

Poster Session 1

Odd Numbers

Tuesday, 23 September, 17:45 – 20:00

Gimnasio, Edificio Carolino

ID	TITLE	SIMPOSIUM
7	Theoretical Studies of the Photoluminescence Phenomenon of Silicene Using DFT and HF Methods	LP
9	Boron phosphide monolayer for C ₂ H ₂ and H ₂ Se adsorption by DFT	TSM
13	DESIGN AND CONSTRUCTION OF MS ₂ @TiO ₂ HETEROJUNCTIONS (WHERE M IS MO ₂ ⁺ AND W ₄ ⁺) FOR PHOTOCATALYTIC APPLICATIONS USING VISIBLE LIGHT.	NS
19	Numerical Simulation and Modeling of WO ₃ /CuO Solar Cells using SCAPS-1D	REN
21	Study and simulation of the semitransparent solar cell based on the heterojunction n-TiO ₂ /p-NiO using SCAPS-1D	REN
25	SYNTHESIS OF GOLD CONCAVE NANOCUBES AND THEIR EXCHANGE OF SURFACTANT WITH SODIUM CITRATE, FOR THEIR POTENTIAL USE AS SENSORS OF BIOMARKERS	BIO
29	MECHANICAL EXFOLIATION OF GRAPHITE USING ULTRASONIC CAVITATION	NS
33	High-performance photodetection of UV-visible-NIR by Ag-Mn ₂ O ₃ heterojunctions	SEM
35	Zinc sulfoxide thin films by chemical bath deposition with potential for utilization of solar energy	THF
41	Optical properties of flexible PET/ITO and PII/ITO substrates exposed to visible solar radiation	REN
43	DEGRADATION OF MALAQUITE GREEN BY ADSORPTION AND PHOTOCATALYSIS WITH DIFFERENT COMPOUNDS	NS
45	Synthesis and structural characterization of metal oxides for photoelectrochemical hydrogen generation.	SEM
49	Temperature growth effects study of Ga ₂ O ₃ and its response to UV light	SEM
51	Silicon Oxynitride Thin Films by means HFCVD: A Study of the Composition, Structure, and Optical properties	THF
55	Plasma-Enhanced ALD Growth Window and Composition Tuning of Al _{1-x} Sc _x N for Emerging Neuromorphic Applications	SEM

63	XPS and Optical Characterization of Hexagonal Phase GaN Thin Films Synthesized by Pulsed Laser Deposition (PLD)	PLV
69	Electrical behavior of bismuth ferrite microstructures as a function of bismuth content	REN
73	Physical properties of GaN and AlN thin films deposited by sputtering	THF
77	On the prospects of using alumoborosilicate glass as a hydrogen battery	REN
81	Fabrication and characterization of nanoscale vacuum electronic devices.	MEM
87	Surface plasmon resonance of gold and silver nanoparticles deposited by PLD on substrates with controlled roughness	PLV
89	Comparative Antimicrobial Evaluation of Green-Synthesized ZnO Nanoparticles using Ginger and Garlic Extracts	SEM
91	Characterization of Copper boride surfaces	TSI
93	Comparative analysis of the recycling methods used in c-Si photovoltaic modules	SEM
95	Optical Characterization of Carbon Quantum Dots Synthesized from Avocado Peel in Different Solvents	LP
97	LUMINESCENT PROPERTIES OF Al ₂ O ₃ -Li ₂ O-B ₂ O ₃ GLASSES ACTIVATED WITH Tb ₂ O ₃	LP
99	Electroluminescence in BiFeO ₃	LP
107	IN-SITU PLD GROWTH OF Au-MEDIATED ZnO STRUCTURES: INFLUENCE OF SUBSTRATE TEMPERATURE AND AMBIENT PRESSURE	NS
111	Injection molding process for polypropylene device used in chrome plating	BIO
113	Obtention of optical constants of (CdTe) _{1-x} (In ₂ Te ₃) _x films grown by RF sputtering and study of their electrical properties.	SEM
115	NICKEL-BASED MOFS FOR THE DEVELOPMENT OF SENSORS FOR THE DETECTION OF VOLATILE ORGANIC COMPOUNDS	NS
117	Numerical analysis of heat transfer in solids from infrared photothermal radiometry measurements	TSM
121	Functionalize porous silicon (PSi) with phthalocyanines as a possible application for gas sensing	SEM
125	Reaction Force and Electronic Flux as Descriptors for Oxygen Adsorption in N-Doped Graphene-Based Single-Atom Catalysts"	TSM

127	ZnO NANOCOMPOSITE WITH CARBON QUANTUM DOTS: A PHOTOCATALYTIC SOLUTION FOR ANTIBIOTIC REMOVAL FROM WATER.	SEM
129	Modification of chitosan films by laser processing	TSI
131	Synthesis and Characterization of Chitosan (Cts) Reinforced with Hydroxyapatite (Ha) via an Electrochemical Process on 316L Stainless Steel	TSI
133	Growth and analysis of Multi-Stacked InAs Quantum Dots using GaAs and InGaAs as matrix semiconductor Layers	SEM
135	Synthesis and physical characterization of ZnCuO thin films	SEM
139	Synthesis and Study of the Structural Properties of ZnO Co-doped with Er and Zr.	LP
143	Sm ₂ O ₃ –Eu ₂ O ₃ Aerogels Functionalized with TTA: Synthesis and Characterization	LP
145	METASTABLE MgO(001)/MnGe ₂ CO-SPUTTERED THIN FILMS SYNTHESIZED BY REACTIVE DEPOSITION EPITAXY METHOD (RDE)	THF
147	Optimization and Comparison of Photovoltaic Energy Production in Silicon and CdTe Solar Panels Under Real-World Conditions	REN
149	Flexible UV photodetector based on ZnO thin film on polyimide substrate	MEM
151	Exploration of InAs QD Nucleation on III-N-V semiconductors Materials for Strain Balance Applications	SEM
157	Blue, green luminescence response of green synthesized graphene oxide nanoparticles obtained by control numeric assisted laser ablation from lemon and tangerine peels	LP
159	Thermochemical Boriding of AISI 1080 Steel: A Study on Surface Hardening and Layer Growth	TSI
161	Synthesis and preliminary optical characterization of SnO thin films deposited by spray pyrolysis	SEM
165	ONE-STEP SYNTHESIS OF MOS ₂ /TiO ₂ USED FOR DEGRADATION OF METHYLENE BLUE	NS
169	ZINC OXIDE FILMS OBTAINED BY ULTRASONIC SPRAY PYROLYSIS FOR THE EVALUATION OF THEIR PIEZOELECTRIC POTENTIAL	SEM
175	Analysis of Photovoltaic Properties in III–V Quantum Wire Short-Period Superlattice Solar Cells Using Silvaco ATLAS	SEM
177	Exploring Hubbard Corrections in Nb ₄ C ₃ MXene: Impact on Electronic Structure and Hybridization Dynamics	TSM
179	DEVELOPING GA ₂ O ₃ PHOTOELECTRODES FOR EFFICIENT PHOTOELECTROCHEMICAL CELLS	SEM

181	Analysis and study of the growth of SiO ₂ and porous-SiO ₂ films by DC reactive sputtering	TSI
183	Soft-Templated N-Doped Hollow Carbon Spheres as a Platform for NiS-Based HER Electrocatalysts	CHM
187	Estimation of Absorbed dose response due to g-Rays and Neutrons in pure and Dy- and Eu-doped Hydroxyapatite using Monte Carlo methods	TSM
189	Surface Engineering of HfO ₂ by Spin Coating and ALD: A Comparative Approach for MOS/MIM biosensors	SEM
191	Physical and thermal characterization of fermented arabica coffee cherry (<i>Coffea arabica</i> L.) solutions	BIO
199	Controlling the α -MoO ₃ growth parameters via thermal oxidation and reactive magnetron RF-Sputtering	THF
203	FABRICATION OF CARBON-COATED Fe ₃ O ₄ NANOPARTICLES (Fe ₃ O ₄ @C) FOR MICROWAVE ABSORBER APPLICATIONS	NS
205	Green synthesis of nanoparticles WO ₃ decorated with GOQDs	NS
207	Synthesis and characterization of novelty bismuth multi-principal elements or high entropy alloys	THF
211	Optical and Electrical Diagnostics of Reactive Magnetron Sputtering Plasmas for Thin Film Engineering	CHM
215	Characterization of Chitosan (Cts) Coatings Reinforced with Hydroxyapatite (Ha) on Cylindrical Titanium Alloy (Ti) Substrates	TSI
217	OPTIMIZATION OF ORGANIC SOLAR CELLS WITH P3HT:PCBM MATERIAL BY VARYING TRANSPORT LAYERS USING SCAPS-1D	REN
219	Effect of Metal Contact Position on IGZO-Based Interdigitated Structures for Sensor Application	MEM
221	Memristive Behavior in Ultrathin Ga ₂ O ₃ Films Deposited by ALD on TiN/Si	SEM
229	Implementation of a treatment train of Coagulation-Flocculation, Biological and Advanced Oxidation Processes for the elimination of emerging contaminants from CDMX wastewater	REN
235	Deposition and Characterization of Ag and Mo Thin Films Using e-beam for Optoelectronics Applications	THF
237	DEVELOPMENT OF LUBRICANT ADDITIVES BASED ON ADVANCED MATERIALS	TSI
241	Study of the physicochemical and luminescent properties of the TbTPTZ@HKUST-1 composite.	LP
243	Luminescence Study of Ca ₃ (VO ₄) ₂ : Sm ³⁺ for horticulture applications	LP

247	Development of a ZnO Photoelectrode for its Use in Photoelectrochemical Cells	SEM
251	DESING OF METAL-DOPED TiO ₂ NANOTUBULAR ARRAY SURFACES AS FUNCTIONAL PLATFORMS FOR ADVANCED ELECTROCHEMICAL SENSING	NS
253	Semiconductor-assisted chemical etching.	MEM
255	Ultra-high photocatalytic activity of ZnS thin film with Cu islands for dye degradation	REN
263	ENCAPSULATION OF A BIOHERBICIDE CONTAINING INORGANIC NANOPARTICLES WITH CONTROLLED-RELEASE PROPERTIES	NS
265	Simulation-Based Study of Fermi Energy Level and Dielectric Substrate Effects on the Electromagnetic Response of Graphene-Based Metasurfaces	TSM
267	Development of a Flexible Microcoil for Wireless Power Transfer in Implantable Devices	MEM
269	Cheap Separation Process for Biochar-derived Carbon Quantum Dots	NS
275	Characterization of nanostructured cerium oxide thin films in the photoelectrocatalytic water-splitting process	REN
279	FeRh THIN FILMS OBTAINED BY PULSED LASER ABLATION	THF
281	OPTIMIZING EXPERIMENTAL CONDITIONS FOR ENHANCED SULFURIZATION OF ZNO NANOWIRES AND ZNO-ZNS CORE-SHELL FORMATION	NS
285	Structural and Morphological Characterization of Indium Selenide synthesized via Mechanical Alloying in a Commercial Mill	SEM
291	Electron paramagnetic resonance in the sodium phosphate glasses doped with MnO	CHM
293	DFT study on the influence of biphenylene-type nanostructuring on the electronic properties of group IV-A carbides	TSM
295	The optical response of layered [layer_1/layer_2] _N metamaterials: A study through the transfer matrix formalism	CHM
299	Influence of Solvents and Precursors on the Deposition of ZnO Thin Films by AACVD	THF
301	The optical response of stacked non-periodic plate systems using the transfer matrix formalism	CHM
303	SYNTHESIS AND CHARACTERIZATION OF FE ₂ O ₃ NANOSTRUCTURE VIA PULSED LASER ABLATION IN LIQUID	NS
305	Optical and structural studies of polycrystalline thin films of Cadmium Tellurium processed by CSVT technique	THF

307	Lanthanide upconversion nanoparticles as a temperature sensor	LP
311	SYNTHESIS AND CHARACTERIZATION OF Y ZEOLITE EXCHANGED WITH Ni ²⁺ AND REDUCED NiO BY DRS, XRF AND TGA	NS
313	Comparative Evaluation of Hydroxyapatite Coatings on Ti6Al4V and 316L Stainless Steel Using Laser Ablation, Plasma Spraying, and Sol-Gel Techniques	BIO
315	Simulation of Energy Deposition in Proton Beam Therapy for Prostate Cancer Using SRIM	BIO
317	MECHANICAL AND WATER VAPOR PERMEABILITY PROPERTIES OF BIOFILMS MADE FROM CROSS-LINKED STARCH AND PLASTICIZERS	BIO
319	SYNTHESIS AND CHARACTERIZATION OF AU-Fe ₂ O ₃ HYBRID NANOSTRUCTURES VIA LASER ABLATION IN LIQUID FOR BIOMEDICAL APPLICATIONS	NS
321	Comparative Analysis of the Refractive Index of Graphene Oxide and EGCG-Reduced Graphene	CHM
329	Thermal Diffusivity Enhancement in Polycaprolactone Fibers through Nanomaterial Incorporation	BIO
331	Growth of 1D Zinc Oxide Structures by the Vapor-Liquid-Solid Technique: Role of Substrate Position and Displacement	REN
335	PRISMA-COUPLED OPTICAL BIOSENSOR BASED ON 2D MATERIALS	NS
341	Thermic protection of cuticle of garambullo (Myrtillocactus geometrizans), agave (Agave salmiana), nopal (Opuntia spinulifera) and sábila (Aloe vera)	BIO
347	Photonic Bandgaps in Photonic Crystals for High-Performance Optical Devices: A Comparative Bioinspired Approach	CHM
355	Structural and electronic properties of full and half-Heusler Co ₂ VGa structures: DFT study	TSM
361	Sustainable Polymeric Composites from Epoxidized Linseed Oil and Recycled Zinc Oxide from Alkaline Batteries: Decomposition Temperature, Photoluminescence, and Dielectric Behavior	BIO
363	Characterization of zinc oxide from spent alkaline batteries: photoluminescence and aspect ratio	LP
365	Synthesis and Characterization of Spherical ZnO Coatings from Zinc Primer for the Removal of Methylene Blue	REN
373	Hydrogen Production via Aqueous Glycerol Reforming Assisted by Ultrasound Using a Heterogeneous Catalyst.	REN
377	Sensor design and simulation in Klayout	SEM

381	OBTAINING THERMOCHEMICAL PROPERTIES USING THERMAL AND CALORIMETRIC TECHNIQUES FOR A SUBSTRATE USED IN COMPOSTING	REN
383	“Design and development of a bioactive occlusal guard using 3D printing and photogrammetry”	BIO
387	Lamination-Assisted Integration of AACVD-Deposited Perovskite Films	LP
399	From Quantum Theory to Oxide-Semiconductor Chemistry: The Power of X-ray Photoelectron Spectroscopy (XPS)	SEM
405	Application of Coupled Resonances (CR) Line Shape in XPS Analysis of Fifth-Period Elements	TSI
415	MICROWAVE-ENHANCED PHYSICAL PROPERTIES OF BATH-DEPOSITED ZnO NANOFILMS	NS
417	Thermoluminescence Analysis of CaMoO ₄ : Dy ³⁺ under UV radiation for Dosimetry Applications	LP
419	GREEN SYNTHESIS OF TUNGSTEN OXIDE (WO ₃) WITH JUSTICIA SECUNDA VAHL EXTRACT	SEM
423	PREPARATION AND EVALUATION OF CHITOSAN NANOPARTICLE–GELLAN GUM MEMBRANES FOR WASTEWATER REMEDIATION	NS
425	ALL-INORGANIC Sb ³⁺ ACTIVATED PHOSPHOR Cs ₂ CdBr ₂ Cl ₂ WITH BROADBAND EMISSION	LP
427	Comparative study of the InAs QDs self-assembly on Al _x Ga _{1-x} As at different Al concentration.	NS
431	SELF-ORGANIZED METAL NANOPARTICLES ON SiO ₂ SURFACE NANOPATTERNS INDUCED BY MEV ION IMPLANTATION	NS
435	Influence of Plasma Dynamics and Substrate Temperature on the Growth and Properties of Bi ₂ S ₃ Thin Films by PLD	PLV
437	Structural, Vibrational and Electronic Properties of α -Sulfur Based Nanosheet	TSM
441	Structural and Optical Characterization of p-InGaAsSb/n-InGaAsSb/n-GaSb Heterostructures Growth by Liquid Phase Epitaxy for Infrared Applications	SEM
443	Synthesis of Au Nanoparticles on TiO ₂ Thin Films by Pulsed Laser Ablation for Enhanced Photocatalytic Activity	PLV
445	Fabrication and characterization of III-V and graphene/III-V devices	SEM
447	Structure of Heavily Mn-Doped GaAs	SEM

449	Effects of field intensity, polarity reversal, and air agitation on the properties of ZnO thin films synthesized by electric field-assisted chemical bath deposition.	THF
451	Atomistic-level understanding of charge storage behavior in α -MnO ₂ nanostructures	TSM
453	Structural and electronic properties of high entropy thin film SrRuTiMnFeScO ₃ : An experimental and theoretical approach	THF
455	PHYSICS-INFORMED MACHINE LEARNING FOR SPR BIOSENSORS.	NS
457	Lanthanide-Doped NaMgF ₃ Perovskites for Optical Thermal Sensing; A Comparative Study of Hydrothermal and AACVD Methods.	LP
467	Evaluation of curcumin-functionalized iron magnetic nanoparticles on spermatogenesis in CD1 mice.	NS