PLATHINIUM

PLASMA THIN FILM INTERNATIONAL UNION MEETING

23-27 September 2019
Antibes, French Riviera

FINAL PROGRAM & EXHIBITORS GUIDE

ORGANIZED BY
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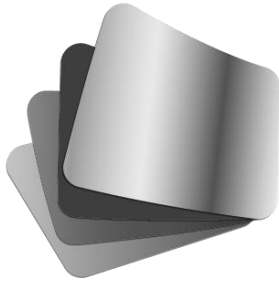

PLATHINIUM

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23 - 27 September 2019

Antibes, French Riviera

www.plathinium.com

19 rue du Renard - F-75004 Paris, France

ISBN: 978-2-918641-21-6
Legal Deposit: December 2019

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WELCOME

Over the last decades, the community of plasma scientists has got closer and closer to the researchers and engineers in thin films science and engineering. Consequently, topics of dedicated conferences, in either plasma science or thin film research, were often overlapping. Therefore, it appeared as necessary to create a scientific event where both communities could exchange and share their knowledge and experience related to their common fields of interest. So was born the **PLA**sma **THIN** film **I**nternational **U**nion **M**eeting, PLATHINIUM, by merging the former three biennial events CIP (Int. Coll. Plasmas Processes), ITFPC (Innovation in Thin Film Processing and Characterization) and MIATEC (Magnetron, Ion and Arc Technology).

Among these former three international meetings, CIP was the oldest one with 21 editions held in France between 1973 and 2017. Entirely devoted to plasma science at the beginning, it progressively introduced applications of plasmas related to material processing over the last decades.

The ITFPC Conference started in 2003 and continued for the 8 editions until 2017 in Nancy (France). ITFPC followed the TATF symposium (international symposium on Trends and Applications of Thin Films) for which 7 editions were organized between 1987 and 2000.

The MIATEC conference was created in 2010 following the symposium “Magnetrons & Arcs” (in French) which started in 1999 in Mons (Belgium) as a joint event between SFV and Belvac. MIATEC was jointly organized with ITFPC in 2011, RSD (Reactive Sputter Deposition) in 2015 and CIP in 2017.

Naturally, all these scientific events organized by the French Vacuum Society (SFV) had an important overlap and therefore PLATHINIUM aims to become the biennial *rendez-vous* in plasma, plasma processing and thin films in Europe and worldwide.

Plasma processes as well as thin films and coatings are developing continuously towards advanced functionality of surfaces, and ever-new applications and complexity, thus laying foundations for various industries of today and the future. Hence, the topics of the conference are selected to address important scientific and societal challenges, to ascertain hot trend topics and to confirm continuous interest in other aspects related to plasma and thin films.

WELCOME

The ten major topics of PLATHINIUM are expected to cover the wide diversity of the domains of plasma, thin films and their applications, including plasma sources, plasma diagnostics and modelling, plasma in liquids, coating growth and modelling, nanostructured thin films, functional coatings, health and bio applications. For all participants, PLATHINIUM provides an open forum to discuss the progress and latest developments in plasmas and thin films science, engineering and technology, and applications.

Over the four days of the conference, the world-renowned scientists in the field will present 6 plenary and 8 keynote lectures. The conference program also includes 78 selected oral contributions and two poster sessions, stimulating efficient exchanges between the academic and industrial participants.

Prior to the scientific sessions, short courses will cover different aspects of plasmas and thin film science and technology in connection with the conference topics.

Have a fruitful event and a pleasant stay in Antibes and the French Riviera.

Welcome at 1st PLATHINIUM!

André ANDERS
Chair of the Scientific Committee

Gérard HENRION
Chair of the Steering Committee

PLATHINIUM
PLASMA THIN FILM INTERNATIONAL UNION MEETING

TABLE OF CONTENT

GENERAL INFORMATION

Practical information

- **Official language**

The conference language is English.

- **Wi-Fi access**

Indicated on your badge provided onsite.

- **Badges**

All delegates, exhibitors and visitors must wear their badges at all times to obtain admittance to the conference venue.

- **Mobile phone**

Please keep your mobile phone turned off or in silent mode in all conference rooms.

- **Publication**

A USB stick containing all abstracts (orals & posters) is distributed in the delegate's bag. The abstract book is also available on your personal registration space on the website.

- **Tourism Office**

Palais des Congrès – level 1
60 chemin des Sables
06160 Juan-les-Pins

Phone: +33 (0)4 22 10 60 01 (press 1)
www.antibesjuanlespins.com/en

- **Opening hours**

Welcome desk – level 2

Monday 23 Sept	08:00 – 20:00
Tuesday 24 Sept	08:30 – 23:00
Wednesday 25 Sept	08:00 – 18:30
Thursday 26 Sept	08:00 – 18:30
Friday 27 Sept	08:00 – 13:00

Exhibition – level 2

Tuesday 24 Sept	09:00 – 23:00
Wednesday 25 Sept	08:30 – 16:30

Disclaimer

The program is preliminary. The organizers reserve the right to alter the program if and as is deemed necessary.

The PLATHINIUM 2019 organization and/or its agents have the right for any reason beyond their control to alter or to cancel, without prior notice, the Conference or any of the arrangements, time tables, plans or other items relating directly or indirectly to the Conference. The PLATHINIUM 2019 organization and/or its agents shall not be liable for any loss, damage, expenditure or inconvenience caused as a result of such alteration or cancellation.

Contacts

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SOCIAL EVENTS

Get together parties

✓ Included in the registration – no booking necessary

- **Welcome reception**

Monday 23 September - 18:30 -20:00

On Monday evening, after the short courses, come to pick your badge and conference material. The organization offers a cocktail to get together over a drink with other attendees.

- **Industrial evening**

Tuesday 24 September - 17:30 – 23:00

At the end of the first day of the conferences, during the Poster session #1, all the exhibitors will be pleased to open the exhibition and welcome you with a cocktail.

- **Poster party - session #2**

Thursday 26 September – 16:00 – 18:00

Finish the last but one day relaxed: after the afternoon break, let's talk with the presenters, of the poster session II, about their work while having a friendly drink.

Conference dinner

× Not included in the registration (€60 incl. VAT extra) - Booking mandatory

Wednesday 25 September at **"Les pirates" Beach restaurant**

Accessible by foot from the congress site, "Les Pirates" Beach Restaurant is a Treasure Island of Gastronomy, nestled in the Pine Park of Juan les Pins, just 5 min. away from the city center of Antibes. Come and discover this magic world of golden sanded beach, its pontoon and solarium on the Mediterranean …

The long white sandy beach of approximately 2000 m^2 is also a mythical location where some of the most famous jazzy artists were during a legendary festival since more than 40 years. With sunbeds turquoise and white, the place is one of the largest in Juan Les Pins, including 2 piers, a solarium and private cabins.

Everything is there to make this moment unforgettable: cocktail on the pier, air-conditioned veranda in front of the sea, delicious cuisine with Provencal and Italian flavours and more than 30 years of know-how, an authentic cuisine and a quality service.

Social activities

Friday 27 September from 14:00
✓ Included in the registration / Booking mandatory

- **Option #1 - Excursion to Grasse**
  International capital of Flowers and Perfume

  - 14:00 / Transfer by bus from to Grasse
  - 15:00 / Guided tour of the Fragonard Perfume Factory
  - 16:15 / Guided tour of Grasse old town
  - 17:45 / Transfer back to Juan-les-Pins

The town of Grasse is said to be the core of the Riviera as well as a model of Provençal culture. The city offers splendid vistas over the shores near Cannes. A “Cité d'Art & d'Histoire,” Grasse is known as the “Capital of Flowers and Perfume.” Clinging to sun drenched hills, this place slowly reveals its charms to those who linger in its picturesque alleyways and welcoming little squares. The historic centre confirms this architectural quality. In the 18th century, perfume making, which took over from the tanneries, blossomed. In the 19th century, flower cultivation and perfume production gave Grasse its international reputation. You will visit one of the oldest perfume factories established in a 19th century building in the heart of the old town where perfumes and soaps are crafted everyday.

- **Option #2 - Walking tour on the coastal path “sentier de Tire-Poil”**
  Immerse in the nature of the Cap d’Antibes

  - 14:00 / Transfer from the Congress site to a bus tour around the Cap d’Antibes
  - 14:45 / Hiking on the coastal path
  - 17:15 / Transfer back to Juan-les-Pins

Discover with a guide the landscapes, the points of view and the remarkable species of the Tire-Poil path. Sea Lavendar, Jupiter Beard, Common Tern… these are the suggestive names which indicate the natural wealth of this little paradise on the Mediterranean coast. You will meet native and exotic plants and will learn to respect the protected species present on the Cap d’Antibes. A naturalistic, educational, playful and sports activity for everybody!

- **Option #3 - Excursion to Saint Paul de Vence**

  - 14:00 / Departure from the Congress site by coach to St Paul de Vence
  - 14:45 / Guided Tour of the village
  - 16:30 / Guided Tour of the Maeght Foundation
  - 18:00 / Transfer back to Juan-les-Pins Convention Center

Perched on a hill overlooking the countryside and the sea, Saint-Paul de Vence is a historic village to discover and enjoy. All year round, its alleyways and ramparts are perfect for wandering and discovering the artists who have left their mark on the village, and those which continue to do so today. If Saint-Paul de Vence is a creative place, the village is also a cultural destination: its Maeght Foundation, museums and heritage are evidence of a rich history and an artistic tradition going back over a hundred years.The prestigious Maeght Modern Art Foundation, nestled in nature, brings together an important collection of paintings and sculptures of modern and contemporary art. The architecture of Josep Lluis Sert and the gardens are forming a peaceful and harmonious setting for the works of Calder, Chagall, Braque, Giacometti, Miró...

PROGRAM INFORMATION

Codes & topics

In the scientific program, the PLATHINIUM conference has been organized around 10 topics:

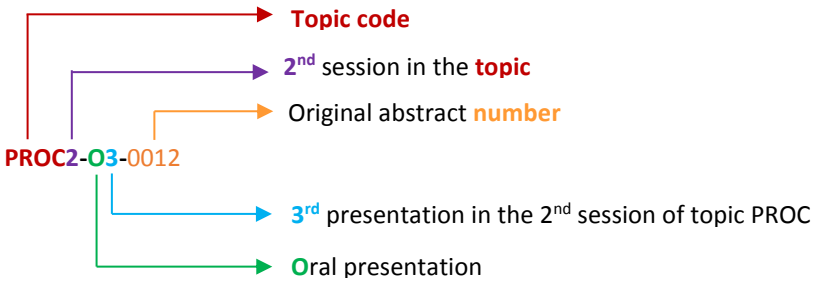
DEPO	Plasma - deposited coatings for optical, electronical and other functionalities
GROM	Thin films growth and modelling
HELI	Health and life science
INDU	Industrial hot topics
LIQU	Plasma and liquids
NANO	Nanomaterials and nanostructured thin films
PROC	Process control (including plasma diagnostics, plasma modelling)
SOUR	Plasma sources and electrical discharges
SURF	Plasma - surface interactions
TRIB	Plasma - deposited protective and tribological coatings

Key to lecture

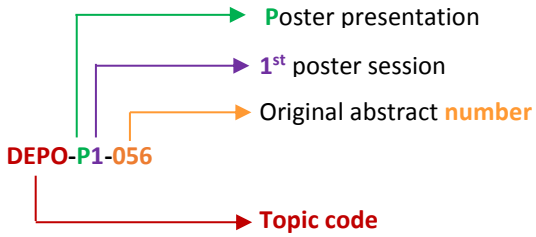
- **Type of presentations**

PL	Plenary talk	O	Oral presentation
K	Keynote lecture	P	Poster presentation

- **Lecture numbers**



- **Poster numbers**



Instructions for authors

- **Oral Presentations**

  Durations (including discussions)

  - Plenary talk 40 minutes
  - Keynote Lectures 30 minutes
  - Oral Presentations 20 minutes

  Lectures must be presented **in English.**

  Each speaker must ensure that presentation (including 5 min for questions) is not longer than stipulated in the program. The chairpersons will be strict on timing.

  There is no preview system for the conference. All speakers have to **load their presentation file on the laptop available on the session room, preferably on the half day before the start in the session room.**

  PowerPoint projection will be available in the session rooms which are equipped with a laptop computer and a projector. Overhead projection and slide projection are not available. All the hardware will be provided by the Congress to ensure consistency in technical quality and allow for quick and smooth transition between the speakers.

  Please note that **only the computers provided on site can be used**.

  The video files attached to the presentation must be located in the same folder as the presentation files.

  Presentation's Privacy: at the end of the Congress, ALL presentations and associated fills will be deleted.

- **Poster Presentations**

  Each poster must be in the size of **0.85 m in width and 1.2 m in height (A0).**

  The author's name and affiliation and the title of the paper must be indicated in the top section of the poster.

  The posters will be presented and numbered according to the poster programme. The poster number will be displayed on top of the board. Writing or painting on the poster board is not allowed.

  All posters will be displayed during all the conference days (Tuesday until Friday). However, focus will be made with 2 poster sessions on:

  - **P1 / Session #1** with exhibition cocktail / Tuesday 24 from 17:10 until 23:00
  - **P2 / Session #2** with refreshments / Thursday 26 from 16:00 until 18:00

  Presenters are expected to be next to their poster during the session (P1 or P2) assigned to their poster (information sent by email & available on the detailed program & registration space).

  Posters should be mounted from Tuesday 24 September 2019 at 10:00 and should be removed by 19:00 on Thursday 26 September 2019.

PLATHINIUM
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Invited lectures

- **Plenary speakers**

In ANTIPOLIS AUDITORIUM

Grégory ABADIAS **PL2 // TUE 24 -14:00**
Pprime Institute, Poitiers (FR)
Thin film growth dynamics: stress and beyond

Cristina CANAL **PL3 // WED 25 – 8:40**
UPC Barcelona (ES)
Current approach to osteosarcoma therapy with cold plasmas and biomaterials

Timo GANS **PL5 // THU 26 – 8:40**
Univ. York (UK)
Controlled plasma dynamics and chemical kinetics in low temperature plasmas for environmental & healthcare technologies

Achim von KEUDELL **PL4 // WED 25 – 14:00**
Univ. Bochum (DE)
Non-equilibrium plasma chemistry - from atmospheric pressure plasmas to high pressure plasmas in liquids

Mark KUSHNER **PL6 // FRI 27 – 8:40**
Univ. Michigan, Ann Arbor (US)
Attempts by modeling to maintain Moore's law in microelectronics processing

Eugen STAMATE **PL1 //TUE 24 – 9:20**
TU Denmark, Roskilde (DK)
Optoelectronic properties of aluminum doped zinc oxide thin films deposited by disk and rotatable magnetron sputtering cathodes at medium and radio frequency

- **Keynote speakers**

Martin AMBERG ANTIPOLIS AUDITORIUM
Empa, St.Gallen (CH) DEPO2-K1-024 // TUE 24 – 16:10
Thermosensitive color-changing coatings for textile sensors

Simon BULOU ELLA FITZGERALD ROOM
LIST, Esch sur Alzette (LU) NANO3-K1-069 // FRI 27 – 10:30
One step gold nanoparticles synthesis and deposition from an atmospheric pressure microwave PECVD – Applications to the fast and low cost production SERS substrates

Martin FENKER
FEM, Schwäbisch Gmünd (DE)
ANTIPOLIS AUDITORIUM
DEPO4-K1-039 // WED 25 – 16:10

Influence of nitrogen incorporation on physical and electrical properties of a-C:H films deposited by a plasma beam source

Martin MICKAN
GREMI, Univ. Orléans (FR)
ANTIPOLIS AUDITORIUM
DEPO5-K1-116 // THU 26 – 14:00

Deposition of Gadolinia-doped Ceria thin films by reactive DC magnetron and High Power Impulse Magnetron Sputtering

Yevgeny RAITSES
Princeton Plasma Physics Lab., Princeton (US)
ELLA FITZGERALD ROOM
NANO1-K1-093 // WED 25 – 16:10

Synthesis of boron nitride and boron-carbon-nitride nanomaterials by arc discharge

Patrice RAYNAUD
LAPLACE, Univ. Toulouse (FR)
ELLA FITZGERALD ROOM
GROM2-K1-130 // THU 26 – 14:00

A comparative study of metal oxide and metal oxide/silica thin films deposited by LP microwave plasma process from metalorganic precursors (Zirconium Tetra tert-Butoxide and Titanium Tetra Isopropoxide)

Thibaut RICHARD
CERN, Geneva (CH)
ANTIPOLIS AUDITORIUM
PROC3-K1-106 // FRI 27 – 10:30

Numerical modelling of DC magnetron discharges applied to Nb/Cu coatings in superconducting radio-frequency cavities

Petr VASINA
Univ. Masaryk, Brno (CZ)
ELLA FITZGERALD ROOM
TRIB2-K1-065 // TUE 24 – 16:10

Hard and fracture resistant metal-boron-carbon based coatings deposited by industrial sputtering system

PLATHINIUM

PLASMA THIN FILM INTERNATIONAL UNION MEETING

DETAILED PROGRAM

- Tuesday 24 September
- Wednesday 25 September
- Thursday 26 September
- Friday 27 September

Tuesday 24 September

9:00 – 12:10

9:00 Opening ceremony — ANTIPOLIS AUDITORIUM

Chair: A. Anders

9:20 **PLENARY TALK //** Optoelectronic properties of aluminum doped zinc oxide thin films deposited by disk and rotatable magnetron sputtering cathodes at medium and radio frequency
E. Stamate [1], K. Norrman [1], P. Norby [1]
Technical University of DK - Kgs. Lyngby (DK)

10:00 COFFEE BREAK

DEPO 1/5 Plasma-deposited coatings for optical, electronical and other functionalities – Part I — ANTIPOLIS AUDITORIUM

Chair: E. Stamate

10:30 DEPO1-O1-023 ● Radiofrequency reactive magnetron sputtering of bismuth in an $Ar/O_2/CF_4$ plasma for depositing photocatalytic thin films
S. Ibrahim [1], A. Bousquet [1], P. Bonnet [1], E. Tomasella [1], M. Sarakha [1], T. Sauvage [2]
[1]Université Clermont Auvergne, Institut de Chimie de Clermont-Ferrand (ICCF) (FR)
[2]CNRS/CEMHTI Site Cyclotron, Orléans (FR)

10:50 DEPO1-O2-025 ● Effects of sputtering gas environment on the nucleation and growth, optical properties, and durability of thin film silver mirrors
K. Folgner [1], C.T. Chu [1], S. Sitzman [1], Z. Lingley [1], P. Adams [1], J. Barrie [1]
Aerospace Corporation - El Segundo (US)

11:10 DEPO1-O3-048 ● Thermochromic VO_2 films obtained by the oxidation of reactively sputter-deposited VN in a semi-industrial machine
A. García Wong [1], D. Pilloud [1], S. Bruyère [1], F. Capon [1], J.F. Pierson [1]
Institut Jean Lamour, Université de Lorraine - Nancy (FR)

11:30 DEPO1-O4-014 ● Titanium oxide based coatings used for improving the decorative properties of orthodontic wires
V. Suciu [1], D. Cristea [1], T. Bedo [1], C. Gabor [1], J. Borges [2], D. Costa [2], F. Vaz [2], D. Munteanu [1]
[1]University Transilvania - Brasov (RO)
[2]University Minho - Braga (PT)

11:50 DEPO1-O5-061 ● Characterization of Nb/Cu coatings in HiPIMS with application of a positive pulse
F. Avino [1], S. Calatroni [1], A.M. Charlety [1], A. Grudiev [1], H. Neupert [1], G. Rosaz [1], A. Sublet [1], M. Taborelli [1], C. Yin Vallgren [1]
CERN - Meyrin (CH)

12:10 LUNCH

Tuesday 24 September

9:00 – 12:10

10:00 COFFEE BREAK

PROC 1/3 - Process control (including plasma diagnostics, plasma modelling)

ELLA FITZGERALD ROOM

Chair: T. Richard

10:30 PROC1-O1-142 ● On three different ways to quantify the degree of ionization in sputtering magnetrons
D. Lundin [1], A. Butler [1], N. Brenning [2], M. Raadu [2], J.T. Gudmundsson [3], T. Minea [1]
[1]Laboratoire de Physique des Gaz et Plasmas, CNRS/Univ. Paris-Sud - Orsay (FR)
[2]Department of Space and Plasma Physics, School of Electrical Engineering and Computer Science, KTH Royal Institute of Technology - Stockholm (SE)
[3]Science Institute, University of Iceland - Reykjavik (IS)

10:50 PROC1-O2-115 ● Characterization of a distributed antenna array microwave plasma used for low-temperature/large-area nanocrystalline diamond film deposition
D. Dekkar [1], F. Bénédic [1], X. Aubert [1], S. Béchu [2], A. Bès [2]
[1]LSPM-CNRS, Université Paris 13, Sorbonne Paris Cité - Villetaneuse (FR)
[2]Université Grenoble Alpes, CNRS, Grenoble INP, LPSC-IN2P3 - Grenoble (FR)

11:10 PROC1-O3-067 ● Time-resolved imaging of sputtered particles in multi-pulse HiPIMS discharge
J. Hnilica [1], P. Klein [1], P. Soucek [1], P. Vašina [1], R. Snyders [2,3], N. Britun [2]
[1]Department of Physical Electronics, Masaryk University - Brno (CZ)
[2]Chimie des Interactions Plasma-Surface (ChIPS), CIRMAP, Univ. de Mons (BE)
[3]Materia Nova Research Center - Mons (BE)

11:30 PROC1-O4-050 ● A remote plasma spectroscopy based method for monitoring of volatile chemicals in a vacuum environment
B. Kurian [1], J. Brindley [1], D. Monaghan [1], B. Daniel [1], V. Bellido-Gonzalez [1]
Gencoa Ltd - Liverpool (UK)

11:50 PROC1-O5-003 ● Density of N and H atoms in R/x%(N_2-5%H_2) (R = Ar or He) microwave afterglows
A. Ricard [1], J.P. Sarrette [1]
Laplace-Univ. Toulouse-CNRS - Toulouse (FR)

12:10 LUNCH

Tuesday 24 September

14:00 – 15:40

Chair: T. Czerwiec — ANTIPOLIS AUDITORIUM

14:00 **PLENARY TALK //** Structure, stress and physical properties of Mo-Al-N thin films deposited by reactive magnetron sputtering
G. Abadias [1], F. Angay [1], D. Eyidi [1], S. Camelio [1]
Institut Pprime, CNRS-Université de Poitiers - Futuroscope-Chasseneuil (FR)

SOUR 1/1 Plasma sources and electrical discharges — ANTIPOLIS AUDITORIUM

Chair: A. Lacoste

14:40 SOUR1-O1-059 ● A novel plasma jet with RF and HF coupled electrodes
A. Patelli [1], F. Tampieri [1], E. Marotta [1], E. Cattaruzza [2], B. Zaniol [3], P. Scopece [4]
[1]University of Padova - Padova (IT)
[2]University of Venice - Venezia (IT)
[3]Consorzio RFX - Padova (IT)
[4]Nadir srl - Venezia (IT)

15:00 SOUR1-O2-072 ● Bipolar high-power pulsed magnetron sputtering (BPH) of titanium dioxide: influence of electrical parameters on the discharge and film properties
M. Michiels [1], A. Hemberg [1], Y. Paint [1], N. Britun [2], S. Konstantinidis [2], R. Snyders [2]
[1]Materia Nova R&D center - Mons (BE)
[2]Chimie des Interactions Plasma-Surface (ChIPS), CIRMAP, Univ. de Mons (BE)

15:20 SOUR1-O3-153 ● HiPIMS electron properties by Thomson uncoherent scattering and PIC-MCC modeling
T. Minea [1], S. Tsikata [2], A. Revel [1], B. Vincent [2]
[1]LPGP CNRS-Université Paris-Saclay - Orsay (FR), [2]ICARE, CNRS - Orléans (FR)

15:40 COFFEE BREAK

Tuesday 24 September

14:00 – 15:40

TRIB 1/5 Plasma-deposited protective and tribological coatings – Part I

ELLA FITZGERALD ROOM

Chair: T. Czerwiec

14:40 TRIB1-O1-005 ● Mechanical properties and corrosion behaviour of DLC monolayers and multilayers deposited over nitrided martensitic stainless steel
S. Brühl [1], E.L. Dalibón [1], V.J. Trava-Airoldi [2], A. Cabo [3]
[1]UTN National University of Technology - Concepción Del Uruguay (AR)
[2]INPE - Sao Jose Dos Campos, Sp (BR)
[3]IONAR S.A. - San Martin (AR)

15:00 TRIB1-O2-060 ● Optimization of AlCrN monolayers and Cr/CrN/AlCrN multilayers for metal forming and machining applications
Y. Zhang [1], C. Nouveau [1], J. Outeiro [1], A. Besnard [1], B. Jullière [2], S. Dezecot [2]
[1]Arts et Metiers ParisTech - Cluny (FR)
[2]EVATEC Tools - Thionville (FR)

15:20 TRIB1-O3-158 ● Surface pretreatment effects on Tantalum coating microstructure when deposited on biomedical NiTi wires
B. Pace [1], J. Cairney [1]
The University of Sydney - Camperdown (AU)

15:40 COFFEE BREAK

Tuesday 24 September

16:10 – 17:20

DEPO 2/5 Plasma-deposited coatings for optical, electronical and other functionalities – Part II

ANTIPOLIS AUDITORIUM

Chair: R. Clergereaux

16:10 **KEYNOTE //** DEPO2-K1-024 ● Thermosensitive color-changing coatings for textile sensors
M. Amberg [1], D. Leutenegger [1], D. Hegemann [1].
Empa - St. Gallen (CH)

16:40 DEPO2-O2-016 ● Concentrated solar power plants need plasma coatings for efficient solar energy conversion
D. Ngoue [1], A. Carling-Plaza [2], A. Diop [1], A. Grosjean [1], V. Pares [1], A. Soum-Glaude [2], S. Quoizola [1], E. Hernandez [1], L. Thomas [1]
[1]PROMES-CNRS-UPVD - Perpignan (FR)
[2]PROMES-CNRS - Perpignan (FR)

17:00 DEPO2-O3-078 ● Optimizing material properties of sputter deposited optical interference coatings by plasma assist
S. Schwyn Thöny [1], S. Gees [1], E. Schuengel [1]
Evatec AG - Trübbach (CH)

17:20 POSTER SESSION #1
& EXHIBITION COCKTAIL

Tuesday 24 September

16:10 – 17:20

TRIB 2/5 Plasma-deposited protective and tribological coatings – Part II

ELLA FITZGERALD ROOM

Chair: G. Abadias

16:10 **KEYNOTE //** TRIB2-K1-065 Hard and fracture resistant metal-boron-carbon based coatings deposited by industrial sputtering system
P. Vasina [1], M. Kroker [1], P. Matej [1], M. Fekete [1], L. Zabransky [1], P. Soucek [1], V. Bursikova [1]
Masaryk university - Brno (CZ)

16:40 TRIB2-O2-013 ● Non-reactive HiPIMS of oxide ceramics for carbide cutting tools
B. Gaedike [1], R. Gadow [2], F. Kern [2], A. Killinger [2], M. Luik [1]
[1]Hartmetall-Werkzeugfabrik Paul Horn GmbH - Tübingen (DE)
[2]Institute for Manufacturing Technologies of Ceramic Components and Composites, University of Stuttgart (DE)

17:00 TRIB2-O3-111 ● Multilayered PVD coatings for erosion protection of Carbon Fiber Reinforced Polymers
B. Coto [1], L. Mendizabal [1], L. Selegard [2], H. Kling [2], F. Pagano [1], R. Ortiz [1]
[1]IK4-TEKNIKER - Eibar (ES)
[2]SAAB - Linköping (SE)

17:20 POSTER SESSION #1
& EXHIBITION COCKTAIL

Wednesday 25 September

8:40 – 10:00

Chair: J. Santos Sousa — ANTIPOLIS AUDITORIUM

8:40 **PLENARY TALK //** Current approach to osteosarcoma therapy with cold plasmas and biomaterials
C. Canal
UPC Barcelona (ES)

TRIB 3/5 Plasma-deposited protective and tribological coatings – Part III

ANTIPOLIS AUDITORIUM

Chair: P. Vasina

9:20 TRIB3-O1-129 ● Exploration of new PVD coatings resistant to solid particles erosion
M-A. Leroy [1], Y. Gachon [1], C. Pupier [1]
IREIS / Groupe HEF - Andrézieux Bouthéon (FR)

9:40 TRIB3-O2-144 ● New insight in corrosion resistance of TiO_2 thin films obtained by PVD sputtering in an inverted cylindrical magnetron (ICM)
M. Mantel [1], C. Esparza Contro [1], C. Vachey [2], G. Berthomé [1], L. Latu Romain [1]
[1]Univ. Grenoble Alpes, CNRS, Grenoble INP, SIMaP - Grenoble (FR), [2]Ugitech S.A., Avenue Paul Girod - Ugine (FR)

10:00 COFFEE BREAK

Wednesday 25 September

8:40 – 10:00

HELI 1/1 Health and life science

ELLA FITZGERALD ROOM

Chair: M. Amberg

9:20 HELI1-O1-124 ● Ageing of amine-rich plasma polymer coatings and their usage for enhancement of vascular cell proliferation on polycaprolactone nanofibers

L. Blahová [1], M. Michlicek [2], J. Medalova [3], P. Cernochova [3], M. Parizek [4], I. Kopova [4], L. Bacakova [4], L. Zajickova [1]

[1]RG Plasma Technologies, CEITEC – Central European Institute of Technology, Masaryk University - Brno (CZ),
[2]Dep. of Physical Electronics, Faculty of Science, Masaryk University - Brno (CZ),
[3]Dep. of Experimental Biology, Faculty of Science, Masaryk University - Brno (CZ)
[4]Department of Biomaterials and Tissue Engineering, Institute of Physiology of the Academy of Sciences of the CZ - Prague (CZ)

9:40 HELI1-O2-161 ● Optimization of helium cold plasma jets for new anti-tumor treatments

J. Santos Sousa [1], K. Sklias [1], K. Gazeli [1], G. Bauville [1], M. Fleury [1], P.M. Girard [2]

[1]LPGP, CNRS, Univ. Paris-Sud, Université Paris-Saclay - Orsay (FR),
[2]Institut Curie, PSL Research University, Univ. Paris-Sud, Université Paris-Saclay, CNRS UMR3347, INSERM U1021 - Orsay (FR)

10:00 COFFEE BREAK

Wednesday 25 September

10:30 – 12:10

DEPO3/5 Plasma-deposited coatings for optical, electronical and other functionalities – Part III

ANTIPOLIS AUDITORIUM

Chair: M. Fenker

10:30 DEPO3-O1-102 ● XRF and GDOES synergy for layer quantification
S. Gaiaschi [1], J. Marciano [1], M. Stanley [2], P. Chapon [1]
HORIBA FR - Palaiseau (FR), [2]EDF-IPVF - Palaiseau (FR)

10:50 DEPO3-O2-127 ● Nb doped-TiO_2 thin films deposited by Plasma Enhanced Chemical Vapour Deposition at low substrate temperature for photocatalytic applications
B. Dey [1], S. Bulou [1], T. Gaulain [1], W. Ravisy [2], M. Richard-Plouet [2], A. Goullet [2], A. Granier [2], P. Choquet [1]
[1]LU Institute of Science and Technology - Esch Sur Alzette (LU)
[2]Institut des Matériaux Jean Rouxel - Nantes (FR)

11:10 DEPO3-O3-088 ● New adhesive joint elaborated by pulsed RF plasma polymerization
M. Ji [1], L. Benyahia [1], F. Poncin-Epaillard [1]
Institut des Molécules et Matériaux du Mans (IMMM), UMR n°6283 Le Mans Université, Le Mans (FR)

11:30 DEPO3-O4-100 ● Deposition of titanium dioxide films by atmospheric pressure plasma torch: design of the layer in the view of photovoltaic applications
A. Perraudeau [1], C. Dublanche-Tixier [1], P. Tristant [1], C. Chazelas [1], S. Vedraine [2], B. Ratier [2]
[1]Université de Limoges, CNRS, IRCER, UMR 7315 - Limoges (FR)
[2]Université de Limoges, CNRS, XLim, UMR 7252 - Limoges (FR)

11:50 DEPO3-O5-140 ● Optimization of surface properties of wood modified by cold remote N_2/O_2 microwave plasma process
B. Mutel [1], C. Jama [2], M. Bigan [3]
[1]IEMN, Team P2M, University of Lille - Villeneuve D'ascq (FR)
[2]UMET, Ecole Nationale Supérieure de Chimie de Lille - Villeneuve-D'ascq (FR)
[3]Institute Charles Violette, Team ProBioGen, University of Lille (FR)

12:10 LUNCH

Wednesday 25 September

10:30 – 12:10

INDU 1/1 Industrial hot topics ELLA FITZGERALD ROOM

Chair: P. Choquet

10:30 INDU1-O1-190 ● Integrated atom Probe/tEBSD for grain boundary analysis in a thermal barrier coating
Y. Chen [1], A. Bui [2], K. Rice [1], P.H. Clifton [1], T.J. Prosa [1]
[1]CAMECA Instrument Inc. - Madison (US)
[2]CAMECA SAS - Gennevilliers (FR)

10:50 INDU1-O2-028 ● PECVD/ECR/HWCVD multichamber system with robotic substrate handling system for deposition of thin film electronic devices
A. Jacquemot [1], P. Rava [2]
[1]MICROTEST - Sérignan (FR)
[2]ELETTRORAVA - Venaria Reale (IT)

11:10 INDU1-O3-167 ● Facilitated sputter deposition processing of nitrides, oxides, ceramics, TCO's and other complex thin films by using a refined power supply technology
G. Eichenhofer
4A-PLASMA - Holzgerlingen (DE)

11:30 INDU1-O4-138 ● Advanced HIPIMS coatings through Kick pulse technologyAdvanced HIPIMS coatings through Kick pulse technology
J. Hrebik
Kurt J. Lesker Company - Jefferson Hills (US)

11:50 INDU1-O5-021 ● High temperature oxidation protection of g-based TiAl by sputtered Al-O-F films
M. Cavarroc [1], F. Bergeron [2], S. Loquai [2], E. Bousser [2], S. Knittel [3], L. Martinu [2], J.E. Sapieha [2]
[1]Safran Tech, Materials & Processes department - Magny-les-Hameaux (FR),
[2]Ecole Polytechnique de Montréal - Montréal (CA)
[3]Safran Aircraft Engines - Evry (FR)

12:10 LUNCH

Wednesday 25 September

14:00 – 15:40

Chair: T. Minea — ANTIPOLIS AUDITORIUM

14:00 **PLENARY TALK //** Non-equilibrium plasma chemistry - from atmospheric pressure plasmas to high pressure plasmas in liquids
A. Von Keudell [1], T. Urbanietz [1], C. Stewig [1], G. Katharina [1], H. Julian [1].
Ruhr University Bochum - Bochum (DE)

GROM 1/2 Thin films growth and modelling — ANTIPOLIS AUDITORIUM

Chair: G. Marcos

14:40 GROM1-O1-007 ● Hot target magnetron sputtering applied to oxide thin film growth
R. Graillot Vuillecot [1], C. Cachoncinlle [1], E. Millon [1], A.L. Thomann [1], A. Caillard [1]
GREMI UMR 7344 Université d'Orleans - CNRS - Orleans (FR)

15:00 GROM1-O2-036 ● Controlling surface morphology and properties by nanocrystalline/amorphous competitive growth in thin films
A. Borroto [1,2], S. Bruyère [1], S. Migot [1], J.F. Pierson [1], A.C. García-Wong [1], T. Gries [1], F. Mücklich [3], D. Horwat [1]
[1]Institut Jean Lamour (UMR CNRS 7198), Univ. de Lorraine, Nancy (FR)
[2]Dep. of Materials Science and Engineering, Saarland University, Saarbrücken, (DE)
[3]Dep. of Materials Science and Engineering, Saarland University, Saarbrücken, (DE)

15:20 GROM1-O3-081 ● Virtual Coater: On the implementation of specific algorithms to predict and optimize coating uniformity on 3D parts in motion
M. Evrard [1], S. Lucas [1], A. Besnard [2]
[1]University of Namur - NISM - LARN - Namur (BE)
[2]ENSAM - LaBoMaP - Cluny (FR)

15:40 COFFEE BREAK

Wednesday 25 September

14:00 – 15:40

LIQU 1/1 Plasma and liquids

ELLA FITZGERALD ROOM

Chair: A-L. Thomann

14:40 LIQU1-O1-042 ● Internal micro-discharges during the plasma Electrolytic oxidation process: evidence and effects on the coating formation
V. Ntomprougkidis [1], J. Martin [1], I.V. Bardin [2], A. Nominé [3], C. Noël [4], G. Henrion [1]
[1]Institute Jean Lamour - LabEx DAMAS - University of Lorraine - Nancy (FR)
[2]National University of Science and Technology MISiS - Moscow (RU)
[3]Dep. of Nanophotonics and Metamaterials, ITMO University - St. Petersburg (RU)
[4]Institute Jean Lamour - University of Lorraine - Nancy (FR)

15:00 LIQU1-O2-123 ● Synthesis and electrocatalytic behavior of Pt-based nano-catalyst obtained via magnetron sputtering onto vegetal glycerin
V. Orozco [1], J. Bigarre [2], S. Cuynet [3], P. Brault [1], A. Caillard [1]
[1]Groupe de recherches sur l'énergétique des Milieux Ionisés (GREMI) UMR 7344, Université d'Orléans / CNRS - Orléans (FR)
[2]CEA DAM, Le Ripault - Monts (FR),
[3]Institut Jean Lamour (IJL) UMR 7198, Université de Lorraine / CNRS - Nancy (FR)

15:20 LIQU1-O3-031 ● Synergy between Cold Atmospheric Plasma and Nano-Photocatalyst for Pharmaceuticals Removal in Drinking Water
M. El Shaer [1], M. Eldaly [1], G. Heikal [2], Y. Sharaf [3], H. Diab [4], B. Liu [5], M. Mobasher [1], A. Rousseau [5]
[1]PEARLZ (Plasma & Energy Applications Research Laboratory, Zagazig), Faculty of Engineering, Zagazig University (EG)
[2]Dep. of Environmental Engineering, Faculty of Engineering, Zagazig University (EG)
[3]Dep. of Analytical Chemistry, Faculty of Pharmacy, Zagazig University (EG)
[4]Dep. of Microbiology, Faculty of Medicine, Zagazig University (EG)
[5]LPP, Ecole Polytechnique, CNRS, Sorbonne Université, Université Pairs-Saclay, Palaiseau (FR)

15:40 COFFEE BREAK

Wednesday 25 September

16:10 – 18:00

DEPO4/5 Plasma-deposited coatings for optical, electronical and other functionalities – Part IV

ANTIPOLIS AUDITORIUM

Chair: S. Konstantinidis

16:10 **KEYNOTE //** DEPO4-K1-039 ● Influence of nitrogen incorporation on physical and electrical properties of a-C:H films deposited by a plasma beam source
M. Fenker [1], J. Julin [2], K. Petrikowski [1], A. Richter [1]
[1]fem Research Institute for Precious Metals and Metal Chemistry - Schwäbisch Gmünd (DE)
[2]Helmholtz-Zentrum Dresden-Rossendorf - Dresden (DE)

16:40 DEPO4-O2-022 ● Atmospheric-Pressure Synthesis of Atomically Smooth, Conformal, and Ultrathin Low-k Polymer Insulating Layers by Plasma-Initiated CVD
D. Abessolo Ondo [1], F. Loyer [1], F. Werner [2], R. Leturcq [1], D. Phillip [2], N.D. Boscher [1]
[1]LU Institute of science and technology - Esch-sur-Alzette (LU)
[2]University of LU - Esch-sur-Alzette (LU)

17:00 DEPO4-O3-096 ● iCVD pore filling: a way to limit plasma damage during porous low-k integration
M. Van-Straaten [1,2], A. Tavernier [1], M. Lagrange [1], B. Assie [1], C. Ratin [1], A. Ben Hadj Mabrouk [1], M. Veillerot [1], F. D'agosto [3], N. Posseme [1], V. Jousseaume [1]
[1]Univ. Grenoble Alpes - Grenoble (FR)
[2]CEA, LETI, MINATEC Campus - Grenoble, (FR)
[3]Université de Lyon, Univ Lyon 1, CPE Lyon, CNRS, UMR 5265, C2P2 (Chemistry, Catalysis, Polymers & Processes) - Villeurbanne (FR)

17:20 DEPO4-O4-166 ● High performance hard magnetic $Nd_2Fe_{14}B$ thin films by pulsed laser deposition
T. Nguyen Van [1], N. Dempsey [2], C. Champeaux [1], F. Dumas-Bouchiat [1]
[1]University of Limoges, CNRS, IRCER, UMR 7315 - Limoges (FR)
[2]Institut Néel, CNRS-UJF - Grenoble (FR)

17:40 DEPO4-O5-168 ● Elaboration and thermoelectric properties of $CuCrO_2$:Mg and $CuFeO_2$:Mg thin films deposited by RF sputtering
L. Presmanes [1], Y. Thimont [1], I. Sinnarasa [1], A. Barnabe [1], P. Tailhades [1]
CIRIMAT UMR CNRS 5085 - Toulouse (FR)

18:00

19:30 **CONFERENCE DINNER**
AT "LES PIRATES" BEACH RESTAURANT

Wednesday 25 September

16:10 – 18:00

NANO 1/3 Nanomaterials and nanostructured thin films

ELLA FITZGERALD ROOM

Chair: A. Granier (provisional)

16:10 **KEYNOTE //** NANO1-K1-093 ● Synthesis of boron nitride and boron-carbon-nitride nanomaterials by arc discharge
Y. Raitses [1], S. Yatom [1], R. Selinsky [2], Y.W. Yeh [2], A. Khrabryi [1], I. Kaganovich [1], B. Koel [2], B. Santra [2], R. Car [2], P. Krstic [3], L. Han [3]
[1]Princeton Plasma Physics Laboratory - Princeton (US)
[2]Princeton University - Princeton (US), [3]SUNY at Stony Brook (US)

16:40 NANO1-O2-076 ● Dichroic optical properties of non-noble metal nanostructures prepared by glancing-angle deposition onto nanorippled surfaces
D. Babonneau [1], S. Camelio [1], F. Pailloux [1], A. Fafin [1], G. Abadias [1], P. Patsalas [2]
[1]Institut Pprime, CNRS-Université de Poitiers - Poitiers (FR)
[2]Department of Physics, Aristotle University of Thessaloniki (GR)

17:00 NANO1-O2-092 ● Functional study of carbon nanotubes as adhesives for micro-objects
L. Zajickova [1], M. Elias [2], T. Vystavel [3], P. Poloucek [3], D. Necas [1], P. Kaushik [1], P. Klapetek [4]
[1]Masaryk University - Brno (CZ)
[2]Brno University of Technology - Brno (CZ)
[3]ThermoFisher - Brno (CZ)
[4]Czech Metrology Institute - Brno (CZ)

17:20 NANO1-O3-095 ● Hexagonal boron nitride thin film synthesis by micro hollow cathode discharges
H. Kabbara [1], S. Kasri [1], V. Mille [1], A. Tallaire [1], O. Brinza [1], G. Lombardi [1], C. Lazzaroni [1]
LSPM CNRS UPR3407, Laboratoire des Sciences des procédés et des matériaux, Université Paris13, Sorbonne Paris Cité, Villetaneuse (FR)

17:40 NANO1-O5-110● Nano ZnO and ZnO_2 Deposition by HIPIMS Magnetron Sputtering at Cryogenic Substrate Temperatures MODIFIED
J. Purans [1], M. Zubkins [1], R. Kalendarev [1], A. Azens [1]
Institute of Solid State Physics University of Latvia - Riga (LV)

18:00

19:30 **CONFERENCE DINNER**
AT "LES PIRATES" BEACH RESTAURANT

Thursday 26 September

8:40 – 10:00

Chair: A. Bousquet — **ANTIPOLIS AUDITORIUM**

8:40 **PLENARY TALK //** Controlled plasma dynamics and chemical kinetics in low temperature plasmas for environmental & healthcare technologies
T. Gans
Univ. York (UK)

TRIB 4/5 Plasma-deposited protective and tribological coatings

ANTIPOLIS AUDITORIUM

Chair: A. Bousquet

9:20 TRIB4-O1-047 ● Active corrosion protection for 3D-printed aluminum alloys by atmospheric pressure plasma deposition of cerium containing thin films
A.M. Schwan [1], A. Pfuch [2], K. Horn [2], A. Hinterer [3], P. Stögmüller [3], S. Proschwitz [4], M. Putzschke [4], J.M. Lackner [1], W. Waldhauser [1]
[1]JOANNEUM RESEARCH Forschungsgesellschaft m.b.H. - Graz (AT)
[2]INNOVENT e.V. - Jena (DE)
[3]INOCON Technologie G.m.b.H. - Attnang-Puchheim (AT)
[4]MAICOM Quarz G.m.b.H. - Posterstein (DE)

9:40 TRIB4-O2-058 ● Mechanical properties of nanocomposite thin films produced with a reactor-injector: From stiff to soft coatings
G. Carnide [1,2], T. Sadek [3], J. Bardon [4], D. Ruch [4], L. Stafford [3], M. Kahn [1], R. Clergereaux [5]
[1]LCC - Toulouse (FR)
[2]LAPLACE (US)
[3]UDEM - Montreal (CA)
[4]LIST (LU)
[5]LAPLACE - Toulouse (FR)

10:00 COFFEE BREAK

Thursday 26 September

8:40 – 10:00

SURF 1/2 Plasma-surface interactions

ELLA FITZGERALD ROOM

Chair: A. Caillard

9:20 SURF1-O1-070 ● Hyperspectral Raman imaging applied to fundamental studies of plasma-graphene interactions in pulsed and continuous argon plasmas at low pressure
P. Vinchon [1], G. Robert Bigras [1], X. Glad [1], C. Allard [1], R. Martel [1], L. Stafford [1]
Université de Montréal - Montréal (CA)

9:40 SURF1-O2-154 ● Effect of different nitrogen-containing plasma used for N-doping of graphene nanowalls
N. Marath Santhosh [1,2], G. Filipic [1], U. Cvelbar [1]
[1]Jozef Stefan Institute, - Ljubljana (SI)
[2]Jozef Stefan International Postgraduate School, - Ljubljana (SI)

10:00 COFFEE BREAK

Thursday 26 September

10:30 – 12:10

PROC 2/3 Process control (including plasma diagnostics, plasma modelling)

ANTIPOLIS AUDITORIUM

Chair: T. Gans (provisional)

10:30 PROC2-O1-071 ● Synthesis of zirconium oxide thin films by reactive HiPIMS under peak current regulation
S. Konstantinidis [1], S. Adzhani [2], N. Britun [1], A. Panepinto [1], M. Yang [2], T. Shimizu [2]
[1]Plasma-Surface Interaction Chemistry, University of Mons - Mons (BE)
[2]Division of Mechanical System Engineering, Graduate School of System Design, Tokyo Metropolitan University (JP)

10:50 PROC2-O2-066 ● Understanding and influencing energies of ions incident onto substrate in bipolar HiPIMS discharges
T. Kozak [1], A.D. Pajdarova [1], J. Capek [1], P. Mares [2], M. Cada [3], Z. Hubicka [3]
[1]Department of Physics and NTIS – European Centre of Excellence, University of West Bohemia - Plzen (CZ)
[2]HVM Plasma, s.r.o. - Praha (CZ)
[3]Institute of Physics, Academy of Sciences of the CZ - Praha (CZ)

11:10 PROC2-O3-131 ● Deposition process for low temperature growth of VO_2 thin films on large area using the microwave plasma-assisted reactive sputtering technique
A. Lacoste [1], A. Bès [1], R. Yang [1]
LPSC, Université Grenoble-Alpes, CNRS/IN2P3 - Grenoble (FR)

11:30 PROC2-O4-169 ● On the effect of stationary magnetic field on spatial distribution of deposition rate and ionized flux fraction in the HiPIMS discharge
H. Hajihoseini [1], J.T. Gudmundsson [1], D. Lundin [2], M. Cada [3], Z. Hubicka [3]
[1]Science institute, University of Iceland - Reykjavik (IS)
[2]LPGP, Université Paris-Sud - Orsay (FR)
[3]Institute of Physics ASCR - Prague (CZ)

11:50 PROC2-O5-121 ● Influence of gas pulsed injection in Dielectric Barrier Discharges at atmospheric pressure
L. Cacot [1], M. Kahn [2], R. Clergereaux [1], N. Naudé [1], L. Stafford [3]
[1]LAPLACE, Universite´ de Toulouse, CNRS - Toulouse (FR)
[2]CNRS, LCC (Laboratoire de Chimie de Coordination) - Toulouse (FR)
[3]Département de Physique - Université de Montreal - Montréal (CA)

12:10 LUNCH

Thursday 26 September

10:30 – 12:10

NANO 2/3 Nanomaterials and nanostructured thin films

ELLA FITZGERALD ROOM

Chair: L. Zajickova (provisional)

10:30 NANO2-O1-041 ● A novel one-step approach for nanocomposite thin films coupling PECVD and colloidal solutions
M. Mitronika [1], J. Profili [2], A. Goullet [1], L. Stafford [2], A. Granier [1], M. Richard-Plouet [1]
[1]Institut des Matériaux Jean Rouxel (IMN), Université de Nantes, CNRS, Nantes (FR)
[2]Département de Physique, Université de Montréal,Montréal, Québec, Montréal (CA)

10:50 NANO2-O2-105 ● Plasma-based modification of membranes with nanoparticles for versatile oil/water separation
A. Shukurov [1], M. Vaidulych [1], A. Shelemin [1], J. Hanuš [1], I. Khalakhan [2], P. Pleskunov [1], O. Kylián [1], H. Biederman [1]
[1]Charles University, Faculty of Mathematics and Physics, Department of Macromolecular Physics - Prague (CZ)
[2]Charles University, Faculty of Mathematics and Physics, Department of Surface and Plasma Science - Prague (CZ)

11:10 NANO2-O3-132 ● An innovative approach for micro/nano structuring plasma polymer films
N. Vinx [1], P. Damman [2], D. Moerman [3], P. Leclère [3], C. Satriano [4], R. Snyders [1], D. Thiry [1]
[1]Chimie des Interactions Plasma-Surface (ChIPS), University of Mons - Mons (BE)
[2]Laboratoire Interfaces et Fluides Complexes (Influx), University of Mons - Mons (BE)
[3]Chimie des Matériaux Nouveaux (CMN), University of Mons - Mons (BE)
[4]Laboratory of Hybrid NanoBioInterfaces (NHIL), University of Catania - Catania (IT)

11:30 NANO2-O4-165 ● Pulsed laser nanoparticles source and thin films deposition to tune vanadium dioxide properties
C. Champeaux [1], M. Gaudin [1], R. Boyer [1], F. Dumas-Bouchiat [1]
University of Limoges, CNRS, IRCER, UMR7315 - Limoges (FR)

11:50 NANO2-O5-101 ● Electron emission characteristic study on carbon-based very thin films prepared by RF magnetron sputtering
J. Huran [1], N.I. Balalykin [1], M.A. Nozdrin [1], V. Sasinková [2], E. Kovácová [3], A.P. Kobzev [1], A. Kleinová
[1]Joint Institute for Nuclear Research - Dubna (RU)
[2]Institute of Chemistry, SAS - Bratislava (SK)
[3]Institute of Electrical Engineering, SAS - Bratislava (SK)
[4]Polymer Institute, SAS - Bratislava (SK)

12:10 LUNCH

Thursday 26 September

14:00 – 16:00

DEPO 5/5 Plasma-deposited coatings for optical, electronical and other functionalities

ANTIPOLIS AUDITORIUM

Chair: J-F. Pierson

14:00 **KEYNOTE //** DEPO5-K1-116 ● Deposition of Gadolinia-doped Ceria thin films by reactive DC magnetron and High Power Impulse Magnetron Sputtering
M. Mickan [1], A. Caillard [1], T. Lecas [1], P. Coddet [2], J. Vulliet [2], H. Lecocq [3], T. Sauvage [3], A.L. Thomann [1]
[1]GREMI, UMR7344 CNRS/Université d'Orléans (FR)
[2]CEA DAM, Le Ripault - Monts (FR)
[3]CEMHTI, UPR3079 du CNRS - Orléans (FR)

14:30 DEPO5-O2-057 ● Influence of transition metal dopants on the reactive HiPIMS deposition of γ-Al_2O_3 thin films
H. Riedl [1], S. Kagerer [1], L. Zauner [1], T. Wojcik [1], S. Kolozsvári [2], J. Capek [3], T. Kozák [3], P. Zeman [3], P.H. Mayrhofer [1]
[1]Institute of Materials Science and Technology, TU Wien - Wien (AT)
[2]Plansee Composite Materials GmbH - Lechbruck Am See (DE)
[3]Department of Physics and NTIS, European Center of Excellence, Univeristy of West Bohemia - Plzen (CZ)

14:50 DEPO5-O3-162 ● Metal-to-insulating transition tuning in reactively sputter-deposited epitaxial V_2O_3 thin films
S. Shayestehaminzadeh [1], E.B. Thorsteinsson [2], A.S. Ingason [3], F. Magnus [2], U.B. Arnalds [2]
[1]Technovation Center, AGC Glass Europe - Gosselies (BE)
[2]Science Institute, University of Iceland - Reykjavík (IS)
[3]Grein Research ehf. - Reykjavík (IS)

15:10 DEPO5-O4-037 ● Cathodic arc deposition of V_2O_3 films and their application in quench protection of high-temperature superconducting magnets
Q. Ji [1], Z. Yang [1], X. Wang [1], A. Anders [2]
[1]Lawrence Berkeley National Laboratory - Berkeley (US)
[2]Leibniz Institute of Surface Engineering (IOM) - Leipzig (DE)

15:30 COFFEE BREAK

16:00 POSTER SESSION #2

18:00

Thursday 26 September

14:00 – 16:00

GROM 2/2 Thin films growth and modelling

ELLA FITZGERALD ROOM

Chair: S. Brühl

14:00 **KEYNOTE //** GROM2-K1-130 ● A comparative study of metal oxide and metal oxide/silica thin films deposited by LP microwave plasma process from metalorganic precursors (Zirconium Tetra tert-Butoxide and Titanium Tetra Isopropoxide)
P. Raynaud [1], I. Martinko [1], R. Alvarez [2], A. Palmero [2]
[1]Laboratoire Laplace - CNRS - Université Toulouse - Toulouse (FR)
[2]Spanish Council of Research (CSIC), Materials Science Institute of Seville (ES)

14:30 GROM2-O2-062 ● Nanostructure and photocatalytic activity of Plasma-Enhanced Chemical Vapour Deposited anatase TiO_2 on polymer substrates
W. Ravisy [1], B. Dey [2], D. Li [1], S. Bulou [2], P. Choquet [2], N. Gautier [1], A. Goullet [1], M. Richard-Plouet [1], A. Granier [1]
[1]IMN, Univ. de Nantes, UMR CNRS 6502, Nantes (FR)
[2]Materials Research and Technology Dep., LIST - Esch-sur-Alzette (LU)

14:50 GROM2-O3-125 ● Analysis of nanoscopic defects in SiOx like plasma polymer films by means of positron annihilation spectroscopy
C. Hoppe [1], F. Mitschker [2], P. Awakowicz [2], T. De Los Arcos [1], G. Grundmeier [1]
[1]Technical and Macromolecular Chemistry, University of Paderborn - Paderborn (DE)
[2]Electrical Engineering and Plasma Technology, Ruhr-University Bochum (DE)

15:10 GROM2-O4-012 ● Numerical and experimental investigation of the deposition of plasma polymerized films on low-vapour-pressure liquids
S. Gaiser [1], D. Hegemann [1]
Empa, Swiss Federal Laboratories for Materials Science and Technology, Advanced Fibers, Plasma & Coating Group - St. Gallen (CH)

15:30 COFFEE BREAK

16:00 POSTER SESSION #2

18:00

Friday 27 September

8:40 – 10:00

Chair: L. Stafford (provisional) — ANTIPOLIS AUDITORIUM

8:40 **PLENARY TALK //** Attempts by modeling to maintain Moore's law in microelectronics processing
M. Kushner
Univ. Michigan, Ann Arbor (US)

TRIB 5/5 Plasma-deposited protective and tribological coatings

ANTIPOLIS AUDITORIUM

Chair: E. Tomasella

9:20 TRIB5-O1-113 ● Low temperature conformal deposition of nanocrystalline diamond on three-dimensional substrates for biomedical applications
F. Bénédic [1], D. Dekkar [1], C. Falentin-Daudré [2], O. Brinza [1], R. Issaoui [1], J. Achard [1]
[1]LSPM-CNRS, UPR 3407, Université Paris 13, Sorbonne Paris Cité - Villetaneuse (FR)
[2]LBPS-CSPBAT, UMR 7244, Univ. Paris 13, Sorbonne Paris Cité - Villetaneuse (FR)

9:40 TRIB5-O2-141 ● Plasma-assisted patterning on metal surfaces for tribological applications
G. Marcos [1], A. Pavlik [2], J. Vincent [3], M. Coulibaly [3], J. Martin [1], S. Philippon [3], T. Czerwiec [1]
[1]Institut Jean Lamour - Nancy (FR)
[2]Institut Jean Lamour/LEM3 - Nancy (FR)
[3]LEM3 - Metz (FR)

10:00 COFFEE BREAK

Friday 27 September

8:40 – 10:00

SURF 2/2 Plasma-surface interactions

ELLA FITZGERALD ROOM

Chair: C. Champeaux (provisional)

9:20 SURF2-O1-026 ● Atomic Layer Etching at cryogenic temperature
G. Antoun [1], P. Lefaucheux [1], T. Tillocher [1], R. Dussart [1], S. Tahara [2], K. Yamazaki [3], K. Yatsuda [3], J. Faguet [4], K. Maekawa [4]
[1]GREMI, Orleans University-CNRS - Orleans (FR)
[2]Tokyo Electron Miyagi Limited - Miyagi (JP)
[3]Tokyo Electron Limited - Tokyo (JP)
[4]TEL Technology Center - Albany (US)

9:40 SURF2-O2-122 ● Submillimetric patterns of organic/inorganic deposition on low temperature substrates using a novel atmospheric pressure plasma torch CVD
K. Acharya [1], S. Bulou [1], T. Gaulain [1], M. Gérard [1], G. Frache [1], P. Choquet [1]
Luxembourg Institute of Science and Technology (LIST) - Esch-Sur-Alzette (LU)

10:00 COFFEE BREAK

Friday 27 September

10:30 – 12:30

PROC 3/3 Process control (including plasma diagnostics, plasma modelling)

ANTIPOLIS AUDITORIUM

Chair: P. Raynaud

10:30 **KEYNOTE //** PROC3-K1-106 ● Numerical modelling of DC magnetron discharges applied to Nb/Cu coatings in superconducting radio-frequency cavities
T. Richard [1], F. Avino [1], A. Grudiev [1], G. Rosaz [1], A. Sublet [1], M. Taborelli [1]
CERN - Geneva (CH)

11:00 PROC3-O2-135 ● Model based analysis of the Ion Flux-Energy Distribution Functions in Capacitively Coupled Multi-Frequency Plasmas
E. Schüngel [1], A. Derzsi [2], M. Vass [3], Z. Donkó [3], J. Schulze [4]
[1]Evatec AG - Trübbach (CH)
[2]Department of Physics, West Virginia University - Morgantown (US)
[3]Institute for Solid State Physics and Optics, Wigner Research Centre for Physics, Hungarian Academy of Sciences - Budapest (HU)
[4]Institute for Electrical Engineering, Ruhr-University-Bochum (DE)

11:20 PROC3-O3-133 ● The magnetic asymmetry effect: theoretical investigation by using a lumped element model
D. Engel [1], L. Kroll [1], M. Oberberg [2], J. Schulze [2], P. Awakowicz [2], R.P. Brinkmann [1]
[1]Institute of Theoretical Electrical Engineering, Ruhr University Bochum (DE)
[2]Institute of Electrical Engineering and Plasma Technology, Ruhr Univ. Bochum (DE)

11:40 PROC3-O4-120 ● Understanding the magnetron PECVD of DLC films in an acetylene admixture with a hybrid PICMC/DSMC model
A. Fauroux [1], A. Pflug [2], S. Lucas [1]
[1]University of Namur – NISM – LARN - Namur (BE)
[2]Fraunhofer Institute for Surface Engineering and Thin Films - Braunschweig (DE)

12:00 Closing ceremony

ANTIPOLIS AUDITORIUM

14:00 SOCIAL PROGRAM

For registered person / 3 activities proposed:

- Option #1 - Excursion to Grasse, international capital of Flowers and Perfume
- Option #2 - Walking tour on the coastal path “sentier de Tire-Poil”
- Option #3 - Excursion to Saint Paul de Vence

Friday 27 September

10:30 – 12:30

NANO 3/3 Nanomaterials and nanostructured thin films

ELLA FITZGERALD ROOM

Chair: D. Lundin (provisional)

10:30 **KEYNOTE //** NANO3-K1-069 ● One step gold nanoparticles synthesis and deposition from an atmospheric pressure microwave PECVD – Applications to the fast and low cost production SERS substrates
S. Bulou [1], K. Baba [1], J.B. Chemin [1], P. Choquet [1], N. Boscher [1]
Luxembourg Institute of Science and Technology - Esch-Sur-Alzette (LU)

11:00 NANO3-O2-009 ● A tailored RF-ICP plasma to synthesize tailored nanoparticles
E. Haye [1], Y. Busby [1], M. Da Silva Pires [1], F. Bocchese [1], T. Hauet [2], C. Soon Chang [2], G. Dudek [3], N. Job [4], J. Ghanbaja [2], L. Houssiau [1], J.J. Pireaux [1]
[1]Laboratoire Interdisciplinaire de Spectroscopie Electronique (LISE), Namur Institute of Structured Matter (NISM), University of Namur (BE)
[2]Institut Jean Lamour, UMR 7189, Université de Lorraine - Nancy (FR)
[3]Department of Physical Chemistry and Technology of Polymers, Faculty of Chemistry, Silesian University of Technology - Gliwice (PL)
[4]Department of Chemical Engineering – Nanomaterials, Catalysis, Electrochemistry, University of Liège - Liège (BE)

11:20 NANO3-O3-097 ● PtBi, PtCu and PtBiCu nanoclusters grown in a magnetron based gas aggregation source
A. Caillard [1], W. Chamorro-Coral [1], P. Brault [1], C. Coutanceau [2], S. Baranton [2]
[1]GREMI UMR7344, CNRS / Université d'Orléans (FR)
[2]IC2MP UMR 7285, CNRS / Université de Poitiers (FR)

11:40 NANO3-O4-156 ● Morphology dependent photocatalytic properties of ZnO nanostructures synthesized by plasma afterglow treatments
T. Gries [1], A. Imam [1], J. Ghanbaja [1], T. Belmonte [1]
Institut Jean Lamour - CNRS - Université de Lorraine - Nancy (FR)

14:00 SOCIAL PROGRAM

For registered person / 3 activities proposed:

- Option #1 - Excursion to Grasse, international capital of Flowers and Perfume
- Option #2 - Walking tour on the coastal path “sentier de Tire-Poil”
- Option #3 - Excursion to Saint Paul de Vence

PLATHINIUM

PLASMA THIN FILM INTERNATIONAL UNION MEETING

POSTER PROGRAM

- **P1 / Session #1**
  with exhibition cocktail
  Tuesday 24 September
  17:10 - 23:00
    - DEPO
    - GROM
    - HELI
    - INDU
    - LIQU
    - SURF
    - TRIB
- **P2 / Session #2**
  with refreshments
  Thursday 26 September
  16:00 - 18:00
    - DEPO
    - GROM
    - LIQU
    - NANO
    - PROC
    - SOUR
    - TRIB

Poster session #1

- **DEPO**

DEPO -P1-011 Antifogging surfaces prepared from plasma copolymerization
F. Poncin-Epaillard [1], D. Debarnot [1], T.H. Tran [1]
IMMM - Le Mans (FR)

DEPO -P1-034 A low-temperature (330 °C) deposition of high-performance thermochromic VO_2-based coatings for smart-window applications
T. Bárta [1], J. Vlcek [1], D. Kolenatý [1], J. Rezek [1], J. Houška [1], S. Haviar [1]
University of West Bohemia - Pilsen (CZ)

DEPO -P1-038 Growing controllable-crystalline aluminium nitride thin films by plasma-enhanced atomic layer deposition at low temperature and its properties
T. Nguyen [1, 2], N. Adjeroud [1], J. Guillot [1], J. Polesel [1]
[1]*Luxembourg Institute of Science and Technology - Esch-sur-Alzette (LU)*
[2]*University of LU - Esch-Sur-Alzette (LU)*

DEPO -P1-040 The role of atomic oxygen in the growth of single phase β-MnO_2 thin films by remote plasma assisted pulsed laser deposition
M. Tabbal [1], M. Abi Akl [2], W. Kassem [1], D. Haidar [1]
[1]*American University of Beirut - Beirut (LB)*
[2]*Texas A & M University at Qatar - Doha (QA)*

DEPO -P1-053 Water stability of organosilicon coatings prepared by atmospheric pressure plane-to-plane dielectric barrier discharge
L. Stafford [1], S. Babei [1], J. Profili [1], A. Dorris [2], S. Beck [2], S. Asadollahi [3], A. Sarkissian [3]
[1]*Université de Montréal - Montreal (CA)*
[2]*FPInnovations - Pointe-Claire (CA)*
[3]*Plasmionique - Varennes (CA)*

DEPO -P1-063 Influence of the film thickness on the structure, optical and photocatalytic properties of TiO_2 thin films deposited by ICP-PECVD
W. Ravisy [1], D. Li [1], B. Dey [2], S. Bulou [2], P. Choquet [2], A. Goullet [1], M. Richard-Plouet [1], A. Granier [1]
[1]*Institut des Matériaux Jean Rouxel (IMN), Université de Nantes, UMR CNRS 6502 - Nantes (FR)*
[2]*Materials Research and Technology Department, LU Institute of Science and Technology - Esch-sur-Alzette (LU)*

DEPO -P1-074 Porous silicon double membranes for lithium- ion batteries
C. Yaddaden [1], N. Gabouze [1], M. Berouaken [1]
CRTSE - El Harrach (DZ)

Poster session #1

DEPO -P1-108 Effect of the silicon substrate nitridation on optical and electrical properties of silicon carbonitride thin films deposited by reactive magnetron sputtering

A. Bachar [1], A. Bousquet [1], C. Robert-Goumet [2], G. Monier [2], C. Varenne [2], E. Tomasella [1]
[1]*Université Clermont Auvergne, CNRS, SIGMA Clermont, ICCF - Clermont-Ferrand (FR)*
[2]*Université Clermont Auvergne, CNRS, SIGMA Clermont, Institut Pascal - Clermont-Ferrand (FR)*

DEPO -P1-109 Hollow cathode plasma sputtering for coating the 90º elbow vacuum chambers of the ELENA antiproton ring at CERN

A. Sapountzis [1], P. Costa Pinto [1], T. Sinkovits [1], A.M. Charlety [1], T. Richard [1], G.J. Rosaz [1], M. Taborelli [1]
CERN - Meyrin (CH)

DEPO -P1-128 Pulsed Electron Cyclotron Wave Resonance Plasma Enhanced Chemical Vapour Deposition of photocatalytic TiO_2 thin films on polymeric substrates

B. Dey [1], S. Bulou [1], T. Gaulain [1], W. Ravisy [2], M. Richard-Plouet [2], A. Goullet [2], A. Granier [2], P. Choquet [1]
[1]*Luxembourg Institute of Science and Technology - Esch Sur Alzette (LU)*
[2]*Institut des Matériaux Jean Rouxel - Nantes (FR)*

DEPO -P1-145 Time resolved In situ characterization of deposited SiCN:H thin films obtained in Ar/TMS/N_2 dual ECR and RF-PVD by infrared absorption spectroscopy (FTIR)

Z. Al Hallak [1, 2], R. Hugon [1], P. Pigeat [1], A. Ahmad [2], A. Naja [2], M. Belmahi [1]
[1]*Institut Jean Lamour UMR 7198, CNRS, Univ. de Lorraine - Nancy (FR)*
[2]*Laboratoire de Physique et Modalisation, Université LBaise - Tripoli (LB)*

DEPO -P1-171 Oblique deposition of nickel thin films by HiPIMS

H. Hajihoseini [1], S.Þ. Ingvarsson [1], M. Kateb [1], J.T. Gudmundsson [1]
Science Institute, University of Iceland - Reykjavik (IS)

DEPO -P1-181 Organosilicon coatings deposited by cold nitrogen plasma post-discharge for prevention of biofilm formation in food and medical sectors

M. Hage [1], B. Crocco [1], S. Khelissa [1], M. Abdallah [1], H. Akoum [2], N.E. Chihib [1], C. Jama [1]
[1]*Université de Lille - Lille (FR)*
[2]*Université LBaise - Saida (LB)*

Poster session #1

- **GROM**

GROM -P1-010 CrN thin film synthesis in Ar/N_2 and Ar/NH_3, a comparative study
E. Haye [1], L. Rassinfosse [1], J.L. Colaux [2], N. Tumanov [3], J.J. Pireaux [1], S. Lucas [2]
[1]*Laboratoire Interdisciplinaire de Spectroscopie Electronique (LISE), Namur Institute of Structured Matter (NISM), University of Namur (BE)*
[2]*Laboratoire d'Analyse par Réactions Nucléaires (LARN), Namur Institute of Structured Matter (NISM), University of Namur (BE)*
[3]*Chemistry Department, University of Namur (BE)*

GROM -P1-044 Reactivity to organic vapors at PECVD PDMS-like surfaces for gas detection and membrane separation
G. Dakroub [1], T. Duguet [2], C. Lacaze-Dufaure [2], S. Roualdès [3], V. Rouessac [3]
[1]*IEM & CIRIMAT - Montpellier (FR)*
[2]*CIRIMAT - Toulouse (FR)*
[3]*IEM - Montpellier (FR)*

GROM -P1-083 Prediction of the column tilt angle in GLAD by sputtering
A. Besnard [1]
Arts et Metiers ParisTech – LaBoMaP - Cluny (FR)

GROM -P1-084 Low pressure plasma polymerization of cylclopropylamine in a hollow cathode reactor
S. Lucas [1], S. Mathioudaki [1], C. Vandenabeele [1], A. Pflug [2]
[1]*University of Namur, LARN-NISM - Namur (BE)*
[2]*Fraunhofer Institute for Surface Engineering and Thin Films IST - Braunschweig (DE)*

GROM -P1-086 PVD large scale growth simulation: Influence of the substrate roughness
A. Besnard [1], S. Lucas [2], P. Moskovkin [2]
[1]*Arts et Metiers ParisTech – LaBoMaP - Cluny (FR)*
[2]*University of Namur– LARN-NISM - Namur (BE)*

GROM -P1-098 Preparation of DLC films by microwave plasma-assisted chemical vapour deposition in open-air
H. Yagi [1], S. Yudate [1]
Ehime University - Matsuyama (JP)

GROM -P1-114 Bio-inspired functional coatings on plasma-processed polymeric materials for vehicular interiors
H. Salapare [1], C. Fradin [1], A. Sathanikan [1], T. Darmanin [1], S. Amigoni [1], A. Zenerino [1], F. Guittard [1]
Université Côte d'Azur, NICE Lab, IMREDD - Nice (FR)

Poster session #1

- **HELI**

HELI -P1-085 Surface functionalisation, nanoroughness and drug delivery by atmospheric plasma jet on scaffolds
A. Patelli [1], F. Mussano [2], P. Brun [1], T. Genova [2], E. Ambrosi [3], N. Michieli [1], G. Mattei [1], P. Scopece [4], L. Moroni [5]
[1]*University of Padova - Padova (IT)*
[2]*University of Torino - Torino (IT)*
[3]*University of Venezia - Venezia (IT)*
[4]*Nadir srl - Venezia (IT)*
[5]*University of Maastricht - Maastricht (NL)*

- **INDU**

INDU -P1-020 Titanium nitrides coating for hard chromium replacement
M. Cavarroc [1], B. Giroire [2], L. Teulé-Gay [2], D. Michau [2], A. Poulon-Quintin [2]
[1]*Safran Tech, Materials & Processes dep. - Magny-les-Hameaux (FR)*
[2]*ICMCB - Pessac (FR)*

INDU -P1-136 Atom probe tomography analysis for additive manufacturing
T. Prosa [1], P. Clifton [1], R. Katherine [1], C. Yimeng [1], U. Robert [1], L. David [1], B. Anna [2]
[1]*Cameca Instruments Inc. - Fitchburg (US)*
[2]*Cameca Instruments Inc. - Gennevilliers (FR)*

INDU -P1-188 From component to system for a faster technology
A. Vasiliu [1]
COMET - Flamatt (CH)

- **LIQU**

LIQU -P1-049 Study of the synthesis of nanoparticles in liquid phase enhanced by microsecond plasma discharges at atmospheric pressure
S. Cuynet [1], C. Edbaiech [1], M. Mazri [1], C. Noel [1], L. De Poucques [1], G. Henrion [1], T. Belmonte [1]
Institut Jean Lamour - Nancy (FR)

- **SURF**

SURF -P1-043 Physicochemical modification of spin-coated TiO_2 nanoparticle thin film by ICP low pressure oxygen plasma
M. Mitronika [1], J. Profili [2], W. Ravisy [3], A. Goullet [3], L. Stafford [2], A. Granier [3], M. Richard-Plouet [3]
[1]*IMN, Université de Nantes, CNRS - Nantes (FR)*
[2]*Dép. de Physique, Université de Montréal, Québec - Montréal (CA)*
[3]*IMN, Université de Nantes, CNRS - Nantes (FR)*

SURF -P1-051 Functionalization and characterization study of Metal Organic Frameworks (MOF) by plasma process
A. Najah [1], S. Cuynet [1], G. Henrion [1], D. Boivin [1], L. De Poucques [1], T. Belmonte [1], V. Fierro [1]
Institut Jean Lamour, Université de lorraine, CNRS - Nancy (FR)

Poster session #1

SURF -P1-055 The role of SiF_4 physisorption in silicon cryoetching
T. Tillocher [1], G. Antoun [1], P. Lefaucheux [1], R. Dussart [1], C. Cardinaud [2], A. Girard [2], S. Tahara [3], K. Yamazaki [4], K. Yatsuda [4], J. Faguet [5], K. Maekawa [5]
[1]*GREMI, Université d'Orléans - CNRS - Orléans (FR)*
[2]*IMN, Université de Nantes - CNRS - Nantes (FR)*
[3]*Tokyo Electron Limited Miyagi - Miyagi (JP)*
[4]*Tokyo Electron Limited - Tokyo (JP)*
[5]*TEL Technology Center America - Albany (US)*

SURF -P1-082 Measuring the energy flux at the substrate during plasma based deposition techniques: a way to investigate both the sputtering process and the film growth
A-L. Thomann [1], R. Graillot-Vuillecot [1], S. Konstantinidis [2], T. Lecas [1], A. Caillard [1]
[1]*GREMI CNRS/Université d'Orléans - Orléans (FR)*
[2]*ChIPS université de Mons - Mons (BE)*

SURF -P1-146 Study of interactions between a PMMA support and cold plasma used for thin film deposition
M. Kouicem [1], E. Tomasella [2], A. Bousquet [2], G. Monier [3], C. Robert-Goumet [3], L. Dubost [1]
[1]*IREIS/HEF Groupe, Large Area Coatings Department - Andrézieux (FR)*
[2]*Univ. Clermont Auvergne, CNRS, SIGMA Clermont, ICCF - Aubière (FR)*
[3]*Univ. Clermont Auvergne, CNRS, Institut Pascal - Aubière (FR)*

SURF -P1-148 Etching of Ge-Sb-Se glasses in SF_6 and SF_6/Ar plasma
T. Meyer [1], A. Girard [1], C. Cardinaud [1], V. Nazabal [2], P. Nemec [3]
[1]*IMN, UMR-CNRS 6502, Université de Nantes (FR)*
[2]*Institut des Sciences Chimiques de Rennes, UMR-CNRS 6226, Université de Rennes 1 (FR)*
[3]*Department of Graphic Arts and Photophysics, Faculty of Chemical Technology, University of Pardubice (CZ)*

SURF -P1-150 Physicochemical modification of spin-coated silver nanoparticle thin film by atmospheric surface-wave microwave post-discharge
J. Trahan [1], J. Profili [1], M. Mitronika [2], A. Goullet [2], A. Granier [2], M. Richard-Plouet [2], L. Stafford [1]
[1]*Université de Montréal - Montréal (CA)*
[2]*Institut des Matériaux Jean Rouxel - Nantes (FR)*

SURF -P1-159 Patterning at micrometric scale of metallic surfaces by plasma etching
F. Laourine [1, 2], G. Marcos [1], S. Guilet [2], T. Czerwiec [1]
[1]*Institut Jean Lamour - Nancy (FR)*
[2]*Centre de Nanosciences et de nanotechnologies - Paris (FR)*

Poster session #1

- **TRIB**

TRIB -P1-015 Optimization of Mo-S-N solid lubricant films with improved adhesion and low friction by DC magnetron sputtering
K. Hebbar Kannur [1], C. Pupier [2], C. Heau [2], A. Cavaleiro [3]
[1]*IREIS-HEF group, University of Coimbra - Andrézieux-Bouthéon (FR)*
[2]*IREIS-HEF group - Andrézieux-Bouthéon (FR)*
[3]*University of Coimbra (PT)*

TRIB -P1-030 Characterization of duplex, nanocomposite and nanolayered thin films
B. Skoric [1], A. Miletic [2], P. Terek [2], L. Kovacevic [2]
[1]*Prof. Phd - Novi Sad (RS)*
[2]*Ass.Prof. Phd - Novi Sad (RS)*

TRIB -P1-068 Study of Cr, CrN, CrAlN monolayers and Cr/CrN/CrAlN multilayers developed by DC magnetron sputtering for mechanical application
C. Nouveau [1], K. Aouadi [2], A. Besnard [1], B. Tlili [3], M. Chafra [2]
[1]*Arts et Metiers ParisTech - Cluny (FR)*
[2]*Ecole Polytechnique de Tunisie - La Marsa (TN)*
[3]*Ecole Nationale d'Ingénieurs de Tunis - Tunis (TN)*

TRIB -P1-080 Tribological behavior of ZrN/Ta Coatings Deposited by RF Magnetron Sputtering on Ti-6Al-4V and CoCrMo Alloys
C. Ramoul [1, 2], C. Nouveau [3], N. Beliardouh [1], H. Kaleli [4]
[1]*Université BADJI Mokhtar - Annaba (DZ)*
[2]*Centre de Recherche en Technologies Industrielles CRTI - Alger (DZ)*
[3]*Arts et Metiers ParisTech - Cluny (FR)*
[4]*Yildiz Technical University - Istanbul (TR)*

TRIB -P1-103 Reactive HiPIMS deposition of Ti-Al-N: Influencing the Cubic to Wurtzite phase transition
L. Zauner [1], L. Zauner [2], T. Wojcik [3], T. Kozák [4], J. Capek [4], H. Bolvardi [5], S. Kolozsvári [6], P.H. Mayrhofer [1], P.H. Mayrhofer [2], H. Riedl [2], H. Riedl [3]
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[5]*Oerlikon Balzers, Oerlikon Surface Solutions AG (LI)*
[6]*Plansee Composite Materials GmbH, DE - Lechbruck (DE)*

TRIB -P1-186 Deposition and characterization of multilayer CrAlN/$CrAlO_x$ coatings deposited by CAE-PVD
E. Almandoz [1], J. F. De Ara [1], J. Martínez De Bujanda [1], J.F. Palacio [1], G. Alcalá [2], J.A. García [3], G.G. Fuentes [4], R.J. Rodríguez Trías [3]
[1]*AIN - Cordovilla (ES)*
[2]*UCM - Madrid (ES)*
[3]*UPNA - Pamplona (ES)*
[4]*AIN - Pamplona (ES)*

Poster session #2

- **DEPO**

DEPO -P2-004 Effect of RF sputtering deposition parameters on silicon nitride coatings
S. Meziani [1]
Centre de Recherche en Technologie des Semiconducteurs pour l'Energétique - Algiers (DZ)

DEPO -P2-029 Superhydrophobic plasma polymerization on surfaces from smooth to laser textured multi-scale structure
R. Elleb [1], F. Mermet [2], T. Engel [3], G. Chabrol [4], F. Poncin-Epaillard [1]
[1]IMMM - Université du Maine - Le Mans (FR)
[2]IREPA LASER - Illkirch-Graffenstaden (FR)
[3]INSA Strasbourg (FR)
[4]IPP, ICUBE - Illkirch-Graffenstaden (FR)

DEPO -P2-045 Optimization of gold coatings for bipolar plates of polymer electrolyte membrane fuel cells
M-A. Leroy [1], H. Sauzet [1], C. Heau [1], Y. Gachon [1]
IREIS / Groupe HEF - Andrézieux Bouthéon (FR)

DEPO -P2-046 Determination the structure of $ZnSnN_2$ thin films by using transmission electron microscopy
F. Alnjiman [1, 2], S. Bruyère [1], J. Ghanbaja [1], S. Diliberto [1], P. Boulet [1], H. Albrithen [2], P. Miska [1], J.F. Pierson [1]
[1]Institut Jean Lamour, Université de Lorraine, Nancy, FR - Nancy (FR)
[2]Department of Physics and Astronomy at College of Science, King Saud University at Riyadh - Riyadh (SA)

DEPO -P2-052 High temperature stable ZrN-based thin films for plasmonic applications
J-F. Pierson [1], M. Gipperich [1], D. Pilloud [1], T. Easwarakhanthan [1], H. Rinnert [1]
Institut Jean Lamour (UMR CNRS 7198) – Univ. de Lorraine - Nancy (FR)

DEPO -P2-054 Evidence of in-depth transport phenomena during deposition of hydrophobic organosilicon coatings on porous cellulosic materials in atmospheric pressure dielectric barrier discharges
L. Stafford [1], J. Profili [1], S. Babei [1], A. Dorris [2], S. Beck [2], S. Asadollahi [3], A. Sarkissian [3]
[1]Université de Montréal - Montréal (CA)
[2]FPInnovations - Pointe-Claire (CA)
[3]Plasmionique - Varennes (CA)

DEPO -P2-119 Plasma-based deposition of coatings for Drop Coating Deposition Raman (DCDR) Spectroscopy
A. Kuzminova [1], M. Procházka [1], E. Kocišová [1], O. Kylián [1]
Charles University, Faculty of Mathematics and Physics - Praha (CZ)

Poster session #2

DEPO -P2-163 Tuning the localized surface plasmon resonances of micro-triangular patterns
A. Bercea [1], C. Constantinescu [1], F. Dumas-Bouchiat [1], C. Champeaux [1]
University of Limoges, CNRS, IRCER, UMR7315 - Limoges (FR)

DEPO -P2-178 Plasma-Enhanced Pulsed Laser Deposition of metal-oxide thin films
E. Wagenaars [1], D. Meehan [1], S. Rajendiran [1], A. Rossall [2]
[1]York Plasma Institute, Department of Physics, University of York (UK)
[2]School of Computing & Engineering, University of Huddersfield (UK)

DEPO -P2-180 Structure, stress and physical properties of Mo-Al-N thin films deposited by reactive magnetron sputtering
G. Abadias [1], F. Angay [1], D. Eyidi [1], S. Camelio [1]
Institut Pprime, CNRS-Univ. de Poitiers - Futuroscope-Chasseneuil (FR)

- **GROM**

GROM -P2-177 The role of each cathode in GLAD dual mode. Experimental and numerical investigations
A. Besnard [1, 2], E. Haye [3], J. Colaux [4], J. Muller [2], J.J. Pireaux [3], S. Lucas [3]
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[2]University of Namur, LARN-NISM - Namur (BE)
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[4]University of Namur, SIAM - Namur (BE)

- **LIQU**

LIQU -P2-174 Dressed dust acoustic soliton energy in dusty space plasmas
R. Amour [1], M. Benzekka [2]
[1]Plasma Physics Group, Theoretical Physics Laboratory, Faculty of Physics, University of Bab-Ezzouar, USTHB - Bab Ezzouar (DZ)
[2]Laboratoire de Physique des Particules et Physique Statistique, ENS-Kouba - Algiers (DZ)

LIQU -P2-175 Nonlinear localized dust acoustic waves in dusty plasma with nonthermal ions featuring Gurevich distribution
M. Ouazene [1], R. Amour [2]
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[2]Plasma Physics Group, Theoretical Physics Laboratory, Faculty of Physics, University of Bab- Ezzouar, USTHB - Bab Ezzouar (DZ)

LIQU -P2-176 Nonlinear structures in dusty space plasma in the presence of polarization force
M. Benzekka [1, 2], R. Amour [1], T.H. Zerguini [1]
[1]Plasma Physics Group, Theoretical Physics Laboratory, Faculty of Physics, University of Bab-Ezzouar, USTHB - Algiers (DZ)
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Poster session #2

- **NANO**

NANO -P2-032 Dependence of plasma polymer / metal composite structure on the nature of metallic nanoparticles
D. Debarnot [1], A. Mansour [1], F. Poncin-Epaillard [1]
Le Mans Université - Le Mans (FR)

NANO -P2-118 Femtosecond laser nanostructuring of magnetron sputtered functional oxide thin films
M. Tabbal [1], A. Talbi [2], P. Coddet [2], M. Mickan [2], A.L. Thomann [2], E. Millon [2], A. Stolz [2], C. Boulmer-Leborgne [2], G. O'connor [3], N. Semmar [2]
[1]American University of Beirut - Beirut (LB)
[2]GREMI-Universite d'Orleans - Orléans (FR)
[3]National University of Ireland - Galway (IE)

NANO -P2-182 Study of the interactions between a resonant power supply and a flat dielectric barrier discharge lamp
B. Caillier [1], N. Hamza [2], D. Florez [3], H. Piquet [2]
[1]Laboratoire Diagnostics des Plasmas Hors Equilibre (DPHE), Université de Toulouse, INU Champollion - Albi (FR)
[2]LAPLACE, Université de Toulouse, CNRS, INPT, UPS - Toulouse (FR)
[3]Universidad Sergio Arboleda - Bogota (CO)

NANO -P2-183 Atmospheric plasma-assisted modification of $LiYF_4:Eu^{3+}$
B. Caillier [1], P. Guillot [1], J.M. Gonçalves [2], J.M.A. Caiut [2]
[1]Laboratoire Diagnostics des Plasmas Hors Equilibre (DPHE), Université de Toulouse, INU Champollion - Albi (FR)
[2]Department of Chemistry – FFCLRP, University of Sao Paulo - Ribeirao Preto, Sp (BR)

- **PROC**

PROC -P2-035 Characterization of transport of neutral and ionized speciesin reactive HiPIMS process
D. Boivin [1], A. El Farsy [1], A. Najah [1], S. Cuynet [1], C. Noel [1], T. Belmonte [1], L. De Poucques [1]
Université de Lorraine, CNRS, IJL, F-54000, FR - Nancy (FR)

PROC -P2-056 Influence of N_2, O_2, and H_2 admixtures on the electron power balance and neutral gas heating in microwave Ar plasmas at atmospheric pressure
A. Durocher-Jean [1], N. Delnour [1], L. Stafford [1]
Universite de Montreal - Montreal (CA)

Poster session #2

PROC -P2-087 Statistical evaluation of late and early afterglow coefficients in the flowing afterglow of microwave nitrogen plasmas
G. Robert Bigras [1], A. D'arco [1], L. Stafford [1]
Université de Montréal - Montréal (CA)

PROC -P2-134 Characterization of an assisting plasma source in reactive sputter deposition processes
E. Schüngel [1], S. Gees [1], S. Schwyn Thöny [1]
Evatec AG - Trübbach (CH)

PROC -P2-139 Modelling of High-power impulse magnetron sputtering of Ar/O_2 mixture using global kinetic model.
J. Zgheib [1]
Institut des matériaux Jean Rouxel (IMN) - Nantes (FR)

PROC -P2-160 Ammonia production in low pressure H_2-N_2 DECR plasmas
C. Noel [1], A. Maizeray [1], G. Marcos [1], T. Czerwiec [1]
Institut Jean Lamour - Nancy (FR)

PROC -P2-185 Movement of titanium ions in the target region of HiPIMS
J. Held [1], A. Von Keudell [1], V. Schulz-Von Der Gathen [1]
Experimental Physics II, Ruhr University Bochum - Bochum (DE)

PROC -P2-187 Study of particle transport above the target in high power impulse magnetron sputtering plasmas using a marker technique
S. Thiemann-Monjé [1], J. Held [1], M. Sackers [1], A. Von Keudell [1]
Ruhr-University Bochum (DE)

- **SOUR**

SOUR -P2-019 Pressure and voltage effects on UV efficacy in a mercury-free neon-xenon dielectric barrier discharge
F. Haddou [1], P. Guillot [1], A. Belasri [2], B. Caillier [1]
[1]Laboratoire Diagnostics des Plasmas Hors Équilibre (DPHE),Université de Toulouse,INU Champollion - Albi (FR)
[2]Laboratoire de Physique des Plasmas,Matériaux Conducteurs et leurs Applications (LPPMCA),Université des Sciences et de la Technologie (USTO-MB) - Oran (DZ)

SOUR -P2-064 Microwave plasma source development for the study of ionization processes influence on isotopic fractionation of nitrogen and hydrogen
L. Pentecoste-Cuynet [1], L. Tissandier [1], D. Bekaert [1], L. Piani [1], T. Rigaudier [1], D. Lequin [1], B. Marty [1]
Centre de Recherche Pétrographique et Géochimique, UMR 7358 - CNRS/Université de Lorraine - Vandoeuvre Les Nancy (FR)

Poster session #2

SOUR -P2-099 Combinatorial investigation of high entropy alloy systems sputtered by highly energized ion beams
L. Petho [1], G. Roussely [2], P. Nagy [1], T. Nelis [3], P. Sortais [2], J. Michler [1]
[1]*Lab. for Mechanics of Materials and Nanostructures, Empa - Thun (CH)*
[2]*Polygon Physics - Grenoble (FR)*
[3]*Institute ALPS, Berner Fachhochschule - Biel (CH)*

SOUR -P2-107 Arc sources for low defect coatings and high target utilisation
B. Kurian [1], V. Bellido-Gonzalez [1], D. Monaghan, [1], B. Daniel [1], R. Brown [1], J. Price [1], A. Azzopardi [1], T. Sgrilli [1], O. Hernandez-Rodriguez [1]
Gencoa ltd - Liverpool (UK)

SOUR -P2-126 Characterization of magnetron sputtering discharges during the formation and transport of metal nanoparticles
A. Chami [1], C. Arnas [1], L. Couëdel [2]
[1]*Aix-Marseille université - Marseille (FR)*
[2]*University of Saskatchewan - Saskatoon (CA)*

SOUR -P2-143 Multi microwave microplasmas generated in capillaries for laser application
O. Leroy [1], S. Latchabady [1], J. Robert [1], T. Minea [1]
LPGP - CNRS - Orsay (FR)

SOUR -P2-151 Insight on the discharge parameters in magnetron sputtering by a 2D PIC-MCC modeling
A. Revel [1], L. De Poucques [2], T. Minea [1]
[1]*Laboratoire de Physique des Gaz et des Plasmas, CNRS UMR 8578, Université Paris-Sud, Université Paris-Saclay - Orsay (FR)*
[2]*Institut Jean Lamour UMR 7198, CNRS – Univ. de Lorraine - Nancy (FR)*

- **TRIB**

TRIB -P2-075 New generation of duplex treatments on pure Fe substrates
D. Cotton [1], C. Nouveau [1], N. Bentayeb [1], A. Besnard [1]
Arts et Metiers ParisTech - Cluny (FR)

TRIB -P2-149 Influence of titanium addition on the phase composition and properties of tungsten borides thin films
T. Moscicki [1], R. Psiuk [1], H. Slominska [1]
Institute of Fundamental Technological Research Polish Academy of Science - Warsaw (PL)

TRIB -P2-155 Elaboration of MAX phases in TiAl alloys by plasma-assisted diffusion treatments
T. Czerwiec [1], J. Kadoc [1], A. Trigui [1], E. Guillaume [2], M. Grégory [1], D. Jacky [1]
[1]*Institut Jean Lamour (IJL) - Nancy (FR)*
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AUTHORS INDEX

C

G

H

I

J

K

L

PLATHINIUM
PLASMA THIN FILM INTERNATIONAL UNION MEETING

M

N

O

P

Q

R

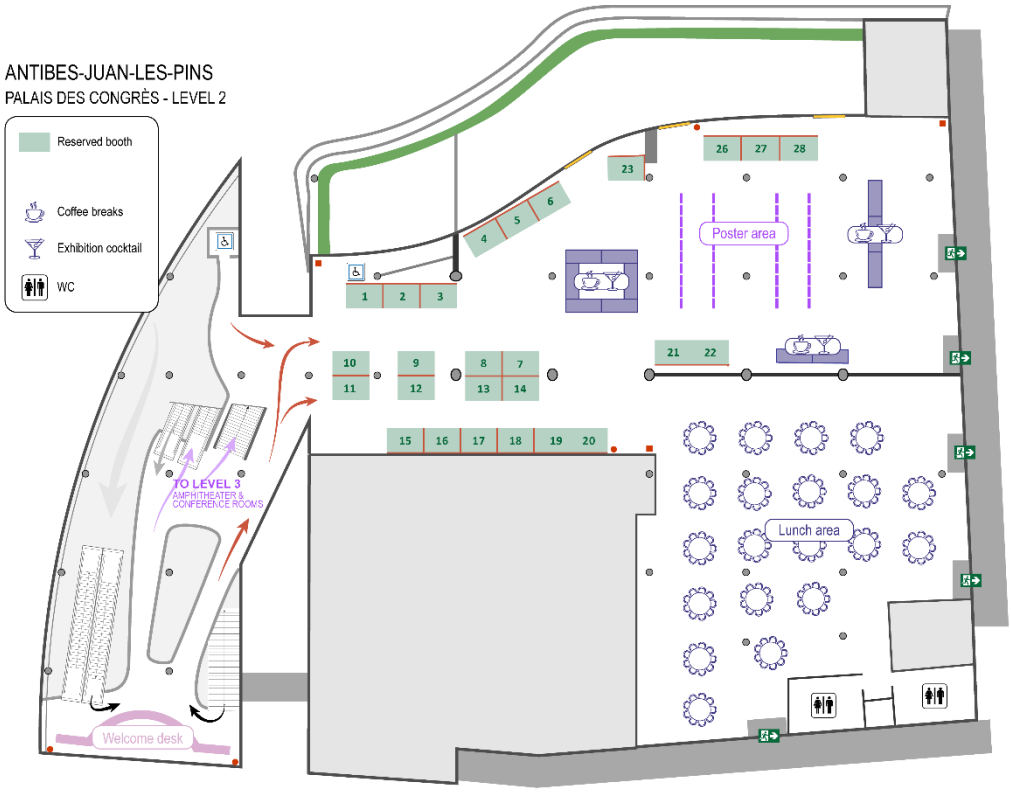
S

Y

Z

EXHIBITORS

Exhibition map



List of exhibitors

Company	booth
AGC PLASMA TECH SOLUTIONS	18
ALLIANCE CONCEPT	09
AMPERE INDUSTRIE	14
BRONKHORST	03
BUSCH	26
CAMECA	08
ELETTRORAVA	04
FRANCE SCIENTIFIQUE	13
HIDEN ANALYTICAL	13
HORIBA	23
IMPEDANS	05
INFICON	06
J. SCHNEIDER ELEKTROTECHNIK	10

Company	booth
KURT J. LESKER	01
MICROTEST	04
NEYCO	11
PFEIFFER VACUUM	12
PHYSICAL INSTRUMENTS	28
POLYGON PHYSICS	07
ROBEKO	21-22
SAIREM	19-20
SCIA SYSTEMS	16
SCIENTEC	17
SEMILAB	27
TECHNIX	02
VAT	15

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emeiasales@lesker.com
www.lesker.com

MICROTEST

Stand # 04

MICROTEST: Equipment & consumables

Technical expertise – After-sales Service – Maintenance – Consumables

Our wide offer and technical knowledge support the implementation of your projects, with our team at your side to provide assistance and expert follow up. Our equipment:

- Thin film coating: with our partner Elettrorava SPA, we are experts in designing, production, research and development of thin films deposition systems involving DC/RF sputtering, PECVD, HFCVD, E-Beam deposition techniques. One of the major activities includes design and development of PECVD single chamber and cluster chamber deposition systems. A wide range of processes has been implemented in the Process Chambers, including rf-PECVD, vhf-PECVD, ECR-PECVD and HWCVD
- Pumps and Industrial balancing machines
- Spin/spray Coaters/developers, Wafer bonders, Hotplates, Wet process for R&D and production
- High Temperature Ovens
- Atmospheric Plasma Cleaner
- Mask aligners, laser Lithography
- Second Source Spare parts (Novellus – Applied – LAM…)
- Consumables & Tools: Tweezers - Vacuum handlers, frames and shippers…

MICROTEST
Equipment & Consumables for the semiconductors and hybrids

ZA La Garrigue du Rameyron
84830 Sérignan
France
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microtest@microtest-semi.com
www.microtest-semi.com

NEYCO

Stand # 11

Over the past 60 years, Neyco has consolidated its position as the specialist in the fields of high vacuum, inorganic materials and thin films

Our main skills, capabilities and knowledge include:

- Materials: inorganic powders and pellets, sputtering targets & backing plates, precious metals, filaments & boats, liners, wafers & substrates
- Thin films components: electron guns and ion guns spare parts, thickness measurement and quartz, magnetrons, electron guns,
- Vacuum components: pressure measurement, KF/ISO/CF vacuum fittings, glass & quartz components, viewports, feedthroughs, valves
- Electron Microscopy: consumables dedicated to SEM & TEM

Our company is ISO 9001 and ISO 14001certified. This ensures that you receive a guaranteed quality of service with the lowest environmental impact.

neyco
Vacuum & Materials

30 avenue de la Paix
92170 Vanves
France
+33 (0)1 41 90 50 50
contact@neyco.fr
www.neyco.fr

PFEIFFER VACUUM

Stand # 12

Pfeiffer Vacuum – a name that stands for innovative vacuum and leak detection solutions, high technology and dependable products, along with first-class service.

Pfeiffer Vacuum is at the origin of the invention of many products in the vacuum field.

Its components and equipment are used to generate a clean and dry vacuum, to test the tightness of industrial installations and equipment, to measure level of vacuum and to carry out gas analyses in the fields of research and industrial process.

Pfeiffer Vacuum provides itself with the means to provide each customer with an optimal and adapted vacuum solution. The group tends to maintain its Research and Development momentum. This is in order to maintain excellence and be an industrial reference based on high-tech products. The main products are developed in our R&D (Asslar and Annecy) and are subjected to numerous tests before being marketed.

In order to best meet customer demand, Pfeiffer Vacuum ensures that its commitments in terms of sustainable development, quality and safety are met. The group is proud to highlight its two certifications: ISO 9001 (quality management) and 14001 (environmental management). Thanks to its desire to provide increasingly eco-responsible products, eco-design has been introduced into the production process.

PFEIFFER VACUUM

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74009 Annecy Cedex
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PHYSICAL INSTRUMENTS

Stand # 28

Founded in 2005 PHYSICAL Instruments is a sales agency distributing over the French market High Voltage DC Power Supplies and Pulsed High Voltage Generators, DC to DC HV converters. Also we offer a nice portfolio of HV cables and connectors.

We are collaborating with expert engineers, physicists, production and quality specialists, thus offering excellent products.

The complete development and production process is done in Germany. Customers are able to obtain complete fine-tuned solutions for supplying industrial experiments from a single source.

All units are available as standard version or optionally with digital interfaces. Therefore integration into computer based systems is guaranteed…

Physical Instruments

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POLYGON PHYSICS

Stand # 07

Polygon Physics designs and produces charged particle or plasma sources as well as complete systems for vacuum surface engineering applications such as ion beam sputter deposition (including combinatorial thin film deposition), surface nano-structuring, ion beam figuring, electron beam welding, and ion implantation.

We are specialized in ultra-compact ultra-low power ECR technology. This technology enables stable and reliable plasma, ion or electron beams and beam arrays of any size and shape. Due to the filament-less design of our products also reactive gases (e.g. oxygen) can be used, and the maintenance is very low. We can offer from a very cost-effective version to very specific versions matched to the power requirement of the user.

In need of a linear, rectangular or circular beam for a particular surface treatment? We have a unique expertise in creating the beam of your choice, small or large, high brightness or high current.

53 rue des Martyrs
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www.polygonphysics.com

robeko

Stand # 21-22

robeko is a leading technology company, providing technical consulting and sales of components and materials for PVD- and PECVD -processes.

The company has an own application center with several industrial scale sputtering systems and a target production including target bond shop as well as a sales portfolio of high end, complementary components for thin film production, plasma analysis and plasma surface treatment. We are proud to be the sales agent for leading manufactures like Sputtering Components, Thin Film Consulting, PLASUS, Impedans, Sairem, ionics and Magpuls. Accompanied by the in house developed high power microwave source MIRO robeko is able to provide a full range of products in the field of thin film technology.

Continuous production process development and training of our employees assure deep understanding and expertise of the products and their applications. This allows robeko to consult with the customers and advice the best solution for their needs.

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www.robeko.de

SAIREM

Stand # 19-20

SAIREM is the Microwave and Radio Frequency specialist with applications in industry, food processing, global science, chemistry, plasma, and medicine. The equipment, designed and developed by SAIREM, can operate at power levels of a few watts up to several hundreds of kilowatts at all standard ISM frequencies. The company offers a wide range of solutions, including innovating generators, components for energy transfer, plasma sources, or turnkey solutions, and all the associated technologies to optimize your application: reactor design, protection and radiation control, tuning and automation systems...In the plasma activity, SAIREM designs, manufactures and provides microwave plasma sources and associated generators in the whole pressure and power range. From solutions for large treatment areas in the Pa range using solid state generators and autotuned plasma sources to atmospheric plasma torch working at several kW.

Recent developments in plasma

- ECR coaxial plasma source Aura-Wave (SVTM innovation award 2015)
- Medium pressure coaxial plasma source Hi-Wave (SVTM innovation award 2015)
- Surface wave launcher S-Wave (SVTM innovation award 2018)
- New industrial 6 kW atmospheric downstream plasma source with ignition system
- Solid state microwave generator 2.45 GHz – 1000 W

sairem
microwave & radio frequency

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scia SYSTEMS

Stand # 16

scia Systems GmbH is a full range supplier of precise surface processing equipment, based on advanced ion beam and plasma technologies. The systems are applicable for coating and etching processes in the production of microelectronics, MEMS and precision optical components, in both, high volume production as well as research and development environments.

Due to their flexible and modular design, the systems can be configured according to customer specific requirements. Amongst others by combining several vacuum process chambers into cluster or in-line solutions. Together with our worldwide service partners, we offer comprehensive service and superior technology support.

Technology Portfolio
- Ion Beam Trimming (IBT)
- Ion Beam Etching and Milling (IBE/IBM)
- Dual Ion Beam Sputtering (DIBS)
- Plasma Enhanced Chemical Vapor Deposition (PECVD)
- Reactive Ion Etching (RIE)
- Magnetron Sputtering
- Dry Cleaning

scia systems

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www.scia-systems.com

SCIENTEC

Stand # 17

ScienTec is one of the largest French distributors in the field of surface analysis from nanometer to millimeter, for research & industry.

ScienTec is the representative of Prevac that manufacture Vacuum systems for analysis & deposition (PVD – PLD – MBE)

ScienTec also offers a wide range of scientific equipments:

- Nanoindentors: Hardness, scratch, Young modulus, ambient/vacuum environments
- Optical and mechanical profilometers: single & automated measurements
- Thin film analyzers: Single-spot, microscopic-spot thickness or automated
- Vacuum systems for analysis & deposition (PVD – PLD – MBE)
- SEM microscopes: Superior price-to-performance tabletop and standard SEM (robustness, ease-of-use, EDS analysis)
- AFM microscopes: Best price / performance AFM (High resolution, ResiScope, HD-KFM, sMIM, multiple environments)
- IR and RAMAN spectroscopies: submicron scale, better than ATR

SCIENTEC
The SoluTion to your measurements

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info@scientec.fr
www.scientec.fr

SEMILAB

Stand # 27

SEMILAB is a major supplier of advanced metrology equipment and techniques, for the control of processes and materials in the field of Semiconductor, III-V, LED Photovoltaic and printed electronics, both for research and development and production control.

Our techniques and measuring instruments provide mechanical, opticals and electricals characterizations for a wide range of bulk materials and thin layers, whose structures can be simple or multilayered. Our equipments can be implemented fully manual and R&D type but also online for production control or even integrated in situ within process equipment.

SEMILAB has a wide variety of measurement techniques, many of which are contactless and non-destructive such as ellipometry and spectroscopic reflectometry, photoluminescence, which allow complete control of all the optical properties of the materials.

SEMILAB proposes also a very wide range of techniques for characterizing electrical properties of thin metallics, semiconductors and transparent conductive layers, such as resistance, dopant, mobility by hall effect, contamination, life time, and diffusion length...

And since recently SEMILAB has included in his product portfolio mechanical tests by AFM, SPM and Nanoindentation.

SEMILAB

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www.semilab.hu

TECHNIX

Stand # 02

Since 2000, Technix designs and manufactures in France a wide range of high voltage DC power supplies based on the zero current switching (ZCS) resonance technology. The range spans from 1 kV to over 100 kV and from 300 W to over 100 kW.

We offer a flexible modular design and customized solutions, while keeping high reliability and fast delivery time through a wide range of options.

Technix generators are used all around the world within many important industrial groups and famous research laboratories for applications like HiPIMS solutions, low pressure microwave discharges, Atmospheric plasmas, DC discharges, physical vapor deposition (PVD) ,Electron beam evaporation, DC Power Magnetron Sputtering, Dielectric Barrier Discharge (DBD), Molecular beam epitaxy (MEB), etc.

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contact@technix-hv.com
www.technix-hv.com

VAT

Stand # 15

VAT is the leading global developer, manufacturer and supplier of high-end vacuum valves. VAT vacuum valves are mission-critical components for advanced manufacturing processes of innovative products used in daily life like such as portable devices, flat screen monitors or solar panels. VAT is organized into three different reporting segments: Valves, Global Services and Industry offering high-end vacuum valves, multi-valve modules, edge-welded bellows and related value-added services for an array of vacuum applications. VAT Group is a global player with main manufacturing sites in Haag (Switzerland), Penang (Malaysia) and Arad (Romania).

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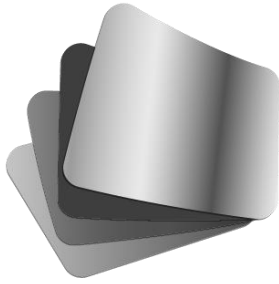
See you for the 2nd edition



PLATHINIUM

PLASMA THIN FILM INTERNATIONAL UNION MEETING

13 - 17 September 2021

Antibes, French Riviera

www.plathinium.com

HORIBA

The HORIBA Group, made up of 49 companies in 28 countries, is a world leading Technology company that provides precision analytical and measurement systems. HORIBA's products and engineering solutions bring together 45 years of expertise in fluid control and over two centuries of experience in spectroscopy to provide vacuum coating OEMs and end users with a unique value proposition.

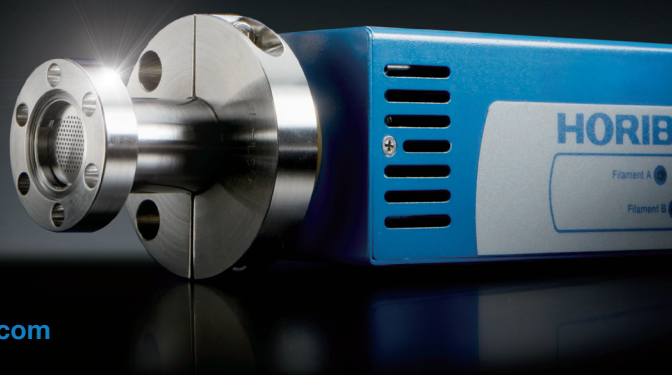
HORIBA's Applications and Technology experts work as part of your team to ensure OEMs and end users receive the best possible support to increase yield, minimize waste and maximise productivity when using our repeatable, reliable and reproducible solutions.

When it comes to confidence in delivering fluids and monitoring the quality of low-pressure plasma environments; HORIBA has it covered. HORIBA is recognised globally in the Semiconductor industry as a leading provider of solutions that contribute to process stability and consistent control for etching and deposition processes.

With a wide range of Instrumentation, controllers, monitors, analysers, and bespoke engineering solutions, HORIBA is a proven single source for consistent quality assurance, process control and monitoring both for in-situ / in-line and offline applications.

RGA Redefined

HORIBA's compact process Gas Monitor Micropole system is one of the smallest complete mass spectrometer systems in the world. Delivering high performance and offering high pressure operation combined with ease of use, rapid installation and intuitive feature-rich software this product provides users with a proven no-nonsense solution to complex gas analysis.



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Visit: https://horiba-vacuumcoating.com

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HORIBA

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CONFERENCE SECRETARY: FRENCH VACUUM SOCIETY

PLATHINIUM
PLASMA THIN FILM INTERNATIONAL UNION MEETING

Overview program

Monday 23 Sept.

8:30 - 9:00	Short course Registration Badge pick up
9:00 - 9:20	9:00 - 10:30 Tutorials #1 **Fundamental of plasmas** *A.von Keudell*
9:20 - 10:00	
10:00 - 10:30	Coffee break 15'
10:30 - 10:50	10:45 - 12:15 Tutorials #2 **Introduction to High Power Impulse Magnetron Sputtering** *D. Lundin*
10:50 - 11:10	
11:10 - 11:30	
11:30 - 11:50	
11:50 - 12:10	
12:10 - 14:00	Lunch
14:00 - 14:40	14:15 - 15:45 Tutorials #3 **Modelization of thin film deposition by kinetic Monte-Carlo, and evaluation of their properties** *S. Lucas*
14:40 - 15:00	
15:00 - 15:20	
15:20 - 15:40	
15:40 - 16:10	Coffee break 15'
16:10 - 16:40	16:00 - 17:30 Tutorials #4 **Functional characterization of thin films** *U. Cvelbar*
16:40 - 17:00	
17:00 - 17:20	
17:20 - 17:40	
17:40 - 18:00	
18:30 - 20:00	**Registration/Badge pick up & Welcome reception** *until 20:00*

EXHIBITION SET UP

Tuesday 24 Sept.

Antipolis Auditorium	Ella Fitzgerald Room
Registration Badge pick up	
Opening ceremony	
PL1 / E. STAMATE	
Coffee break	
DEPO1-O1-023 S. Ibrahim DEPO1-O2-025 K. Folgner DEPO1-O3-048 A. Garcia Wong DEPO1-O4-014 V. Suciu DEPO1-O5-061 F. Avino	DEPO 1/5
PROC1-O1-142 D. Lundin PROC1-O2-115 D. Dekkar PROC1-O3-067 J. Hnilica PROC1-O4-050 B. Kurian PROC1-O5-003 A. Ricard	PROC 1/3
Lunch	
PL2 / G. ABADIAS	
SOUR1-O1-059 A. Patelli SOUR1-O2-072 M. Michiels SOUR1-O3-153 T. Minea	SOUR 1
TRIB1-O1-005 S. Brühl TRIB1-O2-060 Y. Zhang TRIB1-O3-158 B. Pace	TRIB 1/5
Coffee break	
DEPO2-K1-024 M. Amberg	
TRIB2-K1-065 P. Vasina	
DEPO2-O2-016 D. Ngoue DEPO2-O3-078 S. Schwyn Thöny	DEPO 2/5
TRIB2-O2-013 B. Gaedike TRIB2-O3-111 B. Coto	TRIB 2/5
Poster session I & Exhibition Cocktail *until 23:00*	

EXHIBITION

Wednesday 25 Sept.

Antipolis Auditorium	Ella Fitzgerald Room
PL3 / C. CANAL	
TRIB3-O1-129 Y. Gachon TRIB3-O2-144 M. Mantel	TRIB 3/5
HELI1-O1-124 L. Blahová HELI1-O2-161 J. Santos Sousa	HELI 1
Coffee break	
DEPO3-O1-102 S. Gaiaschi DEPO3-O2-127 B. Dey DEPO3-O3-088 M. Ji DEPO3-O4-100 A. Perraudeau DEPO3-O5-140 C. Jama	DEPO 3/5
INDU1-O1-190 A. Bui INDU1-O2-028 A. Jacquemot INDU1-O3-167 G. Eichenhofer INDU1-O4-138 J. Hrebik INDU1-O5-021 M. Cavarroc	INDU 1
Lunch	
PL4 / A. VON KEUDELL	
GROM1-O1-007 R. Graillot-Vuillecot GROM1-O2-036 A. Borroto GROM1-O3-081 M. Evrard	GROM 1/2
LIQU1-O1-042 V. Ntomprougkidis LIQU1-O2-123 V. Orozco LIQU1-O3-031 M. El Shaer	LIQU 1
Coffee break	
DEPO4-K1-039 M. Fenker	
NANO1-K1-093 Y. Raitses	
DEPO4-O2-022 D. Abessolo Ondo DEPO4-O3-096 M. Van Straaten DEPO4-O4-166 T. Nguyen Van DEPO4-O5-168 L. Presmanes	DEPO 4/5
NANO1-O2-076 D. Babonneau NANO1-O2-092 L. Zajickova NANO1-O3-095 H. Kabbara NANO1-O5-110 J. Purans	NANO 1/3
Conference dinner (by reservation) *from 19:30*	

EXHIBITION

DISMANTLING

Thursday 26 Sept.

Antipolis Auditorium	Ella Fitzgerald Room
PL5 / T. GANS	
TRIB4-O1-047 A.M. Schwan TRIB4-O2-058 G. Carnide	TRIB 4/5
SURF1-O1-070 P. Vinchon SURF1-O2-154 N. Marath Santhosh	SURF 1/2
Coffee break	
PROC2-O1-071 S. Konstantinidis PROC2-O2-066 T. Kozak PROC2-O3-131 A. Lacoste PROC2-O5-169 H. Hajihoseini PROC2-O5-121 L. Cacot	PROC 2/3
NANO2-O1-041 M. Mitronika NANO2-O2-105 A. Shukurov NANO2-O3-132 N. Vinx NANO2-O4-165 C. Champeaux NANO2-O5-101 J. Huran	NANO 2/3
Lunch	
DEPO5-K1-116 M. Mickan	
GROM2-K1-130 P. Raynaud	
DEPO5-O2-057 H. Riedl DEPO5-O3-162 S. Shayestehaminzadeh DEPO5-O4-037 Q. Ji	DEPO 5/5
GROM2-O2-062 W. Ravisy GROM2-O3-125 C. Hoppe GROM2-O4-012 S. Gaiser	GROM 2/2
Coffee break	
Poster session II *until 18:00*	

Friday 27 Sept.

Antipolis Auditorium	Ella Fitzgerald Room
PL6 / M. KUSHNER	
TRIB5-O1-113 F. Bénédic TRIB5-O2-141 G. Marcos	TRIB 5/5
SURF2-O1-026 G. Antoun SURF2-O2-122 K. Asharya	SURF 2/2
Coffee break	
PROC3-K1-106 T. Richard	
NANO3-K1-069 S. Bulou	
PROC3-O2-135 E. Schüngel PROC3-O3-133 D. Engel PROC3-O4-120 A. Fauroux	PROC 3/3
NANO3-O2-009 E. Haye NANO3-O3-097 A. Caillard NANO3-O4-156 T. Gries	NANO 3/3
Closing ceremony	
Social Program *until 18:00*	

8:40 - 9:20 | 9:20 - 9:40 | 9:40 - 10:00 | 10:00 - 10:30 | 10:30 - 11:00 | 11:00 - 11:20 | 11:20 - 11:40 | 11:40 - 12:00 | 12:00 - 12:30 | 14:00 - 14:30 | 14:30 - 14:50 | 14:50 - 15:10 | 15:10 - 15:30 | 15:30 - 16:00

Topics: DEPO, GROM, HELI, INDU, LIQU, NANO, PROC, SOUR, SURF, TRIB

Poster sessions, exhibition, coffee breaks & lunches are located in the Gould area