



European Materials Research Society

# 2024 Spring Meeting

May 27 - 31 / Strasbourg Convention Centre

## SYMPOSIUM I

Nano-engineered coatings and thin films: from fundamentals to applications

*Symposium Organizers:*

Alberto PALMERO, Institute of Materials Science of Seville. Spanish Council of Research (CSIC), Spain

Daniel MUNTEANU, Department of Material Science, Transilvania University, , Romania

José Filipe VAZ, University of Minho, Physics Department, Braga, Portugal

Philippe STEYER (Main organizer), INSA de Lyon – MATEIS Laboratory, France



**Monday May 27**

## **I01\_Chemical synthesis and coatings for multifunctional surfaces I**

**SCHUMAN - FIRST FLOOR**

**Chairperson(s) : COLL Mariona - STEYER Philippe**

<b>08:45</b>	<b>762</b>	<b>INV</b>	Chemical synthesis of multicomponent oxide thin films and membranes.	<b>COLL Mariona</b>
<b>09:15</b>	<b>2555</b>		A novel Ruthenium deposition precursor for ALD in microelectronics	<b>EWEINER Florian</b>
<b>09:30</b>	<b>2581</b>		Tungsten Oxide Coated Liquid Metal Electrodes via Galvanic Replacement as Heavy Metal Ion Sensors	<b>BHAGWAT Sagar</b>
<b>09:45</b>	<b>2144</b>		Exploring the synergistic effect of electroactive polymers and propolis in materials with increased surface contact area	<b>DIAS MOREIRA Joana</b>

**Monday May 27**

## **I02\_Chemical synthesis and coatings for multifunctional surfaces II**

**SCHUMAN - FIRST FLOOR**

**Chairperson(s) : RYDZEK Gauthier - VAZ Filipe**

<b>10:30</b>	<b>2880</b>		Morphological, structural, chemical and (photo)-electrochemical characterizations of AlN-Cu thin films deposited by Reactive Magnetron Sputtering	<b>MARTIN Pierre-Louis</b>
<b>10:45</b>	<b>1933</b>		Aerosol assisted atmospheric pressure plasma deposition of hybrid Ag <sup>+</sup> /TiO <sub>2</sub> nanocomposite coatings for photocatalytic applications	<b>DEL SOLE Regina</b>
<b>11:00</b>	<b>1272</b>		Controlled CVD Growth of Mo <sub>2</sub> C MXene with Various Thin Film Catalysts	<b>ROUHI Sina</b>
<b>11:15</b>	<b>710</b>		Chemical Vapor Deposition of Edge-on Oriented 2D Conductive Metal-organic Framework Thin Film	<b>CHOE Myeonggeun</b>
<b>11:30</b>	<b>386</b>		Thin Al <sub>2</sub> O <sub>3</sub> coating via atomic layer deposition for enhancing the cycle stability of Ni-rich layered cathodes in all-solid-state batteries	<b>SHIM Huney</b>

11:45	1552	Hybrid mesoporous silica powders and films structured by polyion complex micelles: modulation of their nanotexture for sorption applications	RYDZEK Gauthier
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**Monday May 27**

**I03\_Advanced surfaces modification and functionalization I**

**SCHUMAN - FIRST FLOOR**

**Chairperson(s) : FIEDLER Patrique - OH Jae sub**

13:30	294	INV	Novel materials for dry electrophysiology sensors	FIEDLER Patrique
14:00	982		Innovative methodology for selective nanostructuration, variation of composition and structuration combining plasma deposition and acoustic waves	RICO Víctor J.
14:15	2328		Fine-Tuning Hydrogen Sensor Reliability: Insights from Pd/Ni Bilayer Thin Films and Customized Interfacial Layers	OH Jae Sub
14:30	606		Effect of annealing on composite nanoparticle-based thin films for improved hydrogen gas sensing	SHAJI Kalyani
14:45	2248		Micro/nanostructured piezoelectric $\alpha$ -quartz thin films on silicon	SANCHEZ David
15:00	1997		Defect generation in single-layer graphene upon sputter deposition of thin metal films	NADJI ADJIM Franck Louba
15:15	1752		Enhancement of photoswitchable wetting properties of SP-containing porous surfaces by roughness adjustment	NEKOONAM Niloofar
15:30	173		Nature inspired cellulose-based networks for moisture and temperature sensors	ALMEIDA Ana
15:45	1507		Pd-Decorated SnO <sub>2</sub> /CuO hetrostructure nanofiber as a low ppm H <sub>2</sub> S gas sensor	RUKSANA Shaik

Monday May 27

## I04\_Advanced surfaces modification and functionalization II

SCHUMAN - FIRST FLOOR

Chairperson(s) : FENKER Martin - SIVAKOV Vladimir

16:30	1364	Effect of initial mono- and biatomic inorganic silver salts on the formation of plasmonically active silver nanostructures	SIVAKOV Vladimir
16:45	1292	ZnO vapor phase infiltration into photo-patternable polyacrylate thin films	DEMELIUS Lisanne
17:00	1623	Dendrite-Free Planar Zn-Ion Micro-Capacitors Utilizing Activated Carbon Anode and VO <sub>2</sub> Cathode for Enhanced Capacity	DEKA BORUAH Buddha
17:15	970	Anisotropic controlled wetting by plasma treatment for directed self-assembly of high- $\chi$ block copolymers	PUTRANTO Achmad Fajar
17:30	2060	Helical assemblies of plasmonic 1D-nanoobjects with giant circular dichroism	PAULY Matthias
17:45	2706	Influence of Nitrogen Partial Pressure on the Microstructure and Mechanical Properties of Industrially Deposited TiZrN coatings	BEHRANGI Sahand
18:00	527	Asymmetric Magnetoimpedance on NiFe/Ag multilayer for high-frequency sensor applications	CORREA Marcio
18:15	2265	Synthesis of 2D PtSe <sub>2</sub> nanolayers on glass substrates and their integration in device applications	MARINOVA Vera

Tuesday May 28

## I05\_Thin film growth: fundamentals and modelling I

SCHUMAN - FIRST FLOOR

Chairperson(s) : MARTIN Nicolas - SARAkinOS Kostas

08:45	3117	INV	Oriented growth of thin films for favoring anisotropic behaviors	MARTIN Nicolas
09:15	2787		Ignition of an inverted fireball using a magnetron sputtering source	FENKER Martin
09:30	1870		Understanding droplet formation in ultrasonic spray coating using Phase Doppler Anemometry: Comparison with predictive models	VERDING Pieter
09:45	448		Unravelling the effect of nitrogen on the morphological evolution of thin silver films on weakly-interacting substrates	SARAkinOS Kostas

Tuesday May 28

## I06\_Thin film growth: fundamentals and modelling II

SCHUMAN - FIRST FLOOR

Chairperson(s) : GONZÁLEZ-ELIPE Agustín r. - PERROTTA Alberto

10:30	2367		Merging Plasma Sputtering Deposition and Acoustic Wave Activation for the Nucleation and Growth of Silver Nanoparticles	GONZÁLEZ-ELIPE Agustín R.
10:45	742		Nano-porous Surfaces and Associated Interfacial Forces	GÓRA Michal
11:00			Plasma processing of metal phthalocyanines and porphyrins for the development of supported porous nanostructures for functional applications	SANCHEZ-VALENCIA Juan Ramón
11:15	51		In situ fabrication of lead-free double perovskite/polymer composite films emitting white light	SHI Jindou
11:30	272		The influence of the nano-structured design on the mechanical and tribological properties of TiN coatings	BORSAN Ioana
11:45	1951		Plasma-driven material engineering of functional polymers for perovskite-based energy devices	PERROTTA Alberto

**Tuesday May 28**  
**I07\_Coating for biomedical applications**

**SCHUMAN - FIRST FLOOR**

**Chairperson(s) : BRUZZI Mara - THOMANN Anne-lise**

<b>13:30</b>	<b>607</b>	<b>INV</b>	Thin films for biomedical applications	<b>BRUZZI Mara</b>
<b>14:00</b>	<b>2279</b>		Electroactive-responsive materials for the re-sensitization of resistant bacteria	<b>FERNANDES Margarida</b>
<b>14:15</b>	<b>1903</b>		Hydrogel based functionalization of SiC films for new hybrid neural Interfaces	<b>GREENHORN Scott</b>
<b>14:30</b>	<b>2047</b>		Antimicrobial, antiviral, and anti-inflammatory coatings: implementation of innovative production tools	<b>LI Yijie</b>
<b>14:45</b>	<b>1952</b>		Quartz On-chip bio-MEMS for Virus Detection	<b>RATHAR Raïssa</b>
<b>15:00</b>	<b>1694</b>		Engineered Graphene Oxide-nanosheets for applications at the nano-biointerface	<b>SATRIANO Cristina</b>
<b>15:15</b>	<b>77</b>		Antimicrobial multi-elementary alloy coatings: numerical approach and deposition by magnetron sputtering	<b>THOMANN Anne-Lise</b>
<b>15:30</b>	<b>233</b>		Enhanced virus viability in electrostatic air sampling with carbon nanotube electrodes synthesized by thermal chemical vapor deposition	<b>CHOI Sangsoo</b>
<b>15:45</b>	<b>364</b>		Diamond patterning employing sequential infiltration synthesis for biosensing applications	<b>AMINE Nour Hanne</b>

**Tuesday May 28**

**16:30**

**01\_1001 IP01\_Poster session**

**ETOILE - FIRST FLOOR**

<b>16:30</b>	<b>01_1001</b>	<b>120</b>	01_1001 Nanoscale texturing and its effect on calcium carbonate crystallization	<b>ARMSTRONG Tobias</b>
<b>16:30</b>	<b>02_1013</b>	<b>120</b>	02_1013 The influence of composition and nanostructure design on the thermal behaviour of Ti thin films	<b>MACEDO Francisco</b>
<b>16:30</b>	<b>03_1018</b>	<b>120</b>	03_1018 Laser-induced structural modulation and superconductivity in SrTiO <sub>3</sub>	<b>BHAKAR Monika</b>

16:30	04_1024	120	04_1024 Transparent liquid-repellent coatings from fluorine-free building blocks	MANDAL Priya
16:30	05_1069	120	05_1069 Correlative morphology of MoS <sub>2</sub> thin film with sputtering deposition time	GURAWAL Prachi
16:30	06_1072	120	06_1072 Growth of nanoporous thin films by magnetron sputter deposition performed in He	THOMANN Anne-Lise
16:30	07_1089	120	07_1089 Embedded Fe nanoparticles into CrN films For enhancing thermoelectric properties	LE FEBVRIER Arnaud
16:30	08_1113	120	08_1113 Two-dimensional material protective layer toward high-performance aqueous Zn ion batteries	LEE Dongju
16:30	09_1133	120	09_1133 Fundamental properties and applications in energy and biology of nano-engineered based metallic nanowires and thin coating films: A brief review	BELLETT Daniel
16:30	10_1231	120	10_1231 Synthesis of silver-based cermet layer by magnetron sputtering: influence of process parameters on the Ag nanoparticle characteristics	MONTIGAUD Hervé
16:30	11_1256	120	11_1256 The apparatus for in-situ crack tracing and full-field strain analysis with a wide test temperature range	KIM Kang-Han
16:30	12_127	120	12_127 Morphological investigation of Li thin film deposited by thermal evaporation method	SERIKKAZYEVA Assel
16:30	13_1282	120	13_1282 Microstructure and phase formation in epitaxial thin Ni-Al films	ZHEHAO Chen
16:30	14_1287	120	14_1287 The strategy for enhancing the performance of triboelectric nanogenerators by introducing the functionalized parylene thin film	LEE Kyung-Jin
16:30	15_3116	120	Tuning Optical Properties of Defect Engineered CVD Grown 2D Molybdenum Oxide by Ar Plasma for Optoelectronic Applications	Malik Pariksha
16:30	16_1323	120	16_1323 Laser induced surface modification of nitride ceramics	NEDYALKOV Nikolay
16:30	17_1332	120	17_1332 Laser induced 2D nanoparticle arrays fabrication	NEDYALKOV Nikolay
16:30	18_1366	120	18_1366 Enhancement of Raman vibrational spectra of nucleobases by copper nanostructures excited at 325 nm	JADAV Shivani

16:30	19_1379	120	19_1379 Transparent liquid-repellent coatings from fluorine-free building blocks	MANDAL Priya
16:30	20_1403	120	20_1403 Magnetron sputtered Molybdenum Disulfid (MoS <sub>2</sub> ) thin films for sensors and memristive devices	SCHELER Theresa
16:30	21_1467	120	21_1467 Correlations between structure and electrical properties of Cr-Ta thin films prepared by oblique angle co-sputtering	GERAMI Hamidreza
16:30	22_1484	120	22_1484 Study on structural color realization by using atomic layer deposition	KIM Jeong Hwan
16:30	23_1514	120	23_1514 Pd-Decorated SnO <sub>2</sub> /CuO hetrostructure nanofiber as a low ppm H <sub>2</sub> S gas sensor	RUKSANA Shaik
16:30	24_1545	120	24_1545 Hetero-integration of layered semimetal as electrodes for future CMOS devices	BISWAL Bubunu
16:30	25_1546	120	25_1546 Tuning of Polarization of Anisotropic Exctions in ReS <sub>2</sub> using Gate voltage	POUDYAL Saroj
16:30	26_1572	120	26_1572 Optical Properties and Band Alignment of MBE Grown MoSe <sub>2</sub> /WSe <sub>2</sub> Heterostructures on c-plane Sapphire Substrate	KANDAR Santanu
16:30	27_1583	120	27_1583 Unveiling the potential of ZnO-based thin films as antimicrobial coatings	VAZ Filipe
16:30	28_1586	120	28_1586 Spray deposited Ag-ZrO <sub>2</sub> cermet coatings on galvanized steel sheet	LEINEN Dietmar
16:30	30_1645	120	30_1645 Large-area growth of Bi <sub>2</sub> Se <sub>3</sub> thin film using a two-step process of Bi deposition and selenization with cracked Se	CHO Dae-Hyung
16:30	31_1664	120	31_1664 High-Efficiency Energy Generation through Evaporation Phenomena in Porous Vanadium Pentoxide Based on Ionovoltaics	LI Lianghui
16:30	32_1666	120	32_1666 Heterogeneous Self-Assembly of a Single-Type of Nanoparticles Modulated by Skin Formation	CHANG Li
16:30	33_1674	120	33_1674 Exploring Temperature-Dependent Carrier Transport and Persistent Photoconductivity in WSe <sub>2</sub> /MoS <sub>2</sub> Nanocomposite Thin Films	KAUR Manjot
16:30	34_1688	120	34_1688 ZnO-SnO <sub>2</sub> composites developed for N <sub>2</sub> O gas detection	ATANASOVA Genoveva
16:30	35_1696	120	35_1696 Effect of post-cracked Se treatment for the formation of topological insulator Bi <sub>2</sub> Se <sub>3</sub> thin film on the high TC superconductor YBa <sub>2</sub> Cu <sub>3</sub> O <sub>7</sub>	LIM So-Young



16:30	36_1701	120	36_1701 Synthesis of 2D and 3D vanadium doped WTe <sub>2</sub>	<b>DIMITROV Dimitre</b>
16:30	37_1702	120	37_1702 Hydrogen terminated diamond-transition metal oxide heterostructures for next-generation high power electronics	<b>CHATTERJEE Subhajit</b>
16:30	38_1750	120	38_1750 Artificial Synaptic Characteristics of HfO <sub>x</sub> – Based ReRAM Applicable to Neuromorphic Computing	<b>JEONG Se Yeon</b>
16:30	39_193	120	39_193 Improvement of Impact performance and bending flexibility of PSQ-directed coated on Ultra-Thin Glass for foldable display	<b>KIM Do-Gwan</b>
16:30	40_1994	120	40_1994 Growth of Gd <sub>2</sub> O <sub>3</sub> and Eu <sup>3+</sup> - doped Gd <sub>2</sub> O <sub>3</sub> thin films obtained by chemical solution deposition	<b>RAMONA Sonher</b>
16:30	41_206	120	41_206 Nanostructured tungsten coatings deposition by siliciding and boriding in melts	<b>STETSYUK Tatyana</b>
16:30	42_219	120	42_219 Isotropic Thermoelectric Response of NiTa Thin Films : Exploring the Thermal Behavior	<b>FERREIRA Armando</b>
16:30	43_256	120	43_256 MPCVD grown diamond films for quantum devices: Formation of nitrogen-related point defects.	<b>RAJ Rahul</b>
16:30	45_276	120	45_276 Surface Roughness Reduction of Substrates Beyond Conventional Machining	<b>JACOB RUSSEL RAJ Daljin</b>
16:30	46_283	120	46_283 Mechanical properties of AlCoCuCrFeNi high-entropy alloys using molecular dynamics and machine learning	<b>FANG Te-Hua</b>
16:30	47_304	120	47_304 Plasma deposition of vertically oriented graphene sheets from waste polymers	<b>VESEL Alenka</b>
16:30	48_308	120	48_308 Localized Surface Plasmon Resonance (LSPR) Sensors based on Au-Ag NPs embedded in Oxide Thin Films	<b>VAZ Filipe</b>
16:30	49_346	120	49_346 Tracking the CVD growth of large-scale MoS <sub>2</sub> monolayers on liquid gold	<b>MAGNARD Nicolas Pierre Louis</b>
16:30	50_395	120	50_395 Full colored, low infrared emissivity film for visible-infrared compatible camouflage	<b>XIONG Yuqin</b>
16:30	51_441	120	51_441 Improvement in Switching Characteristics and Bias Stability of Solution-Processed Zinc–Tin Oxide Thin Film Transistors via Simple Low-Pressure Thermal Annealing Treatment	<b>FENG Junhao</b>

16:30	52_501	120	52_501 Self-rectifying HfSiOx-based memristor crossbar array for artificial neural network accelerator	JU Hyunsu
16:30	53_505	120	53_505 Low temperature dependence of electrical resistivity in nanostructured palladium films	MARTIN Nicolas
16:30	54_520	120	54_520 Characteristics of high entropy alloy thin films grown by pulsed laser deposition	CRACIUN Valentin
16:30	55_549	120	55_549 Olympics in piezoelectric thin film acoustofluidics: faster, higher, stronger and better!	FU Richard
16:30	56_583	120	56_583 Electrospinning of epoxy micro- and nano-fibers	WAGNER Hanoch Daniel
16:30	57_593	120	57_593 Reusable Polymer-Based Fluorescent Sensor Nanoprobe for the Detection of Heavy Metal Ions	KARABIYIK Merve
16:30	58_642	120	58_642 Innovative Integration: Thin Film Dry-Electrodes for Personalized and Preventive Digital Healthcare	LOPES Claudia
16:30	59_705	120	59_705 Detection of botulinum neurotoxin serotypes B and C by immunoassay and endopeptidase activity using nanostructured SiO <sub>2</sub> /Si interferometer	SHTENBERG Giorgi
16:30	60_747	120	60_747 Using temperature-dependent resistivity to disentangle grain boundary and interface scatterings in Ag-based low-E coatings	HASPOT Victor
16:30	61_802	120	61_802 Impedance assisted Neural network-based model for real time prediction of H <sub>2</sub> S using Pd anchored CuCrO <sub>2</sub> sensor	KUMAR Amit
16:30	62_805	120	62_805 Low temperature production of nanocolumnar VO <sub>2</sub> thin films for thermochromic applications by magnetron sputtering at oblique geometries	ACOSTA Hiedra
16:30	63_836	120	63_836 Fe <sub>3</sub> O <sub>4</sub> @g-C <sub>3</sub> N <sub>4</sub> and MWCNT embedded highly flexible polymeric hybrid composite for simultaneous thermal control and suppressing microwave radiation	KATHERIA Ankur
16:30	64_878	120	64_878 Epitaxially Controllable h-BN on Graphene	WU Chung Lin
16:30	65_895	120	65_895 Multifunctional-flexible rice starch-graphene oxide biocomposite	BHADANE Prathmesh
16:30	66_898	120	66_898 A long-term substrate-independent reusable antibacterial polymer coating	PRAJAPATI Deepakkumar

<b>16:30</b>	<b>67_931</b>	<b>120</b>	67_931 Influence of Nitrogen and Nb Incorporation on Microstructure and Mechanical Properties of bcc-Cr rich Coatings	<b>BHAURAO JATHAR Sagar</b>
<b>16:30</b>	<b>68_954</b>	<b>120</b>	68_954 Laser Dynamic Control of the Thermal Emissivity of a Planar Surface Cavity Based on a Phase-Change Material	<b>LEE Myeongkyu</b>
<b>16:30</b>	<b>70_978</b>	<b>120</b>	70_978 Development of Multifunctional Coatings for Emerging Thin-Film Photovoltaics	<b>NG Annie</b>

Wednesday May 29

## I08\_ New synthesis and plasma-based processes I

SCHUMAN - FIRST FLOOR

Chairperson(s) : KONSTANTINIDIS Stephanos - PIERSON Jean-françois

08:45	2740	INV	Efficient thermochromic thin films obtained by controlled oxidation of vanadium nitrides	PIERSON Jean-François
09:15	2462		Spintronics with Black Phosphorus	WEI Hao
09:30	2810		Graphene-based coating: Suitability for space applications	JOSHI Rita
09:45	2733		Thermochromic VO <sub>2</sub> - Gold Nanoparticle hybrid thin films as tunable plasmonic platforms	KONSTANTINIDIS Stephanos

Wednesday May 29

## I09\_ New synthesis and plasma-based processes II

SCHUMAN - FIRST FLOOR

Chairperson(s) : DIMITROV Dimitre - LIU Poting

10:30	1284		Particle Transport and Thermalization of Sputtered Species in Magnetron Sputtering Depositions	ALVAREZ Rafael
10:45	2286		Synthesis of 2D and 3D vanadium doped WTe <sub>2</sub>	DIMITROV Dimitre
11:00	1314		Nanoengineering of tin-based coatings using nanostructured silicon matrix	LIU Poting
11:15	825		Nature-inspired multilayered nanocellulose-based assemblies with anisotropic properties	GARNIER Leïla
11:30	69		In-situ Developed Upconversion-Gold and Prussian Blue Nanocomposites for Synergistic Enhancement in Ultrasensitive Broadband Photodetection	GUPTA Akash
11:45	406		Temperature-Modulated Photoluminescence Dynamics In Silicon-Based Active Layers	DEMIRTAS Mustafa

**Wednesday May 29**  
**I10\_Innovative multifunctional thin films**

**SCHUMAN - FIRST FLOOR**

**Chairperson(s) : CORREA Marcio - HEGEMANN Dirk**

<b>13:30</b>	<b>507</b>	<b>INV</b>	Porous SiO <sub>x</sub> plasma polymer films as versatile platform for biological multifunctional surfaces	<b>HEGEMANN Dirk</b>
<b>14:00</b>	<b>963</b>		Large-area MBE growth and study of the band alignment of WTe <sub>2</sub> /MoTe <sub>2</sub> heterostructure for possible application in 2D Schottky structures	<b>KAMLESH Kamlesh</b>
<b>14:15</b>	<b>1872</b>		Effects of nanoheterojunctions and nanostructuring of BiVO <sub>4</sub> thin films deposited by reactive magnetron co-sputtering on the visible light photocatalysis	<b>GOUTTE Mathias</b>
<b>14:30</b>	<b>1791</b>		Fabrication of proton conductive silicate nanosheet membranes for a solid electrolyte of fuel cells	<b>WATANABE Haruki</b>
<b>14:45</b>	<b>610</b>		Transparent Conductive Strontium Vanadate Thin Films Grown by Magnetron Sputtering	<b>ROUVILLER Axel</b>
<b>15:00</b>	<b>1054</b>		Exploring the magnetoelectric functionality in PMN-PT/FSMA multiferroic heterostructure for flexible MEMS applications	<b>ARORA Diksha</b>
<b>15:15</b>	<b>1254</b>		Magnetron sputtered W-Zr-Cu Ternary Thin Film Alloys: A study of phase transition, mechanical and electrical properties	<b>THAKUR Deepika</b>

Wednesday May 29

# I11\_Thin film metallic glasses and high entropy alloys films I

SCHUMAN - FIRST FLOOR

Chairperson(s) : IRIMICIUC Stefan - SPIECKERMANN Florian

08:45	2475	INV	From Bulk to Thin Film Metallic Glasses: Alloy Design, Property Optimization and Surface Functionalization	SPIECKERMANN Florian
09:15	1773		Effect of ultrashort laser texturing of Ag-enriched Zr-Ti thin film metallic glasses on their dental-linked biological properties	LEBRUN Noémie
09:30	2700		Fabrication of refractory high-entropy alloy and high-entropy oxide thin films by magnetron sputtering and pulsed laser deposition	IRIMICIUC Stefan
09:45	636		Influence of Si on structural, mechanical, and thermal properties of high entropy carbide thin films based on (Hf, Ta, Ti, V, Zr)	ALTAF Muhammad Awais

Thursday May 30

## I12\_Thin film metallic glasses and high entropy alloys films II

SCHUMAN - FIRST FLOOR

Chairperson(s) : BOUSQUET Angélique - MUNTEANU Daniel

10:30	1533	Real-time microscopy of the relaxation of a thin film glass	RUIZ-RUIZ Marta
10:45	2396	Stoichiometry Engineering of Molybdenum Oxide Thin Films for smart application in energy devices	LA MANNA Salvatore
11:00	2148	Structural and optical properties of laminate-type thin film SWCNT composites in a silicon oxynitride matrix obtained by low-temperature curing methods.	SHMAGINA Elizaveta
11:15	1896	From nanocomposites thin films to nanoparticles of Bi-based photocatalysts for CO <sub>2</sub> photoconversion	BOUSQUET Angélique
11:30	1795	Controlling fluid instabilities of optical glass thin films for photonic applications	PIVETEAU Pierre-Luc
11:45	2138	Enhancing photochemical conversion with an ultra-thin TiO <sub>2</sub> film coupled to a self-organized plasmonic nanowire electrode	FERRANDO Giulio

Thursday May 30

## I13\_Laser processing of thin films

SCHUMAN - FIRST FLOOR

Chairperson(s) : DINESCU Maria - LANCOK Jan

13:30	2260	INV Recent advances in laser deposition of thin films	DINESCU Maria
14:00	183	Direct laser interference patterning and synthesis of 2D transition metal dichalcogenide (TMD) nanoribbons	KALGANOVA Arina
14:15	1505	Laser-printed pyroelectric field effect transistors	SHEVCHENKO Mariia
14:30	1494	Hydrophobic surfaces by duplex treatments of titanium combining nanosecond laser processing and chemical functionalization	LAVISSE Luc

14:45	738	Tensile and Compressive Strain Effects on p- and n-Type Polycrystalline Germanium Layers	IGURA Kota
15:00	733	Anion exchange properties of layered double hydroxide films: towards the elaboration functional coatings	SOULÉ Samantha
15:15	1982	UV filters for transparent technology protection	MAGNO LOPES DA SILVA Ricardo
15:30	3118	Topographic, chemical and property modifications of PVD ZrCu-based thin film metallic glasses through femtosecond laser treatment	BRUHIER Hugo
15:45	1995	Defect nature influence over CuI thin film properties produced by pulsed laser deposition	LANCOK Jan

**Thursday May 30**  
**IP02\_Poster session**  
**ETOILE - FIRST FLOOR**

16:30	01_1758	120	01_1758 Understanding oleophobicity through plasma polymer substitutes for PFAS	SOUTHAM Astrid
16:30	02_1765	120	02_1765 Laser macro- and micropolishing of finegrained niobium for potential application in superconducting radio frequency cavities	BROCKNER Florian
16:30	03_1804	120	03_1804 Novel gradient-like nitrogen doping mechanism in multilayer TiO <sub>2</sub> /polydopamine nanocomposites with remarkably large and sharp interfaces	SZEWCZYK Jakub
16:30	04_1832	120	04_1832 Synthesis of Multifunctional MOF Films along the Solid-Vapor Interface via Chemical Vapor Deposition	CHIN-YUN Lee
16:30	05_1855	120	05_1855 Synthesis and characterization of Rhodamine 6G dyes employing bis(trifluoromethanesulfonyl)imide anion for color filter of ultra-high resolution OLED displays	LIM Jee Young
16:30	06_1884	120	06_1884 Growth of Rutile TiO <sub>2</sub> Thin Films on SnO <sub>2</sub> Electrodes for DRAM Capacitors	LEE Woongkyu
16:30	07_1900	120	07_1900 Production and Evaluation of a microfluidic Cell Design for UV-Vis Spectroscopy	RING Jonathan



16:30	08_1974	120	08_1974 Nanostructured Cellulose-Based Platforms for Enhanced Sensing and Environmental Applications	ALOTAIBI Aeshah Farhan
16:30	09_1991	120	09_1991 Non-melt ultra-short laser-induced crystallization of MoS <sub>2</sub> thin films	FARID Nazar
16:30	10_1999	120	10_1999 Piezoelectric Nanoimprinting for Sensors and Technological Developments	ALOTAIBI Aeshah Farhan
16:30	11_2012	120	11_2012 Organic nanometric thin films with tailored dielectric properties by Remote Plasma Assisted Vacuum Deposition.	CZERMAK ÁLVAREZ Triana
16:30	12_2018	120	12_2018 New hybrid treatment of austenitic stainless-steel by Ti based-magnetron sputtering coating and carburizing	NOUVEAU Corinne
16:30	13_2036	120	13_2036 Evaluation of the applicability of CdSe thin films' modification to enhance the efficiency of photocatalytic decomposition of organic dyes	OMAROVA Aliya
16:30	14_2042	120	14_2042 Structural, optical and non-linear-ONL- optical analysis of halogen-substituted hexatriene	Hafied Waheb
16:30	15_2048	120	15_2048 Innovations in vapor-constructed multicomponent scaffolds for stem cell integration	HU Shu-Man
16:30	16_2062	120	16_2062 Study of the sensitivity limit of detection of a-particles by polymer film detectors	YERIMBETOVA Dana
16:30	17_2064	120	17_2064 Octadecanona-ene: Relation of theories of electrical conductivity and chemical reaction in the solid	Rida Masmoudi
16:30	18_2121	120	18_2121 Numerical simulation of splat formation dynamics of two molten ceramic particles in plasma spray process	Kribaa Ilhem Rafika
16:30	19_2139	120	19_2139 Integration of HfO <sub>2</sub> /Al <sub>2</sub> O <sub>3</sub> high-k dielectric stacks in charge trapping memory cells	PASKALEVA Albena
16:30	20_2177	120	20_2177 1 Selector 1 ReRAM (1S1R) Crossbar Array for Multiply and Accumulate Operations	LEE June Hyuk
16:30	21_2200	120	21_2200 VO <sub>2</sub> by Pulsed-laser Deposition : controlling thin films nature and properties	BANSHAMLAN Asma
16:30	22_2237	120	22_2237 Ti-Zr-Mo alloy film coated Ti-6Al-4V biomedical alloy with improved tribological, corrosion and biological properties	MARUPALLI Bharatcharougoud

16:30	23_2245	120	23_2245 Chemical Stability of nanostructured designed TiNx Coatings in Saline Environments	ALVES Alexandra C.
16:30	24_2246	120	24_2246 Growth of monolayer MoS2 flakes via close proximity re-evaporation of MoS2	ANTONOV NAPOLEONOV Blagovest
16:30	25_2261	120	25_2261 Ab-initio and dft study of the isomerisation kinetics of substituted icosadeca-ene	Masmoudi Rida
16:30	27_2308	120	27_2308 Nanophase separation in cylinder forming PS-b-PDMS block copolymer thin films	VENUGOPAL Harikrishnan
16:30	28_2320	120	28_2320 Growth and study of Ta2O5 thin films by radiofrequency magnetron sputtering	CHEIKH Aïmane
16:30	29_2322	120	29_2322 Tailored H2 Sensor Performance through RF Sputtered Multi-Metal Thin Films	OH Jae Sub
16:30	30_2343	120	30_2343 Designing a Wavelength-Tunable Optical Filter using Inquisitive Optical and Electro-optical Attributes of Azo-dye Dispersed Nematic Liquid Crystal	AGARWAL Shikha
16:30	31_2354	120	31_2354 Polythiophenes and Fullerene Derivatives Applied as gas sensors	SANTOS SIMÕES André Vítor
16:30	32_2377	120	32_2377 Self-rectifying resistive memory in 1k crossbar array	SEO Hyun Kyu
16:30	33_2407	120	33_2407 From hot wire to cold finger: methods to detect the unstable gas SnH4 produced from etching Sn	SCHMITZ Jurriaan
16:30	34_2425	120	34_2425 Tailored H2 Sensor Performance through RF Sputtered Multi-Metal Thin Films	LEE Juhyun
16:30	35_2493	120	35_2493 Effect of Cr and Si alloying on the properties of arc plasma deposited ZrCN coatings used in industrial applications	CONSTANTIN Lidia Ruxandra
16:30	36_2494	120	36_2494 Ti/TiSi/TiSiN/TiSiCN multilayered structures obtained by cathodic arc evaporation	CONSTANTIN Lidia Ruxandra
16:30	37_2495	120	37_2495 Multi-Hierarchical Poly(para-xylylene)-Gelatin Membrane with macro-honeycomb and micro-porous: Innovations in Fabrication, Characterization, and Applications in Tissue Engineering	CHOU Fang-Yu
16:30	38_2501	120	38_2501 High-purity silica produced from sand using a novel method combining acid leaching and thermal processing	KHALIFA Marouan

16:30	<a href="#">39_2525</a>	120	39_2525 Verification of Adhesion Energy and Strain Modulus of Adherend Bonded with Homo/heterogeneous Substrate for Temporary Bonding and Debonding	<b>JEONG Hakyung</b>
16:30	<a href="#">40_2580</a>	120	40_2580 Silica particles : Size control and determination of hydroxyl content	<b>ERARD Annaëlle</b>
16:30	<a href="#">41_2636</a>	120	41_2636 Conducting polymer hollow nanostructures by surfactant-free Ouzo emulsion for an exceptional EMI shielding performance.	<b>LEE Jia</b>
16:30	<a href="#">42_2664</a>	120	42_2664 Silica-based composite aerogel nanofilms for pesticide residue removal and detection	<b>NICULESCU Adelina-Gabriela</b>
16:30	<a href="#">43_2667</a>	120	43_2667 Aerogel-based nanofilm catalysts for CO <sub>2</sub> conversion	<b>NICULESCU Adelina-Gabriela</b>
16:30	<a href="#">44_2692</a>	120	44_2692 Ice-templated synthesis of multicomponent porous coatings via vapour sublimation and deposition polymerization	<b>CHANG Yu-Ming</b>
16:30	<a href="#">45_2727</a>	120	45_2727 3D Printed Elastic Fluoropolymer for microfluidic membrane pumps	<b>SONG Qingchuan</b>
16:30	<a href="#">46_2747</a>	120	46_2747 Bi <sub>2</sub> Se <sub>3</sub> -based topological insulator Josephson junction with high-temperature superconductor	<b>HWANG Tae-Ha</b>
16:30	<a href="#">47_2753</a>	120	47_2753 Controlling Superhydrophobicity on Complex Substrates Based on a VaporPhase Sublimation and Deposition Polymerization	<b>CHEN Hsien-Yeh</b>
16:30	<a href="#">48_2758</a>	120	48_2758 Unusual-High Ion Conductivity of 2D MoS <sub>2</sub> and Its Implication in Li-S Battery and Neuromorphic Memory	<b>CHOI Wonbong</b>
16:30	<a href="#">49_2770</a>	120	49_2770 Electrical noise spectroscopy of Indium Tin Oxide thin films	<b>SHARU Kritika</b>
16:30	<a href="#">50_2796</a>	120	50_2796 Self-assembly-based synthesis of Magnesium nanostructures : New efficient route for size and shape control	<b>ABBAS Doha</b>
16:30	<a href="#">51_2812</a>	120	51_2812 Advances in supported 1D organic nanowires growth as soft-templates for conformal multifunctional coatings by vacuum and plasma deposition techniques.	<b>LÓPEZ-FLORES Víctor</b>
16:30	<a href="#">52_2833</a>	120	52_2833 Enhancing the humidity sensing performance of 2D materials by nanopatterning	<b>P. MARTINEZ Juan</b>
16:30	<a href="#">53_2843</a>	120	53_2843 Tungsten nanoparticle carpets deposited on surfaces by magnetron sputtering gas aggregation	<b>DINESCU Maria</b>

16:30	<a href="#">54_2875</a>	120	54_2875 Single-cell Electrochemical Aptasensor Array	<b>LI Shuo</b>
16:30	<a href="#">55_2892</a>	120	55_2892 Gas sensing property of sputtered hafnium oxide based memristor	<b>SHARON Antony</b>
16:30	<a href="#">56_2905</a>	120	56_2905 Development of multilayer coated fabric for broad spectrum Electromagnetic interference shielding	<b>ASHRAF Munir</b>
16:30	<a href="#">57_2915</a>	120	57_2915 On the Importance of Brillion Zone Sampling for Thermal Transport in Layered Materials.	<b>GAJANAN GOKHALE Amey</b>
16:30	<a href="#">58_2928</a>	120	58_2928 Design of Highly Selective 2-D Plasmonic Hydrogen Sensors by Tunable Porous Metal Oxide Layers	<b>DENIZ Erdem</b>
16:30	<a href="#">59_2942</a>	120	59_2942 Unveiling the dynamic growth mechanism of GaAs thin films on Silicon substrate through in-situ TEM	<b>WEI Chen</b>
16:30	<a href="#">60_2947</a>	120	60_2947 Atomic layer deposition of transparent conducting Al-doped ZnO films	<b>PATHI Prathap</b>
16:30	<a href="#">61_2962</a>	120	61_2962 Growth and characterization of orthorhombic PdSe2 single crystals	<b>MARINOVA Vera</b>
16:30	<a href="#">62_2971</a>	120	62_2971 Tuning of interface characteristics of TiO2 based MIS device	<b>Koteswara Rao Peta</b>
16:30	<a href="#">63_2999</a>	120	63_2999 Structural and electronic properties of Ga2S3 thin films for use in electromagnetic radiation detection devices	<b>VATAVU Sergiu</b>
16:30	<a href="#">64_3005</a>	120	64_3005 Study of the physical properties of nanostructured copper oxide Cu2O: Application to methanol detection	<b>BENAMOR Moncef</b>
16:30	<a href="#">65_3009</a>	120	65_3009 Effect of Thickness on the Physical Properties of Transparent Thin Film Copper Oxide (CuxO) Fabricated by Glancing Angle Deposition (GLAD)	<b>GANNOUNI Jawher</b>
16:30	<a href="#">66_3036</a>	120	66_3036 Exploring potential of vanadium oxides to reinforce nano-engineered mechanobactericidal surfaces	<b>MICHALSKA Martyna</b>
16:30	<a href="#">67_693</a>	120	67_693 Elaboration of hybrid thin film by electrophoretic deposition: from nanoparticles to devices.	<b>LEBASTARD Clement</b>

Friday May 31

## I14\_Design & characterization of nano-engineered thin films I

SCHUMAN - FIRST FLOOR

Chairperson(s) : PALMERO Alberto - SNYDERS Rony

08:45	480	INV	Innovative PVD strategies for the design of novel TiO <sub>2</sub> -based photoanode	SNYDERS Rony
09:15	2384		Optical properties of sputtered nanocomposite materials for glazing applications	BALESTRIERI Matteo
09:30	2076		Synthesis and characterization of Fe <sub>x</sub> CoCrNi(100-x) thin film complex compositional alloys with tailored microstructure and mechanical properties	CURAM Arjun Bharath
09:45	1769		Multimodal characterization of low dimensional materials using AFM-in-SEM	HEGROVA Veronika

Friday May 31

## I15\_Design & characterization of nano-engineered thin films II

SCHUMAN - FIRST FLOOR

Chairperson(s) : BOHN Felipe - SYREK Karolina

10:30	1585		Ultra-low doping of Silver Thin Films with Thorium: Electroless Deposition and Radiative Emission Characterization	MOSKOVICH Shachar
10:45	267		Self-organized Plasmonic Nanoparticle Chains Embedded in Dielectric Films for SERS Applications.	DE LOS SANTOS VAZQUEZ Emmanuel
11:00	1121		Functionalization of thin graphitic layers used as transparent electrodes with equivalent properties to Indium Tin Oxide	MEYER Renzo
11:15	546		Near white light emission of Bi and V doped nanostructured MgAl <sub>2</sub> O <sub>4</sub> thin films	GORNI Giulio
11:30	603		On the nature of the interlayer magnetic interactions in biphasic ferromagnetic films	BOHN Felipe
11:45	2192		Enhanced Solar Thermal Collector Coatings: Advancing Energy Efficiency and Mechanical Strength	PANA Iulian

<b>12:00</b>	<b>2650</b>	Nanostructured tungsten oxide-based materials for photoelectrochemical applications	<b>SYREK Karolina</b>
<b>12:15</b>	<b>282</b>	Silicon nanowires functionalized silver-gold multilayer nanoparticles as highly efficient plasmonic-assisted photocatalytic platforms for organic dye pollutants and biosensing applicationsng	<b>GAIDI Mounir</b>