride SiCN:H films deposited from Tetramethylsilane / Ammonia microwave plasmas
Y. Gazal¹, **B. Plujat**², **C. Cardinaud**¹, **S. Quoizola**², **J. Hamon**¹, **E. Hernandez**², **A. Bousquet**³,
A. Granier¹, **A. Goulet**¹, **L. Thomas**²
¹ Institut des Matériaux Jean Rouxel (IMN-CNRS), Univ. Loire - Nantes (FR)
² Lab. PROMES-CNRS, Univ. Perpignan Via Domitia (FR)
³ Institut de Chimie de Clermont-Ferrand (ICCF-CNRS), Univ. Blaise Pascal (FR)

12:10 Lunch

10:30 #S03.2-1I011 - Understanding some aspects of RF driven negative hydrogen ion sources for fusion by means of diagnostics.*Invited speaker***L. Schiesko, C. Wimmer, B. Heinemann, F. Bonomo, U. Fantz***Max-Planck-Institut für Plasmaphysik (DE)***11:05 #S03.2-2O006 - Pressure behavior of distributed electron cyclotron resonance plasmas in nitrogen-hydrogen mixtures.****C. Noël¹, A. Gasco², Y. Yang¹, G. Marcos¹, N. Pecina², S. Simison³, S. Bruhl², T. Belmonte¹, T. Czerwicz¹**¹ *Institut Jean Lamour - Nancy (FR)*² *National Univ. of Technology - Concepción Del Uruguay (AR)*³ *INTEMA (CONICET-UNMdP) - Mar Del Plata (AR)***11:25 #S03.2-3O046 - Electron – ion recombination in low temperature hydrogen/deuterium plasma.****J. Glosik, P. Dohnal, Á. Kálosi, Š. Roucka, R. Plašil***Dept. of Surface and Plasma Science, Faculty of Mathematics and Physics, Charles Univ. Prague (CZ)***11:45 #S03.2-4O062 - Distributed antenna array microwave-plasma process for low-temperature/large-area nanocrystalline diamond film deposition.****F. Bénédic, B. Baudrillart, J. Achard***LSPM-CNRS, Univ. Paris 13, Sorbonne Paris Cité (FR)***12:05 #S03.2-5O066 - Study of polymer deposition in inductively coupled plasma at low pressure for different VOC and hydrocarbons - H₂ - Ar mixture.****W. Faider, J. Piet, T. Meyer, A. Girard, C. Cardinaud***Institut des Matériaux Jean Rouxel (IMN), Univ. Nantes – CNRS (FR)***12:10 Lunch**

WEDNESDAY, JUNE 28TH - AFTERNOON

S06 - Plasma diagnostics and plasma processes

Clio Room

- 14:00 #S06-1I099 - Experimental and numerical investigations of glow discharge plasmas for sputter deposition in superconducting RF cavities.**
Invited speaker
T. Richard¹, **I. Furno**², **A. Sublet**³, **G. Rosaz**³
¹ EPFL/SPC - CERN - Geneva (SZ)
² EPFL/SPC - Lausanne (SZ)
³ CERN - Geneva (SZ)
- 14:35 #S06-2O015 - Target potential screening during reactive sputtering.**
C. Corbella¹, **A. Marcak**¹, **T. De Los Arcos**², **A. von Keudell**¹
¹ Ruhr-Univ. Bochum (DE)
² Univ. Paderborn (DE)
- 14:55 #S06-3O038 - Toxic chemical-free Si etching by narrow gap hydrogen plasma toward Si wafer thinning process.**
H. Ohmi, **N. Takei**, **K. Kimoto**, **H. Kakiuchi**, **K. Yasutake**
Osaka Univ. - Suita (JP)
- 15:15 #S06-4O050 - Experiments and simulations of He⁺ implantation into tungsten at low fluxes: influence of the ion kinetic energy**
A-L. Thomann¹, **L. Pentecoste**¹, **P. Desgardin**², **A. Caillard**¹, **T. Lecas**¹, **M.F. Barthe**², **P. Brault**¹
¹ GREMI CNRS/univ. Orléans (FR)
² CEMHTI CNRS - Orléans (FR)
- 15:35 #S06-5O068 - Smart coatings with interfacial thermoreversible properties.**
M. Vauthier¹, **K.F.A. Clancy**¹, **L. Jierry**², **V. Roucoules**¹, **F. Bally-Le Gall**¹
¹ Institut de Science des Matériaux de Mulhouse (FR)
² Institut Charles Sadron - Strasbourg (FR)
- 15:55 #S06-6O100 - Plasma treatment of poly(ethylene glycol-co-1,3/1,4 cyclohexanedimethanol terephthalate) for surface and adhesion improvement.**
H. Salapare¹, **F. Guittard**¹, **J. Balbarona**², **H.S. Cosiñero**³, **B.A. Suarez**⁴, **M. Bacaoco**⁵, **J.A. Nuñez**⁶, **H. Ramos**⁷
¹ N.I.C.E. Lab, Univ. de Nice-Sophia Antipolis - Nice (FR)
² Dep. of Mechanical Engineering, Univ. Philippines Diliman (PH)
³ Materials Science and Engineering Program, College of Science, Univ. Philippines Diliman - (PH)
⁴ Graduate School of Science and Engineering, Doshisha Univ., KyotonabeG - Kyoto (JP)
⁵ National Institute of Physics, College of Science, Univ. Philippines (PH)
⁶ Dep. of Physical Sciences and Mathematics, Univ. Philippines Diliman (PH)
⁷ Technology Management Center, Univ. Philippines Diliman (PH)
- 16:15 #S06-7O112 - Surface engineering of bromine-based plasma polymer films: a step toward high thiol density containing organic layers.**
D. Thiry¹, **M. Pouyanne**¹, **D. Cossement**², **A. Hemberg**², **R. Snyders**¹
¹ Chimie des Interactions Plasma Surface - Mons (BE)
² Materia Nova Research Center - Mons (BE)
- 16:35 Coffee break 30'**
SVTM Exhibition hall – Level 2
- 17:00 Poster Session**
Muses area

WEDNESDAY, JUNE 28TH - AFTERNOON**S11 - Industrial plasma - Hot topics****Thalie Room****14:00 #S11-1I107 - Technology specifications for large area industrial PVD coatings.***Invited speaker***A. Kharchenko***Saint-Gobain Recherche - Aubervilliers (FR)***14:35 #S11-2I130 - Plasma conversion to electrify chemical industry.***Invited speaker***G. van Rooij***Dutch Institute for Fundamental Energy Research DIFFER - Eindhoven (NL)***15:10 #S11-3O014 - Revealing structures and embedded interfaces with pulsed RF GDOES.****P. Chapon, S. Gaiaschi***HORIBA - Palaiseau (FR)***15:30 #S11-4O077 - Influence of the magnetic field on the DC sputtering efficiency of an Inverted Cylindrical Magnetron (ICM)****T. Le Coz¹, C. Vachey¹, S. Grosso², A. Bès³, A. Lacoste³, M. Mantel¹**¹ *Ugitech S.A. Ugine (FR)*² *Univ. Grenoble Alpes, CNRS, Grenoble INP*, SIMaP (FR)*³ *LPSC, Univ. Grenoble-Alpes (FR)***S11 - Industrial plasma - Hot topics – Flash presentations****Thalie Room****15:50 #S11-6O133 - Nano-ordered thin films achieved by soft atmospheric plasma polymerization.****C. Becker***Funcoats - Luxembourg (FR)***16:05 #S11-O131 - An ECR plasma cavity the size of a thumb as building block for beams of any size and shape.****M. Bronsgeest***Polygon Physics - Grenoble (FR)***16:20 #S11-7O139 - Monitoring and control of vacuum processes using a remote plasma emission spectroscopy based sensor.****F. Meyer***Genco Ltd, Liverpool (UK)***16:35 Coffee break 30'***SVTM Exhibition hall – Level 2***17:00 Poster Session***Muses area*

THURSDAY, JUNE 29TH - MORNING**Plenary #3 - Topic #2 - Plasma and process modeling****Clio Room****08:30 #PL3-02_128 - Fundamental properties of TM nitrides: materials design strategies for extreme properties.***Plenary speaker***J.E. Greene^{1,2,3}**¹ Depts. of Materials Science and Physics, Univ. of Illinois - Urbana (USA)² Physics Dep., Linköping Univ. (SE)³ Mat. Sci. Dept, National Taiwan Univ. of Science & Technology - Taipei (CH)**S08.1 - Plasma nanoscience and nanotechnologies – Part I****Clio Room****9:15 #S08.1-1I121 - Thin film growth dynamics probed by real-time diagnostics.***Invited speaker***G. Abadias¹, J.J. Colin¹, C. Furgeaud¹, A. Jamnig¹, A. Michel¹, L. Simonot¹, B. Krause²**¹ Institut Pprime, CNRS-Univ. de Poitiers-ENSMA - Chasseneuil-Futuroscope (FR)² Institut für Photonenforschung und Synchrotronstrahlung - Kit, Karlsruhe (DE)**09:50 #S08.1-2O023 - Cryogenic etching applied to the realization of high density capacitor with a homopolymer mask****M. Kulsreshath¹, C. Sinturel², P. Lefauchaux¹, M. Vayer², T. Tillocher¹, M. Boufnichel³, R. Dussart¹**¹ GREMI - Univ Orleans - CNRS (FR)² ICMN - Univ Orleans - CNRS (FR)³ STMicroelectronics - Tours (FR)**10:10 Coffee break 20'***Muses area*

THURSDAY, JUNE 29TH - MORNING

Plenary #3 - Topic #2 - Plasma and process modeling

Clio Room

08:30 #PL3-02_128 - Fundamental properties of TM nitrides: materials design strategies for extreme properties.

Plenary speaker

J.E. Greene^{1,2,3}

¹ Depts. of Materials Science and Physics, Univ. of Illinois - Urbana (USA)

² Physics Dep., Linköping Univ. (SE)

³ Mat. Sci. Dept, National Taiwan Univ. of Science & Technology - Taipei (CH)

S04 - Plasma-deposited protective and tribological coatings

Thalie Room

9:15 #S04-1I129 - From hard coatings to optimized cutting tools.

Invited speaker

A. Djouadi

Institut des Materiaux Jean Rouxel (FR)

09:50 #S04-2O030- DLC coatings deposited by HiPIMS in Deep Oscillations Magnetron Sputtering (DOMS) mode.

J. Oliveira, F. Fabio, A. Cavaleiro

SEG-CEMMPRE - Dep. of Mechanical Engineering, Univ. Coimbra (PT)

10:10 Coffee break 20'

Muses area

S08.2 - Plasma nanoscience and nanotechnologies – Part II

Clio Room

- 10:30 #S08.2-1O010 - Hybrid multifunctional nanocomposite coatings by aerosol-assisted atmospheric cold plasma deposition: preparation, characterization and applications.
D. Ruch
Luxembourg Institute of Science and Technology - Esch/alzette (LU)
- 10:50 #S08.2-2O019 - Atmospheric pressure plasma activation: study of the treatment durability and its influence towards the practical adhesion of metallic thin films on PEEK surfaces.
D. Gravis¹, **J.F. Coulon**¹, **F. Poncin-Epaillard**²
¹ *ECAM - Rennes (FR)*
² *IMMM - Le Mans (FR)*
- 11:10 #S08.2-3O043 - Nanoporous gold thin films as a platform for the detection of small molecules.
A. Chauvin, J.Y. Mevellec, B. Humbert, P.Y. Tessier, A.A. El Mel
Institut des Matériaux Jean Rouxel, Univ. Nantes (FR)
- 11:30 #S08.2-4O059 - Material analysis by virtual coating materials.
M. Jupé, H. Badorreck, D. Ristau
Laser Zentrum Hannover e.V. (DE)
- 11:50 #S08.2-5O087 - Plasma enhanced sodium storage performance of vertical WS₂ nanosheets on three dimensional graphene nanostructure with quantum dots
H. Yang
Singapore Univ. of Technology and Design (SN)
- 12:10 #S08.2-6O029 - Experimental and theoretical study of iron catalysis phenomenon of hydrogen thermodesorption from hydrocarbon films of tokamak T10 plasma discharges
V. Stankevich¹, **L. Sukhanov**², **N. Svechnikov**¹, **A. Lebedev**¹, **K. Menshikov**¹, **B. Kolbasov**¹
¹ *National Research Center "Kurchatov Institute", Moscow (RU)*
² *Institute of Physics and Technology, - Moscow (RU)*

12:30 Lunch**Plenary #4 - Topic #8 - Plasma and nanoscience**

Clio Room

- 13:45 #PL4-08_123 - Development of 1D and 3D supported nanostructures by plasma assisted vacuum deposition: from synthesis to applications.
Plenary speaker
A. Borrás Martos
Instituto de Ciencia de Materiales de Sevilla, CSIC (ES)

14:30 Free visit of the city and French Riviera

S10 - Plasma and liquids**Thalie Room****10:30 #S10-1I080 - Physical and chemical effects of self pulsing discharge generated in liquids.***Invited speaker***F. Krcma**¹, **Z. Kozakova**¹, **J. Horak**¹, **L. Dostal**², **B. Obradovic**³, **A. Nikiforov**⁴¹ Brno Univ. Technology, Faculty of Chemistry (CZ)² Brno Univ. Technology, Faculty of Electrical Engineering and Communication (CZ)³ Univ. Belgrade (RS),⁴ Univ. Ghent (BE)**11:05 #S10-2O007 - Ultra-low density metallic foams synthesized by contact glow discharge electrolysis for laser physic experiments****S. Rocher**¹, **R. Botrel**¹, **F. Durut**¹, **C. Chicanne**¹, **M. Theobald**¹, **V. Vignal**²¹ Commissariat à l'énergie atomique et aux énergies alternatives (CEA) (FR)² Institut Carnot de Bourgogne, CNRS-Univ. (FR)**11:25 #S10-3O012 - Thermo- and photo-oxidation in a liquid treatment system using submerged plasma.****D. Milelli**, **F. Lemont**, **M. Marchand**

CEA Marcoule - Bagnols Sur Cèze (FR)

 canceled**11:45 #S10-4O018- Plasma electrolytic oxidation of TA6V for the improvement of its surface hardness.****M. Laveissière**, **H. Cerda**, **J. Roche**, **L. Arurault**

IRT Saint-Exupéry, Univ. Toulouse III Paul Sabatier (FR)

12:05 #S10-5O009 - Synthesis of cadmium oxide microcubes by nanosecond-pulsed discharges in liquid nitrogen.**H. Kabbara**¹, **M. Trad**¹, **J. Ghanbaja**¹, **C. Noël**¹, **M. Tabbal**², **T. Belmonte**¹¹ Institut Jean Lamour, Université de Lorraine - Nancy (France),² Department of Physics, American University of Beirut - Beirut (Lebanon)**12:30 Lunch****Plenary #4 - Topic #8 - Plasma and nanoscience****Clio Room****13:45 #PL4-08_123 - Development of 1D and 3D supported nanostructures by plasma assisted vacuum deposition: from synthesis to applications.***Plenary speaker***A. Borrás Martos**

Instituto de Ciencia de Materiales de Sevilla, CSIC (ES)

14:30 Free visit of the city and French Riviera

FRIDAY, JUNE 30TH - MORNING

Plenary #5 - Topic #9 - Plasma for solar energy conversion and environmental applications

Clio Room

08:30 Atmospheric pressure PECVD for solar energy conversion.

Plenary speaker

F. Massines, J.F. Lelievre

CNRS PROMES - Perpignan (FR)

S05.3 - Plasma-deposited coatings for optical, electronical and other functionalities – Part III

Clio Room

9:15 Towards Industrial roll-to-roll thin film processing using a high current dielectric barrier discharge

Invited speaker

D. Horwat¹, M. Mickan¹, W. Chamorro¹, U. Helmersson²

¹ *Institut Jean Lamour, Univ. Lorraine - Nancy (FR)*

² *IFM, Linköping Univ. (SE)*

9:50 #S05.3-2O047 - Association of radiofrequency magnetron sputtering and microwave plasma for a-SiC_xN_y:H_z films deposition : process study and correlation with the films properties.

**A. Bachar¹, A. Bousquet¹, C. Robert-Goumet², G. Monier², L. Thomas³, M. Belmahi⁴,
A. Gouillet⁵, E. Tomasella¹**

¹ *Univ. Clermont Auvergne, CNRS, Institut de Chimie de Clermont-Ferrand (FR)*

² *Univ. Clermont Auvergne, CNRS, Institut Pascal (FR)*

³ *PROMES (UPR 8521 CNRS) Technosud Rambla de la Thermodynamique Perpignan (FR)*

⁴ *Institut Jean Lamour UMR CNRS 7198 Univ. de Lorraine (FR)*

⁵ *Institut des Matériaux Jean Rouxel (IMN), Univ. Nantes (FR)*

10:10 Coffee break 20'

Muses area

FRIDAY, JUNE 30TH - MORNING

Plenary #5 - Topic #9 - Plasma for solar energy conversion and environmental applications

Clio Room

08:30 Atmospheric pressure PECVD for solar energy conversion.

Plenary speaker

F. Massines, J.F. Lelievre

CNRS PROMES - Perpignan (FR)

S09.1 - Plasma for solar energy conversion and environmental applications Part I

Thalie Room

9:15 Semiconducting oxide and sulphide thin films deposited by Reactive High Power Impulse Magnetron Sputtering.

Invited speaker

Z. Hubicka¹, S. Kment², M. Cada¹, J. Olejnicek¹

¹ *Institute of Physics, Academy of Sciences of the Czech Republic (CZ),*

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9:50 #S09.1-2O039 - Vibrational energy transfers in low-excitation CO₂ plasmas

**V. Guerra¹, T. Silva¹, M. Grofulovic¹, C.D. Pintassilgo², B.L.M. Klarenaar³, A.S. Morillo-Candas⁴,
R. Engeln³, O. Guaitella⁴**

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⁴ *LPP, Ecole Polytechnique, UPMC, Univ. Paris Sud-11, CNRS – (FR)*

10:10 Coffee break 20'

Muses area

S05.4 - Plasma-deposited coatings for optical, electronical and other functionalities – Part IV **Clio Room**

- 10:30 #S05.4-1O048 - High density diamond-like carbon thin films by Ne-based HiPIMS process: investigations on thermal stability and film stress.
A. Aijaz, T. Kubart
Uppsala Univ. (SE)
- 10:50 #S05.4-2O051 - Electronic quantization in dielectric nanolaminates deposited by ion beam sputtering.
T. Willemsen¹, M. Brinkmann², M. Gyamfi², M. Jupé², D. Ristau²
¹ *Institut für Quantenoptik, Leibniz Univ., QUEST - Hanover (DE),*
² *Laser Zentrum Hannover e.V. (DE)*
- 11:10 #S05.4-3O052 - Structural and electrical characterization of silicon and silicon oxide films prepared in atmospheric-pressure very high-frequency plasma at low temperatures.
H. Kakiuchi, H. Ohmi, K. Yasutake
Osaka Univ. (JP)
- 11:30 #S05.4-4O108 - Photocatalytic properties and nanostructure of TiO₂ thin films deposited at low temperature by PECVD on silicon and PET substrates.
A. Granier¹, N. Gautier¹, T. Leclercq¹, M. Richard-Plouet¹, A. Goulet¹, S. Bulou², P. Choquet²
¹ *IMN, Institut des Matériaux Jean Rouxel, Univ. de Nantes, CNRS (FR)*
² *LIST, Luxembourg Institute of Science and Technology - Belvaux (LU)*
- 11:50 #S05.4-5O114 - Combinatorial thin film deposition system for the rapid exploration of engineered spintronic materials.
A. Styervoyedov, P.J. Zermatten, S.S.P. Parkin
Max Planck Institute of Microstructure Physics - Halle (DE)
- 12:10 #S05.4-6O057 - One-step AP-PECVD process towards the simultaneous synthesis of noble metal nanoparticles and growth of NPs@anatase TiO₂ thin films for visible light photocatalysis applications.
S. Bulou, K. Baba, N. Boscher, P. Choquet
Luxembourg Institute of Science and Technology (LU)
- 12:30 Closing Ceremony**
Ceremony of "Plasma picture prize" & "Student Awards"

S09.2 - Plasma for solar energy conversion and environmental applications Part II

Thalie Room

10:30 #S09.2-1O055 - N-doped titanium oxide thin film synthesis by co-reactive magnetron sputtering for dye-sensitized solar cells applications.

P-A. Cormier¹, **A.P. Panepinto**¹, **J.D. Dervaux**¹, **R.S. Snyders**²

¹ Chimie des Interactions Plasma-Surface, Univ. Mons (BE),

² Chimie des Interactions Plasma-Surface, Univ. Mons, Materia Nova Research Center (BE)

10:50 #S09.2-2O083 - Vibrational kinetics, gas temperature evolution and molecule conversion in CO₂ pulsed glow discharge.

O. Guaitella¹, **A.S. Morillo-Candas**¹, **B.L.M. Klarenaar**², **R. Engeln**², **T. Silva**³, **V. Guerra**³

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S07- Plasma for the life sciences and agriculture

Thalie Room

11:10 Interaction of cold atmospheric pressure plasma with polymers and biomolecules.

Invited speaker

G. Oehrlein¹, **P. Luan**¹, **A. Knoll**¹, **S. Kondeti**², **P. Bruggeman**²

¹ Univ. of Maryland - College Park (USA),

² Univ. of Minnesota - Minneapolis (USA)

11:45 Influence of argon dielectric barrier discharges on degradable ethyl lactate plasma polymers.

Invited speaker

G. Laroche¹, **M. Laurent**¹, **E. Desjardins**², **M. Meichelboeck**¹, **N. Naudé**³, **L. Stafford**², **N. Gherardi**³

¹ Univ. Laval - Québec (CA)

² Univ. de Montréal - Montréal (CA)

³ Univ. de Toulouse III - Toulouse (FR)

12:30 **Closing Ceremony**

Ceremony of "Plasma picture prize" & "Student Awards"