

## ● Poster Session 2

### Even Numbers

Wednesday, 24 september, 18:15 – 20:30

Gimnasio, Edificio Carolino

ID	TITLE	SIMPOSIUM
8	Study and Theoretical Analysis of the Optical Properties of Carbon Nanotubes with Cylindrical and Oval Geometries	NS
12	PHOTOCATALYTIC DEGRADATION OF RHODAMINE B USING HETEROJUNCTIONS WITH MoS <sub>2</sub> , WS <sub>2</sub> AND Na <sub>2</sub> Ti <sub>6</sub> O <sub>13</sub> UNDER UV-VISIBLE LIGHT IRRADIATION	NS
14	Composition-tuned photoluminescence in high-quality CdS <sub>x</sub> Se <sub>1-x</sub> thin films grown by pulsed laser deposition	LP
18	Numerical Analysis of CdS/Sb <sub>2</sub> S <sub>3</sub> Solar Cell Performance under Variable Operating Conditions Using SCAPS-1D	REN
20	Numerical simulation of a solar cell based on a double Sb <sub>2</sub> Se <sub>3</sub> /Sb <sub>2</sub> S <sub>3</sub> absorber layer and an ITO window layer with an efficiency of 28.72%	REN
22	Tribological performance of Ti-Al-N coatings deposited by vacuum arc	TSI
24	Modelling the Sputtering Process via Monte Carlo Binary Collision	TSM
26	ENHANCING ATMOSPHERIC WATER HARVESTING: THE ROLE OF NANOMATERIALS AND MICROSTRUCTURES ON COPPER SURFACE	TSI
30	Design and evaluation of a laboratory-scale ALD reactor: case study with aluminum oxide and zinc oxide.	ALD
32	(CdTe) <sub>1-x</sub> Al <sub>x</sub> films produced by RF co-sputtering employing CdTe and aluminum targets	THF
38	CHARACTERIZATION OF THE WEAR MECHANISM OF A TRADITIONAL Z-TYPE FERTILIZER SPREADERS	CHM
44	OPTIMIZATION OF PHOTOCATALYTIC APPLICATIONS THROUGHOUT THE SYNTHESIS OF SODIUM AND STRONTIUM TITANATE NANOSTRUCTURES DECORATED WITH NANOPARTICLES	NS
46	Synthesis and Characterization of luminescent copper halide films for lighting applications.	LP
52	Synthesis and Optical and Structural Characterization of Colloidal Solutions of Silicon Nanocrystals and Zinc Oxide Quantum Dots	LP
58	Graphene Oxide (GO): Its Synthesis and Optical and Structural Characterization.	LP
60	Study of N-type porous silicon fabricated by electrochemical etching: correlation between the morphology of the porous layer and its optical and thermal properties	CHM

68	Development of a piezoelectric sensor using a thin film of zinc oxide on silicon wafers and its instrumentation for IoT applications	SEM
72	Synthesis and photocatalytic evaluation of ZnO-Cu <sub>2</sub> O films for indigo carmine dye degradation.	REN
76	The use of isotope labels to study intracellular metabolism	BIO
78	SiO <sub>2</sub> AND Al <sub>2</sub> O <sub>3</sub> THIN FILMS CHARACTERIZATION DEPOSITED BY SPUTTERING FOR ITS APPLICATION IN PASSIVATION OF REFLECTIVE METAL SURFACES	THF
82	Influence of times and temperatures on the mechanical properties of the boriding layers formed in an 8620 steel	TSI
84	Influence of Oxygen Impurities on the Photoluminescence of CaF <sub>2</sub> and MgF <sub>2</sub> Films Deposited by Chemical Spray	LP
88	Optical, structural and electric characterization of (Fe <sub>2</sub> O <sub>3</sub> ) <sub>x</sub> (ZnO) <sub>1-x</sub> thin films deposited by spray pyrolysis	SEM
90	Enhanced photocatalysis ZnO/CuO heterojunction via a modified SILAR method	REN
92	Analyze of electrical resistance and micro-abrasion wear rate of Copper boride surfaces (Cu-B).	TSI
96	ZnO AND Sn-ZnO THIN FILMS OBTAINED BY SILAR: STRUCTURAL, OPTICAL ANALYSIS AND PHOTOCATALYTIC PERFORMANCE	REN
100	Band gap dependence on energy density in laser annealing of CdS thin films for photovoltaics applications	REN
104	Boring Tools for Tempered Glass	TSI
106	Synthesis of ZnO nanofibers on FTO by electrospinning for photofunctional devices	CHM
108	Growth of iron boride on 304 stainless steel	TSI
110	HYBRID PLASMA DEPOSITION OF GaN THIN FILMS FROM A GaAs TARGET	TSI
112	Sr <sub>x</sub> Ba <sub>1-x</sub> Nb <sub>2</sub> O <sub>6</sub> : a first report of synthesis by ultrasonic spray pyrolysis	SEM
114	Estimation of the influence of GaAs, GaSb and InP substrates on the boundaries of stable compositions of GaAsSb ternary solid solutions in epitaxial layers of various thicknesses	SEM
116	Solids: A Modular Python Toolkit for Crystal Structure Prediction	TSM
118	Integrating Clustering Techniques to Global Optimization of Atomic Structures	TSM
126	Mn <sub>x</sub> Fe <sub>3-x</sub> O <sub>4</sub> NANOPARTICLES FUNCTIONALIZED IN SITU WITH CLOVE POLYPHENOLS BY CO-PRECIPITATION ROUTE.	NS
128	STUDY OF THE THERMAL DIFFUSIVITY OF THE RGB BLUE TEXTILE DYE WITH TiO <sub>2</sub> NANOPARTICLES USING PHOTOTHERMAL TECHNIQUES	NS
130	Thermodynamic analysis of initial conditions for epitaxial layers formation from ternary Ga-As-Sb liquid phases on InP substrate	SEM
132	DEVELOPMENT AND INTEGRATION OF A SCHOTTKY-BASED PHOTODETECTOR WITH EMBEDDED MULTI-STACKED (In,Ga)As/InAs QUANTUM DOTS	SEM

134	Wear Study of Chitosan (Cts) Films Reinforced with Hydroxyapatite (Ha) Deposited via Electrochemical Method on 316L Stainless Steel	TSI
136	NUMERICAL AND EXPERIMENTAL EVALUATION OF SEMICONDUCTING OXIDES AS ANTI-REFLECTIVE COATINGS FOR GaAs SOLAR CELLS	SEM
144	LiNCM AEROGEL OBTAINED BY SOL-GEL	NS
146	INACTIVATION OF HEAT-RESISTANT PSEUDOMONAS AERUGINOSA VIA MAGNETIC HYPERTHERMIA	NS
154	HIGH-CAPACITY OXAMYL PHOTODEGRADATION VIA SCHOTTKY-ENHANCED $\text{Fe}_3\text{O}_4/\text{Au}$ NANORODS: SYNTHESIS AND CATALYTIC PERFORMANCE	NS
158	Study of Ti-Mg coatings and their effect as shielding against ionizing radiation	TSI
160	CHARACTERIZATION OF NITRIDED HIGH-DIELECTRIC CONSTANT OXIDE NANOFILMS GROWN ON III-V SEMICONDUCTOR SUBSTRATES	NS
168	Structural optimization of low-pressure superhydride $\text{LaBH}_8$	TSM
170	Effect of electrodeposition parameters on ZnO morphology	NS
172	ELECTROMAGNETIC MODEL OF ORGANIC NANOSTRUCTURES APPLIED TO ORGANIC SOLAR CELLS USING EXPERIMENTAL OPTICAL DATA	NS
174	Application of Strain Minimization Method for the design of 1D III-V Photovoltaic Heterostructures	SEM
176	Study of the structural and luminescent properties of $\text{CsVO}_3:\text{Nd}^{3+}/\text{Yb}^{3+}$ and the energy transfers between $\text{Nd}^{3+}$ and $\text{Yb}^{3+}$	LP
184	White electroluminescence and low current consumption in devices based on carbon-based nanomaterials and silicon oxides	LP
196	STRUCTURAL ANALYSIS OF CESIUM METAVANADATE PHOSPHOR BY PYTHON PROGRAM	LP
202	STRUCTURE AND MAGNETIC PROPERTIES OF $\text{Ni}_{0.7}\text{Cr}_{0.1}\text{Mn}_{0.1}\text{Fe}_{1.1}\text{O}_{(3+x)}$ MEDIUM-ENTROPY OXIDE NANOSTRUCTURES	NS
206	Development of metal oxide nanoheterojunction films with potential use in ethanolamine gas detection.	THF
214	ELECTROCHEMICAL ANALYSIS OF ELECTRODES FOR SUPERCAPACITORS BASED ON ACTIVATED CARBON DERIVED FROM SARGASSUM BIOMASS	BIO
216	Tribological Characterization of Chitosan (Cts) Coatings Reinforced with Hydroxyapatite (Ha) on Cylindrical Titanium Alloy (Ti64) Samples	TSI
218	Non-Enzymatic Glucose Detection Using Gold Electrodes Modified with Graphene Oxide	THF
222	$\text{MnS}/\text{CdS}$ deposited by SILAR for application in an ultraviolet sensor	SEM
224	Two-step synthesis and characterization of CuS photoelectrodes for their application in solar water splitting in PECs	REN
226	MECHANO-CHEMICAL SYNTHESIS OF THE $\text{Cs}_2\text{NaBiCl}_6$ SYSTEM ACTIVATED WITH $\text{Ag}^+$ AND $\text{Nd}^{3+}$	LP
230	EFFECT OF BEP VARIATION ON THE STRUCTURAL PROPERTIES OF InAs NANOWIRES GROWN BY MBE ON GRAPHENE/Si	NS

232	SUSTAINABLE SYNTHESIS OF LUMINESCENT NANOGRAFITE BY COFFEE PULP CARBONIZATION	NS
234	Synthesis and Characterization of CIS and CIGS Thin Films by Electrodeposition	THF
240	Ga-Au AND Ga-In EUTECTIC ALLOYS ON SI AS CATALYTIC PRECURSOR FOR GaAs GROWTH BY CSVT	NS
242	Forbidden energy gap determination by photoacoustic spectroscopy in n-type porous silicon: porosity percentage dependence	SEM
246	GRAPHENE OXIDE QUANTUM DOTS: SYNTHESIS AND EVALUATION OF THEIR ANTIBACTERIAL ACTIVITY AGAINST PSEUDOMONAS AERUGINOSA	NS
254	Manufacturing and characterization of electrospun PLA/PBAT nanofibers incorporated with curcumin.	BIO
256	Memristive Applications of Mesoporous Silica Composites with ZnO Nanoparticles	SEM
258	Assessing Water Quality: A TiO <sub>2</sub> Nanoparticles with Mesoporous Silica Approach for Dissolved Nitrogen Detection	SEM
262	Synthesis of Er <sup>3+</sup> , Tm <sup>3+</sup> and Yb <sup>3+</sup> doped Gd <sub>2</sub> O <sub>3</sub> nanostructures with polyols and the study of their upconversion properties	LP
266	Improving of the electrical and optical properties of ZnO films doping with fluor	SEM
270	Study of MoO <sub>3</sub> thin films by thermal oxidation	MEM
272	Study of micellization in mixtures of ionic surfactants	BIO
278	OBTAINING THE EMPIRICAL FORMULA OF ORGANIC COMPOUNDS BY IMPLEMENTING A POST-COMBUSTION GAS CENSUS SYSTEM IN A STATIC BOMB CALORIMETER	REN
280	Mesoporous Silica/PEDOT:PSS-based Breath Biosensor	SEM
288	Enhancing Visible-Light Photocatalysis through the Immobilization of TiO <sub>2</sub> -InP Nanoparticles on Porous Silicon	LP
290	Design of Photonic Heterostructures Based on Porous Silicon for Sensing Applications	THF
292	Model for estimating temperature in laser annealing of CdS thin films	REN
294	Application of Spark-Induced Breakdown Spectroscopy (SIBS) for the Analysis of Insulating Materials	PLV
296	Optoelectronic evaluation of metastabilities in Kesterite/CdS solar cells using multiwavelength illumination	REN
300	Graphene as a Novel ETL in Inverted Organic Solar Cells with Non-Fullerene-Based Active Layer	REN
302	Synthesis and Characterization of NiSe Thin Films on FTO Substrates for Photovoltaic Applications	THF
304	Judd-Ofelt Analysis Applied to Dy <sup>3+</sup> -Doped K <sub>2</sub> O-SrO-P <sub>2</sub> O <sub>5</sub> Inverted Glasses: Experimental Study and Neural Network Prediction	LP
308	SELF-ASSEMBLED FACETED NANOWIRE ARRAYS ON SI(331) FOR STRAIN-ENGINEERED III-V INTEGRATION	NS
312	Synthesis and characterization of yttrium-doped cerium oxide thin films with potential applications in Solid Oxide Fuel Cells	REN

316	Influence of Copper Layer Thickness and Sample Width on Magnetic Coupling in NiFe/Cu/NiFe Trilayers	THF
318	Magneto-electronic transport in Co-based amorphous multilayers	CHM
322	Microwave-Assisted Solvothermal Synthesis of $\beta$ -NaYF <sub>4</sub> : Yb, Er, Nd Upconversion Nanoparticles	LP
326	Structural Characterization of Synthetic Hydroxyapatite by Rietveld Refinement: Evaluation of Phase Purity and Crystallographic Stability	BIO
332	Synthesis and characterization of MISIM type electroluminescent devices using spray pyrolysis	LP
334	Electrical and Magnetic Study of Metal Oxide Composites	CHM
338	Optical properties of low-thickness Silicon Oxycarbide (SiC <sub>x</sub> O <sub>y</sub> ) films produced using the horizontal HFCVD deposition technique.	SEM
346	Investigation of the structure and surface band bending of Si-doped GaNAs grown by MBE	SEM
348	REAL-TIME CONTACT NANOBIOSENSOR AS SUITABLE STRATEGY FOR PATHOGEN DETECTION	NS
352	Experimental And Theoretical Electronic States Studied For GaN <sub>x</sub> As <sub>1-x</sub> Multiquantum Well Heterostructures.	NS
356	Integrated temperature sensor: Design and automation	SEM
358	Laser-Induced Surface Modification of Sputtered Mo Films on Glass: Influence of Irradiation Direction and Wavelength	TSI
360	EFFECT OF LIQUID MEDIUM AND LASER FLUENCE ON GOLD NANOPARTICLES SYNTHESIZED VIA PULSED LASER ABLATION IN LIQUIDS: A DESIGN OF EXPERIMENTS (DOE) APPROACH	NS
374	Structural, electronic, and optical properties of BaTiO <sub>3</sub> and Sr-BaTiO <sub>3</sub> : DFT study	TSM
376	OPTIMIZATION OF UV-ASSISTED GRAPHENE TRANSFER USING PARAFFIN AS SUPPORT LAYER	NS
378	1DZnO biofunctionalization with DNA probes targeting a low-mutation region of SARS-CoV-2	NS
380	Synthesis and characterization of insulin-coated Ag nanoparticles contained in PLA/PBAT nanofibers apossites for transdermal insulin delivery for the treatment of diabetes.	NS
384	COMPUTATIONAL STUDY OF THE SENSITIVITY OF OPTICAL SENSORS BASED ON SURFACE PLASMON RESONANCE WITH A HEXAGONAL ARRAY OF GOLD NANORODS	NS
386	Scanning Tunneling Microscopy of Au, Ag and Au/Ag nanoparticles synthesized by physical methods.	MEM
388	Hydrogen production from a platform molecule by heterogeneous catalysis using a laminar oxide material	REN
390	Metallic ions adsorbed on MXene \$Ti_3C_2\$	TSM
392	Characterization of MAPbI <sub>3</sub> Perovskite Powders Obtained by Mechanical Milling	SEM
394	AEROGELS: CHARACTERISATION AND CONTROL OF NANOPOROUS STRUCTURE	NS

396	LASER THERMAL DIFFERENTIAL REFLECTANCE FOR STUDDING OPTICAL BANDGAPS IN SEMICONDUCTORS	SEM
406	The optical response of stacked non-periodic plate systems using reported experimental refractive indices (n and k)	REN
408	SPR BIOSENSORS TO MEASURE GLUCOSE LEVELS IN THE SKIN	NS
414	InAs Quantum Dots superlattices embedded in asymmetric barriers AlGaAs/GaAs grown by MBE	SEM
416	CONTROLLED SYNTHESIS, OPTICAL AND STRUCTURAL CHARACTERIZATION OF ELECTROSPUN ZnO NANOFIBERS FOR PHOTOCATALYTIC APPLICATIONS	NS
418	Effect of deposition technique on optoelectronic properties of transparent semiconductor films obtained in vacuum by PVD and PLD	PLV
420	SYNTHESIS, CHARACTERIZATION AND PHOTOCATALYTIC APPLICATIONS ELECTROSPINNING TiO <sub>2</sub> /ZnO NANOFIBERS	NS
422	LUMINESCENCE PROPERTIES OF Cs <sub>2</sub> LiIn <sub>1-x</sub> Tb <sub>x</sub> Cl <sub>6</sub> ACTIVATED BY Sb <sup>3+</sup> IONS.	LP
428	TiO <sub>x</sub> analysis on the ALD obtention process by using titanium (IV) n-butoxide: theoretical and experimental study.	ALD
430	DESIGN AND IMPLEMENTATION OF AN SPR OPTICAL SENSOR FOR THE DETECTION OF HEAVY METALS IN WATER	NS
434	Plasma Dynamics and Property Tuning of CuI Thin Films by Pulsed Laser Deposition: A Time-Resolved Optical Emission Study	PLV
438	REMOVAL OF RECALCITRANT HERBICIDE PARAQUAT DICHLORIDE VIA PHOTOCATALYSIS BY ANATASE-PHASE TIO <sub>2</sub> NANOFIBERS	NS
440	Er <sup>3+</sup> -Doped Cs <sub>2</sub> TeCl <sub>6</sub> : Synthesis and Optical Characterization	LP
444	Indium concentration in In <sub>x</sub> Ga <sub>1-x</sub> N/GaN quantum wells by X-ray photoelectron spectroscopy (XPS)	NS
446	Structure and Optical Properties of Heavily Mn-Doped GaAs	SEM
448	Polymeric Biomembranes for Textile Dye Removal from Water	BIO
450	Development of an innovative device instrument to measure the eddy current damping system for a scanning probe microscope.	CHM
454	Pattern formation on silicon surfaces by MeV Cu ion irradiation	SEM
458	Bacterial cellulose with antibacterial properties	NS
468	Evaluation of the spermatogenesis toxicity of magnetite nanoparticles (Fe <sub>3</sub> O <sub>4</sub> ) coated with Curcuma longa L. in CD1 mice.	NS