



European Materials Research Society

2026 Spring Meeting

May 25 - 29
Strasbourg Convention Centre

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SYMPOSIUM B

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

Oral sessions : [CASSIN - FIRST FLOOR](#)
Poster sessions : [ETOILE - FIRST FLOOR](#)

Symposium Organizers:

[Barbara PUTZ](#), Empa Thun, Switzerland

[Gregory ABADIAS](#) (Main organizer), Institut Pprime, Université de Poitiers / CNRS, France

[Kostas SARAkinOS](#), University of Helsinki, Finland

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Monday May 25

B01 Plasma-surface interaction and thin film growth modelling

Chairperson(s): SARA KINOS K.
KRAUSE B.

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- 08:45 901 Characterizing Species Journeys to the Substrate in Reactive Magnetron Sputtering
DEPLA Diederik (Invited)
- 09:15 932 Metal thin film growth by magnetron sputter deposition in He: numerical simulation contribution
THOMANN Anne-Lise
- 09:30 1658 Controlling Growth Morphology of fcc Metals via Substrate–Metal Interaction Engineering: A KMC Framework
ALDANA DELGADO Samuel
- 09:45 73 Nucleation and growth of nanostructured TiNiSn and Sn–O for energy applications
MUSIC Denis

Monday May 25

B02 Combinatorial and advanced deposition processes

Chairperson(s): DEPLA D.
PULZ B.

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- 10:30 2368 A multi-technique thin-film deposition platform for combinatorial development of mixed-anion semiconductors
CROVETTO Andrea
- 10:45 1987 Accelerating multi-functional coating design in mixed anion systems by 2-dimensional combinatorial magnetron sputtering approaches
FRICK Stefanie
- 11:00 1821 Influence of Li/Ni ratio on electrochromic properties of Li–Ni–O sputtered films by combinatorial synthesis
POMONE Thomas
- 11:15 2439 Cu–Ni Gradient Catalysts for LPCVD–Graphene
KOSAK André
- 11:30 1327 From Pulsed Laser Deposition to Magnetron Sputtering: A Comparative Study of Stoichiometry and Crystallization in Sr_xNbO_3 Thin Films.
SAADE Anthony
- 11:45 1207 Gas-Phase Synthesis of Ag Nanoparticles integrated into Nanocapacitors for Nano-Scale Mapping of Electrostatic Potential by Operando Electron Holography
KAUR Ramanpreet
- 12:00 2248 Open-Air Spatial Atomic Layer Deposition for Self-Textured ZnO and Multi-Material Nanolaminates: Advances in Piezoelectricity and Doping Control
MUÑOZ-ROJAS David

Monday May 25

B03 Plasma-surface interaction and thin film growth modelling

Chairperson(s): ABADIAS G.
HOLEC D.

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- 14:30 2816 Insights from atomistic scale modelling of plasma-surface interactions
SAND Andrea (Invited)
- 15:00 2646 Environment-driven surface segregation and H–CO coadsorption in Pd-alloys
EKBORG-TANNER Pernilla
- 15:15 1026 Topology-Directed Silicide Formation: An Explanation for the Growth of $C_{49}TiSi_2$ on the Si(100) Surface
HÜCKMANN Lukas
- 15:30 598 Metal–Organofluorine Interactions: Insights for Selective Metal Thin-Film Deposition
FITKIN Arielle
- 15:45 620 First-Principles Prediction of Metal Nanocluster Morphology on Tungsten Dichalcogenide Monolayers
SWEETMAN Michael

Tuesday May 26

B05 Interfaces: Adhesion and Mechanical properties

Chairperson(s): ENDRINO J.L.
MUNTEANU D.

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- 08:30 65 Measuring metal–polymer adhesion for electronics and aerospace
CORDILL Megan (Invited)
- 09:00 1212 Processing–microstructure–mechanical property relationship in copper thin films on flexible polymer substrates deposited by ionized sputtering
KUBART Tomas
- 09:15 1561 Magnetron Sputtered $Cr_{1-x}Ta_x$ and $Cr_{1-x}Nb_x$ coatings: Microstructure and mechanical properties
SÖHNGEN Jan-Ove
- 09:30 3063 Nanoscale Design of Thin Film Interfaces: Electro-Mechanical Properties and Adhesion
BYLOFF Johanna
- 09:45 930 Role of the twin boundary junctions in the initial deformation mechanisms of nanotwinned thin films: insights from atomic-scale simulations
GEORGE Alisha

Tuesday May 26

B06 Interfaces: Multilayers and nanocomposites

Chairperson(s): **ABADIAS G.**

KOUTNA N.

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- 10:30 364 Interface Stress and Properties in metallic Nanomultilayers: Insights from Experimental and Computational Approaches
CANCELLIERI Claudia (Invited)
- 11:00 1288 Multilayer Combinatorial Libraries and the Development of High-Strength, Thermally-Stable Asymmetric Nanolaminates
BOJARSKI Samuel
- 11:15 689 Design of multilayer coatings for colored photovoltaic modules with low efficiency losses
FERREIRA Catarina G.
- 11:30 2692 Metallic Nanowire–Oxide Nanocomposite Thin Films: Design, Stability, and Functional Properties
BELLETT Daniel
- 11:45 676 Towards Thermal Stability of Interface-Engineered Crystalline / Amorphous Al₁₀₀-zNiz / AlO_xHy Nanolaminates
JANSEN Hendrik
- 12:00 2457 Mechanically and Thermally Robust Porous Cu–Al₂O₃ Nanocomposite Films by Hollow Cathode Sputtering and Atomic Layer Deposition
GUTNIK Dominik

Tuesday May 26

B07 Fundamentals of film growth and epitaxy

Chairperson(s): **SARAKINOS K.**

PALMERO A.

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- 13:45 1194 From Monolayer to Multilayer: Operando Synchrotron X-ray and Atomistic Insights into h-BN CVD on Solid and Liquid Copper
REIN Valentina
- 14:00 3037 A combination of real-time diagnostics probing the impact of N₂ on Ag thin film growth
KAMINSKI Michal
- 14:15 2849 Thermomigration as a Tool for Surface Engineering in Thin-Film Systems
ABU DAHECH Nayef
- 14:30 697 Correlating and Designing Microstructure and Properties of High Current Density REBa₂Cu₃O_{7-x} Superconducting Thin Films and Coated Conductors using Ultra-fast Transient Liquid Assisted Growth (TLAG)
VOULHOX Mahel
- 14:45 2170 Unveiling tilted epitaxial growth in highly mismatched oxides: insights from MgO thin films deposited on R-plane sapphire substrates
CHASLIN Edgar

- 15:00 2637 On the energy of film-forming particles and resulting structure of IBSD-grown heteroepitaxial Ga₂O₃ thin films
KALANOV Dmitry
- 15:15 939 Questionable van der Waals Epitaxy of Nonlayered Materials on Fluorophlogopite Mica: The Case of ScN
CHOWDHURY Susmita
- 15:30 965 Muscovite-Enabled Quasi-van der Waals Epitaxy: A Universal Platform for Atomically Flat Single-Crystal Metal Foils and High-Performance 2D Heterostructures
CHAN Tzu-Ming

Tuesday May 26

B08 Fundamentals of film growth and epitaxy

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- 16:30 2265 Buffer Layer Assisted Growth of Cobalt on Porous Molecular Layers: towards improved molecular spintronic devices.
LION Julie
- 16:45 2048 Perpendicularly Magnetized Mn-Ga Alloy Thin-Films Grown by Low-Temperature Molecular Beam Epitaxy
NISHIOKA Makoto

Tuesday May 26

BPO2 Poster session 2

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- 17:00 01_1052 Design of Interfaces for Mechanical Stability in Multilayer Metamaterial Perfect Absorbers
KOC Nurten
- 17:00 02_1049 Organic molecular surface doping for high-performance quasi-2d tin perovskite transistors
KIM Ju-Hyeon
- 17:00 03_1064 Correlation analysis of intermediate-phase formation and MoS₂ growth behavior
Choi Bum Ho
- 17:00 04_1114 Surface Modification of ZnO Nanorods for High-Efficiency Azo Dye Photodegradation
LI Chaoyang
- 17:00 05_1159 Atomistic Modeling of Oxygen Migration in Ta₂O₅/TaN Heterostructures Using ML-Driven Simulations
FAZELI Sara
- 17:00 06_116 Plasma-Enhanced Atomic Layer Deposition of a-BN for Next-Generation BEOL Low- ϵ Dielectrics
HUNG Tzu-Pu
- 17:00 07_1162 Programmable Charge Trapping in Monolayer MoS₂ Enabled by Spatially Engineered Sulfur Vacancies
CAVALLINI Massimiliano
- 17:00 08_1715 Highly Uniform and Transparent Ag/PDMS SER5 Substrates Enabled by Strain-Induced Nanogap Engineering
LEE Seunghyun

17:00 09_1236 Understanding the role of environment and dielectric capping on the electrical properties of WS₂ monolayers grown by Chemical vapour deposition technique
PATRA Umakanta

17:00 10_1258 Interactions Between Point Defects and Planar Defects in Cubic TaN: A First-Principles Study
ROSTAMI POUR Kiana

17:00 11_1260 Multiscale Characterization of Emerging 2D Materials: Synthesis, Structure, Function
REIN Valentina

17:00 12_1261 Defect mediated surface modification of TiO₂ surface using Grignard reagent in explicit solvation model
GANESAN Krithika

17:00 13_1272 Low Temperature ALD Alumina Coatings for Surface Protection of Nano and Micro Structures
KIM Jeong Hwan

17:00 14_1273 Unlocking the Potential of Freestanding Ferroic Oxides
BRAND Eric

17:00 15_1276 Interface Formation of Metal Phthalocyanines on Aluminum Oxide with Oxygen Vacancies: A Combined DFT and Spectroscopic Study
POWROZNIK Paulina

17:00 16_1374 The Electronic and Magnetic Characterization of Chromium-doped Two-dimensional Transition-Metal Dichalcogenide PdTe₂
HSU Yao-Jane

17:00 17_1386 Machine Learning Guided Prediction of Long-Term Corrosion Resistance of Plasma Polymerized Hexamethyldisilazane Thin Films on Stainless Steel
HARTANTO Danang Tri

17:00 18_1405 Validating Wafer-scale Single Crystal 2H-MoS₂ monolayer via Friedel's Law Breaking: A Non-Destructive LEED analysis for Quality Assessment
KIM Do-Hoon

17:00 19_1421 High-Performance MoSe₂-Based Vertical Field-Effect Transistors via Defect and Band Alignment Engineering
CHOI Da Eun

17:00 20_1536 Interfacial Engineering of YBa₂Cu₃O₇/Bi₂Se₃ via Al₂O₃ Buffer Layers for Enhanced Structural and Superconducting Properties
LEE Woo-Jung

17:00 21_1548 MXene Supercapacitors with Stacked Architectures and Long-term Stability for Sustainable Self-Powered IoT Applications
MOREIRA Pedro

17:00 22_1554 Fabrication of One-Dimensional Zinc Oxide Gate-All-Around Nanowire Transistors
Cortinhal Mariana

17:00 23_1560 Depletion-to-Enhancement Mode Transition and Strongly Suppressed Hysteresis in surface engineered MoS₂ FETs
SAMIKSHA Samiksha

17:00 24_1564 Genetic Algorithm-Based Inverse Design of Multilayer Thin Films for Transparent Solar Cell Applications
LEE Minju

17:00 25_1654 Highly Sensitive Au Nanoparticle-Decorated Silicon Nanomembrane-Based Wearable NO₂ Gas Sensor with Tunable Specific Surface Area
CHOI Yoonhyeong

17:00 26_1672 MOCVD Growth and Luminescence Tailoring of Eu³⁺-Doped GdOF Thin Films
SCARDACI Federica

17:00 27_1688 Accurate Reporting of Time-of-Flight Measurements with Gated Mass Spectrometry
RODKEY Nathan

17:00 28_1732 Current-driven reversible ferromagnetic to antiferromagnetic transition in thin films and tunnel Devices
MONDAL Suryakanta

17:00 29_1750 Investigation of nanoscale charge-carrier dynamics in energy materials through NV-diamond quantum sensors
SCHRODINGER Lukas

17:00 30_1807 Unravelling the effect of hyperthermal species on defect generation in single-layer graphene upon sputter deposition of thin metal films
NADJI ADJIM Franck Louba

17:00 31_1844 Ge-Bi-Te and Ge-Sn-Te ternary thin films: Deposition, structure, and phase-change characteristics
ANGAY Firat

17:00 32_1875 Metal-oxide nanolaminate barrier coatings to enable large-scale manufacturing of sustainable flex packaging
MUSSELMAN Kevin

17:00 33_1907 Synthesis and Integration of Exfoliated α-MoO₃ for Basic Optoelectronic Devices Electrical Behavior and Thermal-Treatment Effects
VERGARA BORGES Sofia

17:00 34_1920 Improvement in Solid Lubricant Retention of Plasma-Sprayed Coatings through Electroless Ni-P Coating and its Tribological Performance
PAL Vivekananda

17:00 35_1927 Al-doped Ga₂O₃ Thin Films from Chemical Vapor Deposition of Fluorinated β-Ketoenamine Precursors
FAUZI Billy Oktor Abdilah

17:00 36_1963 Rational Design of Metal-Oxide Interfaces for Thermal Management at the Nanoscale
ALVAREZ-MARTINEZ Victor

17:00 37_2002 Growth control and structure-properties relationships for Pd₇₇Fe₃Si₂₀ nanoglass thin films
JEBARI Nessrine

17:00 38_2012 Design-Controlled Palladium Nanogap Formation via Sonication-Assisted Engineering for Reliable Hydrogen Sensing
LEE Joonho

17:00 39_2024 Enhancement in spin signals in nanoscale Ge devices with Co-based Heusler alloys
FUJII Shumpei

17:00 40_2043 Crystalline In₂O₃ Deposited by PEALD for 3D Ferroelectric Field Effect Transistors Applications
PARK Jaewon

17:00 41_2055 Plasmon-Enhanced Optical and Photocurrent Characteristics of Au-Nanowire-Integrated MoS₂ Monolayers
KIM Mijeong

17:00 42_1157 Room Temperature Gas Sensing of Carbon Monoxide using ZnO/CuO core-shell Heterostructures on Interdigitated Flexible LIG
MEGHA Megha

17:00 44_2130 MOCVD-Grown Nanostructured CoO Thin Films on Ni-Foam for Efficient Alkaline Hydrogen Evolution Reaction
LO PRESTI Francesca

17:00 45_2147 Comparative Kinetic-Thermodynamic Analysis of Ruthenium Precursors on TiN for ALD by DFT calculations
VU Mai Phuong Uyen

17:00 46_2150 Temperature-Driven Non-Monotonic Magnetic Anisotropy in FeGa-B/LiNbO₃ Systems
Gupta Pankhuri

17:00 48_22 A First-Principles Study of the Reactivity and Layer-Dependent Properties of Phosphorene.
ABDUL SHAKOOR Saba

17:00 49_2261 Controlled switching from nickeline (α) to wurtzite (β) phase in altermagnetic MnTe thin films grown by molecular beam epitaxy
SADOWSKI Janusz

17:00 50_2267 Investigation of Sputtered Undoped ZnO Thin Films as Moisture-Resistant Encapsulation for Enhanced Stability in Solar Cells under Accelerated Ageing Conditions
YADAV Mehak

17:00 51_2339 Luminescent investigation of novel doped-fluoride materials
BARBAGALLO Claudia

17:00 52_2456 EUV Pellicle Reliability Improvement via Composition Control in Co-Sputtered Thin Films
HUANG Shi-Han

17:00 53_2494 Cobalt nitrides thin films deposited by magnetron sputtering: controlling stoichiometry and phase purity.
BOUZROUD Imane

17:00 54_2569 Toward high-efficiency GaAs/Si tandem solar cells: defect-free integration using advanced epitaxial lateral overgrowth techniques and nanosphere lithography
DENTZ Laurie

17:00 56_2612 Mapping Carrier Dynamics: Combining Time-Resolved Photoluminescence and Spatial Imaging for Advanced Semiconductor Research
GUTIERREZ-PARTIDA Emilio

17:00 57_2616 MXene-Coated Fiber-Based Impedimetric Electronic Tongue for Trace Antibiotic Detection in Milk
CORREA Daniel

17:00 58_2632 Synthesis and Integration of Exfoliated α-MoO₃ for Basic Optoelectronic Devices Electrical Behavior and Thermal-Treatment Effects
VERGARA BORGES Sofia

17:00 59_2658 Fabrication and Optical Characterisation of Thermochromic Liquid Crystal Thin Films
GARRY Stephen

17:00 60_2702 Thermo-mechanically Programmed Nano-Engineered Thin-Film Coatings for Reconfigurable Optical Encryption
BISWAS Srijeeta

17:00 61_2792 Comparative Study of H₂S and Elemental Sulfur as Reactive Sources for Reactive Sputtering of BaZr_{0.5}S_{1.5} Thin Films
ITZHAK Anat

17:00 62_2828 Nanostructured metallic thin films for plasmonic enhanced Si photodetectors operating at telecom wavelengths
CRISTEA Dana

17:00 63_2876 Tuneable interface response of MIS devices based on reactively sputtered TiO_xNy high-k layers
GAJULA Hari Priaya

17:00 64_2921 Bioinspired Hybrid Anti-Icing Solutions: SLIPS Passive Coatings Integrated with Electric Heaters and Ultrasound Actuators.
COROZZI Alessandro

17:00 65_2949 Annealing-Driven Modulation of Optical and Electrical Properties in ALD-Deposited HF-Doped ZnO Films
Pathi Prathap

17:00 66_2951 Hydrogen-defect interaction and mechanical property of polycrystalline iron and alloys
WU Jun-Yi

17:00 68_3085 Excellent Silicon Surface Passivation by Atomic Layer Deposited Ultrathin TiO₂ Films
Pathi Prathap

17:00 69_3122 A comprehensive study of Plasma ALD-Deposited HfO₂ Thin Films on the Passivation Mechanism and Interface Quality of Crystalline Silicon
Pathi Prathap

17:00 70_3123 Inorganic Multilayer Films with High Infrared Selective Emission for Daytime Radiative Cooling
WANG Cong

17:00 71_3158 Transient ultraviolet photoresponse of ZnO:Al/p-Si heterojunction fabricated by RF magnetron sputtering
PATHI Prathap

17:00 72_3292 Plasma-Induced Surface Damage Effects on Performance of Nickel/p-Si Schottky Diodes
PATHI Prathap

17:00 73_3351 Synthesis of 2D MoSe₂ and WSe₂ Nanolayers and Their Integration in Light Shutters
DIMITROV Dimitre

17:00 74_3357 Heterostructures between graphene and PtSe₂ nanolayers
VIDEVA Vladimira

17:00 75_419 A High-Aspect-Ratio Lateral Trench Structure for Evaluating SAM-Enabled Area-Selective ALD
MIN Sungbu

17:00 76_6 Static Atomic Layer Deposition for Precursor Infiltration in Porous Materials
MIN Yo-Sep

17:00 77_601 Metal-Organofluorine Interactions: Insights for Selective Metal Thin-Film Deposition
FITKIN Arielle

17:00 78_681 Performance Enhancement of Short-Channel Self-Aligned Top-Gate ITZO TFTs via Stacked Al₂O₃/SiO₂ Gate Dielectrics
SHIN Dongwook

17:00 79_744 The Fabrication of High Performance Perovskite Solar Cells by Evaporation/Blade Coating Method
FANG Jun

17:00 80_957 Multifunctional Reconfigurable In-plane Devices using MoSe₂-WSe₂ Lateral Heterostructure
RAY Purbasha

17:00 81_966 Engineering Low-Dimensional VI-Group Bismuthides Thin Films for Functional Optoelectronic Devices
HE Wen

17:00 82_980 Transparent Zinc Tin Oxide Semiconductor Thin Films for Flexible Electronics
BUKKE Ravindra Naik

- 15:15 83_2923 Functional Erbium-Based Thin-Film for Space Applications
ALMOHAMMED Bahaa
- 11:15 84_2931 Substrate-Dependent Phononic and Excitonic Modulation in CVD Grown MoS₂/WS₂ Heterostructures on Optical Fibers
CHAUDHARY Vivek

Wednesday May 27

B09 Compositionally complex alloy thin films

Chairperson(s): KUBART T.

STEYER P.

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- 08:30 790 Epitaxy and twinning in sputter-deposited Cantor alloy thin films
LEWIN Erik (Invited)
- 09:00 2227 Developing new generations of microwave absorbers based on high-entropy alloys by pulsed laser deposition
IRIMICIUC Stefan-Andrei
- 09:15 2560 Engineering thermally stable and mechanical robust refractory high entropy alloy thin films via Al incorporation
HOUNSINOU Ayadjenou Humphrey
- 09:30 1711 Phase formation and nanoscale structure in magnetron-sputtered W-Nb-V films
KORKOS Spyridon
- 09:45 1277 Synthesis and Mechanical Properties of TiZrHfTa complex concentrated alloys Thin Films deposited by Magnetron Sputtering
SLIMANI Hocine

Wednesday May 27

B10 Advanced characterization methods for functional coatings

Chairperson(s): DUARTE J.

HANS M.

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- 10:30 1886 Advanced electron microscopy to better understand the dynamic of Thin Film Metallic Glasses
STEYER Philippe (Invited)
- 11:00 316 Integrated Manufacturing and Advanced Characterization Platform for High-Performance All-Solid-State Micro-Batteries
SU-HO Cho
- 11:15 1193 Intrinsic defect engineering and microstructural features of HTVPE GaN layers grown on sapphire substrate
MITTIREDDI Ravi Teja
- 11:30 1956 Novel Structure-Property Relationships in Nanocrystalline Thin Films on Non-Planar Substrates
KUTLESA Kevin
- 11:45 530 MEMS cantilever-based method for thin film stress distribution analysis at wafer level
TODESCHINI Alice

- 12:00 935 Hydrogen-assisted HiPIMS plasma nitriding of CoCrMo: benefits and trade-offs in properties and performance
ZIN Valentina

Wednesday May 27

BPO3 Poster session 3

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- 13:45 02_1115 Growth and characterization of epitaxial W-based thin high-entropy alloy films
KOUTSOKOSTAS Konstantinos
- 13:45 03_1161 Structural and electrical characterization of Ta₂Ny thin films deposited by reactive PVD for precise resistor applications
LACOSTE Thibaut
- 13:45 04_1172 Tuning the Properties of TiZrN Protective Coatings through Controlled Nitrogen Partial Pressure in Industrial Deposition
BEHRANGI Sahand
- 13:45 05_1179 LCA for Implementing Sustainability in Lab-Scale TiO₂/Al₂O₃ MOCVD Deposition Development
VISENTIN Francesca
- 13:45 06_1197 Effect of structured interlayer on the properties of functional GaN coatings grown by HTVPE on sapphire substrates
MITTIREDDI Ravi Teja
- 13:45 07_1227 The oxidation behavior and corrosion mechanism of SiC-(Al₂O₃-RE₂O₃) ceramics in a high temperature wet air environment
YAN Shuaibin
- 13:45 08_1251 Optimization of ternary nitride coatings: can data-driven approach be relevant to suggest chemical composition?
JAOL Cédric
- 13:45 09_1338 Synthesis of Hollow Double-Shell TiO₂/Al₂O₃ Submicron Fibers
GEORGIEVA Borislava
- 13:45 10_1352 Kinetic Control of Metastable Phase Formation Through Substrate-Decoupled Thin Film Processing
GOTTESMAN Ronen
- 13:45 11_1419 Electrical Conductivity Enhancement in AlN via Mg and Au Addition
ANGGRAINI Sri Ayu
- 13:45 12_1438 Suppressing Interfacial Reactions and Elemental Diffusion in Bi₂Se₃/Nb Superconducting Heterostructures by Process-Controlled Growth
CHO Dae-Hyung
- 13:45 13_1462 Characteristics of Wafer-Scale Hybrid ALE of SiO₂ for the Application to Gate-All-Around Channels
JUNG Sun Kyu
- 13:45 14_1504 Fe-Cr co-sputtered thin films: effect of composition on micro-structure and thermal stability
MENEGUS Chiara
- 13:45 15_160 Study of the Behavior of Double Chromium-Copper Coating Applied to Alumina Oxide Ceramics under Vacuum Heating
STESYUK Tatyana
- 13:45 16_1774 Improving adhesion of micro- and nanostructured sol-gel coatings on metallic substrates
MONTESS Laura

13:45	17_1781	Nanotribological Properties of Hybrid Graphene Oxide-Titania Nanotextured Surface DATTA Debottam	13:45	39_3000	Tailoring structural and optical properties of Ta2O5 thin films via radio frequency magnetron sputtering for high-refractive index transparent materials CHEIKH Aimane
13:45	18_1798	PIXE modified spectroscopy for material surface elements characteristics EGOROV V.	13:45	40_3048	Functionalization of Spark Plasma Sintering components by Physical Vapor Deposition BESNARD Aurélien
13:45	19_1811	Corrosion-resistant coatings for high temperature applications: experimental and numerical approaches GHARBI Amani	13:45	41_3051	Numerical and experimental study of PVD film growth in an industrial chamber BESNARD Aurélien
13:45	20_1835	Controlling adhesion and debonding of metal films on polymer substrates SANDULLI Federica	13:45	42_3072	Optical characterization of thin films deposited on textured TCOs for indoor photovoltaics GARCIA-PARDO Marina
13:45	21_1855	Cubic-phase ZrO _{2-x} thin film synthesis by Ar/O ₂ reactive magnetron sputtering as solid electrolyte in SOFC applications BENA BODIONG Genevieve Brenda	13:45	43_3118	Tuning ZrON thin film colors through pulsed oxygen and nitrogen gases in reactive sputtering ROUGEMONT Emma
13:45	22_1903	Development and evaluation of a Pull-Off Adhesion test for Thin-film systems MUNTEANU Daniel	13:45	44_3227	Curvature and particle size provides magnetic trade-offs with de-wetting for FePt based Janus particles GONZALEZ-VAZQUEZ Natalia
13:45	23_1915	Hf _x Zr _{1-x} O ₂ Thin Films from Chemical Vapor Deposition of Fluorinated β-Ketoenamine Precursors FAUZI Billy Oktor Abdilah	13:45	45_3260	Growth of high-quality VO ₂ thin films using V2O5 target: influence of sputtering power and annealing conditions DIVOUX Nicolas
13:45	24_2098	Highly durable and ultra high efficient electrochromic devices for smart windows BEHERA Anupama	13:45	46_3369	Design of Functional High-Entropy Alloy Thin Films for Microbiologically Influenced Corrosion Mitigation POSTOLNYI Bogdan
13:45	25_2235	Combinatorial Chemistry for M:VO ₂ sputtered films POMONE Thomas	13:45	47_382	Micro/nanostructuring Strategies of Additively Manufactured 316L Stainless Steel for Enhanced and High-Performance Interfacial Transport WANG Xinrui
13:45	26_2300	Theoretical and Experimental Study of Electroplated γ -Ni ₂ Zn ₁₁ Coatings from a Non-Aqueous Electrolyte: Effect of Additives on the Coating's Microstructure, Texture Characteristics and Mechanical Properties MATALLANA GUERRERO Juan David	13:45	48_420	Wax-assisted planarization for improved delayering stability in multilayer dielectric structures CHO Hyunah
13:45	27_2371	Enhanced TiO ₂ Film Growth on Aluminum Balls Using High-Energy Planetary Milling ALSHARAEH Edreese Housni	13:45	49_449	Evolution of the Properties of Reactively Magnetron Sputtered Tantalum Nitride as a Function of the Deposition Parameters MUNTEANU Daniel
13:45	28_2405	Coatings via Magnetron Sputtering Technology for Hydrogen-related Applications ZIN Valentina	13:45	50_451	Quantification of a-C in Ti(C,N)/a-C nanocomposite coatings using XPS: Limitations and insights KESSLER Juliana
13:45	32_2638	Double-Gas Reactive Sputtering and Annealing of Zr Sulfonitride Thin Films with Exotic Optoelectronic Properties BERTIN Eugène	13:45	51_463	Comparative Study on the Erosion Resistance of DLC and CrAlN Coatings Deposited on Valve Spool Surfaces QIAN Cheng
13:45	33_2649	Growth aspects of TiAlN-based single-layer and multilayer coatings deposited by HiPIMS on Si wafer and WC-Co. DE SOUZA LAMIM Thiago	13:45	52_470	Nanoengineered Tungsten Oxide Thin Films for Advanced Memory LU Jiahao
13:45	35_2767	Investigation of Phase Formation in HfNbTiVZr Thin Films: Role of d Parameter and Thermal Processing LIS Jáchym	13:45	53_481	Impact of RF sputtering power and Cu interlayer thickness on the optoelectrical performance of AZO/Cu/AZO multilayer transparent electrodes DJEFFAL Faycal
13:45	36_2880	Effect of Low Temperature Annealing on The Zn-Co Coatings Developed From a Deep Eutectic Solvent (DES) ARJUN SIVAJI Arjunraj	13:45	54_524	High-end nanoscale characterization of ultra-high vacuum deposited ITO/CuPc/C60/AI thin films for photovoltaic energy conversion TREFON-RADZIEJEWSKA Dominika
13:45	37_2950	Role of Cationic and Anionic Surfactants (CTAB and SDBS) in Tailoring the Microstructure, Tribology, and Corrosion Performance of Zn-Co Alloy Coatings developed from a Deep Eutectic Solvent. KUMARI Anjali	13:45	55_546	Integrated Functional Films Enabling Radiative Cooling and High Thermal Conductivity for Sustainable Thermal Management JIANG Chuanyang
13:45	38_2953	Electrodeposition of Zn-Mn alloy coatings from a choline chloride and ethylene glycol based deep eutectic solvent: microstructural, electrochemical, and mechanical characteristics NAYAK Debasis			

13:45	56_599	Electrical characterization of tungsten oxide screen-printed multifunctional thin films MESCOT Xavier
13:45	57_613	Nano-engineered calcium-phosphate coatings on titanium formed by micro-arc oxidation: adhesion and failure mechanisms MAMAYEVA Axaule
13:45	58_854	PE-ALD deposition of NiO thin films as catalytic templates for low-defect CNT composite coatings TURDALIEV Temur
13:45	59_88	Mechanical property of laminated high-entropy alloys FANG Te- Hua
13:45	60_918	In-situ GIWAXS coupled with tensile loading of vacuum-deposited thin organic films JANIK Katarzyna

Wednesday May 27
B11 Hard coatings
Chairperson(s): JAOU L C.

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15:00	1328	Thermal stability of hard coatings – Identifying the onset of thermal decomposition by combining nanoscale structural and chemical characterization HANS Marcus (Invited)
15:30	1847	High-Ionisation Magnetron Sputtering (HIMS) for Scalable High-Performance Coatings KLIMASHIN Fedor F.
15:45	1904	Low temperature deposition of functional thin films on insulating substrates enabled by selective ion acceleration using synchronized floating potential HiPIMS SIOL Sebastian

Thursday May 28
B12 Functional coatings for energy saving, conversion and storage
Chairperson(s): SARA KINOS K.
ABADIAS G.

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08:30	2668	Hydrogen barrier coatings: from permeation to mechanics DUARTE CORREA Maria Jazmin (Invited)
09:00	715	Fast synthesis of thermochromic coatings with W-doped VO ₂ nanoparticles in SiO ₂ matrix: effect of solid-state dewetting FARRUKH Sadoon
09:15	1286	DFT-guided rational control of the Bi/V ratio in BiVO ₄ photoanodes via magnetron co-sputtering EL OUARDI Otmane
09:30	1943	Allovalent Sn doping-induced Enhancement of Thermoelectric Power Factor in Copper Iodide Thin Films MURMU Peter
09:45	2169	Microstructural Design of Photochromic Yttrium Oxyhydride Thin Films for Smart Window Applications WOLF Philipp Mika

Thursday May 28
B13 Hard coatings
Chairperson(s): LEWIN E.
PLIATSIKAS N.

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10:30	2206	Mechanical behavior of ceramics at the atomic scale: From ab initio to ML-powered molecular dynamics KOUTNA Nikola (Invited)
11:00	1580	Defect-dependent thermal stability of fcc-(Ti,Al)N _x predicted via chemical-environment-sensitive diffusion activation energies NAYAK Ganesh Kumar
11:15	514	Multifunctional CrN Thin-Film Strain and Temperature Sensors for IoT-Based Factory of the Future Monitoring FERREIRA Armando
11:30	1945	Effect of sputtering parameters on the microstructure, mechanical properties, and oxidation behavior of CrZrNbN and CrAlZrNbN thin films ATAIE Sayed Alireza
11:45	2662	Tailoring residual stress and hardness in nano engineered PVD metal/nitride multilayer coatings CHEMIN Jean-Baptiste
12:00	2284	From density functional theory to phase field: a multiscale modeling tool for predictive modeling of oxide film growth KAHLE Leonid

Thursday May 28
B14 Thin films for plasmonics, optoelectronics and sensing
Chairperson(s): PLIATSIKAS N.
PUTZ B.

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13:45	1994	Synthesis, characterization and phase change of interband nanocomposites CHACÓN-SÁNCHEZ Fernando
14:00	338	Growth of RF-Sputtered Ga ₂ O ₃ Films on Ru and Their Application in Resistive Switching Devices BAUNTHIYAL Aman
14:15	917	Cascading Disordered Optical Metasurfaces: How to Assemble and Simulate XOMALIS Angelos (Invited)
14:45	2821	Titanium dioxide mono-material multilayer optical coating MARCELIS Eloy
15:00	1540	A Cathodoluminescence / Raman spectroscopy correlative investigation of Sr ₂ V ₂ O ₇ thin films microstructure evolution throughout elaboration conditions. SÉNICOURT Nicolas
15:30	1804	Fast micro- and nanostructuring of TiN and ZrN using photo-patternable oxides MONTE S Laura
15:45	2990	Advanced strategies for tailoring transparency window in Correlated Transparent Conductors CHEIKH Aimane

Thursday May 28

B15 Thin Films for plasmonics, optoelectronics and sensing

Chairperson(s): XOMALIS A.

ZAJICKOVA L.

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- 16:30 2652 Synthesis, Properties and Biomedical Assessment of Laser-Induced Colloidal Nitride Nanoparticles
ODUTOLA Tamara
- 16:45 3130 Nano-Engineered ITD Thin Films for Lossy Mode Resonance Optical Fiber Sensors with Molecularly Imprinted Selectivity
STRANAK Vitezslav

Thursday May 28

BPO4 Poster session 4

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- 17:00 01_1012 Optical properties regulation of Ag-based short-wave pass spectral filter for PV/T systems
YANG Yingxin
- 17:00 03_1131 Using Buffer Layer Modulated Strain Technique and Higher-k HfO₂/ZrO₂ Superlattice Dielectric Layer to Enhance the Performance of n-Si/p-SiGe NSFET CMOS Inverters
LUO Guang-Li
- 17:00 05_1189 Microfluidic Impedimetric Electronic Tongues Based on Nitride Nanofilms for Soil
BOEIRA Carla Daniela
- 17:00 06_122 Laser Textured Non-Stick Surfaces with PFAS/PFOA Free Coatings for Wear-resistant and Sustainable Applications
ASIF Muhammad Bilal
- 17:00 07_1284 Rational Interfacial Engineering of Mesh Membranes for Sustainable and High-Performance Oil-Water Separation
SWAIN Jashaswinee
- 17:00 08_1302 Design of gas sensors based on ZnO and SnO₂ nanostructures
NEDYALKOV Nikolay
- 17:00 09_1357 Post-growth doping of RPECVD Ge and GeSn thin films by ion implantation and annealing
EKSTEEN Michael
- 17:00 10_1393 High-performance poly(ether ether ketone)-based separators and their ion transport performance
NIE Hui
- 17:00 11_494 Highly Efficient and Stable Wide Band Gap Quasi-2D Perovskite Solar Cells via Interfacial Quantum Well Regulation
Huang Nuanshan
- 17:00 12_1444 In situ Li₃PS₄ Solid Electrolyte Film Synthesized on Li Metal via Sulfur-Rich Anodization for All-Solid-State Lithium-Sulfur Batteries
BI Daoguang
- 17:00 13_1445 Temperature-Dependent Electrical Characteristics of 56-nm-Scale One-Dimensional GaN Nanowire Wrap-Gate Transistors
An Dae Kyu

- 17:00 14_1531 Aqueous synthesis of perovskite precursors for highly efficient perovskite solar cells
ZHU Peide
- 17:00 15_1595 Molecular Control of Tunnelling Transport in Tetrathiafulvalene Monolayers on Silicon-Based Junctions
GHARBI Samar
- 17:00 16_1703 DNA Detection Using Graphene-Based Field-Effect Transistor Devices
ADIACONITA Bianca
- 17:00 18_1891 Improvement of Rubber Resistance to Ultraviolet Radiation through Silicone Nanocoating
MARTÍNEZ Miguel-Angel
- 17:00 19_1991 2D designable nanomatrix for future EMI shielding
CHO Kyungjune
- 17:00 20_201 Dark Artificial Light Harvesters for Photothermoelectric Energy Conversion and Application in Consumer Electronics
CHATTOPADHYAY Surojit
- 17:00 21_2041 Highly Conductive Bi-Layered Stretchable Electrodes Employing Thin Liquid Metal Layer
LEE Hyun Jung
- 17:00 22_2062 Temperature-Adaptive Thermal Emission Control Using a VO₂-Based Fabry-Pérot Thin-Film Cavity
KIM Jae Hyeong
- 17:00 23_2068 Multispectral imaging with a planar cavity-type metasurface for optical security
KANG Dongkyun
- 17:00 24_2093 Stable Oxide Semiconductor-Based Transistors with Subthreshold Swing below 30 mV/dec
MIN Ji Hyeon
- 17:00 25_2096 SnO₂ thickness dependence of electrical hysteresis in Al₂O₃/SnO₂/SiO₂ stacks
MIURA Kota
- 17:00 26_2152 Barrier performance of ALD-Al₂O₃ on nanocellulose substrates – influence of substrate properties and ALD conditions
PATUREAU Hugo
- 17:00 27_2171 Durable Colorization of BIPV Panels Using Photonic Glass Coatings Based on Metal Oxide Nanospheres
Ozbayrak Ilknur
- 17:00 28_2216 Particle Release from Light-Activated Antimicrobial Coatings under Simulated Dermal Contact and Cleaning
MUTLU Nurshen
- 17:00 29_2221 Engineering Interfacial Chemistry of Gold Nanoparticle Arrays for Enhanced Multiplexed Electrochemical Sensing
HONG Youngmin
- 17:00 30_2264 Assessing the Role of Plasma Exposure Duration on the Structural and Optical Characteristics of ZnO Thin Films for Advanced Photovoltaic Applications
YADAV Mehak
- 17:00 31_2278 Lithography-free, high-purity dual-mode structural colors via Fano-resonant cavities with active Ge₂Sb₂Te₅ modulation
AN Hwajin
- 17:00 32_2362 Oil/Water-Selective Dissolvable Multi-Shell Core Composites for Chemical Autonomous Inflow Control Devices
ALSHARAEH Edreese Housni

17:00 33_2373 Sustainable design of green solvent-processed microcapsules for self-healing anticorrosion coatings
ESTEVEES Catia

17:00 34_2418 Annealing-Driven Crystallization of Amorphous Indium Selenide Thin Films
MUKHAMETKARIMOV Yerzhan

17:00 35_2497 RF-sputtered Tungsten Oxide-Based Thin Films for Acid Stable Oxygen Evolution in PEM Water Electrolysis
VAIOPOULOU Triantafyllia

17:00 36_2515 Fluorescent crystalline nanoparticles discovered in plasma polymer films with amino groups
MUKHERJEE Aniket

17:00 37_2530 Thin films of High-temperature superconductors prepared by Ionized jet deposition
JUZA Michal

17:00 38_2559 Nanocrystalline diamond coatings on 2D and 3D titanium-based substrates for biomedical applications: improvement of mechanical and biological properties
FALENTIN-DAUDRE Céline

17:00 39_2561 Optimizing nano-engineered functional coatings for immunosensors through step-by-step surface characterization
VILLA-MORENO Marta

17:00 40_2584 Impact of a charged plasma polymer deposit on heavy metal rejection and clogging of a polyamide nanofiltration membrane
TALEB Djamel

17:00 41_2595 Corrosion-resistant and conductive Ti-Nb-O coatings tailored for ultra-low Pt-loaded BPPs and PTLs in PEM electrolyzers
KOLENATÝ David

17:00 42_2608 Electrochemically assisted self-assembly of mesoporous silica films: from renewable resources to functional hybrid thin films with permselective capabilities
RYDZEK Gauthier

17:00 43_2621 Dichroic and Plasmonic Response of Glancing-Angle Deposited Nanostructured Au Embedded in a-SiN Thin-Film Coatings
AMARAL Ana

17:00 44_2651 Engineering of radical-rich plasma polymer films for bioapplications
KAVCOVA Beata

17:00 45_2847 Multifunctional Dy-Doped SnO₂ Thin Films Grown by Spray Pyrolysis for Gas Sensing and Photocatalytic Applications
BITRI Nabila

17:00 46_2886 Optimizing TiO₂ film thickness for CsPbBr₃-based oxygen evolution photoanodes
Leinen Dietmar

17:00 47_3026 Hybrid Chemical Vapor Deposition of Mechanically Durable Superhydrophobic Nanocomposite Coatings
KARAMAN Mustafa

17:00 48_3176 Copper-graded CZTS absorbers by sol-gel spin-coating for band-gap engineering in thin-film photovoltaics
VASILE Bogdan Stefan

17:00 49_3198 Tuning electronic properties of indium tin oxide via designed self-assembled monolayers
RODRIGUES Moreira Leonardo

17:00 50_3220 A probabilistic-based approach for characterizing radiative recombination spectra of semiconductor thin films
REDKO Roman

17:00 51_3242 Physicochemical and in vitro assessment of alginate coatings loaded with curcumin-functionalized marine biosilica
SOUSA Karolyne

17:00 52_3318 Silver nanoparticles elaborated by self assembling method
FEDALA Abdelkrim

17:00 53_3345 Variations in plasma polymerization of cyclopropylamine driven by spatial gradients and substrate potential
ZAJICKOVA Lenka

17:00 54_3368 Optimising diamond growth towards robust plasmonic silicon solar cells
OLAIFA Oyelusi

17:00 55_337 Enhancing Organic Electronic Architectures via Spin-Crossover Nanomaterial Engineering
VERMA Shiv Prakash

17:00 56_343 Magnetoimpedance Effect in Yttrium Iron Garnet/SnTe bilayers
CORREA Marcio

17:00 57_377 Improved efficiency retention in silicon solar cells by radiative cooling using PDMS-based nanocomposite encapsulations
PERUMALLA Aneela

17:00 58_417 Nano-Engineered Metal-Phenolic Network Thin Films with Temperature-Switchable Electrical Conductivity
ZAVABETI Ali

17:00 59_461 Nano-Engineered Superhydrophobic Polymer Thin Films with Tunable Interfacial Adhesion and Mechanical Stability
GÜRSOY Mehmet

17:00 60_465 Thermally Evaporated Mixed-Halide Perovskites for Light Emitting Diodes
KAR Shaoni

17:00 61_47 Epoxy Nanocomposite Coatings with APTES-Functionalized Boron Nitride Nanosheets for Improved Corrosion Protection of Mild Steel
DIRAKI Ahmad

17:00 62_576 Tailored Low-Temperature Sintered, Environmental Friendly Silver Conductive Ink for Flexible Substrate-Based Electronic Circuits
KARUNANIDHI Govardhan

17:00 63_579 FAPbI₃ Single Crystal Stabilization via Open-Environment Storage for Efficient Perovskite Solar Cells
LIM Geumha

17:00 64_581 Improved Uniformity and Thermal Robustness via Additive Engineering for Wide-Bandgap Inverted Perovskite Solar Cells
LIM Geumha

17:00 65_642 Angle-dependent PL tuning for white light generation in 1D Silicon-Microcavity structures via sol-gel processing
SUKUL Prasenjit Prasad

17:00 66_683 Intrinsic Autonomous Self-Healing in Metastable Thin Metallic Films
TROST Claus O. W.

17:00	67_686	Metal Free Photoactive Antimicrobial Coatings REINA Giacomo
17:00	68_71	Ultrasensitive Photo-induced Raman Enhancement in Sulfur-Deficient Ag Nanoparticle decorated SnS Nanostructures via Vacancy-Mediated Charge Transfer: Experimental and First-Principles Insights BHARDWAJ Lakshay
17:00	69_711	Organic semiconductor thin film decorated with palladium nanoparticles for room temperature conductometric Hydrogen sensor RAJAB PACHA Salma
17:00	70_72	Strained and strain-relaxed Ge-GeSn superlattices grown by remote plasma enhanced chemical vapor deposition HUANG Xingshuo
17:00	71_722	Sustainable Halide Solid Electrolytes for All-Solid-State Batteries CANHOTO Cardoso Joel
17:00	72_743	Anion Exchange Promoting Non-Impurities Enables Conformable and Efficient Inverted Perovskite Solar Cells FANG Jun
17:00	73_745	Lead iodide redistribution enables in-situ passivation for blading inverted perovskite solar cells with 24.5% efficiency WANG Xin
17:00	74_77	Fabrication of an indirect Z-scheme Bi2O3-Au-W18O49 thin film for PEC water Oxidation FATTY Muhammed L.
17:00	75_793	Tunable Proton Intercalation in Tungsten Oxide Thin Films for Proton-Based Energy Storage Devices ISAEV Nabi
17:00	76_836	Textured BaTiO3 Nanorod Arrays Synthesized via Hydrothermal Method: Enhanced Degradation of Rhodamine B with Piezocatalysis CHIU Yen-Lun
17:00	77_839	Piezo-photocatalysis with BaTiO3 Nanorod Arrays-Ag Nanoparticle Composites for the photodegradation of rhodamine B LIAO Jing-Yao
17:00	78_843	Engineering Anodized AlOx Thin-Film Dielectrics for Enhanced Organic Charge-Modulated Field-Effect Transisto OH Suhyun
17:00	79_846	Microbattery Design and Applications Enabled by the NNFC Semiconductor-All-Solid-State Microbattery Platform HAN Hee
17:00	80_859	CMOS Process-Compatible Defect-free InxGa1-xAs n-Channel/Ge p-channel FinFETs Co-Integrated on Bulk Si Substrate LUO Guang-Li
17:00	81_865	Influence of Contact Potential Difference on Voltage Modulation Efficiency in Scanning Capacitance Microscopy: A Tip Work-Function Engineering Study HUANG Zong-Peng
17:00	82_891	Selenium doping in pulsed laser deposited biogenic calcium phosphate thin films: effects on mechanical properties, wettability, dissolution resistance, and in vitro apatite-forming ability DUTA Liviu
17:00	83_922	Electric Dipoles Influence on SnO2/GaAs heterostructures: interface rectifying behavior and variation on excitation wavelength range SCALVI Luis Vicente De Andrade

Friday May 29
B16 Advanced deposition process

Chairperson(s): **ABADIAS G.**
MUNTEANU D.

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08:30	2180	Fundamentals and Applications of Porous Nanocolumnar Thin Films Grown at Oblique Angles PALMERO Alberto (Invited)
09:00	1929	Simulation-Guided GLAD Engineering of Titanate Thin Film Anodes for Enhanced Electrochemical Performance ADALATI Ravikant
09:15	3106	Investigation of the growth of W-Cr Janus-like thin film nanocolumns BESNARD Aurélien
09:30	2764	Engineering porous electroactive thin films by magnetron sputtering on nanorough substrates VIGOLO Brigitte
09:45	1841	Nanostructuring of Bismuth Oxyfluoride Thin Films by Oblique Angle Deposition for photocatalytic application KABOUIA Amir Eddine

Friday May 29
B17 Oxides and low-dimensional materials

Chairperson(s): **SARAKINOS K.**
PUTZ B.

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10:30	3223	Engineering Iron Oxide Thin Films for Water Splitting Applications KOSIAN Nina
10:45	2391	Self-Powered Pyro-phototronic Sensors Based on Ferroelectric HfxZr1-xO2 for Wearable Health Monitoring and Optical Communication GWÓZDZ Katarzyna
11:00	3349	Liquid Precursor-Mediated CVD Growth of MoSe2 for Electro-Optic Applications VERA Marinova
11:15	2007	Vertically stacked Co2MnSi/n-Ge/Co2MnSi heterostructures for room-temperature spin transport WATAHIKI Shimon