

## Poster Session 2

| ID  | TITLE                                                                                                                                                | SIMPOSYUM |
|-----|------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
|     | Jueves 24 de septiembre 2026                                                                                                                         |           |
| 223 | Luminescent Sb/Mn hybrid glass materials with tunable emission for photonic and optoelectronic applications                                          | LP        |
| 167 | Morphological and Luminescent Characterization of Core–Shell Magnetic Nanoparticles                                                                  | LP        |
| 309 | Enhanced Blue Photoluminescence in Eu/Ga-Co-Doped Silicon-Rich Oxide Films Deposited by Hot-Filament CVD                                             | LP        |
| 335 | FROM WASTE LAMPS TO CLEAN WATER: LUMINESCENT POWDERS AS PHOTOCATALYSTS FOR CR(VI) IN AQUEOUS SOLUTIONS                                               | LP        |
| 394 | Synthesis and Study of Different Black Silicon Morphologies for Optoelectronic Applications                                                          | LP        |
| 419 | Luminescent Nanothermometry: Challenges, Applications, and Emerging Technologies                                                                     | LP        |
| 10  | Solvothermal Synthesis of Eu <sup>3+</sup> -Doped and Yb <sup>3+</sup> Co-Doped YPO <sub>4</sub> Ceramic Powders                                     | LP        |
| 392 | LUMINESCENT PROPERTIES OF CsYP2-xO7:Vx BY FREE MERCURY ILLUMINATION APPLICATION                                                                      | LP        |
| 88  | PHOTOLUMINESCENT AND BIOCOMPATIBILITY ASSESSMENT OF LANTHANIDE-DOPED Nb <sub>2</sub> O <sub>5</sub> NANOPARTICLES FOR BIOMEDICAL APPLICATIONS        | LP        |
| 92  | LOW-ENERGY SYNTHESIS OF LUMINESCENT HEXAGONAL PEROVSKITE-DERIVED STRUCTURES AND CRYSTAL STRUCTURE RESOLUTION THROUGH A "CHARGE-FLIPPING" ALGORITHM   | LP        |
| 155 | HETEROGENEOUS PHOTOCATALYTIC DEGRADATION OF LEVONORGESTREL USING PHOTOACTIVE PARTICLES                                                               | LP        |
| 213 | Synthesis and characterization of 50CdO-50P2O5 glasses doped with Dy <sup>3+</sup>                                                                   | LP        |
| 63  | USE OF MICROBIAL FUEL CELLS FOR ELECTRICITY GENERATION THROUGH ORGANIC WASTE                                                                         | NS        |
| 156 | Correlation of pH evolution and thickness in MnS thin films grown by SILAR                                                                           | NS        |
| 176 | Nanometric microscopy with development board                                                                                                         | NS        |
| 19  | Lutetium Oxide with Europium                                                                                                                         | NS        |
| 411 | Physicochemical characterization of Al/Mg LDHs synthesized by microwave/ultrasound combined method: a brief overview of their potential applications | NS        |
| 65  | Ultraviolet light and gas sensing properties of nanostructured $\alpha$ -Bi <sub>2</sub> O <sub>3</sub>                                              | NS        |

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| 422 | Controlled Growth of Si/SiO <sub>x</sub> /Sn Core–Shell Nanostructures by Plasma-Assisted VLS Using Dichlorosilane as Silicon Precursor: Toward Advanced Lithium-Ion Battery Anodes | NS |
| 55  | Ho <sup>3+</sup> doped TiO <sub>2</sub> Films as Electron Transport Layer in Perovskite Solar Cells                                                                                 | NS |
| 59  | Low-Cost Electrochemical Platform for Voltammetric Detection and Degradation of Pharmaceutical Pollutants                                                                           | NS |
| 152 | Preparation of ultrafine Au nanoparticles isolated on CeO <sub>2</sub> nano-islands as exceptional catalysts in the hydrogenation of 4-nitrophenol                                  | NS |
| 412 | Nano and Micro-structured TiO <sub>2</sub> films: Synthesis by Sputtering, Photolithography and Anodization                                                                         | NS |
| 274 | Synthesis and evaluation of ZnO nanoparticles conjugated with essential oils as a control method against Fusarium oxysporum f.sp cubense race 2                                     | NS |
| 183 | Sulfurization of α-MoO <sub>3</sub> /Ti thin film bilayers to synthesize 2H-MoS <sub>2</sub> /TiO <sub>2</sub> heterostructures for optoelectronic applications                     | NS |
| 161 | Room temperature graphene oxide production using endemic bark tree                                                                                                                  | NS |
| 77  | Fabrication of Photonic Crystals with Dual-Nanobeam Architecture Using a Focused Ion Beam System                                                                                    | NS |
| 44  | Synthesis, characterization and photocatalytic evaluation of TiO <sub>2</sub> -MoS <sub>2</sub> for the degradation of oils in wastewater                                           | NS |
| 34  | Synthesis, characterization and photocatalytic evaluation of Ag-modified TiO <sub>2</sub> for oily wastewater degradation                                                           | NS |
| 29  | Synthesis, characterization and in vitro evaluation of sorafenib-loaded chitosan and gold-chitosan hybrid nanocarriers                                                              | NS |
| 16  | Microemulsion-Assisted Synthesis of Fluorinated UiO-66 Nanostructures                                                                                                               | NS |
| 116 | Hydrothermal Synthesis Assisted by Alkaline Fusion of Zeolite Sodalite from Natural Kaolin and Its Structural and Nanoporous Characterization                                       | NS |
| 132 | Fabrication of an MnS/CdS based ultraviolet light sensor using the SILAR technique                                                                                                  | NS |
| 21  | Green synthesis of ZnO nanoparticles using blueberry, raspberry, blackberry like red fruit extracts for photocatalytic degradation of methylene blue in water.                      | NS |
| 43  | INFLUENCE OF ELECTROPOLISHING AND MAGNETO-ELECTROPOLISHING ON GRADE 2 Ti SUBSTRATES ON THE MORPHOLOGICAL AND OPTOELECTRONIC PROPERTIES OF \$TiO_2\$ FILMS OBTAINED BY ANODIZATION   | NS |
| 170 | Relationship between the pH of precursors and rinses with the growth rate of cadmium chloride by the SILAR technique                                                                | NS |

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| 333 | Controlled Growth of Si/SiOx/Sn Core–Shell Nanostructures by Plasma-Assisted VLS Using Dichlorosilane as Silicon Precursor: Toward Advanced Lithium-Ion Battery Anodes | NS   |
| 166 | CVD Growth of Mono- and Few-Layer MoS <sub>2</sub> on SiO <sub>2</sub> /Si Substrates                                                                                  | NS   |
| 177 | Surface nano patterning of GaP crystal at various temperatures by a Bi <sup>+</sup> ion beam.                                                                          | NS   |
| 440 | Effects of AlAs capping layers on InAs quantum dot multilayers grown by MBE                                                                                            | NS   |
| 195 | Comparative Studies of ZnO Nanowires: Growth, Defects, and Applications                                                                                                | NS   |
| 220 | Design and Fabrication of Multi-Resonant Metasurfaces with Visible and Near-Infrared Optical Responses                                                                 | NS   |
| 296 | Predictive Python-FDTD/Silvaco Platform for Plasmonic Organic Solar Cells                                                                                              | NS   |
| 325 | One-step electrosynthesis of Ni-doped TiO <sub>2</sub> nanotube arrays for surface engineering and electrochemical applications                                        | NS   |
| 9   | Determination of Control Parameters for the Formation of CS/PVA Nanofibers via the Electrospinning Method                                                              | NS   |
| 375 | Antifungal Activity of Biomolecule-Functionalized ZnO Nanoparticles Against Neopestalotiopsis rosae, an Emerging Strawberry Pathogen                                   | NS   |
| 434 | Epitaxial Growth and Characterization of InAs Nanowires on Graphene-Coated Si(111) via Molecular Beam Epitaxy                                                          | NS   |
| 357 | PHYSICOCHEMICAL PROPERTIES OF ORTHOFERRITES RFeO <sub>3</sub> (R = La, Nd, Er) AND THEIR ELECTROCHEMICAL EVALUATION                                                    | NS   |
| 402 | Fabrication and characterization of the planar heterostructure P(VDF-TrFE)/BiFeO <sub>3</sub> : a study of the synthesis of individual layers and their optimization   | NS   |
| 362 | Synthesis and characterization of fluorescent carbon nanoparticles for photodynamic inactivation in E. coli                                                            | NS   |
| 368 | Influence of the rare earth R/R'-site cation in R <sub>0.5</sub> R' <sub>0.5</sub> O <sub>3</sub> orthoferrites                                                        | NS   |
| 435 | Surface Treatment of Graphene Transferred onto SiO <sub>2</sub>                                                                                                        | NS   |
| 377 | Optimization of APTMS Functionalization of ZnO Nanowires for Optical Biosensing Applications                                                                           | NS   |
| 387 | Theoretical–Experimental Analysis of the Structural Stability of Kesterites Synthesized by the Solvothermal Method                                                     | NS   |
| 320 | Two Step Sputtering-Sulfurization Growth of Large Area Crystalline Few Layer MoS <sub>2</sub> Films                                                                    | MEMS |
| 26  | Flexible TFTs based on CdS channel with hybrid PVP/PMMA-ZrO <sub>2</sub> gate dielectric                                                                               | MEMS |
| 153 | Design and simulation study of new solar cell structures based on Cu(InGa)Se <sub>2</sub> (CIGS) and Cu(In,Ga,Al)Se <sub>2</sub> (CIGAS).                              | MEMS |

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| 57  | DEVELOPMENT OF FLEXIBLE MICROSYSTEMS FOR BIOMEDICAL APPLICATIONS                                                                                       | MEMS |
| 62  | DEVELOPMENT OF FLEXIBLE MICROSYSTEMS FOR BIOMEDICAL APPLICATIONS                                                                                       | MEMS |
| 135 | Synthesis and Characterization of Organic–Inorganic Hybrid Materials (PVPh/PMMA-HfO <sub>2</sub> ) for Electronic Applications                         | MEMS |
| 141 | Development of dielectric films obtained by solution-based methods for applications in flexible electronic devices                                     | MEMS |
| 233 | Open-Source Tool for Statistical Analysis and Yield Assessment of IGZO/HfO <sub>2</sub> /Mo Thin-Film Transistors                                      | MEMS |
| 246 | Low-Cost Hybrid Semiconductor-Polymer Formulations for Flexible Electronic and Hydrogen Sensing Platforms                                              | MEMS |
| 281 | Design, Sizing, and Analysis of an a-IGZO TFT-Based NAND Logic Gate Using Local PDKs for Specialized Engineering Education                             | MEMS |
| 298 | Design and Characterization of a Thin-Film Voltage Regulator Circuit Based on Oxide Semiconductors (IGZO/HfO <sub>2</sub> ) for Low-Power Applications | MEMS |
| 305 | Design of an potentiostat based on a-IGZO OPAMP for Glucose Sensing Applications                                                                       | MEMS |
| 326 | Impact of Mo Initial Thickness on the Structural Evolution and Electrical Behavior of Thermally Oxidized MoO <sub>3</sub> Thin Films                   | MEMS |
| 1   | Effect of natural additives on the tribological properties of castor oil in metallic system tribopair                                                  | TSI  |
| 273 | Microstructural and Mechanical Characterization of the AA6061 Alloy Modified with Nickel and Processed by Stir Casting.                                | TSI  |
| 113 | Comparison of natural and synthetic zeolites for methylene blue removal in aqueous solutions                                                           | TSI  |
| 139 | Fabrication and study of superconductor-insulator-normal metal tunnel junctions based on the molybdenum nitride superconductor.                        | TSI  |
| 181 | MOLYBDENUM TRIOXIDE THIN FILMS DEPOSITED BY PULSED LASER ABLATION                                                                                      | TSI  |
| 243 | Effect of wear track profile on laser light scattering pattern                                                                                         | TSI  |
| 259 | Ambient Sensitivity of GaN Surfaces with Different Crystallographic Orientations Studied by Contactless Electroreflectance                             | TSI  |
| 283 | PCA-based analysis of plasma emission for monitoring inhomogeneous optical filter deposition                                                           | TSI  |
| 337 | TiAlN and TiAlCrN Multilayer Coatings Obtained by Magnetron Sputtering                                                                                 | TSI  |
| 107 | Tribological study of AISI 316L stainless Steel coated with chitosan coating reinforced with hydroxyapatite particles.                                 | TSI  |
| 45  | Elastic Modulus Variation in CuS Thin Films via SILAR: insights from Thickness, Texture, and Nanoindentation                                           | TSI  |

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| 126 | Laser Ablation plasma parameters influence on the properties of ZnO thin films                                                                          | TSI   |
| 373 | CRYSTALLINE STRUCTURE OF GaN THIN FILMS DEPOSITED USING A HYBRID PLASMA SYTEM                                                                           | TSI   |
| 106 | XPS analysis of Coffea Arabica grains and powders                                                                                                       | TSI   |
| 217 | Theoretical and Experimental Study of Physical Properties in Two-Dimensional Ruddlesden-Popper Perovskites (PEA) <sub>2</sub> Csn-1PbnI <sub>3n+1</sub> | CTDMI |
| 417 | Van der Waals heterostructure based on SWCNT/MnO <sub>2</sub> for energy storage in electronic devices                                                  | CTDMI |
| 127 | DeepONet para la Caracterización Óptica de Pozos Cuánticos Semiconductores                                                                              | CTDMI |
| 137 | First-Principles Stability and Electronic Assessment of Ordered Sc <sub>2</sub> CoGa Heusler Phases                                                     | CTDMI |
| 150 | Electronic properties of the cesium lead chloride (001) surface studied by first principles calculations                                                | CTDMI |
| 151 | Calculation of Electronic Properties of AZO Using the Random Forest Algorithm                                                                           | CTDMI |
| 69  | Electronic structure of double perovskite's surface: a first principles study                                                                           | CTDMI |
| 85  | Transition metals incorporation on Cr <sub>2</sub> C and Mn <sub>2</sub> C MXene: A First principles calculations                                       | CTDMI |
| 125 | Classification of growth times and quantum confinement in GaAs/GaAsSb: a deep learning approach on AFM images                                           | CTDMI |
| 136 | First-Principles Study of Structural, Electronic, Vibrational and Thermoelectric Properties of Sc <sub>2</sub> CoIn Heusler Phases                      | CTDMI |
| 148 | Enhanced Adsorption of Acetone and Ethanol on Al-Doped Boron Phosphide Monolayers: A DFT Study                                                          | CTDMI |
| 231 | N <sub>2</sub> , H <sub>2</sub> and NH <sub>3</sub> interaction study on pristine and modified SiC and SiO <sub>2</sub> 2D surfaces by DFT              | CTDMI |
| 275 | HEAT CONDUCTION TO THE SURROUNDING GAS IN BACK DETECTION LASER-SPOT LOCK-IN THERMOGRAPHY: AN EXPERIMENTAL-COMPUTATIONAL STUDY                           | CTDMI |
| 239 | DFT study of chitins                                                                                                                                    | CTDMI |
| 173 | Bandgap Engineering: Modulation of the Optical and Electronic Properties of Iron-Doped Cs <sub>2</sub> AgInCl <sub>6</sub> Perovskite                   | CTDMI |
| 206 | SPR biosensors to measure glucose on the skin                                                                                                           | CTDMI |
| 396 | Growth-Based Global Optimization of Boron Clusters with Machine Learning Interatomic Potentials                                                         | CTDMI |
| 207 | Computational Study of Cisplatin Encapsulation in Boron Phosphide Nanotubes                                                                             | CTDMI |

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| 270 | Machine learning for the prediction of performance parameters of an SPR biosensor with hyperbolic metamaterial                                                   | CTDMI |
| 295 | First-Principles Investigation of Surface Termination and Lithium Storage in Niobium-Based MXenes                                                                | CTDMI |
| 52  | Structural, optical, electronic, electrochemical, morphological and computational characterization of sodium titanates for use as anodes in sodium-ion batteries | CTDMI |
| 313 | Tuning the Surface Reactivity of 2D-SiC via Metal Decoration for Highly Sensitive Catechol Detection: A DFT Investigation                                        | CTDMI |
| 321 | Hydrogen adsorption on MoS <sub>2</sub> and graphene supercells: a DFT study                                                                                     | CTDMI |
| 354 | Computational study of hexagonal bilayer stackings of groups 14 and 15 generated with JAM                                                                        | CTDMI |
| 401 | Structural evolution and bonding properties of beryllium-doped boron clusters                                                                                    | CTDMI |
| 397 | Determining Ferroelectricity in N-Layer Graphene from the Stacking Sequence                                                                                      | CTDMI |
| 204 | Orange-peel biocarbon decorated with pyrite FeS <sub>2</sub> : Vacuum-assisted synthesis and structural characterization                                         | ASPPV |
| 327 | ZnIn <sub>2</sub> S <sub>4</sub> Prepared by Intermittent Mechanical Milling: A Promising Window Layer Candidate for Thin-Film Solar Cells                       | ASPPV |
| 382 | Sequential Surface Engineering of PEALD NiOx: Synergistic Plasma Treatment and Glycine Functionalization for Perovskite Solar Cells                              | ASPPV |
| 149 | Effect of Oxygen Pressure on Plasma and Film Properties During Pulsed Laser Deposition of Nickel Oxide                                                           | ASPPV |
| 180 | Effect of fluence on morphology and growth rate of pulsed laser deposited multilayer refractory metal thin films.                                                | ASPPV |
| 226 | Effect of RF Plasma Nitrogen Species on the Growth of Cubic Nitrides by Molecular Beam Epitaxy                                                                   | ASPPV |
| 346 | Stoichiometry-Controlled Synthesis of MoS <sub>2</sub> Thin Films via Sulfurization of RF-Sputtered MoOx Precursors                                              | ASPPV |
| 131 | INFLUENCE OF PLASMA PARAMETERS ON THE STRUCTURE AND BAND GAP OF ND-FE-O THIN FILMS DEPOSITED BY PULSED LASER DEPOSITION                                          | ASPPV |
| 174 | Effect of oxygen pressure on the optical and structural properties of neodymium oxide thin films grown by PLD                                                    | ASPPV |