



PLATHINIUM
PLASMA THIN FILM INTERNATIONAL UNION MEETING

11-15 September 2023
Antibes, French Riviera

FINAL PROGRAM & EXHIBITORS GUIDE

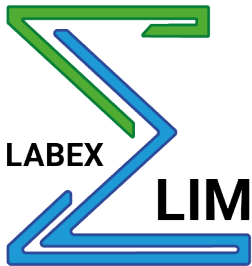


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PLATHINIUM

PLASMA THIN FILM INTERNATIONAL UNION MEETING

11 – 15 September 2023

Antibes, French Riviera

www.plathinium.com

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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 **PLASma THIN** film International **Union Meeting**, PLATHINIUM in 2019, 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). PLATHINIUM is now a recognized biennial meeting covering plasma physics, plasma processing and plasma applications

The topics deal with a wide range of plasma configurations from low to atmospheric pressure using plasma excitation methods at varying frequencies and confinement by magnetic fields also. Consequently, PLATHINIUM 2023 will also focus on the applications from traditional to innovative fields such as thin films and coatings in micro and optoelectronics, automotive, aeronautics industries, and expands to nanoparticles and multifunctional nanocomposites fabrication and to emerging new fields such as plasmas, thin films and nanostructures used in environmental, energy, biomedical and agricultural applications.

Tutorials on plasma science, materials, characterization and applications will be delivered for one-day prior to the Plathinium 2023 conference. A 2-days exhibition with 40 stands dedicated to vacuum, plasma and materials science is organized and will contribute for an important part of the conference.

After a second edition organized fully online in 2021, Plathinium is back in Antibes for this 3rd edition.

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

Welcome at 3rd PLATHINIUM!

Lenka ZAJICKOVA
Chair of the Scientific Committee

Corinne CHAMPEAUX
Chair of the Steering Committee

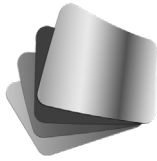


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GENERAL INFORMATION

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**

Antipolis Convention Centre – 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 11 Sept | 08:30 – 20:00 |
| Tuesday 12 Sept | 08:30 – 20:00 |
| Wednesday 13 Sept | 08:15 – 18:30 |
| Thursday 14 Sept | 08:15 – 18:00 |
| Friday 15 Sept | 08:15 – 12:00 |

Exhibition – level 2

| | |
|-------------------|---------------|
| Tuesday 12 Sept | 09:30 – 22:30 |
| Wednesday 13 Sept | 09:00 – 18:30 |

Disclaimer

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

The PLATHINIUM 2023 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, timetables, plans or other items relating directly or indirectly to the Conference. The PLATHINIUM 2023 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



Société française du Vide

Société Française du Vide

19 rue du Renard
F75004 Paris

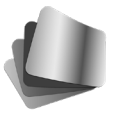
+33 (0)1 53 01 90 30
www.vide.org

Gweltaz HIREL

SFV Director, Event manager
gweltaz.hirel@vide.org

Hervé LEMOINE

Exhibition coordinator
hervel.lemoine@vide.org



SOCIAL EVENTS

Get together parties

✓ Included in the registration – no booking necessary

- **Welcome reception**

Monday 11 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.

- **Poster party session #1 and Industrial evening**

Tuesday 12 September – 17:30 - 22:30

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

- **Poster party - session #2**

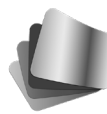
Wednesday 13 September – 17:35 - 18:30

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 cocktail**

Thursday 14 September – 19:30 - 22:30

Enjoy a relaxed moment during the cocktail reception offered on the 3rd floor of the Palais des Congrès with its panoramic terrace and a musical entertainment



Social activities

Friday 15 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

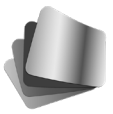
- 14:00 / Transfer from the Congress site to a bus tour around the Cap d’Antibes
- 14:45 / Hiking on the coastal path
- 17:15 / Transfer back to Juan-les-Pins

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 Lluís 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:

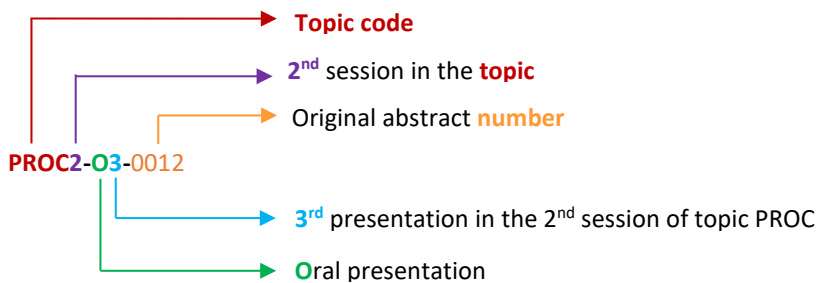
| | |
|--------|---|
| DEPO | Plasma - deposited coatings for optical, electronical and other functionalities |
| PLACC | Plasmas for conversion and catalys |
| GROM | Thin films growth and modelling |
| HELIAG | Plasmas for health, agriculture and life science |
| INAP | Industrial applications of plasmas |
| 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

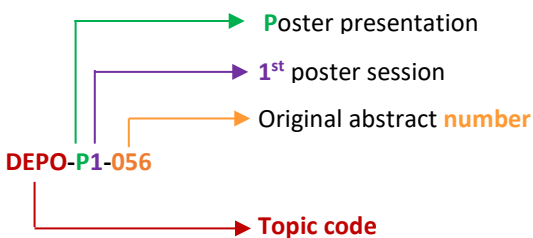
▪ Type of presentations

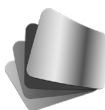
| | | | |
|----|-----------------|---|---------------------|
| PL | Plenary talk | O | Oral presentation |
| K | Keynote lecture | P | Poster presentation |

▪ 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 files 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.

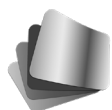
The posters will be presented and numbered according to the poster programme. The poster number will be displayed on top of the board. Writing or painting on the poster board is not allowed.

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 industrial evening / Tuesday 12 from 17:30 until 19:30
- **P2 / Session #2** with refreshments / Wednesday 13 from 16:35 until 18:30

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 12 September 2023 at 10:00 and should be removed by 18:30 on Thursday 14 September 2023.



Invited lectures

▪ **Plenary speakers**

In **ANTIPOLIS AUDITORIUM**

Ronny BRANDENBURG

PL2 // TUE 12 – 14:00

INP Greifswald (DE) & Institute of Physics, Univ. Rostock (DE)

Electrical characterization of barrier discharges: linking fundamentals and applications

Satoshi HAMAGUCHI

PL1 // TUE 12 – 9:25

Osaka Univ. (JP)

Plasma-surface interactions of atomic-layer processing toward sub-nm node semiconductor devices

Uwe KORTSHAGEN

PL3 // WED – 8:40

Univ. Minnesota (US)

Nonthermal plasma synthesis of photonic silicon nanocrystals

Eva KOVACEVIC

PL5 // THU 14 – 08:40

GREMI, Univ. Orléans (FR)

Low temperature plasmas for conductive carbons and multimaterials

Zdenko MACHALA

PL6 // THU 14 – 14:00

Univ. Bratislava (SK)

How reactive species from cold plasma are transported into liquid water bulk/aerosol

Ludvik MARTINU

PL7 // FRI 15 – 8:40

Polytechnique Montréal, Québec (CA)

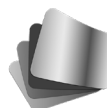
Surface engineering for sustainable future: multifunctional coatings for optics, energy, aerospace and manufacturing applications

Tiago SILVA

PL4 // WED 13 – 14:00

Instituto Superior Técnico, Lisbon (PT)

Plasma-assisted CO₂ recycling: investigation on volume and surface kinetics



▪ Keynote speakers

Benjamin DUFOUR

CEA Valduc, Is-sur-Tille (FR)

ANTIPOLIS AUDITORIUM

GROM3-K1-025 // THU 14 – 16:15

Growth mechanism of metallic foams synthesized by plasma electrolysis deposition: a numerical study

Tomas KOZAK

Univ. West Bohemia, Plzen (CZ)

ANTIPOLIS AUDITORIUM

PROC2-K1-088 // TUE 12 – 16:15

Studying the transport of atoms sputtered from a compound NBC target in HiPIMS discharges: plasma diagnostics and modelling

Dmitrii MOLDAREV

Univ. Uppsala (SE)

ANTIPOLIS AUDITORIUM

DEPO6-K1-080 // FRI 15 – 10:35

Photochromic properties of rare-earth oxyhydride thin films for smart windows applications

Carole PERNEL

CEA Grenoble (FR)

ELLA FITZGERALD ROOM

SURF3-K1-068 // FRI 15 – 10:35

Electrochemical characterization of surface damage in n-type GaN induced by Inductively Coupled Plasma Reactive Ion Etching (ICP-RIE) and Atomic Layer Etching (ALE)

Mireille RICHARD-PLOUET

Univ. Nantes (FR)

ELLA FITZGERALD ROOM

NANO1-K1-121 // TUE 12 – 16:15

Investigation by TEM and XPS of the thermal stability of multi-layer solar selective absorber

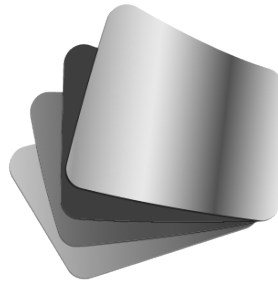
Philippe STEYER

INSA Lyon, Villeurbanne (FR)

ELLA FITZGERALD ROOM

TRIB2-K1-162 // THU 14 – 16:15

A small-scale approach to characterize Ti-based thin films tribological behavior in operando conditions

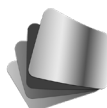


PLATHINIUM

PLASMA THIN FILM INTERNATIONAL UNION MEETING

DETAILED PROGRAM

- Tuesday 12 September
- Wednesday 13 September
- Thursday 14 September
- Friday 15 September


Tuesday 12 September
9:10 – 12:30
9:10 Opening ceremony **ANTIPOLIS AUDITORIUM**

 L. Zajickova, *Chair of Plathinium 2023*

 C. Champeaux, *Chair of the Steering Committee of Plathinium 2023*
9:25 **PLENARY TALK** // Plasma-surface interactions of atomic-layer processing toward sub-nm node semiconductor devices

S. Hamaguchi
Osaka Univ. (JP)
10:05 **COFFEE BREAK**
SURF 1 Plasma-surface interactions **ANTIPOLIS AUDITORIUM**
 Chair: S. Hamaguchi (JP)

10:35 SURF1-O1-019 • Gas- and plasma-surface interactions in cryogenic conditions: a *quasi in situ* XPS study on Si substrates

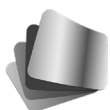
F. Cemin, A. Girard, C. Cardinaud
Nantes Univ., CNRS, Institut des Matériaux de Nantes Jean Rouxel (IMN) - Nantes (FR)
10:55 SURF1-O2-034 • Selective cryoetching plasma process of Si₃N₄
R. Dussart, R. Ettouri, J. Nos, G. Antoun, T. Tillocher, P. Lefaucheux
GREMI – Univ. Orléans - CNRS - Orléans (FR)
11:15 SURF1-O3-049 • Photoresist removal in MEMS fabrication process with HDRF®, optimized chemistry by adding hydrogen radical in oxygen process

M. Segers, Y. Pilloux, A. Pageau
Plasma-Therm Europe - Bernin (FR)
11:35 SURF1-O4-108 • Effects of the substitution of Ar by Kr in ALE process of GaN

C. Mannequin^{1,2}, C. Vallée^{3,2}, G. Jacopin⁴, C. Durand⁵, T. Teramoto⁶,

K. Akimoto², E. Gheeraert^{4,2}, M. Bonvalor^{3,2}, H. Mariette^{5,7,2}
¹*Nantes Univ., CNRS, Institut des Matériaux de Nantes Jean Rouxel (IMN) - Nantes (FR)*
²*Faculty of Pure and Applied Sciences, Univ. Tsukuba - Tsukuba (JP)*
³*CNRS/LTM, Univ. Grenoble-Alpes - Grenoble (FR)*
⁴*CNRS/Institut Néel, Univ. Grenoble-Alpes - Grenoble (FR)*
⁵*CEA/IRIG/PHELIQS, Univ. Grenoble-Alpes - Grenoble (FR)*
⁶*Air Liquide Laboratories - Yokosuka (JP)*
⁷*CNRS/Institut Néel, Univ. Grenoble-Alpes - Grenoble (FR)*
11:55 SURF1-O5-081 • Impact of temperature towards the reduction of C₄F₈ passivating gas-flow during bosch processing

J. Nos¹, T. Tillocher¹, P. Lefaucheux¹, R. Dussart¹, M. Boufnichel²
¹*GREMI, Orléans Univ. - CNRS - Orléans (FR)*
²*STMICROELECTRONICS - TOURS (FR)*
12:30 **LUNCH**



Tuesday 12 September

9:10 – 12:30

10:05 COFFEE BREAK

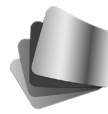
DEPO 1 – Plasma – deposited coatings

ELLA FITZGERALD ROOM

 Chair: G. Abadias (FR)

- 10:35 DEPO1-O1-015 • Properties of a new TiTaZrHfW(-N) refractory high entropy film deposited by reactive DC pulsed magnetron sputtering
A. Bouissil¹, S. Achache¹, D.E. Touaibia¹, B. Panicaud², M. Arab Pour Yazdi³, F. Sanchette¹, M. El Garah¹
¹LASMIS, Antenne de Nogent – Nogent (FR)
²LASMIS, Univ. Technologie de Troyes (UTT) - Troyes (FR)
³FEMTO-ST, MN2S Dpt., Univ. Bourgogne Franche-Comté, UTBM, Montbéliard (FR)
- 10:55 DEPO1-O2-045 • Chemical and physical properties of gold-boron Laser Mégajoule target components coated by sputtering Physical Vapor Deposition
E. Brun¹, S. Khieu¹, V. Durand¹, O. Heintz², A. Krystianiak², R. Botrel¹, N. Cermelli¹, A. Royer¹
¹CEA Valduc - Is sur Tille (FR)
²CNRS Univ. Bourgogne - Dijon (FR)
- 11:15 DEPO1-O3-150 • PVD coating on metallic powders: an innovative metallurgical process
A. Besnard¹, Y. Pinot¹, M.R. Ardigo-Besnard², F. Bussièrè², J.P. Château-Cornu², C. Vandenabeele³, S. Lucas³
¹Arts et Métiers Science and Technology - LaBoMaP - Cluny (FR)
²Laboratoire Interdisciplinaire Carnot de Bourgogne (ICB) - Dijon (FR)
³Innovative Coating Solutions (ICS) - Namur (BE)
- 11:35 DEPO1-O4-151 • Group III-nitride semiconductor materials made by low temperature plasma based Atomic Layer Deposition
N. Adjeroud, J. Polesel, Y. Fleming
Luxembourg Institute of Science and Technology (LIST) (LU)
- 11:55 DEPO1-O5-115 • Engineering multifunctional thin films by plasma copolymerization
A. Riahi, J. Carneiro de Oliveira, A. Airoudj, V. Roucoules, F. Bally-Le-Gall
CNRS, IS2M UMR 7361, Univ. Haute-Alsace, Univ. Strasbourg - Mulhouse (FR)


12:30 LUNCH



Tuesday 12 September

14:00 – 15:45
ANTIPOLIS AUDITORIUM
 Chair: L. Stafford (CA)

 14:00 **PLENARY TALK //** Electrical characterization of barrier discharges: linking fundamentals and applications

R. Brandenburg
*Leibniz-Institute for Plasma Science and Technology (INP), Greifswald (DE)
 Institute of Physics, Univ. Rostock (DE)*
SOUR 1 Plasma sources and electrical discharges
ANTIPOLIS AUDITORIUM
 Chair: L. Stafford (CA)

14:45 SOUR1-O1-048 • Self-organization of HiPIMS plasma investigated by high-speed camera

M. Panjan
Jozef Stefan Institute - Ljubljana (SI)

15:05 SOUR1-O2-084 • Angular distribution of ions and neutrals in High Power Impulse Magnetron Sputtering of titanium

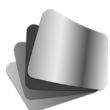
J. Fischer^{1, 2}, M. Renner¹, J.T. Gudmundsson^{3, 4}, M. Rudolph⁵, H. Hajihoseini⁶, D. Lundin¹
¹*Linköping Univ. - Linköping (SE)*
²*Evatec AG - Trübbach (CH)*
³*KTH Royal Institute of Technology - Stockholm (SE)*
⁴*Univ. Iceland - Reykjavik (IS)*
⁵*Leibniz Institute of Surface Engineering (IOM) - Leipzig (DE)*
⁶*Univ. Twente - Enschede (NL)*

15:25 PROC1-O1-163 • A comparison between simulation & experimental results of a low-pressure argon plasma generated by ECR

Y. Fermi, T. Maho, P. Guillot

LDPHE, Univ. Toulouse, INU Champollion - Albi (FR)

 15:45 **COFFEE BREAK**



Tuesday 12 September

14:00 – 15:45

DEPO 2 Plasma-deposited coatings

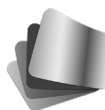
ELLA FITZGERALD ROOM

 Chair: M. Richard-Plouet (FR)


- 14:45 DEPO2-O1-058 • Plasma polymer-metal composites: relations between chemical structure, topography and electrical properties
P. Lottin^{1,2}, J.F. Coulon², D. Debarnot¹
¹*Institut des Molécules et Matériaux du Mans, UMR 6283 CNRS, Le Mans Univ., Le Mans (FR)*
²*ECAM RENNES – Louis de Broglie, Campus de Ker Lann, Bruz (FR)*
- 15:05 DEPO2-O2-074 • Double tube configuration of atmospheric pressure plasma jet for deposition of organic coatings in open air
F. Arefi-Khonsari¹, A. Anagri², A. Baitukha³, J. Pulpytel¹, S. Mori²
¹*Lab. Interfaces et Systèmes Electrochimiques LISE UMR8235, Sorbonne Univ., CNRS - Paris (FR)*
²*Department of Chemical Science and Engineering Tokyo Institute of Technology - Tokyo (JP)*
³*DIAM CONCEPT, ACCELAIR - Les Loges en Josas (FR)*
- 15:25 DEPO2-O3-161 • Environmentally-friendly plasma polymers to get durable water-repellent textile fabrics: a comprehensive study on coating structure-performance relationship
F. Bally-Le Gall¹, S. Jebali^{1,2}, J. Oliveira¹, A. Airoudj¹, A. Riahi¹, I. Ferreira², V. Roucoules¹
¹*Institut de Science des Matériaux de Mulhouse (IS2M) - CNRS/UHA - Mulhouse (FR)*
²*Institut Français du Textile et de l'Habillement (IFTH) - Mulhouse (FR)*

15:45

COFFEE BREAK



Tuesday 12 September

16:15 – 17:20
PROC 2 Process control
ANTIPOLIS AUDITORIUM
 Chair: S. Béchu (FR)

- 16:15 **KEYNOTE** // PROC2-K1-088 • Studying the transport of atoms sputtered from a compound NBC target in HiPIMS discharges: plasma diagnostics and modelling
T. Kozak¹, M. Farahani¹, A.D. Pajdarova¹, A. Bahr², R. Hahn², H. Riedl^{2,3}, P. Zeman¹
¹Department of Physics and NTIS-European Centre of Excellence, Univ. West Bohemia - Plzen (CZ)
²Christian Doppler Lab. for Surface Engineering of High-performance Components, TU Wien - Wien (AT)
³Institute of Materials Science and Technology, TU Wien - Wien (AT)
- 16:45 PROC2-01-082 • Sputtered atom density – target heating correlation in hot magnetron sputtering discharge
K. Leonova¹, S. Konstantinidis¹, N. Britun²
¹Plasma-Surface Interaction Chemistry (ChIPS), Univ. Mons - Mons (BE)
²Center for Low-Temperature Plasma Sciences, Nagoya Univ. - Nagoya (JP)
- 17:05 PROC2-02-169 • Characterization of a helium micro-plasma jet by means of ps-TALIF and a streak camera
K. Gazeli¹, L. Invernizzi¹, C. Anastassiou², J. Franzke³, C. Duluard¹, S. Prasanna¹, K. Hassouni¹, G. Lombardi¹
¹LSPM, CNRS, Univ. Sorbonne Paris Nord, UPR 3407 - Villetaneuse (FR)
²ENAL Electromagnetics and Novel Applications Lab, Univ. Cyprus, - Nicosia (CY)
³ISAS-Leibniz-Institut für Analytische Wissenschaften - Dortmund (DE)

17:30

**POSTER SESSION #1
& INDUSTRIAL EVENING**



Tuesday 12 September

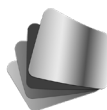
16:15 – 17:30

NANO 1 Nanomaterials & nanostructured thin films

ELLA FITZGERALD ROOM

 Chair: R. Clergereaux (FR)

- 16:15 **KEYNOTE // NANO1-K1-121** Investigation by TEM and XPS of the thermal stability of multi-layer solar selective absorber
M. Richard-Plouet¹, F. Chabanais¹, A. Gouillet¹, J. Hamon¹, N. Gautier¹, A. Diop^{3,4}, B. Diallo², B. Plujat³, A. Bousquet⁴, T. Sauvage², A. Soum-Glaude³, E. Tomasella⁴, L. Thomas³
¹Nantes Univ. - IMN UMR 6502 CNRS - Nantes (FR)
²CEMHTI-CNRS UPR 3079 - Orléans (FR)
³PROMES CNRS UPR 8521 - Univ. Perpignan - Perpignan (FR)
⁴Univ. Clermont Auvergne - ICCF UMR 6296 CNRS - Clermont-Ferrand (FR)
- 16:45 **NANO1-O1-140 • Pulsed laser processes for the development of gold/silver nanocomposites for plasmonic applications**
M. Gireau¹, C. Champeaux¹, F. Dumas-Bouchiat¹, S. Zeng², G. Humbert², F. Beffara²
¹CNRS IRCER UMR 7315 - Limoges (FR)
²CNRS XLIM UMR 7252 - Limoges (FR)
- 17:05 **NANO1-O2-102 • Influence of Cu nanoparticles addition on fracture properties of sputter deposited nanostructured refractory MoNbTaVW HEA coatings**
M. Zitek, T. Ziegelwanger, J. Keckes, R. Daniel
Department of Materials Science, Montanuniv. Leoben - Leoben (AT)



Tuesday 12 September

17:30 – 22:30

17:30 POSTER SESSION #2 (UNTIL 18:30)

19:30 INDUSTRIAL EVENING (UNTIL 22:30)



Tuesday 12 September

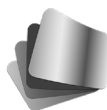
17:30 – 19:30

ITEC 1 Innovation & Technologies

ELLA FITZGERALD ROOM

 Chair: C. Champeaux (FR)

- 17:30 ITEC1-01-006 • A plasma for multidimensional elemental and molecular analysis of surfaces & interfaces
P. Chapon, A. Stankova
Horiba - Palaiseau (FR)
- 17:45 ITEC1-02-009 • Advanced patterning – ion beam etching for nano structuring
M. Loetsch
scia Systems - Chemnitz (DE)
- 18:00 ITEC1-03-172 • Advanced retarding field energy analyzer for accurate measurement of ion energy and flux in plasma-assisted thin film deposition tools
C. Linnane, A. Verma, T. Gilmore, A. McCarter
Impedans Ltd - Dublin (IE)
- 18:15 ITEC1-04-151 • How to identify the optimal plasma treatment length for different surfaces
V. Schloupt¹, N. Heil², S. Schaubach², Q. Liu²
¹*DataPhysics Instruments GmbH - Metz (FR)*
²*DataPhysics Instruments GmbH - Filderstadt (DE)*
- 18:30 End of the sessions and Poster session #1
- 19:30 Industrial evening (until 22:30)



Wednesday 13 September

8:40 – 10:05

ANTIPOLIS AUDITORIUM

Chair: T. Belmonte (FR)

8:40 **PLENARY TALK** // Nonthermal plasma synthesis of photonic silicon nanocrystals
U. Kortshagen
Univ. Minnesota (US)

NANO 2 Nanomaterials & nanostructured thin films

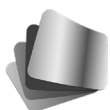
ANTIPOLIS AUDITORIUM

Chair: F. Arefi-Khonsari (FR)

- 9:25 NANO2-O1-100 • ZnO nanoparticles thin films and evolution of their photoluminescence under oxygen plasma treatment
J. Chevet¹, A. Granier¹, M. Feron^{2,3}, F. Massuyeau¹, M.L. Kahn², R. Clergereaux³, A. Goulet¹, M. Richard-Plouet¹
¹Nantes Univ., CNRS, Institut des Matériaux de Nantes Jean Rouxel, IMN - Nantes (FR)
²Laboratoire de Chimie de Coordination UPR8241, CNRS - Toulouse (FR)
³Laplace, Univ. Toulouse, CNRS, UPS, INPT - Toulouse (FR)
- 9:45 NANO2-O2-075 • Optical study of metallic nanoparticles generated by thin-layer ion irradiation
V. Goffinet¹, S. Lucas², P. Roquiny³
¹Unamur/AGC - Namur (BE)
²Unamur - Namur (BE)
³AGC - Gosselies (BE)

10:05

COFFEE BREAK




Wednesday 13 September

8:40 – 10:05

DEPO 3 Plasma – deposited coatings

ELLA FITZGERALD ROOM

 Chair: T. Belmonte (FR)

9:25 DEPO3-O1-040 • VN coatings for supercapacitor, an innovative approach to improve stability

E. Hays¹, Y. Miao², D. Pilloud³, C. Douard⁴, R. Boukherroub², J.F. Pierson³, T. Brousse⁴, S. Lucas¹, L. Houssiau¹, J.J. Pireaux¹, A. Achour¹

¹UNamur (BE)

²IEMN Lille (FR)

³IJL Nancy (FR)

⁴IMN Nantes (FR)

9:45 DEPO3-O2-065 • Plasma-assisted segregation of self-grown catalytic nanoparticles in perovskites for H₂ production by photoelectrocatalysis

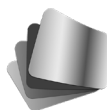
T. Gries¹, V. Guigoz¹, S. Migot¹, S. Bruyère¹, R. Schneider²

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

²Laboratoire Réactions et Génie des Procédés, CNRS, Univ. Lorraine - Nancy (FR)

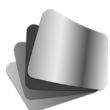
10:05

COFFEE BREAK


Wednesday 13 September
10:35 – 12:30
NANO 3 Nanomaterials & nanostructured thin films
ANTIPOLIS AUDITORIUM
 Chair: U. Kortshagen (US)

- 10:35 NANO3-O1-073 • Plasmonic Cu nanoparticles embedded in semiconductor heterostructures for photoconversion applications
Y. Rodríguez Martínez^{1,2}, J. Ghanbaja¹, S. Migot¹, Y. Battie¹, S. Hamady³, M. Eriksson⁴, N. Almqvist⁴, A. Vomiero⁴, L. Vaillant², D. Horwat¹
¹*Institut Jean Lamour, Univ. Lorraine - Nancy (FR)*
²*Institute of Materials Science and Technology, Univ. Havana - Havana (CU)*
³*LMOPS, Univ. Lorraine - Metz (FR)*
⁴*Department of Engineering Sciences and Mathematics, Luleå Univ. Tech - Luleå (SE)*
- 10:55 NANO3-O2-092 • Development of a microwave microplasma process for the elaboration of nanodiamonds
A. Siby, S. Prasanna, K. Hassouni
Laboratoire des Sciences des Procédés et des Matériaux - Villetaneuse (FR)
- 11:15 NANO3-O3-076 • Dielectric Barrier Discharge in nitrogen for the realization of nanocomposite layers using multifrequency excitation and gold salt precursors
E. Bizeray¹, A. Belinger¹, S. Dap¹, F. Fanelli², N. Naudé¹
¹*LAPLACE, Univ. Toulouse, CNRS, INPT, UPS - Toulouse (FR)*
²*National Research Council (CNR), NANOTEC, Univ. Bari 'Aldo Moro' - Bari (IT)*
- 11:35 NANO3-O4-120 • Synthesis of gold/polymer nanocomposites in an atmospheric pressure plasma
A. Perdrau^{1,2}, N. Barros^{1,2}, H. Glénat¹, F. Fanelli³, B. Plujat^{1,2}, R. Rincón⁴, F. Massines¹
¹*CNRS PROMES, Rambla de la thermodynamique - Perpignan (FR)*
²*Univ. Perpignan Via Domitia - Perpignan (FR)*
³*CNR-Nanotec, Bari Unit - Bari (IT)*
⁴*Univ. Córdoba, Department of Physics - Córdoba (ES)*
- 11:55 NANO3-O5-146 • Au nanoparticles decoration of different TiO₂ nanostructures using atmospheric pressure cold plasma
A. Bjelajac¹, A.M. Phillipe¹, R. Petrovic², M. Stefanovic³, Y. Fleming¹, J.B. Chemin¹, P. Choquet¹, S. Bulou¹
¹*Luxembourg Institute of Science and Technology, Esch-sur-Alzette (LU)*
²*Univ. Belgrade, Faculty of Technology and Metallurgy, Belgrade (RS)*
³*Univ. Belgrade, Innovation Centre of the Faculty of Technology and Metallurgy, Belgrade (RS)*

12:30
LUNCH



Wednesday 13 September

10:35 – 12:30

DEPO 4 Plasma – deposited coatings

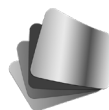
ELLA FITZGERALD ROOM

 Chair: L. Martinu (CA)

- 10:35 DEPO4-O1-079 • W/W-SiCH/TaO_xN_y solar selective absorber coatings for concentrated solar power
A. Mahammou¹, A. Diop¹, D. Ngoue¹, B. Diallo², B. Plujat¹, A. Bousquet³, S. Quoizola¹, M. Richard-Plouet⁴, T. Sauvage², A. Gouillet⁴, A. Soum-Glaude¹, E. Tomasella³, L. Thomas¹
¹PROMES - CNRS, Perpignan / Font-Romeu - Odeillo - Via - Univ. Perpignan - Perpignan (FR)
²CEMHTI (Conditions Extrêmes et Matériaux) - Orléans (FR)
³ICCF, Institut de Chimie de Clermont-Ferrand - Clermont-Ferrand (FR)
⁴IMN, Institut des Matériaux Jean Rouxel - Nantes (FR)
- 10:55 DEPO3-O2-148 • PVD coatings for PEMFC bipolar plates functionalization
M-A. Leroy, M. Ougier, C. Cambier, C. Pupier
IREIS / HEF Group, Andrézieux-Bouthéon (FR)
- 11:15 DEPO3-O3-128 • Characterization of CuBi₂O₄ thin films deposited by RF magnetron sputtering
L. Presmanes, B. Duployer, Y. Thimont, A. Barnabé, C. Tenailleau
CIRIMAT CNRS - Toulouse (FR)
- 11:35 DEPO3-O4-166 • High-rate reactive deposition of ultrawide bandgap Ga₂O₃ by liquid metal target sputtering
J. Purans, M. Zubkins, A. Azens, E. Butanovs, E. Strods
Institute of Solid State Physics Univ. Latvia - RIGA (LV)
- 11:55 DEPO3-O5-124 • Non-equilibrium synthesis of Si₁-XMnX thin films for magnetic application
A. Bénédict-Cardenas¹, T. Fox², S. Bruyère¹, C. Pauly², S. Migot¹, T. Hauet¹, S. Petit-Watelot¹, D. Horwat¹, A. Nominé¹
¹Univ. Lorraine - Nancy (FR)
²Saarland Univ. - Saarbrücken (DE)

12:30

LUNCH


Wednesday 13 September
14:00 – 16:05
ANTIPOLIS AUDITORIUM

 Chair: R. Brandenburg (DE)

14:00 **PLENARY TALK // Plasma-assisted CO₂ recycling: investigation on volume and surface kinetic**

T. Silva

Instituto Superior Técnico, Lisbon (PT)

PLACC 1 Plasmas for conversion and catalysis

ANTIPOLIS AUDITORIUM

 Chair: T. Silva (PT)

14:45 PLACC1-O1-133 • Interplay of transport, plasma concentration and chemistry in microwave discharges

G. van Rooij, M. Azevedo, T. Righart, T. Butterworth

Maastricht Univ. - Maastricht (NL)

15:05 PLACC1-O2-119 • Plasma-assisted CO₂ hydrogenation over Ir/TiO₂ catalytic thin films in a DBD reactor

J. Gregory¹, N. Pourali¹, Y. Gong¹, R. Walton¹, V. Hessel², E. Rebrov^{1,3}

¹*Univ. Warwick - Coventry (UK)*

²*Univ. Adelaide - Adelaide (AU)*

³*Eindhoven Univ. Technology - Eindhoven (NL)*

15:25 PLACC1-O3-173 • Discharges in honeycomb monoliths and capillary tubes

K. Hensel, S. Kukura, R. Cimerman, M. Janda

Comenius Univ. - Bratislava (SK)

15:45 PLACC1-O4-027 • Synthesis and effect of BiVO₄ thin films heterojunctions deposited by reactive magnetron co-sputtering on photogenerated charges for visible light photocatalysis

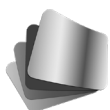
M. Goutte¹, A. Bousquet¹, E. Tomasella¹, G. Monier², T. Sauvage³

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

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

³*CNRS, UPR 3079, CEMHTI, Univ. Orléans (FR)*

16:05
COFFEE BREAK



Wednesday 13 September

14:00 – 16:05

HELIAG 1 Plasmas for health, agriculture and life science

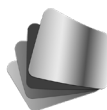
ELLA FITZGERALD ROOM

Chair: R. Brandenburg (DE)

- 14:45 HELIAG1-O1-037 • Bactericidal surface treatments for dental implants based on silver and copper MEVVA ion co-implantation
J. Caro¹, R. Bonet¹, J. Orrit-prat¹, S. Molas¹, A. Concustell¹, M. Bahillo¹, J. Muñoz²
¹Eurecat, Centre Tecnològic de Catalunya, Unit of Metallic and Ceramic Materials - Manresa (ES)
²Microdent Implant System - Santa Eulàlia de Ronçana (ES)
- 15:05 HELIAG1-O2-093 • Combination of plasma-polymer thin films and topography to limit bacterial adhesion
A. Whiteley, G. Nonglaton, J. Reche, Z. Mehrez, V. Jousseume
Univ. Grenoble Alpes, CEA Leti - Grenoble (FR)
- 15:25 HELIAG1-O3-122 • Investigation of the antibacterial properties of silver-doped amorphous carbon coatings produced by low pressure magnetron assisted acetylene discharges
V. Job¹, J. Laloy², V. Maloteau², E. Haye^{1,3}, S. Lucas^{1,3}, S. Penninckx^{1,4}
¹LARN Laboratory (LARN-NARILIS), Univ. Namur - Namur (BE)
²Laboratory (NNC-NARILIS), Department of Pharmacy, Univ. Namur - Namur (BE)
³Innovative Coating Solutions (ICS), Univ. Namur, Forville (BE)
⁴Medical Physics Dept, Institut Jules Bordet, Univ. Libre de Bruxelles, Brussels (BE)
- 15:45 HELIAG1-O4-153 • The role of short- and long-lived reactive species on the anti-cancer action of plasma-treated liquids: *in vitro* and *in vivo* applications
J. Santos Sousa¹, K. Sklias¹, P.M. Girard², T.H. Chung³, A. Stancampiano⁴, G. Bauville¹, M. Fleury¹, K. Gazeli¹, T. Darny¹, S. Dozias⁴, C. Douat⁴, J.M. Pouvesle⁴, E. Robert⁴, L. Mir³
¹Univ. Paris-Saclay, CNRS, Lab de Physique des Gaz et des Plasmas - Orsay (FR)
²Institut Curie, PSL Univ., Univ. Paris-Saclay, CNRS, INSERM - Orsay (FR)
³Univ. Paris-Saclay, CNRS, Institut Gustave Roussy, METSY - Villejuif (FR)
⁴GREMI, CNRS, Univ. Orléans - Orléans (FR)

16:05

COFFEE BREAK

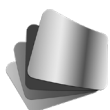


Wednesday 13 September

16:35 – 18:30

16:35

POSTER SESSION #2 (UNTIL 18:30)



Wednesday 13 September

16:35 – 18:30

16:35 **POSTER SESSION 2** (until 18:30)

ITEC 2 Innovation & Technologies

ELLA FITZGERALD ROOM

 Chair: J. Santos Sousa (FR)

From 16:35 until 17:35, 12 min per presentation

#030 - DLC coatings with tailorable functionalities as a function of sp^3/sp^2 hybridization

B. Paul, G. Wahli, A. Lümckemann
Platit AG - Selzach (CH)

#168 - Optical emission spectroscopy of carbon plasma discharged by constant pulse current High Power Impulse Magnetron Sputtering

A. Oniszczyk¹, W. Trzewiczyński¹, W. Gajewski¹, J.R. Sobecki²
¹*TRUMPF Huettinger sp. z o.o. - Zlelonka (PL)*
²*Faculty of Materials Science and Engineering, Warsaw Univ. Technology - Warszawa (PL)*

#078 - Optimized cylindrical inertial electrostatic confinement plasma source for thin film applications

D. Tiedemann¹, J. Emmerlich¹, P. Hofmann¹, M. Müller¹, G. Herdrich², S. Ulrich³
¹*Robert Bosch Manufacturing Solutions GmbH - Stuttgart (DE)*
²*Institute of Space Systems, Univ. Stuttgart - Stuttgart (DE)*
³*Institute for Applied Materials, Karlsruhe Institute of Technology - Eggenstein-Leopoldshafen (DE)*

#125 - Deposition of SiO_x based functional thin films for adhesion promotion and corrosion resistance using atmospheric pressure plasma jet

D. Bensalem, M. Buske, P. Delfs
Plasmatreat GmbH - Steinhagen (DE)

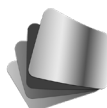
#171 - Remote optical gas sensing to improve plasma and thin film quality & repeatability

N. Kaabeche, D. Monaghan, J. Brindley, B. Daniel, V. Bellido-Gonzalez
Gencoa Limited – Liverpool (UK)

17:35

END OF THE SESSION

AND POSTER SESSION 2 STILL IN PROGRESS UNTIL 18:30



Thursday 14 September

8:40 – 10:00

ANTIPOLIS AUDITORIUM

 Chair: D. Hegemann (CH)

8:40 **PLENARY TALK // Low temperature plasmas for conductive carbons and multimaterials**

E. Kovacevic¹, A. Jagodar¹, N. M. Santhosh^{2,3}, C. Pattyn¹, T. Strunskus⁴, A. Petit¹, L. Gimenez¹, J. Sun⁵, U. Cvelbar^{2,3}, F. Traeger⁶, J. Berndt¹

¹ GREMI UMR 7344, CNRS-University of Orleans, Orleans Cedex 2 (FR)

² Department of Gaseous Electronics (F6), Jožef Stefan Institute, Ljubljana (SI)

³ Jožef Stefan International Postgraduate School, Ljubljana (SI)

⁴ Institute for Materials Science, Christian Albrechts University, Kiel (DE)

⁵ Materials and Manufacture, Department of Industrial and Materials Science, Chalmers University of Technology, Göteborg (SE)

⁶ Westfälische Hochschule, Recklinghausen (DE)

PROC 3 Process control

ANTIPOLIS AUDITORIUM

 Chair: D. Hegemann (CH)

9:25 PROC3-O1-061 • Investigation of ionized metal flux fraction at industrial conditions

P. Vasina¹, J. Hnilica¹, P. Klein¹, V. Sochora²

¹Masaryk Univ. - Brno (CZ)

²SHM - Sumperk (CZ)

9:45 PROC3-O2-071 • Study of the ion energy distribution in the ALE process of GaN

A. Crespi¹, L. Hamraoui¹, T. Zhang¹, P. Lefauchaux¹, T. Tillocher¹,

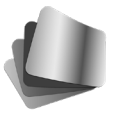
M. Boufnichel², R. Dussart¹

¹GREMI - Orléans (FR)

²ST-Microelectronics - Tours (FR)

10:05

COFFEE BREAK



Thursday 14 September

8:40 – 10:00

GROM 1 Thin films growth and modelling

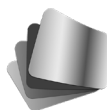
ELLA FITZGERALD ROOM

 Chair: R. Snyders (BE)

- 9:25 GROM1-O1-160 • Molecular dynamics approach for the calculation of surface loss probabilities during the growth of C:H films from an argon-methane plasma
G. Otakandza Kandjani¹, M. Mikikian¹, P. Brault¹, G. Tétard², A. Michau², K. Hassouni²
¹Univ. Orléans / GREMI - Orléans (FR)
²Univ. Sorbonne Paris Nord - Villetaneuse (FR)
- 9:45 GROM1-O2-116 • Multi-level investigation of the formation of silicide interface during Cu/Si energetic deposition process; a combined ab-initio, molecular dynamic, in-situ stress measurement and kinetic monte carlo simulation study
C. Mastail¹, B. Vernet^{1,2}, F. Nita¹, L. Pizzagalli¹, A. Michel¹, G. Abadias¹
¹Institut P², Dpt. Physique et Mécanique des Matériaux, CNRS-Univ. Poitiers-ENSMA - Poitiers (FR)
²Lab. des Sciences pour l'Environnement et l'Energie, Dpt. Physique, ENS-Univ. d'Etat d'Haïti (HT)

10:05

COFFEE BREAK



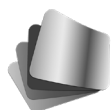
Thursday 14 September

10:35 – 12:30
PROC 4 Process control
ANTIPOLIS AUDITORIUM
 Chair: E. Kovacevic (FR)

- 10:35 PROC4-O1-033 • Plasma chemical reactions governed by the specific energy input
D. Hegemann, P. Navascués
Empa, Swiss Federal Laboratories for Materials Science & Technology - St.Gallen (CH)
- 10:55 PROC4-O2-095 • Analysis of low-pressure misty plasma processes by Optical Emission Spectroscopy
A. Granier¹, S. Chouteau^{1,2}, M. Richard-Plouet¹, L. Stafford²
¹Nantes Univ., CNRS, Institut des Matériaux de Nantes Jean Rouxel, IMN, Nantes (FR)
²Département de physique, Univ. Montréal (CA)
- 11:15 PROC4-O3-105 • How carbon nanoparticles affect the behaviour of the plasma electrolytic oxidation process
L. Magniez¹, C. Da Silva Tusch¹, J. Martin^{1,2}, S. Fontana¹, S. Cahen¹, G. Marcos^{1,2}, T. Czerwec^{1,2}, C. Hérold¹, G. Henrion^{1,2}
¹CNRS – Univ. Lorraine - Institut Jean Lamour - Nancy (FR)
²Univ. Lorraine, LabEx DAMAS - Metz (FR)
- 11:35 PROC4-O4-087 • Nanocrystalline diamond coatings of titanium and titanium alloys for biomedical applications using distributed antenna array microwave system
 F. Bénédic¹, A. Valinataj Omran¹, C. Mahi¹, C. Falentin-Daudré², S. Prasanna³, A. Michau³, K. Hassouni¹
¹Univ. Sorbonne Paris Nord, LSPM, CNRS, UPR 3407 - Villetaneuse (FR)
²LBPS-CSPBAT, UMR 7244, Univ. Sorbonne Paris Nord - Villetaneuse (FR)
³LSPM, CNRS, UPR 3407, Univ. Sorbonne Paris Nord - Villetaneuse (FR)
- 11:55 PROC4-O5-055 • Reduction of oxide using an electron cyclotron wave resonance Ar/H₂ plasma - towards lunar raw materials use for H₂O production
M. Sikiric, S. Bulou, P. Choquet
Luxembourg Institute of Science and Technology - Esch-Sur-Alzette (LU)

12:30

LUNCH



Thursday 14 September

10:35 – 12:30

GROM 2 Thin films growth and modelling

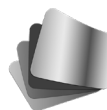
ELLA FITZGERALD ROOM

Chair: R. Snyders (BE)

- 10:35 GROM2-O1-112 • Nanostructured plasma polymers from citronellal: the role of substrate's chemistry
J. Oliveira, A. Airoudj, F. Bally-Le Gall, V. Roucoules
Univ. Haute-Alsace, Univ. Strasbourg, CNRS, IS2M UMR 7361, Mulhouse (FR)
- 10:55 GROM2-O2-046 • Polymerization mechanisms in complex geometries using HMDSO low-pressure plasmas
P. Navascués¹, M. Buchtelová², L. Zajickova², D. Hegemann¹
¹*Empa - St. Gallen (CH)*
²*CEITEC BUT - Brno (CZ)*
- 11:15 GROM2-O3-147 • Boron-carbon thin films deposited via Plasma-Enhanced Atomic Layer Deposition (PE-ALD)
N. Innis, C. Marichy, C. Bousige, C. Journet
Laboratoire des Multimatériaux et Interfaces, UMR CNRS 5615 - Lyon (FR)
- 11:35 GROM2-O4-035 • Study of III-V thin films growth directly on silicon by remote-plasma CVD: towards a reduction in solar cell industrialisation costs
L. Watrin^{1,2}, F. Silva¹, C. Jadaud¹, P. Bulkin¹, J.C. Vanel¹, E. Johnson¹, K. Ouaras¹, P. Roca I Cabarrocas^{1,2}
¹*LPICM, Ecole Polytechnique - Palaiseau (FR)*
²*Institut Photovoltaïque d'Ile-de-France (IPVF) - Palaiseau (FR)*
- 11:55 GROM2-O5-053 • Sputtering and annealing of Mg₂SiO₄ films as proxy of pristine component of the solar system
V. Guigoz¹, A. Seret², H. Rotella¹, P. Vennegues¹, G. Libourel², M. Portail¹
¹*Univ. Côte d'Azur, CRHEA laboratory, UMR 7073 OCA-CNRS - Valbonne (FR)*
²*Univ. Côte d'Azur, Lagrange laboratory, UMR 7296 OCA-UCA-CNRS - Nice (FR)*

12:30

LUNCH



Thursday 14 September

14:00 – 15:45

ANTIPOLIS AUDITORIUM

 Chair: V. Guerra (PT)

14:00 **PLENARY TALK //** How reactive species from cold plasma are transported into liquid water bulk/aerosol

Z. Machala, M.E. Hassan, K. Hensel, M. Janda

Faculty of Mathematics, Physics and Informatics, Comenius Univ. Bratislava (SK)

LIQU Plasma and liquids

ANTIPOLIS AUDITORIUM

 Chair: V. Guerra (PT)

14:45 LIQU1-O1-077 • Gas phase properties and plasma-liquid interactions during DC and pulsed sputtering onto glycerol

S. Atmane, A. Caillard, V. Orozco-Montes, P. Brault, A. Sauldubois

GREMI, Univ. Orléans, CNRS, Orléans (FR)

15:05 LIQU1-O2-016 • Atmospheric pressure plasma jet in contact with a liquid for the formation of silver and gold nanoparticles and their applications

T. Habib^{1,2}, B. Caillier¹, J.M. Caiut²

¹*Institut National Universitaire Champollion - Albi (FR)*

²*Univ. Sao Paulo - Ribeirao Preto (BR)*

15:25 LIQU1-O31-011 • Growth mechanism of nanosheets by discharges in liquids

T. Belmonte¹, A. Nominé¹, T. Gries¹, C. Noël¹, J. Ghanbaja¹, V. Milichko^{1,2}

¹*Univ. Lorraine, CNRS, IJL, Nancy (FR)*

²*ITMO Univ., St. Petersburg (RU)*

15:45

COFFEE BREAK



Thursday 14 September

14:00 – 15:45

TRIB 1 Plasma – deposited protective and tribological coatings

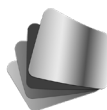
ELLA FITZGERALD ROOM

 Chair: P. Steyer (FR)

- 14:45 TRIB1-O1-060 ● Synthesis and characterization of the ceramic refractory metal high entropy carbide thin films from the Cr-Hf-Mo-Ta-W system
S. Debnarova¹, T. Stasiak^{1, 2}, V. Buršíková¹, P. Vašina¹, P. Souček¹
¹*Department of Physical Electronics, Faculty of Science, Masaryk Univ. – Brno (CZ)*
²*National Center for Nuclear Research - Otwock-Swierk (PL)*
- 15:05 TRIB1-O2-206 ● High-power-density sputtering of industrial-scale targets: case study of (Al,Cr)N
F.F. Klimashin¹, J. Kluson², M. Učík², R. Žemlička³, M. Jílek², A. Lümekemann³, J. Michler¹, T.E.J. Edwards¹
¹*EMPA - Swiss Federal Laboratories for Materials Science and Technology - Thun (CH)*
²*PLATIT a.s. - Šumperk (CZ)*
³*PLATIT AG - Selzach (CH)*
- 15:25 TRIB1-O3-020 ● Oxidation resistance and mechanical properties of AlTiZrHfTa(-N) high entropy films deposited by reactive magnetron sputtering
D. Touaibia¹, S. Achache¹, A. Bouissil¹, J. Ghanbaja², S. Migot², M. Arab Pour Yazdi³, F. Schuster⁴, B. Panicaud⁵, F. Sanchette⁵, M. El Garah⁵
¹*Univ. Technology of Troyes (UTT) - Nogent (FR)*
²*Institut Jean Lamour (IJL), Univ. Lorraine - Nancy (FR)*
³*Anton Paar TriTec SA / FEMTO-ST, Univ. Bourgogne Franche-Comté, UTBM (FR)*
⁴*Commissariat à l'Energie Atomique et aux énergies alternatives (CEA) Saclay (FR)*
⁵*Univ. Technology of Troyes (UTT) (FR)*

15:45

COFFEE BREAK



Thursday 14 September

16:15 – 18:05
GROM 3 Thin films growth and modelling
ANTIPOLIS AUDITORIUM

Chair: E. Haye (BE)

- 16:15 **KEYNOTE // GROM3-K1-025 • Growth mechanism of metallic foams synthesized by plasma electrolysis deposition: a numerical study**
B. Dufour¹, C. Noël², R. Botrel¹, F. Durut¹, T. Belmonte²
¹Commissariat à l'Energie Atomique et aux Energies Alternatives, Valduc, Is-sur-Tille (FR)
²Institut Jean Lamour, Département CP2S, UMR 7198, CNRS-Univ. Lorraine, Nancy (FR)
- 16:45 GROM3-O1-041 • In situ study of the amorphous-to-crystalline phase transformation of thermochromic SmNiO_{3-δ} thin films
Z. Fernandez Gutierrez¹, S. Bruyère¹, D. Pilloud¹, E. Haye², G. Medjahdi¹, S. Barrat¹, F. Capon¹
¹Univ. Lorraine, CNRS, IJL, Nancy (FR)
²Laboratoire d'Analyse par Réactions Nucléaires (LARN), Namur Institute of Structured Matter (NISM) Univ. Namur (BE)
- 17:05 GROM3-O2-031 • Growth manipulation strategies of ultrathin metallic layers aided by in situ and real-time diagnostics
G. Abadias¹, D. Babonneau¹, A. Michel¹, K. Solanki¹, J. Ramade¹, M. Kaminski², A. Resta³, A. Vlad³, A. Coati³, B. Krause², K. Sarakinos⁴
¹Institut Pprime, Univ. Poitiers - Poitiers (FR)
²Karlsruhe Institute of Technology (KIT) - Karlsruhe (DE)
³Synchrotron SOLEIL - Saclay (FR)
⁴Univ. Helsinki - Helsinki (FI)
- 17:25 GROM3-O3-117 • Study on the effects of N₂ addition during Ag thin film sputtering deposition, using *in situ* and real-time measurements
R. Zapata^{1,2}, R. Lazzari², H. Montigaud¹, M. Balestrieri¹, I. Gozkyk¹
¹Laboratoire Surface du Verre et Interfaces UMR 125 - Aubervilliers (FR)
²Institut des Nanosciences de Paris UMR 7588 - Paris (FR)
- 17:45 GROM3-O4-062 • Initial phase formation during nitriding of austenitic stainless steel
D. Manova, S. Mändl
 Leibniz Institute of Surface Engineering - Leipzig (DE)

19:30 CONFERENCE DINNER COCKTAIL (UNTIL 22:30)



Thursday 14 September

16:15 – 18:05

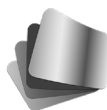
TRIB 2 Plasma - deposited protective and tribological coatings

ELLA FITZGERALD ROOM

 Chair: T. Czerwiec (FR)

- 16:15 **KEYNOTE // TRIB2-K1-162** • A small-scale approach to characterize Ti-based thin films tribological behavior in operando conditions
P. Steyer¹, A. Sayilan¹, D. Philippon¹, C. Lopes², F. Vaz², N. Mary¹, S. Descartes¹
¹INSA Lyon - MATEIS Lab. - Villeurbanne (FR)
²INSA Lyon - MATEIS Lab. - Guimaraes (PT)
- 16:45 TRIB2-O1-141 • Neon enhanced plasma ionization in Cr films deposition by HiPIMS-DOMS
J. Oliveira, S. Adebayo, R. Serra
CEMMPRE – Univ. Coimbra - Coimbra (PT)
- 17:05 TRIB2-O2-043 • Tribological characterization of TiO₂ thin films prepared by magnetron sputtering: the link between color change and TiO₂ wear
S. Marion¹, C. Minfray², V. Fridrici², L. Dubost³, M. Lenci^{1,4}, A. Pascale-Hamri⁴, R. Charriere¹, J. Faucheu¹
¹Mines Saint-Etienne, Univ. Lyon, CNRS, UMR 5307 LGF, Centre SMS - Saint-Etienne (FR)
²Lab. de Tribologie et Dynamique des Systèmes, Univ. Lyon, Ecole Centrale de Lyon - Ecully (FR)
³IREIS, Andrézieux-Bouthéon (FR)
⁴Manutech USD, Bâtiment des Hautes Technologies, Saint-Etienne (FR)
- 17:25 TRIB2-O4-113 • Role of Ti-Al-based thin films modified wettability on heat transfer exchange during droplet impact onto a heated surface
A. García Wong¹, G. Marcos¹, G. Castanet², O. Caballina², T. Potaufoux², F. Lemoine², J.F. Pierson¹, T. Czerwiec¹
¹Institut Jean Lamour, Univ. Lorraine - Nancy (FR)
²Laboratoire d'Energétique et de Mécanique Théorique et Appliquée, Univ. Lorraine - Nancy (FR)

19:30 CONFERENCE DINNER COCKTAIL (UNTIL 22:30)



Friday 15 September

8:40 – 10:05

ANTIPOLIS AUDITORIUM

Chair: A. Granier (FR)

8:40 PLENARY TALK // Surface engineering for sustainable future: multifunctional coatings for optics, energy, aerospace and manufacturing applicationsL. Martinu*Polytechnique Montréal, Québec (CA)***DEPO 5 Plasma-deposited coatings**

ANTIPOLIS AUDITORIUM

Chair: A. Granier (FR)

9:25 DEPO5-O1-167 • VO₂ thin films for thermal devices, the beginnings of a radiative thermal transistorI. Alonzo-Zapata¹, C. Champeaux¹, F. Enguehard², J. Ordenez-Miranda², F. Dumas-Bouchiat¹¹*Univ. Limoges, CNRS, IRCER, UMR 7315, Limoges (FR)*²*Institut Pprime, CNRS, Univ. Poitiers, ISAE-ENSMA, Futuroscope Chasseneuil - Poitiers (FR)***9:45 DEPO5-O2-135 • Pulsed magnetron sputtering of strongly thermochromic VO₂-based coatings with a low transition temperature**M. Kaufman, S. Farrukh, J. Vlček*Univ. West Bohemia – Plzeň (CZ)*

10:05

COFFEE BREAK



Friday 15 September

8:40 – 10:05

SURF 2 Plasma-surface interactions

ELLA FITZGERALD ROOM

 Chair: R. Dussart (FR)

9:25 SURF2-O1-042 • Plasma-surface interactions in oxygen-containing plasmas
V. Guerra¹, J. Afonso¹, J. Silveira¹, A.S. Morillo Candas², L. Vialetto³,
P. Viegas¹

¹*Instituto de Plasmas e Fusão Nuclear, Instituto Superior Técnico, Univ. Lisboa (PT)*

²*Laboratoire de Physique des Plasmas (UMR 7648), CNRS, Univ. Paris Saclay,
Sorbonne Univ., École Polytechnique, Palaiseau (FR)*

³*Theoretical Electrical Engineering, Faculty of Engineering, Univ. Kiel (DE)*

9:45 SURF2-O2-109 • Plasma electrolytic oxidation of aluminium with
incorporation of carbon black nanoparticles

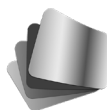
L. Magniez¹, S. Fontana¹, J. Martin^{1,2}, C. Hérold¹, G. Henrion^{1,2}

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

²*Univ. Lorraine, LabEx DAMAS - Metz (FR)*

10:05

COFFEE BREAK



Friday 15 September

10:35 – 12:10
DEPO 6 Plasma – deposited coatings
ANTIPOLIS AUDITORIUM

Chair: A. Bousquet (FR)

10:35 **KEYNOTE** //DEPO6-K1-080 • Photochromic properties of rare-earth oxyhydride thin films for smart windows applications

D. Moldarey, E. Pitthan, M. Wolff, D. Primetzhofer

Department of Physics and Astronomy, Uppsala Univ. - Uppsala (SE)

11:05 DEPO6-O1-010 • Growth mechanisms and properties of magnetron sputtered TiO₂ thin films on complex 3D FOAM substrates

L. Chavée¹, S. Lucas¹, T. Gries², E. Haye¹

¹*Univ. Namur / NISM Institute - Namur (BE)*

²*Institut Jean Lamour - Nancy (FR)*

11:25 DEPO6-O2-022 • Plasma diagnostics of a pulsed hollow cathode discharge and deposition of copper nickel oxide thin films

R. Hippler¹, A. Kapran¹, H. Wulff², A. Pisarikova¹, J. Olejnicek¹, M. Cada¹, Z. Hubicka¹

¹*Institute of Physics, Czech Academy of Sciences - Prague (CZ)*

²*Institute of Physics, Univ. Greifswald - Greifswald (DE)*

11:45 DEPO6-O3-036 • Reactive D.C. magnetron sputter deposition of crystalline silver niobate thin films

L. Kölbl¹, R. Franz¹, A. Kobald², M. Deluca², C. Mitterer¹

¹*Department of Materials Science, Montanuniv. Leoben, Leoben (AT)*

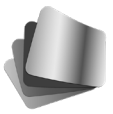
²*Materials Center Leoben Forschung GmbH, Leoben (AT)*

12:10 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 15 September

10:35 – 12:10

SURF 3 Plasma – surfaces interactions

ELLA FITZGERALD ROOM

 Chair: R. Dussart (FR)

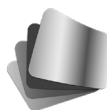
- 10:35 **KEYNOTE // SURF3-K1-068** • Electrochemical characterization of surface damage in n-type GaN induced by Inductively Coupled Plasma Reactive Ion Etching (ICP-RIE) and Atomic Layer Etching (ALE)
C. Pernel, W. Berthou, S. Suman, S. Ruel, L. Vauche
CEA - Grenoble (FR)
- 11:05 SURF3-O1-050 • Deep etching of bulk titanium in fluorinated plasmas for biomedical devices
R. Ettouri¹, T. Tillocher¹, P. Lefaucheux¹, B. Boutaud², R. Dussart¹
¹*Groupe de Recherches sur l'Energétique des Milieux Ionisés (GREMI), CNRS – Univ. Orléans (FR)*
²*MISTIC SAS - Issy-Les-Moulineaux (FR)*
- 11:25 SURF3-O2-145 • Properties of nitrided layers produced in an active-screen plasma nitriding process
G. Marcos¹, R. Hugon¹, C. Cardinaud², O. Carrivain³, C. Noël¹, T. Czerwiec¹
¹*Institut Jean Lamour - Nancy (FR)*
²*Institut des Matériaux Jean Rouxel - Nantes (FR)*
³*HEPIA/HES-SO - Genève (CH)*
- 11:45 SURF3-O3-104 • Dual-phase nanocomposite coatings based on crystalline ZrN and glassy ZrCu
P. Zeman¹, S. Haviar¹, M. Cervena¹, A. Bondarev², R. Cerstvy¹
¹*Dpt. Physics and NTIS - European Centre of Excellence, Univ. West Bohemia - Plzen (CZ)*
²*Dpt. Control Engineering, Faculty of Electrical Engineering, Czech Technical Univ. Prague - Prague (CZ)*
- 12:10 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



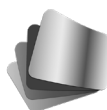


PLATHINIUM

PLASMA THIN FILM INTERNATIONAL UNION MEETING

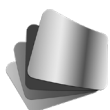
POSTER PROGRAM

- **P1 / Session #1**
with exhibition cocktail
Tuesday 12 September
17:30 - 19:30
 - DEPO
 - GROM
 - HELIAG
 - ITEC
 - NANO
 - PROC
 - SOUR
- **P2 / Session #2**
with refreshments
Wednesday 13 September
16:35 - 18:30
 - DEPO
 - PLACC
 - NANO
 - LIQU
 - GROM
 - SURF
 - TRIB



Poster session #1

- DEPO** **Plasma - deposited coatings for optical, electronical and other functionalities**
- DEPO-P1-018 Effect of interfacial SiN_x ultra-thin film on optical and electrical properties of PVD antireflective coating
B. Hiba¹, G. Monier², L. Bideux², P. Hoggan², A.Z. Dagou³, R. Ergun³, A. Bousquet⁴, E. Tomasella⁴
¹Institut Pascal (IP), Institut de Chimie de Clermont-Ferrand ICCF – Clermont-Ferrand (FR)
²Institut Pascal (IP) - Clermont-Ferrand (FR)
³School of Engineering and Computing Sciences, Durham Univ. - Durham (UK)
⁴Institut de Chimie de Clermont-Ferrand ICCF - Clermont-Ferrand (FR)
- DEPO-P1-026 Effect of Tantalum addition on properties of Cu–Zr–based Thin Film Metallic Glasses (TFMGs)
S. Achache
 LASMIS (FR)
- DEPO-P1-039 Development and characterization of chromium-based PVD coatings for the protection of stainless steel bipolar plates for PEM fuel cells
J. Orrit-Prat, R. Bonet, S. Molas, A. Concustell, M. Bahillo, J. Caro
 Eurecat, Centre Tecnològic de Catalunya, Unit of Metallic and Ceramic Materials - Manresa (ES)
- DEPO-P1-067 Tailoring surface properties of Zr-V thin films by competitive self-separation of crystalline and amorphous phases during sputtering
 Q. Liebgott^{1,2}, A. Borroto³, S. Bruyère¹, A. Ahmed², D. Müller², Z. Fernandez-Gutierrez¹, R. El Beainou¹, S. Migot¹, F. Mücklich², D. Horwat¹
¹Institut Jean Lamour - Nancy (FR)
²Univ. Saarlandes - Saarbrücken (DE)
³Univ. Rennes - Saint-Brieuc (FR)
- DEPO-P1-182 Synthesis of multifunctional flexible Zn-Al based oxide thin film with antibacterial and moisture barrier properties using Atomic Layer Deposition system
 J. Eom, T.Y. Cho, S.K. Cho
 Korea Research Institute of Chemical Technology – Daejeon (KR)
- DEPO-P1-193 Impact of plasma assistance on SiO₂ and HfO₂ thin films physicochemical and photometric aging properties
A. Soutenain¹, M. Guy¹, M. Chorel¹, E. Lavastre¹, E. Laborde², P. Carles², Y. Launay², E. Hyvernaud², S. Macnally³, M. Mireles³, A. Rigatti³, C. Ducros⁴, C. Dublanche-Tixier²
¹CEA CESTA, Le Barp (FR)
²Univ. Limoges, CNRS, IRCER, UMR 7315, Limoges (FR)
³Laboratory for Laser Energetics, Univ. Rochester (US)
⁴Univ. Grenoble Alpes, CEA, LITEN, DTNM, LCH, Grenoble (FR)



Poster session #1

DEPO

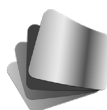
Plasma - deposited coatings

- DEPO-P1-197 Sputtering techniques for smart textiles
D. Hegemann, M. Amberg, P. Rupper
Empa - St.Gallen (CH)
- DEPO-P1-207 Using evaporation to create hydrophobic coating
M. Soobaroyen
Bronkhorst France - Montigny Les Cormeilles (FR)

GROM

Thin films growth and modelling

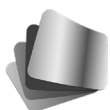
- GROM-P1-063 Depth resolved XRD measurements using *in-situ* XRD during ion beam sputtering
D. Manova, S. Mändl
Leibniz Institute of Surface Engineering - Leipzig (DE)
- GROM-P1-123 "MISSTIC": a multi-tool experimental setup for magnetron sputtering deposition combined with in situ and real-time characterization
R. Zapata¹, H. Montigaud¹, M. Balestrieri¹, I. Gozhyk¹, R. Lazzari²
¹Laboratoire Surface du Verre et Interfaces UMR 125 - Aubervilliers (FR)
²Institut des Nanosciences de Paris UMR 7588 - Paris (FR)
- GROM-P1-126 Augmented reality representation for the investigation of simulated inclined chromium thin films
N. Watiez, D. Cotton, A. Besnard, R. Lou, H. Birembaux, J. Outeiro
LaBoMaP - Cluny (FR)
- GROM-P1-149 Chromium carbide coatings by DC sputtering of a sintered target
A. Besnard¹, Y. Pinot¹, M.R. Ardigo-Besnard², S. Lucas³, E. Haye⁴, L. Chavée⁴
¹Arts et Métiers Science and Technology - LaBoMaP - Cluny (FR)
²Laboratoire Interdisciplinaire Carnot de Bourgogne (ICB) - Dijon (FR)
³Innovative Coating Solutions (ICS) - Namur (BE)
⁴Université de Namur, LARN laboratory, NISM - Namur (BE)
- GROM-P1-199 Ion beam sputter deposition of epitaxial Ga₂O₃ thin films on C-plane Al₂O₃
D. Kalanov, Y. Unutulmazsoy, J.W. Gerlach, A. Lotnyk, J. Bauer, A. Anders, C. Bundesmann
Leibniz Institute of Surface Engineering (IOM) - Leipzig (DE)



Poster session #1

HELIAG Plasmas for health, agriculture and life science

- HELIAG-P1-044 Polysaccharide coatings for urinary catheters
A. Vesel¹, N. Recek¹, R. Zaplotnik¹, K. Kuzmic², L. Fras Zemljic²
¹*Jozef Stefan Institute - Ljubljana (SL)*
²*Univ. Maribor, Faculty of Mechanical Engineering - Maribor (SL)*
- HELIAG-P1-099 Plasma polymer coatings of non-planar materials for bioapplications
L. Janu¹, D. Nečas¹, E. Dvořáková¹, M. Buchtelová¹, L. Zajíčková^{1, 2, 3}
¹*Plasma Technologies for Materials, CEITEC, Brno Univ. - Brno (CZ)*
²*Dpt. Condensed Matter Physics, Masaryk Univ. - Brno (CZ)*
³*Dpt. Theoretical and Experimental Electrical Eng, Brno Univ. - Brno (CZ)*
- HELIAG-P1-101 Towards a development of integrated micro-electro-apta-sensors into a diabetes organoid-on-a-chip device
A. Aubert¹, G. Nonglaton¹, Y. Thomas¹, Y. Roupioz²
¹*Univ. Grenoble Alpes, CEA, LETI, DTBS - Grenoble (FR)*
²*Univ. Grenoble Alpes, CNRS, CEA, IRIG, SyMMES - Grenoble (FR)*
- HELIAG-P1-177 Influence of varying plasma parameters on the response of MG-63 osteoblast-like cells onto poly(allylamine) thin films
H. Salapare¹, A. Airoudj¹, R. Ramos¹, F. Bally-Le Gall¹, A. Ponche¹, T. Petithory¹, L. Pieuchot¹, P. Fioux¹, S. Seemann², S. Staehlke², J. Carneiro De Oliveira¹, V. Roucoules¹, J.B. Nebe^{2, 3}, K. Anselme¹
¹*Institut de Science des Matériaux de Mulhouse (IS2M) - CNRS - UHA - UMR 7361 - Mulhouse (FR)*
²*Department of Cell Biology, Univ. Medical Center - Rostock (DE)*
³*Department of Life, Light & Matter, Univ. Rostock - Rostock (DE)*
- HELIAG-P1-203 Investigation of toxicity of plasma activated water on lemna minor
N. Puac¹, O. Jovanovic¹, A. Morina², N. Skoro¹
¹*Institute of Physics, Univ. Belgrade (RS)*
²*Faculty of Science and Natural Resources, Univ. Malaysia Sabah, Sabah (MY)*



Poster session #1

ITEC

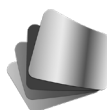
Innovations & Technologies

- ITEC-P1-107 Industrial technology for ta-C coatings deposition
J. Kluson¹, M. Ucik¹, M. Jilek¹, A. Luemkemann², H. Bolvardi²,
B. Paul²
¹Platit a.s. - Sumperk (CZ)
²Platit AG - Selzach (CH)
- ITEC-P1-110 Innovative conformal deposition solution into TSV integration for
oxide, nitride, and metal layers by pulsed liquid precursor injection
M. Segers, P.D. Szkutnik, A. Pageau
Plasma-Therm Europe - Bernin (FR)

NANO

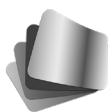
Nanomaterials and nanostructured thin films

- NANO-P1-017 Localized laser texturing of passivating nano-layer deposited by PVD
for industrial olfactory sensors applications
S. Fabert¹, W. Ravisy¹, L. Dubost¹, S. Ponton¹, N. Morel², C. Herrier²
¹IREIS, Groupe HEF - Andrézieux-Bouthéon (FR)
²ARYBALLE - Grenoble (FR)
- NANO-P1-096 Zirconium-based nanocatalysts by sputtering onto glycerol and solid
carbon
A. Caillard¹, S. Atmane¹, S. Fazeli¹, E. Millon¹, A.L. Thomann¹,
P. Brault¹, N. Neha², T. Rafaideen², C. Coutanceau²
¹GREMI, Univ. Orléans / CNRS - Orléans (FR)
²IC2MP, Univ. Poitiers / CNRS - Poitiers (FR)
- NANO-P1-132 Direct liquid reactor-injector of nanoparticles: a safer-by-design
aerosol injection for nanocomposite thin-film deposition adapted to
various plasma-assisted processes
L. Stafford¹, G. Carnide², L. Cacot¹, N. Naudé², M. Kahn³,
R. Clergereaux³
¹Univ. Montréal - Montréal (CA)
²CNRS-LAPLACE - Toulouse (FR)
³CNRS-LCC - Toulouse (FR)



Poster session #1

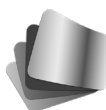
- NANO Nanomaterials and nanostructured thin films**
- NANO-P1-194 Structural and chemical characterizations of nanostructured cermet aluminium oxy-nitride / copper films
P-L. Martin, M. Richard-Plouet, N. Gautier, J. Hamon, P.Y. Jouan, V. Brien
Nantes Univ., CNRS, Institut des Matériaux de Nantes Jean Rouxel, IMN, Nantes (FR)
- NANO-P1-202 Synthesis of ultra-thin film MAA:PEGDMA hydrogels with customized properties by atmospheric pressure plasma
J. Sans^{1, 2}, I. Azevedo¹, R. Quintana¹
¹*Materials Research & Technology Dpt., Luxembourg Inst. Science and Technology - Esch/Alzette (LU)*
²*Dpt. Engenharia Química, EEBE Univ. Politècnica de Catalunya - Barcelona (ES)*
- PROC Process control (including plasma diagnostics, plasma modelling)**
- PROC-P1-098 Optical diagnostics of a N₂/Ar microplasma for the deposition of hexagonal boron nitride
B. Menacer, A. Remigy, C. Lazzaroni, K. Gazeli, G. Lombardi, S. Prasanna, X. Aubert
Univ. Sorbonne Paris Nord, LSPM, CNRS - Villetaneuse (FR)
- PROC-P1-129 Tuning plasma-droplet interactions in Dielectric Barrier Discharge at atmospheric pressure for thin-film deposition
L. Stafford¹, L. Cacot¹, R. Clergereaux², N. Naudé³
¹*Univ. Montréal - Montréal (CA)*
²*CNRS-LAPLACE - Toulouse (FR)*
³*UPS-LAPLACE - Toulouse (FR)*
- PROC-P1-131 Time-resolved optical emission spectroscopy analysis of a low-pressure RF plasma with pulsed injection of argon, pentane and ZnO nanoparticles
M. Dion^{1, 2}, R. Clergereaux², L. Stafford¹
¹*Univ. Montréal - Montréal (CA)*
²*LAPLACE - Toulouse (FR)*



Poster session #1

PROC Process control (including plasma diagnostics, plasma modelling)

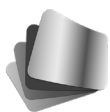
- PROC-P1-137 Developing a method with optical emission spectroscopy to control thin layer in R-HiPIMS deposition process
D. Boivin¹, A. Najah¹, R. Jean-Marie-Désirée², S. Cuynet², L. De Poucques²
¹GREMI, UMR7344 Univ. Orléans/CNRS - Orléans (FR)
²Univ. Lorraine, CNRS, IJL, Campus ARTEM - Nancy (FR)
- PROC-P1-142 Study of N₂/H₂ plasmas produced by an active screen source: contamination due to NO production and role of hydrogen in the gas mixture
R. Hugon¹, G. Marcos¹, O. Carrivain², C. Noël¹, T. Czerwicz¹
¹Institut Jean Lamour (IJL), Département CP2S, UMR 7198 CNRS, Univ. Lorraine - Nancy (FR)
²HEPIA/HES-SO, Univ. Applied Sciences of Western Switzerland - Geneva (CH)
- PROC-P1-174 Impact of electronegativity and monoenergetic electrons on the properties of electrostatic sheaths in magnetized discharge plasmas
S. Chekour¹, A. Tahraoui¹, Z. Kechidi², N. Rebiai¹, N. Fouial¹, F. Abdedou¹
¹Quantum Electronics Laboratory, Faculty of Physics, USTHB (DZ)
²Laboratory of Electrical Engineering and Automatics - Media (DZ)
- PROC-P1-185 Pulsed aerosol assisted plasma deposition: influence of the injection parameters
R. Clergereaux¹, B. Briet¹, M. Feron^{1,2}, V. Orlandi^{1,3}, G. Carnide^{4,5}, M. Cavarroc⁶, M. Kahn⁴
¹CNRS-Laplace - Toulouse (FR)
²CNRS-LCC - Toulouse (FR)
³CNES-Spaceship - Toulouse (FR)
⁴CNRS-LCC - Toulouse (FR)
⁵Safran Tech - Magny Les Hameaux (FR)
⁶Safran Tech - Magny Les Hameaux (FR)
- PROC-P1-189 In-situ temperature measurement of components in PECVD machines with a 3-fold rotation
P. Jäckh, D. Tiedemann, P. Hofmann, N. Holfelder
Robert Bosch Manufacturing Solutions GmbH - Stuttgart (DE)
- PROC-P1-195 Equivalent electrical circuit modeling of a He dielectric barrier discharge plasma jet
M. Puač¹, N. Škoro¹, K. Kutasi², N. Puač¹
¹Institute of Physics, Univ. Belgrade (RS)
²Wigner Research Centre for Physics, Budapest (HU)



Poster session #1

SOUR Plasma sources and electrical discharges

- SOUR-P1-143 Dynamics of the material ejection in a dipolar arc in DC regime and its connection to the arc noise
R. Hugon¹, A. Helle¹, F. Brochard¹, S. Chouchène^{1,2}, G. Marcos¹, P. Sschweitzer¹
¹Univ. Lorraine, Institut Jean Lamour, Campus ARTEM, Nancy (FR)
²Apex Solutions, Pulligny (FR)
- SOUR-P1-152 O₂ shielding modulates the spatiotemporal density of Ar(1s₅) in argon atmospheric-pressure micro-plasma jets
J. Santos Sousa¹, D. Goncalves^{1,2}, G. Bauville¹, P. Jeanney¹, L. Lemos Alves², M. Lino da Silva², S. Pasquiers²
¹Univ. Paris-Saclay, CNRS, Laboratoire de Physique des Gaz et des Plasmas - Orsay (FR)
²Instituto de Plasmas e Fusão Nuclear, Instituto Superior Técnico, Univ. Lisboa - Lisboa (PT)
- SOUR-P1-158 New micro-plasma reactors for the synthesis of heterostructures of 2D films of hexagonal boron nitride and graphene
A-A. Halfaoui, G. Bauville, S. Pasquiers, J. Santos Sousa
Univ. Paris-Saclay, CNRS, Laboratoire de Physique des Gaz et des Plasmas - Orsay (FR)

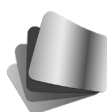


Poster session #2

DEPO

Plasma - deposited coatings for optical, electrical and other functionalities

- DEPO-P2-021 Plasma magnetron sputtering using combinatorial approach to deposit complex alloys thin films
D. Boivin¹, A. Jagodar¹, A. Caillard¹, M. Cavarroc², P. Brault¹, A.L. Thomann¹
¹GREMI, UMR 7344 Université d'Orléans/CNRS - Orléans (FR)
²SAFRAN Tech - Magny-Les-Hameaux (FR)
- DEPO-P2-032 Solar-blind photodetectors based on β -Ga₂O₃ fabricated by oxygen plasma assisted-pulsed laser deposition
E. Kim, T. Kim, Y. Kim, W.C. Jeong
Department of Physics, Hanyang Univ. - Seoul (KR)
- DEPO-P2-090 Plasma decontamination of surfaces using a microwave torch – assessment of the additional role of a TiO₂ photocatalytic layer
C. Dublanche-Tixier¹, L. Renoux¹, L. Youssef¹, P. Tristant¹, C. Chazelas¹, C. Maftah², P. Leprat²
¹Univ. Limoges, CNRS, IRCER, UMR 7315 - Limoges (FR)
²Univ. Limoges, E2Lim - Limoges (FR)
- DEPO-P2-094 Elaboration and characterization of WO₃/TiO₂ nanostructured photoanodes for solar water splitting
J. Pulpytel, T. Lang, F. Arefi-Khonsari, A. Pailleret
LISE (UMR8235) - Sorbonne Univ. - CNRS - Paris (FR)
- DEPO-P2-130 Superelastic TiZrNb and TiZrNbSn coatings for biomedical applications
G. Abadias¹, T. Choquet^{1, 2}, H. Chigama³, A. Fillon⁴, A. Michel¹, D. Laille⁴, Y. Robin¹, P. Vigneron³, M. Vayssade³, T. Gloriant⁴
¹Institut Pprime - Poitiers (FR)
²INSA Rennes - Rennes (FR)
³Univ. Technologie de Compiègne - Compiègne (FR)
⁴INSA Rennes - Rennes (FR)
- DEPO-P2-183 Fabrication of high-quality moisture barrier film using SiN_x/SiOF/SiN_x via pilot-scale roll-to-roll PECVD system
T. Cho, J. Eom, S. Cho
Korea Research Institute of Chemical Technology - Daejeon (KR)



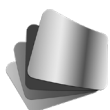
Poster session #2

DEPO Plasma - deposited coatings

- DEPO-P2-198 Thin-film hydrogels deposited by atmospheric-pressure nano-second plasma-induced polymerization of MAA:EGDMA
I. Azevedo Goncalves^{1,2}, J. Sans³, D. Abessolo Ondo¹, N.D. Boscher¹, R. Quintana¹
¹Luxembourg Institute of Science and Technology (LIST) - Esch-sur-Alzette (LU)
²Univ. Luxembourg - Esch-sur-Alzette (LU)
³Univ. Politècnica de Catalunya (UPC) - Barcelona (ES)
- DEPO-P2-208 Synthesis and characterization of chromium doped VO₂ thin films for new applications
J. Capdevila^{1,2}, C. Champeaux¹, F. Dumas-Bouchiat¹, D. Koch², M. Chaker²
¹Univ. Limoges, CNRS, IRCER, UMR 7315, Limoges (FR)
²Institut National de la Recherche Scientifique Énergie Matériaux Télécommunications, Québec – Varennes (CA)

PLACC Plasmas for conversion and catalysis

- PLACC-P2-014 Synthesis of nanoparticles by reactive magnetron sputtering on ionic liquid for photocatalytic applications, from metallic to Bi-based compound nanoparticles
A. Bousquet¹, S. Ibrahim¹, V. Ntomprougkidis¹, M. Traikia¹, G. Monier², J.M. Andanson¹, P. Bonnet¹
¹ICCF - Clermont-Ferrand (FR)
²IP - Clermont-Ferrand (FR)
- PLACC-P2-047 Dissociation of ammonia by microwave discharges in medium pressure range: an experimental study
M. Awaji, T. Belmonte, C. Noel, M. Belmahi, T. Gries
Univ. Lorraine, CNRS, IJL - Nancy (FR)
- PLACC-P2-186 Discharge initiated synthesis of molecular life precursors in carbon monoxide based atmospheres
F. Krcma, J. Vesela, S. Chudjak
Brno Univ. Technology, Faculty of Chemistry - Brno (CZ)
- PLACC-P2-205 Impact of water on atmospheric plasma ethanol conversion for hydrogen production using nano-pulsed plasma reactor
D. Lojen, L. Nyssen, T. Fontaine, D. Petitjean, N. Chandra Roy, F. Reniers
ChemSIN, Univ. Libre de Bruxelles - Bruxelles (BE)

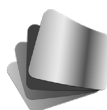


Poster session #2

NANO

Nanomaterials and nanostructured thin films

- NANO-P2-054 GLAD sputtering of nanostructured Ta thin films: influence of deposition angle on electrical resistivity at cryogenic temperature
H. Gerami, J.M. Cote, R. Salut, N. Martin
Institut FEMTO-ST, UMR 6174, CNRS Univ. Bourgogne Franche-Comté - Besançon (FR)
- NANO-P2-072 Galvanic corrosion-based antibacterial bimetallic nanoparticles produced by cylindrical gas aggregation source
N. Khomiakova¹, D. Nikitin¹, H. Biederman¹, M. Cieslar¹, Y. Al-Muhkhrabi², D. Kahoun², J. Lieskovská², J. Kratochvíl², O. Kylián¹
¹*Charles Univ., Faculty of Mathematics and Physics, Prague (CZ)*
²*Univ. South Bohemia, Faculty of Science, České Budějovice (CZ)*
- NANO-P2-118 Laser beam nanostructuring of Gadolinium-Doped Cerium oxide (GDC) oxide thin films deposited by plasma magnetron sputtering
A-L. Thomann¹, W. Karim¹, A. Petit¹, E. Millon¹, J. Vuillet², M. Tabbal³, N. Semmar¹
¹*GREMI CNRS/Univ. Orléans - Orléans (FR)*
²*CEA Le Ripault - Mons (FR)*
³*American Univ. Beirut - Beirut (LB)*
- NANO-P2-190 Plasma assisted nitriding of 2D transition metal carbide (MXENE) thin films
L. Pichon¹, N. Decamps¹, A. Benmoumen¹, M.L. David¹, S. Celerier², L. Loupias², P. Moreau³, M. Drouet¹, V. Mauchamp¹
¹*Univ. Poitiers, ISAE-ENSMA, CNRS, PPRIME - Poitiers (FR)*
²*Univ. Poitiers, CNRS, IC2MP - Poitiers (FR)*
³*Nantes Univ., CNRS, IMN, - Nantes (FR)*
- NANO-P2-204 YTTRIA-stabilized zirconia thin films prepared by radio frequency magnetron sputtering for oxygen sensors
A. Benayache
IM2NP - Marseille (FR)



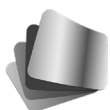
Poster session #2

LIQU**Plasma and liquids**

- LIQU-P2-178 Influence of σ and ε on the streamer dynamics at water surface
A. Hamdan, A. Herrmann
Univ. Montréal (CA)
- LIQU-P2-192 Plasma assisted modification of colloidal Zn nanoparticles
K. Kutas¹, Z. Tóth²
¹*Wigner Research Centre for Physics, Institute for Solid State Physics and Optics - Budapest (HU)*
²*Department of Medical Physics and Informatics, Univ. Szeged (HU)*
- LIQU-P2-200 Can process parameters significantly influence the size of silver nanoparticles synthesized by sputtering onto liquids?
H. Lasfargues¹, L.C. Freymann¹, S. Shankar¹, R. Sahu², C. Scheu², J.M. Schneider¹, C. Azina¹
¹*Materials Chemistry, RWTH Aachen Univ. - Aachen (DE)*
²*Max-Planck-Institut für Eisenforschung GmbH - Dusseldorf (DE)*

GROM**Thin films growth and modelling**

- GROM-P2-007 The influence of structural design on the properties of TiN coatings
D. Munteanu¹, I. Borsan¹, C. Gabor¹, M.A. Pop¹, C. Lopes², F. Macedo², M. Rodrigues², F. Vaz²
¹*Transilvania Univ. - Brasov (RO)*
²*Minho Univ. - Braga (PT)*
- GROM-P2-070 Modelling of thin film deposition into nanofibrous mats
D. Nečas
CEITEC, Brno Univ. of Technology - Brno (CZ)
- GROM-P2-127 Analyse of the angular distribution of the columns of chromium tilted thin films through a comprehensive simulation
N. Watiez¹, A. Besnard¹, P. Moskovkin², R. Lou¹, H. Birembaux¹, J. Outeiro¹, S. Lucas²
¹*LaBoMaP - Cluny (FR)*
²*LARN - Namur (BE)*
- GROM-P2-134 Biased reactive high power impulse sputtering of silica
M. Serényi, G. Safran
MFA Center of Energy Research – Budapest (HU)

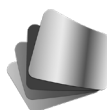


Poster session #2

SURF

Plasma - surface interactions

- SURF-P2-059 In-situ FTIR spectroscopic analysis of plasma activation and plasma polymer film deposition on polylactid acid
H. Müller, S. Golebiowska, G. Grundmeier
Technical and Macromolecular Chemistry, Paderborn Univ. - Paderborn (DE)
- SURF-P2-136 How to functionalize PVD ZrCu-based thin film metallic glasses? Effect of an ultrashort laser surface treatment
P. Steyer¹, N. Lebrun¹, Z. Fernandez Gutierrez², H. Bruhier³, M. Prudent³, C. Der Loughian¹, S. Dassonneville¹, A. Borroto², F. Bourquard³, M. Rousseau⁴, J.F. Pierson², J.P. Colombier³, F. Garrelie³
¹INSA-Lyon, MATEIS Lab. - Villeurbanne (FR)
²Univ. Lorraine, IJL - Nancy (FR)
³Univ. St Etienne, LabHC - St-Etienne (FR)
⁴Univ. St Etienne, Sainbiose Lab. - St-Etienne (FR)
- SURF-P2-138 Functionalization of MIL-53(Al) by means of ECR plasma treatment: a feasibility study
R. Jean-Marie-Desiree¹, A. Najah², G. Marcos¹, S. Cuynet¹, L. De Poucques¹
¹IJL - CNRS - Nancy (FR)
²GREMI - CNRS - Orléans (FR)
- SURF-P2-155 Increasing the hydrogen storage capacities of MIL-53 Al by amino-grafting functionalization using an impulse Dielectric Barrier Discharge plasma
A. Najah¹, D. Boivin², R. Jean-Marie Desirée³, R. Luan Sehn Canevesi⁴, V. Fierro⁴, L. De Poucques³, G. Henrion³, S. Cuynet³
¹GREMI, UMR7344 Univ. Orléans/CNRS - Bourges (FR)
²GREMI, UMR7344 Univ. Orléans/CNRS - Orléans (FR)
³Univ. Lorraine, CNRS, IJL - Nancy (FR)
⁴Univ. Lorraine, CNRS, IJL - Epinal (FR)
- SURF-P2-157 Plasma surface modification of glass and stainless steel by an atmospheric-pressure air DBD treatment
A. Najah, F. Faubert, I. Géraud-Grenier, M. Wartel, S. Pellerin
GREMI, UMR7344 Univ. Orléans/CNRS - Bourges (FR)



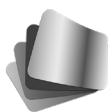
Poster session #2

SURF**Plasma - surface interactions**

- SURF-P2-159 Study by Optical Emission Spectroscopy (OES) of the characteristics of the plasma jet produced by an Axial Injection Torch (TIA): influence of a substrate placed on the jet axis
C. Chazelas, L. Renoux, P. Tristant, C. Dublanche Tixier
Univ. Limoges, CNRS, IRCER, UMR 7315 - Limoges (FR)
- SURF-P2-181 Towards accurate sputtering simulations: developing machine learning-based interatomic potentials for silicon
Y. Kotani¹, S. Hamaguchi¹, H. Kino²
¹*Center for Atomic and Molecular Technologies, Univ. Osaka (JP)*
²*National Institute for Materials Science (NIMS) - Ibaraki (JP)*
- SURF-P2-184 Surface wettability modification of polyimide films by pulsed magnetron sputtering
M. Barrera, F. Fietzke
Fraunhofer FEP - Dresden (DE)
- SURF-P2-187 Advancing NH₃ sensing with plasma reduction of graphene oxide
A. Kurtishaj^{1, 2}, N. Marath Santhosh^{1, 2}, V. Shvalya¹, U. Cvelbar^{1, 2}
¹*Department of Gaseous Electronics (F6), Jožef Stefan Institute, Ljubljana (SI)*
²*Jožef Stefan International Post Graduate School, Ljubljana (SI)*
- SURF-P2-188 Hydrogen plasma reduction of regolith simulant
J. Kadok^{1, 2}, S. Bulou¹, P. Choquet¹
¹*Luxembourg Institute of Science and Technology (LU)*
²*European Space Resources Innovation Centre (LU)*

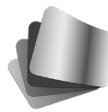
TRIB**Plasma - deposited protective and tribological coatings**

- TRIB-P2-013 Mechanical properties and tribological performances of AlTiZrTaHf(-N) high entropy nitrides deposited by reactive magnetron sputtering
M. El Garah¹, D.E. Touaibia¹, S. Achache¹, A. Michau², E. Sviridova³, P.S. Postnikov³, M.M. Chehimi⁴, F. Schuster², F. Sanchette¹
¹*LASMIS, Antenne de Nogent - Nogent (FR)*
²*Commissariat à l'Énergie Atomique et aux énergies alternatives (CEA) Saclay, Gif-Sur Yvette (FR)*
³*Research School of Chemistry & Applied Biomedical Sciences, Tomsk Univ. - Tomsk (RU)*
⁴*Univ. Paris, ITODYS, UMR CNRS 7086 - Paris (FR)*



Poster session #2

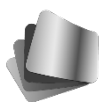
- TRIB Plasma - deposited protective and tribological coatings**
- TRIB-P2-038 Development and characterization of ultra-hard DLC coatings for high quality machining of high strength aluminium alloys
J. Caro¹, G. Ramírez¹, J.M. Gonzalez Castro², J. Orrit-Prat¹, R. Bonet¹, N. Cuadrado¹, M. Visaleca¹, L. Carreras³
¹Eurecat, Unit of Metallic and Ceramic Materials - Manresa (ES)
²Eurecat, Unit of Applied Artificial Intelligence - Cerdanyola del Vallès (ES)
³Tratamientos Térmicos Carreras S.A. - Sabadell (ES)
- TRIB-P2-056 Properties of tungsten-tantalum diboride coatings deposited by HiPIMS
R. Psiuk, T. Moscicki
Institute of Fundamental Technological Research PAS - Warsaw (PL)
- TRIB-P2-083 Effect of annealing temperature on morphological and microstructural properties of CrN-MoN multilayers deposited by reactive magnetron sputtering
R. Mareus¹, A. Caillard¹, A.L. Thomann¹, G. Rosiere^{1,2}, C. Richard³, M. Amigou²
¹GREMI UMR7344, Univ. Orléans / CNRS - Orléans (FR)
²BorgWarner France, Injection systems automotive supplier - Blois (FR)
³GREMAN UMR 7347 Univ. Tours / CNRS - Tours (FR)
- TRIB-P2-114 Zirconium-based thin film metallic glasses prepared by magnetron sputtering
P. Souček¹, J. Ženíšek¹, T. Schmidtová¹, V. Buršíková¹, P. Vašina¹, A. Kubíček², V. Sochora²
¹Masaryk Univ. - Brno (CZ)
²SHM s.r.o. - Šumperk (CZ)
- TRIB-P2-156 Increasing the thickness of sputtered Cr films by HiPIMS-DOMS
S. Adebayo, R. Serra, J. Oliveira
CEMMPRE, Univ. Coimbra - Coimbra (PT)
- TRIB-P2-176 Influence of temperature on the properties of W-Ti-B coatings deposited with the HIPIMS method
T. Moscicki¹, R. Psiuk¹, M. Ciemiorek-Bartkowska², M. Lewandowska²
¹Institute of Fundamental Technological Research, Polish Academy of Sciences - Warsaw (PL)
²Warsaw Univ. Technology, Faculty of Materials Science and Engineering - Warsaw (PL)



Poster session #2

TRIB Plasma - deposited protective and tribological coatings

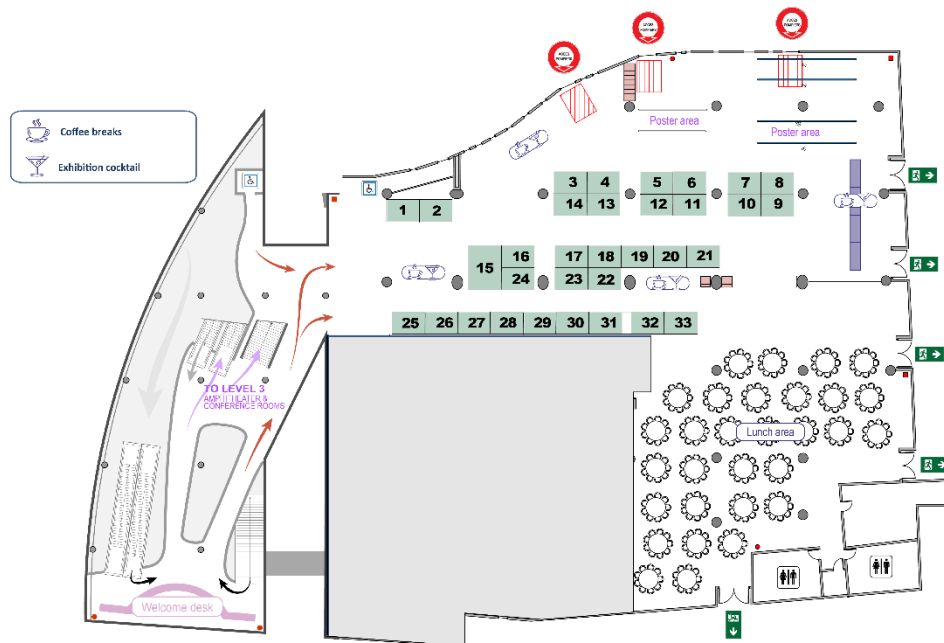
TRIB-P2-201 Plasma electrolytic oxidation of additively manufactured AlSi10MG alloy
P. Broniszewska-Wojdat, P. Pawłowski
Institute of Fundamental Technological Research, Polish Academy of Sciences - Warsaw (PL)



EXHIBITORS

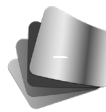
PLATINIUM
PLASMA THIN FILM INTERNATIONAL UNION MEETING

Exhibition map



List of exhibitors

| Company | booth | Company | booth |
|--------------------|-------|----------------------|-------|
| ADVANCED ENERGY | 22 | OMICRON TECHNOLOGIES | 22 |
| ALLIANCE CONCEPT | 23 | PFEIFFER VACUUM | 17 |
| BRONKHORST | 12 | PHYSICAL INSTRUMENTS | 4 |
| BT ELECTRONICS | 5 | PLASMA THERM | 30 |
| BUSCH | 21 | POLYGON PHYSICS | 20 |
| DATAPHYSICS | 6 | POLYTEC | 1 |
| EBARA | 19 | PRO-VIDE | 14 |
| EDWARDS | 10 | ROBEKO | 32 |
| GEOWELL VACUUM | 26 | SAIREM | 33 |
| HIDEN ANALYTICAL | 24 | Scia SYSTEMS | 11 |
| IMPEDANS | 3 | SCIENTEC | 8 |
| INNODYS | 31 | SEMILAB | 27 |
| KENOSISTEC | 28 | TECUUM | 29 |
| KORVUS TECHNOLOGY | 13 | TESCAN ANALYTICS | 9 |
| MEGATECH | 16 | TESTBOURNE | 18 |
| MICROTEST | 2 | UC COMPONENTS | 7 |
| NEYCO – HEF GROUPE | 15 | VAT | 25 |



ADVANCED ENERGY

Stand # 22

Advanced Energy® (AE®) has dedicated over four decades to perfecting power enabling breakthrough design and driving growth for key clients in the semiconductor and industrial sectors. AE is a market leader in power supply, control solutions, and temperature measurement for critical processes such as etching, deposition, inspection, and implantation.

Through its platform architecture and innovative semiconductor manufacturing solutions, AE develops strategic partnerships, anticipates application needs, and swiftly designs products and solutions to meet specific requirements.

Offering extensive capabilities and reliable performance, AE's system and integrated power solutions form the foundation of the next generation of semiconductor manufacturing platforms.

As a leader in DC and RF process power for 40 years, AE has been involved in chip fabrication in fabs worldwide. AE's expanded semiconductor portfolio now includes new power products as well as precise and reproducible sensor solutions to address customer needs in power and measurement.



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 38320 Eybens
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ALLIANCE CONCEPT

Stand # 23

Alliance Concept is a French PVD thin film deposition systems manufacturer. Involved in evaporation, magnetron sputtering and cathodic arc evaporation technologies, Alliance Concept propose a large cutting-edge system portfolio starting from 300mm class chamber up to a few meters size. The complete systems and parts are designed, manufactured, assembled and tested in France. With its home developed software solutions, Alliance Concept systems are user friendly, reliable and aimed at supporting academic leading edge research topics but also high quality production requirements. Since 1991, customer's challenges are the only motivation to manufacture technical solutions beyond expectations. In today's competitive growing market, customer satisfaction is

the baseline of the support service strategy to bring to users all the mandatory know-how during system lifetime. Senior experts will assist you during all the project, from the technical need analysis to the manufacturing and delivery, as well as the maintenance. Alliance Concept will be your next partner in PVD technology.



allianceconcept

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 74960 Cran Gevrier
 France
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www.alliance-concept.com



BRONKHORST

Stand # 12

BRONKHORST: Leader in low flow fluidics handling technology

Since more than 40 years, Bronkhorst offer an extensive product range of thermal, Coriolis and ultrasonic flow meters and flow controllers for low flow rates of gases and liquids. The flow instruments are used for a variety of applications in laboratory, machinery, industrial and hazardous areas. By sharing our knowledge and closely cooperating with OEM customers in the field we develop customer specific low

flow solutions, e.g. of multifunctional, pretested modules or skids for gas, liquid of vapour flow control.



Bronkhorst®
FRANCE

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sales@bronkhorst.fr
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BT ELECTRONICS

Stand # 5

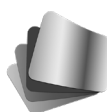
BT ELECTRONICS specializes in equipment and consumables for microelectronics, offering a wide range of dedicated products for both R&D laboratories and the industry. We take pride in accompanying our clients throughout their manufacturing process, providing them with innovative solutions based on cutting-edge technologies.

We cover the entire spectrum of processes, from front-end to back-end, with various machines that can be used in a wide variety of applications. These include vacuum PVD or CVD deposition systems, polymerization solutions with LED UV technology (energy-efficient and long-lasting), atmospheric plasma treatment machines, and vacuum plasma treatment machines to modify material surface properties without damaging them.

We are committed to offering our customers and partners innovative solutions to meet the ever-changing requirements of the microelectronics and semiconductor markets. Our goal is to continue being a major player in this field by providing high-quality products to support the constant evolution of the electronics and semiconductor industries.



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78630 Orgeval
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contact@bt-electronics.com
<https://bt-electronics.com/>



BUSCH

Stand # 21

Busch France is the French subsidiary of the German group Busch Vacuum Solutions. For over 60 years, we have been manufacturing vacuum and pressure solutions for all types of applications and environments in more than 45 countries.

As a true partner, we support our customers in their projects from A to Z with a range of services, original Busch accessories and spare parts, as well as standard and customized systems. The Medium-High-Vacuum market involves 3 experts available to advise you on the choice of your solutions, as well as 90 people working daily to bring you satisfaction.

We offer robust and compact scroll or screw dry vacuum pumps, ideal for

coating, such as the COBRA and FOSSA ranges. We also offer boosters to increase the pumping speed or final pressure of your pumps, as well as gauges and leak detectors to guarantee their performance. Come and discover them on our stand 21 and meet our Market Manager Stefanie Warsitz to start your plasma project!



16 rue du Bois Chaland
91090 Lisses
France
+ 33 (0)1 69 89 89 89
busch@busch.fr
www.buschvacuum.com

DATAPHYSICS

Stand # 6

DataPhysics Instruments GmbH, a German company with 25 years of experience, specialises in measurement technology for surface science use cases. The company offers a wide range of devices, which can analyse chemical and physical properties of surfaces and interfaces, such as interfacial tension, surface energy, work of adhesion, static and dynamic contact angles, roughness profiles, zeta potential and dispersion stability.

In short, their products help determining material properties whenever a liquid meets another liquid or a solid surface. The portfolio encompasses contact angle

measurements, force and spinning drop tensiometers, dispersion stability analysis systems, surface profile analyzers and zeta potential analyzers. Services also include professional contract measurements in the manufacturer's own application centre.



Raiffeisenstrasse 34
70794 Filderstadt
Germany
info@dataphysics-instruments.com
www.dataphysics-instruments.com

EBARA

Stand # 19

EBARA is a leading global manufacturer of vacuum and semiconductor systems used in different industries for manufacturing wafers, liquid crystals, solar cells and other products requiring advanced technology. Our vision for 2030 is CO2 neutrality. We introduced products like the Dynox to intensify our environmental protection rate for our customers. Save energy is the benefit of our products! Furthermore, we are the partner for comprehensive vacuum requirements. The portfolio includes dry and turbo molecular vacuum pumps as well as gas abatement systems.

EBARA Precision Machinery Europe (EPME) is part of the Japanese EBARA Group and employs over 250 people in Europe. EBARA is No 1 on the world

market for wafer bevel polish systems, on the world market for vacuum solutions and CMP tools. Our mission is innovative technology meets sustainability.



Muehlweg 2c
82054 Sauerlach
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www.ebara-pm.eu

EDWARDS

Stand # 10

Edwards is a leading developer and manufacturer of sophisticated vacuum products, exhaust management systems and related value-added services.

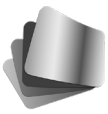
With over 100 years of heritage, Edwards is the partner of choice for many industries and has in-depth knowledge of plasmas, thin films and all types of coatings applications.

We understand the needs of these challenging processes where vacuum pumping is crucial and we offer a wide range of pumps to meet their specific requirements (dry screw pumps, turbo pumps, cryo pumps, rotary vane pumps, piston pumps, roots, etc.).

Using modelling techniques and our wide range of pumps, gas analysers, Polycold® cryochillers, gauges, controllers and accessories, we can optimise any pumping configuration to provide the small footprint vacuum system giving the maximum performance in the most reliable, environmentally friendly and cost-effective way.



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www.edwardsvacuum.com



GOWELL VACUUM

Stand # 26

GOWELL VACUUM CO., LTD., is a HI-TECH enterprise in China dedicating in manufacturing, R&D, marketing of oil free scroll vacuum pumps and compressors with core value to achieve maximal efficiency and reliability through cutting-edge technology and innovations.

Through 20 years persistent innovation and development, GEOWELL has become the leading manufacturer of oil free scroll vacuum products, with more than 60 patents and proprietary technologies for oil free scroll vacuum pumps and compressors, and met multiple international technical standards, including EU CE Certification, Russian Customs EAC Certification, and ISO9001 Certification.

GOWELL's products has been verified by thousands of users in semiconductor, optoelectronics, new materials, new energy, biomedicine, food and medicine,

analyzing instrument, and other industrial fields all over the world.

We believe the integration of high performance and high reliability product and service will bring the highest value to both our customer and ourselves. For this goal, we have contributed our complete effort.



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110169 Shenyang
China
+86-24-83685362
export@geowell.com.cn
www.geowell.com.cn

HIDEN ANALYTICAL

Stand # 24

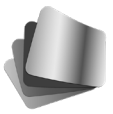
Hidden Analytical supply quadrupole mass spectrometers with high performance specifications and long-term reliability for research and process control. Applications include gas analysis, catalysis, UHV surface science, SIMS and plasma research.

Hidden Analytical excels in creating bespoke instruments for thin film research. Our advanced devices, such as quadrupole mass spectrometers, plasma diagnostic tools, and gas analysers, lead the industry in precision and dependability. The Hiden EQP Series revolutionizes thin film processes with accurate plasma diagnostics, while the HPR-30 residual gas analyser enables real-time gas analysis for unmatched process control and quality.

We pride ourselves on delivering tailor-made solutions to meet individual client needs. Our committed team of scientists, engineers, and support specialists strive for superior customer satisfaction. Join prestigious research institutions and industries trusting Hiden Analytical to elevate their thin film research.



420 Europa Boulevard
Warrington WA5 7UN
United Kingdom
+44 1925 445 225
info@hiden.co.uk
www.hidenanalytical.com



IMPEDANS

Stand # 3

Impedans provide you with intelligent sensing platforms for radio-frequency (RF) and plasma process monitoring. Our products find applications in fundamental research, process development, tool design, process control and fault detection and classification (FDC). We serve a wide range of industries, due to the ubiquitous nature of RF and plasma processing, such as semiconductor, vacuum coating, medical device, hard disk and aerospace among many others.

Our value proposition is that we provide you with an independent diagnosis of your process health, using intelligent, internet-

enabled sensing platforms, in conjunction with our vast experience in RF and plasma systems, to help you solve the most complex processing issues.



Chase House City Junction Business Park
D17 AK63 Dublin
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+353 1 8428826
business@impedans.com
www.impedans.com

INNODYS

Stand # 31

INNODYS is a sale rep organization located in France/UK/Germany. The Company services the Semiconductor market / MEMS / Optoelectronic / R&D markets.

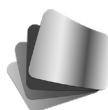
INNODYS was started 20 years ago and depending on territories, is the representative of:

OKYAY tech R&D Atomic layer deposition, Electrospinning system.
Heidelberg Instruments high-precision photolithography systems, maskless aligner, 3D. **ABB** Wet Process Analysis Division. **IMTEC** Wet Process components. **UE-PRECISION SENSORS** for safety & process control. RION Particles Counters. **SIMONA** FM4910 Polymer Sheets. **FAITH Enterprises** Wfr Mass Transfer Systems. **NuPure** Gas Purification Technology. **KFPi** Integrated Fire Protection system for Chemical Wet Stations. **CIC** Photonics Gas Analysis Cell & Gas Analysis Systems. **Microresist** Technology Photoresist and Special Polymers. **ARC** Advance Radiation Corp. Lamps & UV Radiation Sources. **Fluidix**

Flow-Thru Gauge Isolators. **Fab-Tech Inc** Corrosive Fume Exhaust. **Allwin21** Compound Semiconductor Front-End Process Equipment. **NANOTRONICS** The most advanced automated inspection tool. **OSIRIS** Coater & Dev. **X-trinSiC** Wfrs reclaim. **MicroTech** Surface Tension Gradient dryer (STG). **ThetaMetrisis** Spectroscopy, coating characterisation nano/micro scale.
ANSA Semiconductor Grade Seals, **PORVAIR** High Efficiency Filtration Products
AIRGARD Point Of Use Abatements Systems



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KENOSISTEC

Stand # 28

Kenosistec: Empowering Industries with Advanced Thin Film Solutions

Kenosistec stands as a pioneering force in the realm of industrial progress, specialized in engineering of vacuum and UHV deposition Solutions, from design to production. Rooted in innovation and driven by a commitment to excellence, Kenosistec's cutting-edge solutions are tailored to revolutionize industrial processes and elevate productivity to unprecedented heights, while maintaining an important focus on environmental sustainability.

Kenosistec offers a range of thin-film deposition equipment that enables industries to improve product performance, durability, and functionality, as well as support scientific research at R&D centers, working together with customers to develop and manufacture flexible, reliable, and advanced solutions. In our product basket we can count on a variety of different solutions such as: PVD Systems (cathodic arc and sputtering), PECVD, PLD/ALD Systems, and customized clusters.

Kenosistec's expertise has enabled it to work successfully on many industrial application areas: Semiconductor,

Automotive, Biomedical Science, Renewable Energy, and even Functional and Decorative sectors, developing fully customized equipment for each application area.

Beyond delivering high-quality thin film solutions, Kenosistec offers comprehensive services including custom design, installation, training, and ongoing technical support. Our team of experts collaborates closely with clients to create solutions aligned with their specific production requirements, ensuring seamless integration and optimal systems performance.

In an era where precision and efficiency define success, Kenosistec stands as the cornerstone of transformative industrial evolution, dedicated to equipping enterprises with the tools they need to thrive in a rapidly evolving landscape.

KENOSISTEC | PVD GREEN
EVOLUTION

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20082 Binasco MI
Italy
+39 02 9055200
antonio.angolemme@kenosistec.it
www.kenosistec.com/en/



KORVUS TECHNOLOGY

Stand # 13

Korvus Technology is a UK company specialising in highly modular PVD systems. In contrast to conventional systems, the Korvus "HEX Series" has a unique open-frame architecture, which allows for ease of operation and an unparalleled ability for upgrades and customisations. Our unique method of glovebox integration is also very attractive for users working with organics and lithium compounds.

The "HEX Series" comes in two sizes: the standard HEX and the larger HEX-L. The core concept of modularity is maintained across both models, with the key differences being the maximum sample size and number of deposition sources which can be used.

Korvus-designed deposition sources are available, including standard thermal boat evaporation, low-temperature organic evaporation, DC and RF sputtering, and a unique four-pocket electron beam source

which allows for co-deposition of many metals at once.

We are exhibiting at Plathinium as we enter an exciting time in our company's progression. Korvus are to have a prototype "HEX Cluster" system by the end of 2023. This will revolutionise the way cluster systems are developed, because our cluster is fully modular-allowing users to add and remove chambers as they wish, at no extra cost.



KORVUS TECHNOLOGY

Unit 1 Kings Grove Industrial Estate
Maidenhead
SL6 4DP Berkshire
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+44 1628 201329
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www.korvustech.com

MEGACOLD

Stand # 16

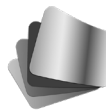
Our own-brand Megacold water vapour cryopumps are the most cost effective addition to an existing vacuum system or as part of a vacuum pumping solution for new systems. It can dramatically reduce pump down times and significantly improve product quality and throughput. In production this means more cycles per day.

Typically 50-100% throughput improvements are achievable. Megacold products work on the principle of Meissner trapping, whereby water vapour is captured by condensing onto a cryogenically cooled surface (a cryocoil) that is placed inside the vacuum chamber so pumping is not limited by pumping ports.

The MegaCold range is controlled by an industry standard PLC with a touchscreen local interface for ease of use and graphing of current or historic data. It has a full set of remote options. The equipment is available in a range of configurations including single & dual output cooling circuits giving independent control over a cryocoil and baffle.



Unit 10, Littleton Drive, Huntington,
Cannock, WS12 4TS
United Kingdom
+44(0)1543500044
ben@megatech.com
www.megatech.com/brands/megacold/cryogenic-chillers



MICROTEST

Stand # 2

MICROTEST is a French distributor of equipment, consumables and services for research and high-technology industry in microelectronics.

Operating since 1994, we are offering in France, Europe and North Africa the best suited systems to match the requirements of universities, R&D laboratories and industry.

THIN-FILM DEPOSITION

Our partner for thin film deposition, ELETTRORAVA (Italy), designs, develops, and manufactures thin film process solutions for R&D, pilot and production applications. With over 40 years of expertise in thin film processes, Elettrorava supports its customers in all stages of deposition process development, testing and validation.

Our partner ENCAPSULIX (France), addresses the geometric scaling of critical Atomic Layer Deposition (ALD) requirements for industrial & microelectronic devices and foils. We offer the solution to the universal problem of corrosion barriers and encapsulation for the OLED, Flexible Organic Electronic, Data Storage, Photovoltaic and Industrial Films.

SYSTEMS

- ALD geometrically scalable from prototype to production applications.
- PVD and CVD solutions ranging from sputtering, ion beam, electron beam, evaporation and plasma enhanced CVD systems.
- Customized systems designed to achieve the performance required.
- Multi-process/multi-chamber systems capable of operating automatically both in sequential and simple mode.

MARKETS

- Semiconductors
- Optoelectronics
- Aeronautics and aerospace
- Solar photovoltaic
- Optical coatings



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 microtest@microtest-semi.com
 www.microtest-semi.com



NEYCO

Stand # 15

Neyco is the French specialist in the vacuum/ultra-vacuum and inorganic materials markets. With 70 years of cutting-edge expertise and a rigorous commitment to improvement, our ability to advise and our adaptability are strengthened.

Above all, Neyco is a team of experts with a spirit of initiative, focused on people and the quality of relationships, concerned about the well-being and fulfilment of their colleagues and partners.

Neyco stands for quality and expertise in inorganic materials, thin film deposition, microscopy, vacuum and ultra-high vacuum.

Working hand in hand with industry and research laboratories, it is this diversity that enables us to be at the cutting edge of top-of-the-range technologies, and to

provide 'standard' or 'custom' solutions for technical products; in the same way as consultancy: Neyco is a bridge between Research and Industry.

Well-being in the workplace is vital for individual fulfilment, and the same goes for our partners. This is what motivates our employees every day to bring their expertise and rigour to bear in order to

neyco

HEF[®] PHOTONICS

satisfy the requests they receive in the best possible way - whatever they may be.

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92170 Vanves
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www.neyco.fr

OMICRON TECHNOLOGIES

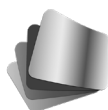
Stand # 22

Since 1988, OMICRON Technologies is serving Science and Industries using high purity fluids, vacuum and ultra-high vacuum, temperature, power and plasmas. As a distributor of many renowned brands in these fields, working in close collaboration as partners, we are together able to provide best advice and support in a product selection, perfectly matching any application constraint.

Our engineering service complements this comprehensive offering by the design and manufacture of custom systems (gas mixers, diluters, humidifiers, liquid vaporizers or test benches either for industry or research labs) with a constant focus on performance, innovation, and ease of use combination.

OMICRON
technologies

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jcormier@omicron-technologies.com
www.omicron-technologies.com



PFEIFFER VACUUM

Stand # 17

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.



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info@pfeiffer-vacuum.fr
www.pfeiffer-vacuum.com

PHYSICAL INSTRUMENTS

Stand # 4

Founded in 2005 PHYSICAL Instruments is a sales agency distributing over the French market High Voltage DC Power Supplies, DC to DC HV converters, Pulsed High Voltage Generators, AC HV Generators, Multichannel HV Switches. Also we offer a nice portfolio of HV cables and HV connectors up to 100 kV.

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

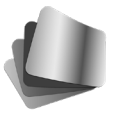
The complete development and production process is done in Germany. Customers are able to obtain complete fine-tuned solutions for supplying

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.



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France
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www.physical-instruments.fr



PLASMA THERM

Stand # 30

Plasma-Therm is a global manufacturer of advanced plasma processing equipment. Its tools and processes are used to support manufacturing needs in etch, deposition, rapid thermal processing, and plasma dicing technologies. The company serves the semiconductor and compound semiconductor industries in developing solutions for the wireless, power device, MEMS, photonics, advanced packaging, and data storage markets. With locations in North America, Europe, and Asia-Pacific, Plasma-Therm meets the diverse

needs of its customers with exceptional customer service. To learn more visit www.plasmatherm.com



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St. Petersburg, FL 33716
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elizabeth.unger@plasmatherm.com
www.plasmatherm.com

POLYGON PHYSICS

Stand # 20

POLYGON PHYSICS designs and produces electrons, ions and plasma sources for vacuum surface engineering. We have a source for your application whatever it is, such as electron beam processing, material analysis, metrology, surface cleaning, ion beam polishing, figuring, surface nano-structuring, plasma and/or atomic layer etching, ion beam sputtering deposition (including combinatorial thin film deposition), ion beam assist, ion implantation, medical and scientific accelerators...

POLYGON PHYSICS is the global leader in compact low power ECR technology, a reliable and stable filament free solution with an unmatched working range. Our technology enables electron or ion beams as well as beam arrays of any size and shape. Our products operate in reactive environment without specific constraint or lifetime impact. They are maintenance light.

We offer off-the-shelf plug and play products suited for a large range of applications, to be mounted on standard vacuum ports, with energies up to 5keV on

CF40 flanges, 10keV on CF63 flanges or 30keV on CF100 flanges or on flexibles if to be moved inside your vacuum chamber.

For equipment manufacturers needing a specific set-up or a custom solution, we provide customization services. We design the exact beam needed and supply sources as OEM products.

Whatever you want a point, linear, rectangular, or circular beam, we have a solution. Feel free to ask for the beam fulfilling your requirements, electron or ions, small or large, high brightness or high current.



**POLYGON
PHYSICS**

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POLYTEC FRANCE

Stand # 1

The Polytec group has a worldwide presence through its subsidiaries and representatives. As a manufacturer and specialist, Polytec designs optical measurement equipment for real-time non-destructive testing: vibrometry, velocimetry, surface metrology and on-line spectrometry.

Also a distributor, Polytec offers complementary product ranges in photonics, vision, industrial process, etc.

Polytec France supports all professionals in the public sector (Education, Research) and industry (Aeronautics, Automotive, Defence, Electronics, Food, Biomedical, Agriculture, Cosmetics, etc.). Based in Chatillon (92), the French subsidiary

operates throughout France and offers its customers a wide range of alternatives in addition to a high-quality technical and after-sales service: sales, rental, measurement services, training, etc.



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PRO-VIDE

Stand # 14

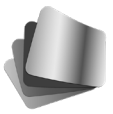
Pro-vidé is a team of mechanics / boilermakers who imagine, design and manufacture customized equipment and systems dedicated to vacuum and ultra-high vacuum. With our expertise, Pro-vidé can respond to many of your problems, from vacuum manipulation (rotary, Z transporters, manipulators, arm transfer...), sample holders (rotating, heated, cooled...), vacuum chambers and custom components, to small systems, according to your exact specifications.

To complete our offer, Pro-Vide has teamed up with two vacuum pump manufacturers, Kashiyama and Shimadzu; a partnership concluded because it meets our criteria of performance and reliability.

We look forward to seeing you at our Booth No.14, where we'll be presenting our achievements and discussing your projects.



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41120 Cormeray
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+33 (0) 06 84 04 06 98
contact@pro-vidé.eu
www.pro-vidé.eu



ROBEKO

Stand # 32

robeko is a supplier of components and materials as well as a technology partner for PVD & PECVD processes. We are European distributor for the cutting-edge products of our partners Sputtering Components, Ionautics, House of Plasma, Sairem, PLASUS, Magpuls and Thin Film Consulting. robeko provides planar and rotatable sputtering targets and bonding services for tribological, decorative and optical applications. We are proud of our in house manufacturing capabilities for cast planar targets and planar target bonding. As a technology partner our capabilities are ranging from feasibility

studies and layer development to upscaling and process transfer into industrial production. Our own application lab with three sputter coaters and analytical instruments allows for quick adaption to our customer demands.



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SAIREM

Stand # 33

For more than 45 years, Sairem has been developing new processing solutions for industry, innovating for its customers with high technology microwave & RF generators and high performance industrial machines. The company offers the most advanced range for thermal processing and plasma generation, based on its expertise in simulation and its application knowledge. SAIREM has developed a new generation of solid-state generators and cutting edge plasma sources : Aura-Wave and Hi-Wave.

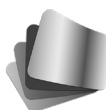
The innovative design of Aura-Wave prevents power loss within the source and allows to be self-matched over wide operating conditions without the need of any impedance matching system. A second collisional source, the Hi-Wave, has been developed for a working pressure range between 1 and a few 10 Pa for processes requiring high concentration of reactive species such Plasma-Enhanced Chemical Vapor Deposition (PECVD) with high deposition rates or isotropic etching.

Our 2540 MHz solid state generator provides a continuous wave and pulse output (option) at frequencies ranging between 2400 MHz and 2500 MHz. These solid-state generators offer a longer lifetime and no high voltage, along with a very good frequency spectrum even at low power. They can provide stable operation from 1 W and adjust the power in 1 W steps.

This equipment allows generating very high-density plasmas for a wide range of applications : Diamond generation by chemical vapor deposition, etching, PECVD, gas abatement, nanoparticles synthesis, sterilization of surface (electronic, medical), surface activation....



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www.sairem.com



scia SYSTEMS

Stand # 11

scia Systems is a full-range supplier for precise surface processing equipment, based on advanced ion beam and plasma technologies. The systems are applicable for coating, etching and cleaning processes, mainly in the MEMS, microelectronics and precision optics industries. Especially for micro- and nano-scale structuring applications, our ion beam etching systems can play a crucial role, when it comes to meet the high surface requirements. With exact incidence angle control and defined selectivity, the scia Mill series enables perfect results, for example when etching slanted surface relief gratings as optical couplers for augmented reality devices. In addition, ion beam milling allows to remove all materials of a layer stack, even magnetic materials like CoFe, CoPt or

NiFe. These multilayer stacks are typically used in high-precision spintronic devices that exploit the tunnel-magneto-resistance effect (TMR). Due to the flexible and modular in design, the process equipment of scia Systems can be configured easily for research applications as well as for high volume production, for example in either a "cluster" or "inline" configuration



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SCIENTEC

Stand # 8

ScienTec is one of the largest distributors within the French market, specializing in the distribution of surface analysis technologies that span from nanometer to millimeter scales, catering to both research and industrial sectors.

ScienTec is the representative of Prevac that manufacture Vacuum systems for analysis & deposition (PVD – PLD – MBE) Furthermore, ScienTec presents a wide-ranging selection of scientific equipment options, including:

- AFM microscopes: Best price / performance AFM (High resolution, ResiScope, HD-KFM, sMIM, multiple environments)
- SEM microscopes: Superior price-to-performance tabletop and standard SEM (robustness, ease-of-use, EDS analysis)
- IR and RAMAN spectroscopies: submicron scale, better than ATR

- Nanoindentors: Hardness, scratch, Young modulus, ambient/vacuum environments
- Optical and mechanical profilometers: single & automated measurements
- Vacuum systems for analysis & deposition (PVD – PLD – MBE)
- Thin film analyzers: Single-spot, microscopic-spot thickness or automated


SCIENTEC


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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 products 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 spectroscopic ellipsometry 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, PV materials, 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.



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christophe.defranoux@semilab.com
www.semilab.com

TECUUM

Stand # 29

Tecuum AG (www.tecuum.com) is a Swiss-based company specializing in designing and manufacturing Vacuum Technology products for research and industrial purposes, including VCM600 Thermal Evaporation and Leak Detection Systems.

VCM600 Thermal Evaporators are "Plug and Play", compact, desktop/bench top units.

No running cables mesh. No special operating system. No PLC bugs.

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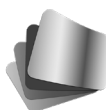
EU safety directives and fits the best customer's application and budget.

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VCM600 is the standard system for thermal vacuum evaporation.



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TESCAN ANALYTICS

Stand # 9

TESCAN ANALYTICS, a subsidiary of the TESCAN ORSAY HOLDING group, is an approved private laboratory for advanced physicochemical characterization of surfaces and interfaces in materials.

With nearly 30 years of experience, TESCAN ANALYTICS supports you in solving your analytical problems.

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www.tescan-analytics.com/en-us/

TESTBOURNE

Stand # 18

Testbourne is a leading supplier for over 40 years in high purity coating metals, alloys & compounds for R&D and industries.

Testbourne supplies an extensive selection of materials available in fabricated forms including sputtering/arc targets, evaporation materials, powders, wire, rods & sheets.

For your evaporation requirement we also supply evaporation sources, multi-strand filaments, wire baskets, boats and crucibles.

Testbourne also accommodate any custom requirements you may have. Testbourne is the representative for some

of the world's leading scientific instrument manufacturers that include QCM Technology, Sample Preparation Equipment, Microwave and Radio Frequency Systems, UHV Components and Thin Film Technology



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The Netherland.

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www.testbourne.com

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UC COMPONENTS

Stand # 7

UC Components, Inc. is the premier manufacturer of RediVac® non-vented & vented screws, hex nuts, washers, & O-rings for the most demanding applications.

Our RediVac® center or slot/side vented fasteners are designed to provide complete evacuation of trapped volumes of air during pump-down & eliminate "virtual leaks." They are available in a wide range of sizes, lengths, & head styles, along with a myriad of custom configurations & options. Our inch-measure screws are manufactured to ASME standards. Our metric-measure screws are manufactured to DIN & ISO standards. We also offer non-vented screws for through-holes in HV, UHV systems, & other applications.

UC Components RediVac® washers and hex nuts are the perfect complement to our vented & non-vented screws. They are made from the same high-quality materials & available with the same specialty finishes that help our fasteners improve vacuum system performance. All are available in both inch & metric sizes. Our RediVac® O-rings are also specially processed for use in High Vacuum, Ultra

High Vacuum, and other clean-critical equipment & applications. Our standard O-rings are manufactured from top-quality fluoroelastomer materials. Buna, silicone, and other materials are available upon request. Specific chemistries may also be available upon request.

All parts are precision cleaned and packaged in our certified Class 100/ISO Class 5 Cleanroom and arrive ready for immediate service. We offer many packaging options and vacuum-stable finishes (WS2, MoS2, gold, silver, nickel, & more) designed to reduce contamination, boost system performance, reduce corrosion, prevent galling, and more. Over 40,000 size and type options are available.



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VAT

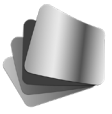
Stand # 25

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).



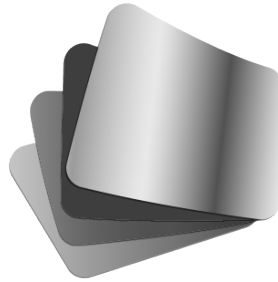
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Overview program

| Monday 11 Sept. | Tuesday 12 Sept. | Wednesday 13 Sept. | Thursday 14 Sept. | Friday 15 Sept. | |
|---|--|--|--|---|--|
| Antipolis Auditorium | Antipolis Auditorium | Antipolis Auditorium | Antipolis Auditorium | Antipolis Auditorium | Antipolis Auditorium |
| Ella Fitzgerald Room | | | | | Ella Fitzgerald Room |
| 8:30 - 9:10 Short course Registration Badge pick up | Registration Badge pick up | DEPO 2/3 NANO 2/3 DEPO 3/6 | DEPO 3/4 GROM 1/3 | DEPO 5/6 SURF 2/3 | |
| 9:10 - 9:25 9:00 - 10:40 Tutorial #1 Nonequilibrium kinetics of molecular plasmas V. Guerra | Opening ceremony | DEPO 3/6 | PL7 / E. KOVACEVIC | PL7 / L. MARTINU | 8:40 - 9:20 |
| 9:25 - 10:05 10:05 - 10:35 | PL1 / S. HAMAGUCHI | DEPO 2/3 NANO 2/3 DEPO 3/6 | PL7 / E. KOVACEVIC | DEPO 5/6 SURF 2/3 | 9:20 - 9:25 9:25 - 9:45 9:45 - 10:05 |
| 10:35 - 10:55 10:55 - 11:15 11:15 - 11:35 11:35 - 11:55 11:55 - 12:15 | Coffee break 30' | DEPO 2/3 NANO 2/3 DEPO 3/6 | Coffee break 30' | Coffee break 30' | 10:05 - 10:35 10:35 - 11:05 11:05 - 11:25 11:25 - 11:45 11:45 - 12:05 |
| 12:30 - 14:00 Lunch | Lunch (from 12:30) | Lunch (from 12:30) | Lunch (from 12:30) | Closing ceremony | 12:10 - 12:25 |
| 14:00 - 14:40 | PL2 / R. BRANDENBURG | PL4 / T. SILVA | PL6 / Z. MACHALA | | 14:00 - 14:40 |
| 14:45 - 15:05 15:05 - 15:25 15:25 - 15:45 | EXHIBITION | EXHIBITION | EXHIBITION | | 14:45 - 15:05 15:05 - 15:25 15:25 - 15:45 |
| 15:45 - 16:15 16:15 - 16:45 16:45 - 17:05 17:05 - 17:25 17:25 - 17:45 17:45 - 18:05 18:00 - 18:20 | Coffee break 30' | Coffee break 30' | Coffee break 30' | Social Activities (excursions) until 18:00 | 15:45 - 16:15 16:15 - 16:45 16:45 - 17:05 17:05 - 17:25 17:25 - 17:45 17:45 - 18:05 |
| 18:30 - 20:00 Registration/Badge pick up & Welcome reception until 20:00 | Industrial evening (from 19:30) until 22:30 | Industrial evening (from 19:30) until 22:30 | Conference dinner cocktail from 19:30 | | |

Topics: DEPO GROM HELIAG PLACC LIQU NANO PLACC SOUR PROC SORF TRIB

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