

**20<sup>th</sup> International Balkan Workshop on Applied Physics Constanța, Romania, July 12-15, 2022**

<i>Date</i>	<i>Time</i>	<i>Activity</i>			
<b>Tuesday July 12</b>	<b>15:00 – 17:00</b>	<b>Registration - Hall of Aula B</b>			
	<b>17:00 – 19:00</b>	<b>WELCOME RECEPTION - Cafeteria</b>			
<b>Wednesday July 13 Morning</b>	<b>08:00 – 09:00</b>	<b>Registration - Hall of Aula B</b>			
	<b>09:00 – 09:30</b>	<b>OPENING SESSIONS – AULA B</b>			
		<b>PLENARY SESSION (AULA B) Chair: Mihai GÎRȚU</b>			
	<b>09:30– 10:00</b>	<b>Roman SCHRITTWIESER</b>			
	<b>10:00 – 10:30</b>	<b>Calin A. UR</b>			
	<b>10:30 - 11:00</b>	<b>Coffee Break</b>			
		<b>LECTURE SESSIONS</b>			
		<b>Sec 1 (Aula B) Chair: Jocelyn ACHARD</b>	<b>Sec 3 (AB1) Chair: Mihaela BACALUM</b>	<b>Sec 4 (S22) Chair: Sorin MELINTE</b>	
	<b>11:00 – 11:30</b>	<b>Fabien BENEDIC</b>	<b>Gholam H BORDBAR</b>	<b>Camelia BALA</b>	
	<b>11:30– 12:00</b>	<b>Silviu POLOSAN</b>	<b>Constantin MIHAI</b>	<b>Fanica CIMPOESU</b>	
	<b>12:00 – 12:30</b>	<b>Razvan HIRIAN</b>	<b>Liviu S. CRACIUN</b>	<b>Samir FARHAT</b>	
		<b>Lucia N. LEONAT</b>	<b>Andreea A. UDREA</b>		
	<b>12:30 – 13:00</b>	<b>Cristian MORARI</b>	<b>Iulia S. TRANDAFIR</b>	<b>George STAN</b>	
		<b>Iulian PANA</b>	<b>Ioan M. DINU</b>	<b>Cosmin A. SERBAN</b>	
	<b>13:00 – 13:15</b>	<b>Anda E. STANCIU</b>	<b>Laura RADULESCU</b>	<b>Amanda T. PREDA</b>	
	<b>13:15 – 14:15</b>	<b>Lunch break</b>			
	<b>Wednesday July 13 Afternoon</b>		<b>LECTURE SESSIONS</b>		
			<b>Sec 1 (Aula B) Chair: Cristian M. TEODORESCU</b>	<b>Sec 2 (AB1) Chair: Branko SKORIC</b>	<b>Sec 5 (S22) Chair: Samir FARHAT</b>
		<b>14:15-14:45</b>	<b>Ovidiu BRANZA</b>	<b>Milan TICHY</b>	<b>Sorin MELINTE</b>
<b>14:45-15:15</b>		<b>Lidia R. CONSTANTIN</b>	<b>Codrina IONITA</b>	<b>Cristina BESLEAGA</b>	
		<b>Thomas DIPPONG</b>		<b>George A. NEMNES</b>	
<b>15:15-15:45</b>		<b>Magdalena GALATANU</b>	<b>Stefan MATEJCIK</b>	<b>Alina CISMARU</b>	
		<b>Liviu DUTA</b>		<b>Denis PANAITESCU</b>	
<b>15:45-16:15</b>		<b>Ana-Maria LEPADATU</b>	<b>Monica MAGUREANU</b>	<b>Daniel LINCUI</b>	
		<b>Sever MICAN</b>		<b>Roxana ANDREIAS</b>	
<b>16:15–16:45</b>		<b>Aurelian C. GALCA</b>	<b>Rodica VLADOIU</b>	<b>Cezar COMANESCU</b>	
		<b>Outman EL KHOUJA</b>			
<b>16:45-17:15</b>		<b>Alina R. ONE</b>	<b>Cristina ACHIM (POPA)</b>		
		<b>Ioan M. GHITIU</b>	<b>Mioara BERCU</b>		
<b>17:15 – 18:00</b>		<b>Coffee Break</b>			
<b>17:15 – 18:00</b>		<b>Poster session – Sections 1 + 3 + 6</b>			
<b>19:30 – 22:00</b>		<b>BANQUET</b>			

<i>Date</i>	<i>Time</i>	<i>Activity</i>	
<b>Thursday</b> <b>July 14</b> <b>Morning</b>		<b>PLENARY SESSION (AULA B)</b> Chair: Milan TICHY	
	09:00 – 09:30	Mircea DRAGOMAN	
	09:30 – 10:00	Vasile PARVULESCU	
	10:00 – 10:30	Cristian P. LUNGU	
	10:30 - 11:00	Coffee Break	
		<b>LECTURE SESSIONS</b>	
		Sec 1 (AULA B) Chair: Mircea DRAGOMAN	Sec 2 (AB1) Chair: Cristian P. LUNGU
	11:00 - 11:30	Cristian M. TEODORESCU	Branko SKORIC
	11:30 – 12:00	Vianney MILLE	Pavel KUDRNA
	12:00 – 12:30	Monica ENCULESCU	Alina VLADESCU
		Jocelyn ACHARD	
	12:30 – 13:00	Laura E. ABRAMIUC	Ana-Maria BRATU
		Doru STICLET	Dmitrii NISTOR
	13:00 – 14:30	Lunch Break	
	14:30 – 15:30	Poster session – Sections 2 + 4 + 5	
	16:00 – 20:00	Trip	

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<i>Date</i>	<i>Time</i>	<i>Activity</i>			
<b>Friday July 15 Morning</b>		<b>PLENARY SESSION (AULA B)</b> Chair: Stefan ANTOHE			
	<b>08:30 – 09:00</b>	<b>Mihaela BACALUM</b>			
	<b>09:00 – 09:30</b>	<b>Ionut ENCULESCU</b>			
	<b>09:30– 10:00</b>	<b>Victor CIUPINA</b>			
	<b>10:00 – 10:30</b>	<b>Coffee Break</b>			
		<b>LECTURE SESSIONS</b>			
		<b>Sec 1 (AULA B)</b> Chair: Thomas DIPPONG	<b>Sec 6 (AB1)</b> Chair: Marius BELC	<b>S4 (S 22)</b> Chair: Fanica CIMPOESU	
	<b>10:30 - 11:00</b>	<b>Magdalena CIUREA</b>	<b>Laura E. MARINAS</b>	<b>Stefan ANTOHE</b>	
	<b>11:00 – 11:30</b>	<b>Iosif G. DEAC</b>	<b>Jeanina M. LUNGU</b>	<b>Rares A. SUVAILA</b>	
	<b>11:30– 12:00</b>	<b>Vlad A. ANTOHE</b>	<b>Daniela CAPRIOARA</b>	<b>Daniela BERGER</b>	
	<b>12:00 – 12:30</b>	<b>Andrei GALATANU</b>	<b>Anda A. CIOBANU</b>		<b>Gabriel CARUNTU</b>
		<b>Florin ANDREI</b>			
	<b>12:30 – 13:00</b>	<b>Nicolae FILIPOIU</b>			<b>Maria A ZORAN</b>
		<b>Andrei G. TOMULESCU</b>			<b>Alexandra MARANCIUC</b>
	<b>13:00 – 13:30</b>	<b>CLOSING CEREMONY – AULA B</b>			
	<b>13:30 - 14:30</b>	<b>Lunch Break</b>			

## S0 – PLENARY SECTION

### SO 01

#### **IN VITRO IRRADIATION OF 2D AND 3D CELL CULTURE AT IFIN-HH**

Mihaela BACALUM, Mina Raileanu, Mihai RADU, Mihai STRATICIUC, Radu ANDREI, Decebal IANCU, Liviu CRACIUN, Tiberiu Relu ESANU

### SO 02

#### **STRUCTURAL AND PHYSICAL PROPERTIES OF SiC and TiC BASED THIN FILMS DEPOSED BY TVA METHOD**

Victor CIUPINĂ

### SO 03

#### **QUANTUM DEVICES AT ROOM TEMPERATURE BASED ON ATOMICALLY THIN MATERIALS**

Mircea DRAGOMAN, Adrian DINESCU, Daniela DRAGOMAN

### SO 04

#### **MULTIFUNCTIONAL SYSTEMS BASED ON SUBMICRONIC WIRES AND FIBRE WEBS FOR SENSING AND ACTUATING APPLICATIONS; RESEARCH IN NIMP'S FUNCTIONAL NANOSTRUCTURES LABORATORY**

Ionut ENCULESCU

### SO 05

#### **BERYLLIUM BASED PLASMA FACING COMPONENTS FOR NUCLEAR FUSION REACTORS**

Cristian P. LUNGU, Corneliu POROSNICU, Ionut JEPU, Oana POMPILIAN, Paul DINCA, Bogdan BUTOI, Cornel STAICU

### SO 06

#### **NANO-METALS SUPPORTED ON GRAPHITIC CARBONS AS HIGHLY ACTIVE AND MATERIALS FOR THE ENERGY PRODUCTION AND ENVIRONMENTAL APPLICATIONS**

Vasile I. PARVULESCU

### SO 07

#### **PLASMA FIREBALLS, THEIR CREATION AND BEHAVIOUR**

Roman SCHRITTWIESER, Codrina IONIȚĂ, Reiner L. STENZEL, Claudia Teodora KONRAD-SOARE, Dan Gheorghe DIMITRIU, Florin ENESCU, Stefan Andrei IRIMICIUC

### SO 08

#### **ELI-NP: EXTREME LIGHT FOR THE BENEFIT OF SOCIETY**

Călin Alexandru UR

## S1 – MATERIALS PHYSICS

### S1 L1

#### **MICROSCOPIC MODEL FOR FERROELECTRICITY AND ITS STATISTICAL TREATMENT**

Cristian Mihail TEODORESCU

### S1 L2

#### **EFFECT OF THE CADMIUM TELLURIDE DEPOSITION METHOD ON THE COVERING DEGREE OF ELECTRODES BASED ON COPPER NANOWIRE ARRAYS**

Vlad-Andrei ANTOHE, Ana-Maria PANAITESCU, Iulia ANTOHE

### S1 L3

#### **LOW TEMPERATURE/LARGE AREA NANOCRYSTALLINE DIAMOND FILMS: FROM GROWTH PROCESS TO APPLICATIONS**

Fabien BÉNÉDIC, Damia DEKKAR, Chaimaa MAHI, Azadeh VALINATTAJOMRAN, Ovidiu BRINZA, Riadh ISSAOUI, Jocelyn ACHARD

### S1 L4

#### **GROWTH STRATEGY FOR THICKENING AND ENLARGING MWPACVD DIAMOND FILMS**

Ovidiu BRINZA, Alexandre TALLAIRE, Audrey VALENTIN, Vianney MILLE, Fabien BENEDIC, Jocelyn ACHARD

### S1 L5

#### **FERROELECTRIC HfO<sub>2</sub> PHASE FORMATION BY Ge-DOPING IN HfO<sub>2</sub>/Ge-HfO<sub>2</sub>/HfO<sub>2</sub> 3-LAYER STRUCTURES ASSISTED BY STRESS FIELD**

Catalin PALADE, Ana-Maria LEPADATU, Adrian SLAV, Ovidiu COJOCARU, Alin IUGA, Valentin Adrian MARALOIU, Antoniu MOLDOVAN, Maria DINESCU, Valentin Serban TEODORESCU, Toma STOICA, Magdalena Lidia CIUREA

### S1 L6

#### **MAGNETIC PROPERTIES OF (Mn-Ni)Fe<sub>2</sub>O<sub>4</sub> NANOPARTICLES EMENDED IN SiO<sub>2</sub> MATRIX**

Thomas DIPPONG, Iosif G. DEAC, Romulus TETEAN

### S1 L7

#### **DEPOSITION OF BORON NITRIDE BY MICRO HOLLOW CATHODE DISCHARGE**

V. MILLE, M. JACQUEMIN, O. BRINZA, A. TALLAIRE, C. LAZZARONI and G. LOMBARDI

### S1 L8

#### **ORGANIC LIGHT EMITTING DIODES WITH ELECTROSPUN ELECTRODES FOR DOUBLE SIDE EMISSION**

I.C. CIOBOTARU, C.C. CIOBOTARU, M. ENCULESCU, S. POLOSAN

### S1 O1

#### **POLARIZATION CHARGE DYNAMICS ON AIR-EXPOSED FERROELECTRIC Pb(Zr,Ti)O<sub>3</sub>(001) SURFACES**

Laura E. ABRAMIUC, Nicoleta G. APOSTOL, Marius A. HUȘANU, Cristian M. TEODORESCU

**S1 O2**

**INORGANIC PEROVSKITE-BASED DEVICES FABRICATED VIA LASER ABLATION TECHNIQUES**

Florin ANDREI, Nicoleta ENEA, Valentin ION and Nicu SCARISOREANU

**S1 O3**

**DEPOSITION AND CHARACTERISATION OF ANTIMICROBIAL THIN FILMS ON TRANSPARENT POLYMER FOILS BY MAGNETRON SPUTTERING**

Lidia.R CONSTANTIN, Anca C PARAU, Adrian.E. KISS, Iulian. PANA, Mihaela DINU, Alina VLADESCU, Catalin VITELARU, Cristina ADOCHITE, Sarah COSTINAS, Mihaela IDOMIR, Mihaela BADEA, Lavinia E. TONOFREI

**S1 O4**

**STRUCTURAL AND MAGNETIC PROPERTIES OF DOPED AND UNDOPED  $MnFe_2O_4$  EMBEDDED IN SILICA MATRIX**

Thomas DIPPONG

**S1 O5**

**THIN FILMS DEPOSITION OF HYDROXYAPATITE DERIVED FROM VARIOUS NATURAL RESOURCES FOR IMPLANTOLOGICAL APPLICATIONS**

Liviu DUTA, George STAN, Carmen CHIFIRIUC, Florin MICULESCU, Valentina GRUMEZESCU, Gabriela DORCIOMAN, Elena MATEI, Irina ZGURA, Gianina POPESCU-PELIN, Johny NEAMTU, Faik OKTAR

**S1 O6**

**BULK AND STRUCTURAL INVESTIGATIONS OF CO-ELECTRODEPOSITED  $Cu_2FeSnS_4$  STANNITE FILMS**

Outman EL KHOUJA, Catalin Constantin NEGRILA, Khalid NOUNEH, Mohamed EBN TOUHAMI, Elena MATEI, Victor KUNCSEK, Aurelian Catalin GALCA

**S1 O7**

**FABRICATION AND PROPERTIES OF PANI/NANOTUBES' ASSEMBLIES FOR ELECTROCHEMICAL APPLICATIONS**

Monica ENCULESCU, Mihaela BUNEA, Andreea COSTAS, Mihaela BEREGOI, Adrian ENACHE, Victor DICULESCU, Ionut ENCULESCU

**S1 O8**

**OPTIMIZING THE BAND ALIGNMENT IN METHYLAMMONIUM LEAD IODIDE –  $Cu_xNi_{1-x}O$  INTERFACE**

Nicolae FILIPOIU, Marina CUZMINSCHI, Tudor Luca MITRAN, Dragos Victor ANGHEL, George E. STAN, Cristina BESLEAGA, Ioana PINTILIE, Kristinn TORFASON, Andrei MANOLESCU, George Alexandru NEMNES

**S1 O9**

**HIGH TEMPERATURE THERMO-PHYSICAL AND MECHANICAL PROPERTIES OF K-DOPED W-LAMINATE MATERIALS PROCESSED BY FAST**

Andrei GALATANU, Magdalena GALATANU, Monica ENCULESCU, Ilhame ASSAHSAMI, Bogdan POPESCU, Jens REISER

**S1 O10**

**MICROENGINEERING DESIGN FOR ADVANCED W-BASED BULK MATERIALS WITH IMPROVED PROPERTIES**

Magdalena GALATANU, Monica ENCULESCU, Andrei GALATANU, Dorina TICOS, Marius DUMITRU, Catalin TICOS

**S1 O11**

**CHALLENGES AND PERSPECTIVES OF SPUTTERED  $\text{Cu}_2\text{ZnSnS}_4$  BASED SOLAR CELLS**

Aurelian Catalin GALCA, Outman EL KHOUJA, Andrei Gabriel TOMULESCU, Mohamed Yassine ZAKI, Iosif Daniel SIMANDAN, Viorica STANCU, Vasilica TOMA, Alin VELEA

**S1 O12**

**PROPERTIES OF COMPOSITE MAGNETIC FILAMENTS FOR 3D PRINTING, PRODUCED USING  $\text{SmCo}_5/\text{Fe}$  EXCHANGE COUPLED NANOCOMPOSITES**

HIRIAN Răzvan, POPA Florin, PETRAȘCU Traian-Timotei, BORTNIC Rareș, SOUCA Gabriela, POP Viorel

**S1 O13**

**HYBRID PEROVSKITE SOLAR CELLS - IMPROVING THE STABILITY THROUGH COMPOSITIONAL ENGINEERING**

Lucia Nicoleta LEONAT, Viorica STANCU, Andrei Gabriel TOMULESCU, Aurelian Cătălin GĂLCĂ, Sarah DERBALI, Cristina BEȘLEAGĂ, Mihaela Florea, Ioana PINTILIE

**S1 O14**

**RAPID THERMAL ANNEALING TEMPERATURE EFFECTS ON CHARGE STORAGE BEHAVIOR OF  $\text{SiGeSn}$  QUANTUM DOTS EMBEDDED IN THE HIGH-K CMOS-COMPATIBLE  $\text{HfO}_2$  IN FLOATING GATE NON-VOLATILE MEMORIES**

Catalin PALADE, Adrian SLAV, Ovidiu COJOCARU, Valentin Serban TEODORESCU, Toma STOICA, Magdalena Lidia CIUREA, Ana-Maria LEPADATU

**S1 O15**

**STRUCTURAL, ELECTRONIC AND MAGNETIC PROPERTIES OF  $\text{PrCo}_{3-x}\text{Cu}_x$  INTERMETALLIC COMPOUNDS**

Sever MICAN, Roxana-Alina ONE, Răzvan-Claudiu POP, Coriolan Viorel TIUȘAN, Romulus TETEAN

**S1 O16**

**AB-INITIO MOLECULAR DYNAMICS AS A TOOL FOR THE STUDY OF LI DIFFUSION IN ORGANIC MOFS**

Luiza BUIMAGA-IARINCA, Cristian MORARI

**S1 O17**

**ELECTRIC FIELD ASSISTED MAGNETIZATION REVERSAL IN AN  $\text{Au/Fe/MgO}$  DISK IN A PULSE LENGTH INDEPENDENT REGIME**

Roxana-Alina ONE, Sever MICAN, Coriolan Viorel TIUȘAN

**S1 O18**

**DEVELOPMENT AND EVALUATION OF COPPER BASED TRANSPARENT HEAT REFLECTORS OBTAINED BY MAGNETRON SPUTTERING**

Iulian PANA, Lidia CONSTANTIN, Mihaela DINU, Anca Constantina PARAU, Adrian Emil KISS, Catalin VITELARU

**S1 O19**

**MAGNETO-RESISTANCE EFFECT IN STRAIGHT AND HELICAL FERROMAGNETIC MICRO-WIRES**

Anda-Elena STANCIU, Gabriel SCHINTEIE, Aurel LECA, Alin IUGA, Bogdan POPESCU, Nicușor IACOB, Bogdana BORCA, Victor KUNCSEK

**S1 O20**

**NON-HERMITIAN LINEAR RESPONSE THEORY AND ITS APPLICATIONS**

Doru STICLET

**S1 O21**

**PARTIAL SUBSTITUTION WITH IMIDAZOLIUM IN HYBRID PEROVSKITE SOLAR CELLS FOR STABILITY IMPROVEMENT**

Andrei Gabriel TOMULESCU, Lucia Nicoleta LEONAT, Florentina NEAȚU, Viorica STANCU, Vasilica TOMA, Sarah DERBALI, Ștefan NEAȚU, Arpad Mihai ROSTAS, Cristina BEȘLEAGĂ, Roxana PĂTRU, Mihaela FLOREA, Ioana PINTILIE

**S1 O22**

**INVESTIGATION OF STRESS INDUCED PROPERTY CHANGES IN PEROVSKITE MATERIALS**

Ioan-Mihail GHIȚIU, George Alexandru NEMNEȘ, Valentin ION, and Nicu D. SCĂRIȘOREANU

**S1 O23**

**DEVELOPMENT OF AN IMPLANTATION SYSTEM FOR PRODUCTION OF HIGH-DENSITY NV CENTRES IN DIAMOND CLOSE TO THE SURFACE**

Midrel Wilfried NGANDEU NGAMBOU, Alexandre TALLAIRE, Ovidiu BRINZA, Audrey VALENTIN, Fabien BENEDIC, Jocelyn ACHARD

**S1 P1**

**THERMOELECTRIC PROPERTIES OPTIMIZATION OF THE P-TYPE  $Mg_2Si_{0.3}Sn_{0.7}$  SOLID SOLUTIONS DOPED WITH Ag AND Ga**

Ilhame ASSAHSABI, Monica ENCULESCU, Bogdan POPESCU, Rachid EL BOUAYADI, Andrei GALATANU

**S1 P2**

**TiO<sub>2</sub>/3D GRAPHENE HYBRIDS**

Cristina BANCIU, Lucia LEONAT, Viorica STANCU, Vasilica TOMA, Ioana PINTILI, Ioana ION, Iulian IORDACHE

**S1 P3**

**PT CARBON DEPOSITION BY ETHYLENGLYCOL REDUCTION METHOD**

Adriana BURCI, Florian Dumitrache, Victor CIUPINĂ, Evghenii GONCEARENCO

**S1 P4**

**INFLUENCE OF TERMINAL CHAIN IN THERMAL DEGRADATION OF AZOCOMPOUNDS**

Catalina-Ionica CIOBANU, Elena-Luiza EPURE, Gabriela LISA, Irina CARLESCU

**S1 P5**

**THE ROLE OF HOLE TRANSPORT LAYER ON ELECTROSPUN WEB ANODE FOR FOLED'S APPLICATION**

I. C. CIOBOTARU, C. C. CIOBOTARU, I. ENCULESCU, A. NITESCU, M. ENCULESCU, S. POLOSAN



**S1 P6**

**SOL-GEL SYNTHESIS OF FERROMAGNETICS DECORATED GRAPHENE DERIVATIVE NANOSTRUCTURES FOR MICROWAVE ABSORBANCE**

Elena CHIȚANU, Mirela Maria CODESCU, Marian GRIGORAȘ, Cristina Antonela BANCIU, Delia PĂTROI, Virgil MARINESCU

**S1 P7**

**SPECTROSCOPIC CHARACTERIZATIONS OF Pr<sup>3+</sup> and Dy<sup>3+</sup> DOPED CALCIUM TANTALUM GALLIUM GARNET- Ca<sub>2.85</sub>Ta<sub>1.80</sub>Ga<sub>3.10</sub>O<sub>12</sub> SINGLE CRYSTALS**

Stefania HAU, Cristina GHEORGHE, Lucian GHEORGHE, Flavius VOICU, Madalin GRECULEASA, Alin BROASCA, George STANCIU, Monica ENCULESCU

**S1 P8**

**MODIFIED OCCUPANCY OF THE ORBITALS AT THE CONDUCTING INTERFACE LAALO<sub>3</sub>/SRTIO<sub>3</sub>**

Marius Adrian HUSANU, Dana Georgeta POPESCU

**S1 P9**

**SURFACE, STRUCTURAL AND MECHANICAL PROPERTY CHANGES OF OXIDES IN TUNGSTEN & BERYLLIUM METALLIC REINFORCED MATRIX COMPOSITES**

Mihail LUNGU, Cornel STAIUCU, Daniel CRISTEA, Flaviu BAIASU, Alexandru MARIN, Oana. G. POMPILIAN, Bogdan BUTOI, Claudiu LOCOVEI and Corneliu POROSNICU

**S1 P10**

**CHARACTERIZATION OF THE AGEING STATE OF THE ELECTROINSULATING POLYMERIC BASED MATERIALS UNDER RADIATION ENVIRONMENTS**

Marius LUNGULESCU, Radu SETNESCU, Virgil MARINESCU, Nicoleta-Oana NICULA

**S1 P11**

**Fe<sub>x</sub>Cu<sub>1-x</sub> ALLOYS WITH INDUCED MAGNETIC ANISOTROPY**

Mirela Maria CODESCU, Yuri NIKITENKO, Wilhelm KAPPEL, Eugen MANTA, Vladimir ZHAKETOV, Delia PĂTROI, Virgil MARINESCU, Elena CHIȚANU, Dan CHICEA

**S1 P12**

**CRYSTALLINE IN<sub>2</sub>O<sub>3</sub> NANOPARTICLES SYNTHESIS USING MICROWAVES VAPORIZATION OF METALLIC WIRES**

Doina CRACIUN, Petronela GAROI, Marian MOGILDEA, George MOGILDEA, Sorin I. ZGURA, Bogdan Stefan VASILE, Valentin CRACIUN

**S1 P13**

**NEW ZnO-BIOCHAR NANOCOMPOSITES OBTAINED BY HYDROTHERMAL SYNTHESIS IN *ULVA LACTUCA* EXTRACT**

Anca DUMBRAVA, Daniela BERGER, Cristian MATEI, Aurel DIACON, Iulia ROSCA, and Florin MOSCALU

**S1 P14**

**CORRELATION BETWEEN HEAT TREATMENTS PARAMETERS –X-RAYS DIFFRACTION AND MECHANICAL AND STRUCTURAL CHARACTERISTICS OF ALLUMINUM ALLOY TYPE 5083**

Dionisie ISTRATE, Beatrice Gabriela SBARCEA, Claudia LAZAR (NATRA), Ovidiu Petrisor ODAGIU, Mihai Alin DEMIAN, Andreea BUZATU, Eugen MANTA, Delia PATROI, Brandusa GHIBAN

**S1 P15**

**SOLVENT EFFECT ON THE MORPHOLOGY AND OPTICAL FEATURES OF SOME FILMS BASED ON DONOR-ACCEPTOR AZOMETHINES**

Marius SOROCEANU, Catalin-Paul CONSTANTIN, Mariana-Dana DAMACEANU

**S1 P16**

**TRIPLE CATION MIXED HALIDE PEROVSKITE AND SnO<sub>2</sub> MESOPOROUS SCAFFOLD FOR SOLAR CELLS**

Viorica STANCU, Lucia Nicoleta LEONAT, Andrei Gabriel TOMULESCU, Aurelian Cătălin GÂLCĂ, Cristina BEȘLEAGĂ, Vasilica TOMA, Sarah DERBALI, Liliana BĂLESCU, Mihaela FLOREA, Ioana PINTILIE

**S1 P17**

**GROWTH AND SPECTROSCOPIC PROPERTIES OF PbF<sub>2</sub>-DOPED BaF<sub>2</sub> CRYSTALS**

Marius STEF, Gabriel BUSE, Andrei RACU and Aleksandr DOROSHKEVICH

**S1 P18**

**VANADIUM OXIDES THIN FILMS BY PHYSICAL VAPOR DEPOSITION AND ELECTRODEPOSITION FOR ENERGY STORAGE APPLICATIONS**

Teddy TITE, Cosmin Giorgian UNGUREANU, Mihaela BUGA, Hajar GHANNAM,, Outman ELKHOUSA, Adnana Alina SPÎNU-ZĂULEȚ, Ionel STAVARACHE, Elena MATEI, George STAN, Constantin-Cătălin NEGRILĂ, Maria Cristina. BARTHA, Aurelian Catalin GALCA, Andrei GALATANU, Mohaned Yassine ZAKI, Mihaela BAIBARAC

**S1 P19**

**PULSED LASER PHOTO-CROSSLINKING OF GELATIN METHACRYLATE HYDROGELS FOR THE LOCALIZED DELIVERY OF CHLORPROMAZINE**

Tatiana TOZAR, Mihai BONI, Simona NISTORESCU, Angela STAICU

**S1 P20**

**BIO-BASED EPOXY COMPOSITES CONTAINING SURFACE-MODIFIED CELLULOSE FIBERS**

Cătălina Diana UȘURELU, Denis Mihaela PANAITESCU, Raluca Augusta GABOR, Cristian Andi NICOLAE, Monica Florentina RADULY, Celina Maria DAMIAN, Adriana Nicoleta FRONE

**S1 P21**

**THE EFFECT OF THE GROWTH SUBSTRATE ON THE MORPHOLOGY AND SURFACE PROPERTIES OF VANADIUM OXIDE THIN FILMS DEPOSITED BY RF SPUTTERING**

Silviu VULPE, Mircea DRAGOMAN, Florin NASTASE, Andrei AVRAM, Adrian DINESCU, Cosmin ROMANITAN, Octavian LIGOR, Martino ALDRIGO, Octavian-Gabriel SIMIONESCU

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**OPTICAL PROPERTIES AND THERMAL DEGRADATION BEHAVIOR OF DOPO-CONTAINING POLYIMIDES**

Tăchită VLAD-BUBULAC, Diana SERBEZEANU, Mihaela HOMOCIANU, Mihai BREBU

## **S2 – LASER, PLASMA AND RADIATION PHYSICS AND APPLICATIONS**

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#### **PLASMA-FACING COMPONENTS COATED BY ULTRA-NANO-CRYSTALLINE DIAMOND FOR HOT AND HAZARDOUS PLASMAS**

Codrina IONIȚĂ, Roman SCHRITTWIESER, Guosheng XU, Ning YAN, Huiqian WANG, Volker NAULIN, Jens Juul RASMUSSEN, Doris STEINMÜLLER-NETHL

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#### **OPTICAL EMISSION SPECTROSCOPY STUDY OF PLASMA PARAMETERS IN LOW-PRESSURE HOLLOW CATHODE PLASMA JET AND PLANAR MAGNETRON POWERED BY DC AND PULSED DC SUPPLY**

Himanshu MISHRA, Milan TICHÝ, Pavel KUDRNA

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#### **REMOVAL OF ANTIBIOTIC POLLUTANTS IN WATER BY NON-THERMAL PLASMA**

Monica MAGUREANU, Florin BILEA, Corina BRADU, Dunpin HONG

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#### **ION MOBILITY SPECTROMETRY STUDIES OF ATMOSPHERIC PRESSURE DISCHARGES AND THEIR APPLICATIONS**

Ladislav MORAVSKÝ, Arian Fateh BORKHARI, Emanuel MAȚAȘ, Štefan MATEJČÍK

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#### **POSSIBILITY OF PLASMA TECHNOLOGIES FOR HIGH TEMPERATURE PROTECTIVE THIN COATINGS**

Branko SKORIC, Pal TEREK, Peter PANJAN, Lazar KOVACEVIC, and Vladimir TEREK

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#### **DIAGNOSTICS AND APPLICATIONS OF A TVA SYSTEM (A REVIEW)**

Milan TICHÝ, Rodica VLADOIU, Aurelia MANDES, Virginia DINCA, Pavel KUDRNA

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#### **BIODEGRADABLE COATINGS WITH CONTROLLABLE DEGRADABILITY**

Alina VLADESCU, Iulian PANA, Lidia R. CONSTANTIN, Anca C.PARAU

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#### **SYNTHESIS OF COBALT-NICKEL ALUMINATE SPINELS BY TVA METHOD AND THERMAL ANNEALING PROCESSES**

Rodica VLADOIU, Aurelia MANDES, Virginia DINCA, Silviu POLOSAN

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#### **ASSESSMENT OF VOLATILE ORGANIC COMPOUNDS BY LASER PHOTOACOUSTIC SPECTROSCOPY IN AN URBAN AREA IN ROMANIA**

Mioara BERCU, Cristina POPA, Ana-Maria BRATU

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#### **IMPACT OF DIFFERENT SMOKING DEVICES ON THE HUMAN BODY IN SHORT-TIME EXPOSURE**

Ana Maria BRATU, Cristina POPA, Mioara PETRUS

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Ioan DANCUS, Gabriel V. COJOCARU, Robert SCHMELZ, Takahisa JITSUNO, Dan MATEI, Lidia VASESCU, Dmitrii NISTOR, Anda-Maria TALPOSI, Vicentiu IANCU, Gabriel BLEOTU, Andrei NAZIRU, Alexandru LAZAR, Alice DUMITRU, Antonia TOMA, Marius NEAGOE, Stefan POPA, Saidbek NORBAEV, Cristian ALEXE, Andreea CALIN, Costin ENE, Adrian TOADER, Nicolae STAN, Mihai CARAGEA, Sorin MOLDOVEANU, Daniel URSESCU, Domenico DORIA, Ovidiu TESILEANU, Olivier CHALUS, Christophe RADIER, Sandrine RICAUD, Vincent LEROUX, Caroline RICHARD, François LUREAU, Andrei BALEANU, Romeo BANICI, Alexandru AILINCUTEI, Iulian MOROIANU, Andrei GRADINARIU, Constantin CALDARARU, Cristian CAPITEANU, Calin Alexandru UR, Kazuo A TANAKA

**S2 O4**

**VOLATILE ORGANIC COMPOUNDS DETECTION USING PHOTOACOUSTIC SPECTROSCOPY METHOD WITH APPLICATIONS IN LIFE SCIENCE**

Cristina ACHIM (POPA), Ana-Maria BRATU, Mioara PETRUS

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**MICROTOMOGRAPHY ANALYSIS ON ACCUMULATOR CELLS USED IN EV INDUSTRY**

Cosmin DOBREA, Ion TISEANU, Adrian SIMA

**S2 P2**

**CHAOTIC LASER DEVICE OF CRYPTO-SYSTEMS TESTING**

Ionut Relu ANDREI, Sandel SIMION, Catalin TICOS, Mihail-Lucian PASCU, Mircea BULINSKI

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**DEPOSITION OF  $Fe_2O_3$  DOPED PANI THIN FILMS BY DC PLASMA POLYMERIZATION**

Bogdan BUTOI, Cornel STAICU, Oana G. POMPILIAN, Paul DINCA, Andreea GROZA

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**SPECTRAL CHARACTERIZATION OF  $TiO_2$  NANOPARTICLES FUNCTIONALIZED WITH PORPHYRINS**

Andra DINACHE, Simona NISTORESCU, Adriana SMARANDACHE, Tatiana TOZAR, Mihai BONI, Angela STAICU

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**NEON RETENTION IN BERYLLIUM CO-DEPOSITED LAYERS**

Paul DINCA, Cornel STAICU, Vasile TIRON, Georgiana BULAI, Bogdan BUTOI, Oana Gloria POMPILIAN, Cristian Petrica LUNGU

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**DEUTERIUM RETENTION IN BERYLLIUM CO-DEPOSITED LAYERS**

Cornel STAICU, Paul DINCA, Bogdan BUTOI, Corneliu POROSNICU, Oana Gloria POMPILIAN, Ion BURDUCEA, Cristian Petrica LUNGU

**S2 P7**

**MAGNESIUM DOPED ZINC THIN FILMS FOR ALKALINE BATTERIES DEPOSITED BY LASER INDUCED THERMOIONIC VACUUM ARC**

Roxana GRIGORE, Virginia DINCA, Aurelia MANDES, Rodica VLADOIU, Silviu POLOSAN

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**THIN FILM OF OXIDIZED TERFENOL-D OBTAINED BY PULSED LASER ABLATION**

Valentin ION, Ioan-Mihail GHIȚIU, Luiza-Maria STINGESCU, Andreea ANDREI, Florin ANDREI and Nicu-Doinel SCARISOREANU

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**ATMOSPHERIC MICROWAVE PLASMA GENERATION FROM METALLIC WIRES**

Marian MOGÎLDEA, George MOGÎLDEA, Sorin. I. ZGURA, Valentin CRACIUN, Doina CRACIUN, Marian C. BAZAVAN

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**EXPERIMENT FOR MITIGATION OF LASER-INDUCED CONTAMINATION ON THE DIELECTRIC MATERIAL WITH OXYGEN INJECTION AT ELI-NP**

Yoshihide NAKAMIYA, Takahisa JITSUNO, Petrisor-Gabriel BLEOTU, Catalin CHIOCHIU, Costin ENE, Vicentiu IANCU, Dan MATEI, Liviu NEAGU, Vanessa-Rozelle-Maria RODRIGUES, Madalin-Mihai ROSU, Robert SCHMELZ, Anda-Maria TALPOSI, Jonathan TAMLYN, Ioan DANCUS, Ovidiu TESILEANU

**S2 P11**

**ANTIMICROBIAL AND CYTOCOMPATIBLE COMPOSITE COATINGS FROM SUSTAINABLE, LOW-COST BIOMATERIALS FOR BIOMEDICAL APPLICATIONS**

Anca-Lăcrămioara NICĂREL, Victor CIUPINĂ

**S2 P12**

**INDUCED EFFECTS IN MELANOMA CELLS BY COMBINED EXPOSURE TO Y<sub>2</sub>O<sub>3</sub> NANOPARTICLES AND SUPERFICIAL X-RAY**

Ioana POROSNICU, Cristian M. BUTNARU, Elena STANCU, Felix SIMA, Ion TISEANU

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**LASER BASED DETECTION OF MICROPLASTICS IN WATER**

Adriana SMARANDACHE, Ionut-Relu ANDREI, Mihai BONI, Andra DINACHE, Viorel NASTASA, Iuliana URZICA, Angela STAICU

**S3 – NUCLEAR AND SUB-NUCLEAR PHYSICS AND APPLICATIONS**

**S3 L1**

**STRUCTURE PROPERTIES OF ANISOTROPIC NEUTRON STAR IN THE PRESENCE OF STRONG MAGNETIC FIELD**

Gholam Hossein BORDBAR, Mohammad KARAMI

**S3 L2**

**OVERVIEW OF  $\gamma$ -RAY SPECTROSCOPY RESEARCH AT THE BUCHAREST 9MV TANDEM ACCELERATOR**

Constantin MIHAI

**S3 O1**

**NEUTRON ACTIVATOR DRIVEN BY A COMPACT CYCLOTRON FOR MEDICAL RADIOISOTOPE PRODUCTION**

Liviu Stefan CRACIUN, Tiberiu Relu ESANU, Laurentiu TEODORESCU, Dana NICULAE, Ofelia Petronela MURESAN, Cristina BURDUCEA

**S3 O2**

**A MACHINE LEARNING BASED TRIGGER ALGORITHM FOR THE PHASE-II UPGRADE MICROMEGAS DETECTOR OF THE NEW SMALL WHEEL MUON SYSTEM IN THE ATLAS DETECTOR**

Ioan-Mihail DINU, Iulia-Ștefania TRANDAFIR

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**EFFECTS OF GAS TEMPERATURE ON MONTE-CARLO SIMULATIONS OF CHARGED PARTICLES DRIFT IN GASEOUS MEDIUM**

Michele RENDA, Iulia Ștefania TRANDAFIR

**S3 O4**

**A MULTICENTER PILOT STUDY USING A CIRS SHANE PHANTOM**

Andreea A. UDREA, Mihai T. DUMITRACHE, Alina DUMITRACHE, Maria VLĂȘCEANU

**S3 P1**

**DECAY CHAINS OF SUPERHEAVY NUCLEI Z=118-122 AND N~172**

C. I. ANGHEL, I. SILISTEANU

**S3 P2**

**INVESTIGATION OF HEAVY METALS IN THE COMPOSITION OF GLASS OBJECTS USING XRF METHOD**

Diana CHIPER, Mihail-Razvan IOAN, Alexandra-Diana CHIPER, Ioana-Cristina CHIPER

**S3 P3**

**QUICK METHODS FOR IDENTIFICATION OF MAJOR AND TRACE ELEMENTS IN DIFFERENT TYPE OF WASTE GLASS**

Diana CHIPER, Daniela CRISTEA STAN, Ileana RADULESCU, Antonio-Andrei SOFRON, Ciprian Augustin PARLOAGA, Alexandra-Diana CHIPER, Ioana-Cristina CHIPER

**S3 P4**

**STUDIES ON OTTOMAN SILVER COINS DISCOVERED IN DOBROGEA USING X-RAY BASED ELEMENTAL ANALYSIS METHODS**

Daniela CRISTEA-STAN, Gabriel TALMATCHI

**S3 P5**

**INTEGRATED SYSTEM FOR TEMPERATURE MANAGEMENT OF FRONT-END ELECTRONICS FOR PARTICLE PHYSICS EXPERIMENTS**

Ovidiu-Emanuel HUTANU, Petre-Constantin BOBOC, Alexandru-Mario BRAGADIREANU

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**INFLUENCE OF EMBEDDING DIFFERENT MATERIALS USED AS THE SELECTIVE SORBENTS FOR RADIOCESIUM ON THE CEMENT MATRICES STRUCTURAL PROPERTIES**

Laura IONASCU, Mihaela NICU, Elena NEACSU, Gheorghe DOGARU

**S3 P7**

**FAST METHOD TO ESTIMATE THE ACTIVITY OF <sup>60</sup>Co AND <sup>137</sup>Cs RADIONUCLIDS PRESENT IN LARGE PACKAGES WITH CONCRETE**

Evelina IONESCU, Daniela GURAU, Doru STANGA, Elena NEACSU

**S3 P8**

**UP DATED RESULTS OF THE TREATMENT OF SOLID RADIOACTIVE WASTE BY SUPERCOMPACTION**

Gheorghe DOGARU, Elena NEACSU, Laura IONASCU and Mihaela NICU

**S3 P9**

**THE EVALUATION OF MECHANICAL CHARACTERISTICS OF CEMENT BASED MATRICES CONTAINING SECONDARY RADIOACTIVE WASTE OBTAINED IN RADIOCESIUM SEPARATION PROCESS**

Mihaela NICU, Laura IONASCU, Elena NEACSU and Gheorghe DOGARU

**S3 P10**

**EXPERIMENTAL TEST BENCH FOR EVALUATING THE RADIATION TOLERANCE OF INTEGRATED CIRCUITS IN RADIATION ENVIRONMENTS**

Vlad-Mihai PLACINTA, Lucian Nicolae COJOCARIU and Florin MACIUC

**S4 – CROSS-DISCIPLINARY APPLICATIONS OF PHYSICS**

**S4 L1**

**STUDY OF CADMIUM-FREE  $A^{2-}B^6$  THIN FILMS FOR ELECTRONIC AND OPTOELECTRONIC DEVICES**

Ștefan ANTOHE, Ana-Maria PANAITESCU

**S4 L2**

**AFFINITY-BASED SENSING PLATFORM. TOWARDS EFFICIENT DETECTION OF SOME BIOMARKERS**

Camelia BALA

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**EXPLORATION OF THE NANOCONFINEMENT EFFECT INTO MESOPORES OF SILICA-TYPE MATERIALS FOR BIOMEDICAL APPLICATIONS**

Daniela BERGER, Mihaela DEACONU, Ana-Maria BREZOIU, Simona IONITA, Daniel LINCUI, Raul-Augustin MITRAN, Mihaela G. MOISESCU, Cristian MATEI

**S4 L4**

**SOLUTION-PROCESSED FERROELECTRIC PEROVSKITE COLLOIDAL NANOCRYSTALS FOR ELECTRONICS AND DATA STORAGE**

Gabriel CARUNTU, Daniela CARUNTU, Vasyl MICHAYLOVICH, Aurelian ROTARU

**S4 L5**

**ENGINEERING MAGNETIC AND OPTICAL PROPERTIES OF LANTHANIDE COMPOUNDS WITH LIGAND FIELD MODELS**

Fanica CIMPOESU, Marilena FERBINTEANU, Werner URLAND

**S4 L6**

**INDUCTIVE HEATING A VERSATILE PROCESS FOR GRAPHENE AND OTHER 2D MATERIALS SYNTHESIS**

Samir FARHAT, Wafa ALIMI, Elyes DHAOUADI, Ivaylo HINKOV, Fabien BENEDIC

**S4 L7**

**ADVANCES IN ENVIRONMENTAL SAMPLE GAMMA RAY ANALYSIS**

Rares SUVAILA

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**AG-NPS FOR BIOMEDICAL APPLICATIONS - SYNTHESIS AND CHARACTERIZATION**

Dan CHICEA, Alexandra MARANCIUC

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**MACHINE LEARNING TECHNIQUES APPLIED TO MANY-PARTICLE STATES IN QUANTUM DOT SYSTEMS**

Amanda Teodora PREDA, Tudor Luca MITRAN, Iulia GHIU, Mihai MARCIU, Andrei MANOLESCU, George Alexandru NEMNES

**S4 O3**

**THE DEFAULT EEG MACROSTATE AND ITS APPLICATIONS IN MEASURING SENSORY STIMULATION SALIENCE IN THE COMATOSE STATE**

Cosmin-Andrei ȘERBAN, Andrei BARBORICĂ, Adina-Maria ROCEANU, Ioana Raluca MÎNDRUȚĂ, Jean CIUREA, Ana-Maria ZĂGREAN, Leon ZĂGREAN, Mihai MOLDOVAN

**S4 O4**

**SINGLE AND COUPLED BIO-FUNCTIONAL EFFECTS OF CUO AND GA<sub>2</sub>O<sub>3</sub> INCORPORATED AS THERAPEUTIC AGENTS IN SILICA- AND PHOSPHATE-BASED BIOACTIVE GLASSES**

George STAN, Teddy TITE, Adrian-Claudiu POPA, Bryan W. STUART, Hugo R. FERNANDES, Maria-Iuliana CHIRICA, George-Adrian LUNGU, Dan MACOVEI, Lucian ALBULESCU, Cristiana TANASE, Sultana NITA, Nicoleta RUSU, David M. GRANT, José M.F. FERREIRA

**S4 O5**

**PRE-EARTHQUAKE GEOPHYSICAL PARAMETERS VARIATIONS DETECTED FROM GROUND AND SATELLITE DATA FOR VRANCEA GEOTECTONIC ACTIVE AREA**

Maria ZORAN, Roxana SAVASTRU, Dan SAVASTRU, Marina TAUTAN, Daniel TENCIU

**S4 P1**

**SYNTHESIS AND CHARACTERIZATION OF PIEZOCERAMIC MATERIALS FOR ROBOCASTING PRINTING OF 3D POROUS SCAFFOLDS**

Luminita AMARANDE, Liviu NEDELCU, Marius CIOANGHER, Lucia LEONAT, Mihai GRIGOROSCU, Liliana-Marinele BALESCU, Cristina BESLEAGA, Corina CIOBOTARU, Adrian-Claudiu POPA, George STAN, Hermine STROESCU, Bo NAN, José M.F. FERREIRA

**S4 P2**

**STRONTIUM AND/OR MAGNESIUM SUBSTITUTED BIPHASIC CALCIUM PHOSPHATE-BASED SCAFFOLDS FOR BONE GRAFTING APPLICATIONS**

Liliana M BALESCU, Cristina BESLEAGA, Iuliana PASUK, Lucia LEONAT, Adrian Claudiu POPA, George E STAN, Bo NAN, Ana Sofia NETO, José MF FERREIRA

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**ASPECTS OF THE PRESENCE OF HEAVY METALS IN PERMANENT TEETH COMING FROM A POLLUTED WORK ENVIRONMENT**

Marius BELC, Mihaela MARIS, Sema BIRGHILA, Nicoleta MATEI

**S4 P4**

**MAPPING THE SPIN COUPLING IN ANTIOXIDANT MOLECULES**

Maria Cristina BUTA, Ana Maria TOADER, Corneliu I. OPREA, Mihai GIRTU, Fanica CIMPOESU



**S4 P5**

**POSSIBILITY OF PERMEABLE THERMOELEMENTS TO INCREASE THE THERMOELECTRIC EFFICIENCY**

Radion CHERKEZ, Anna GUKOVA, Dmytro SHCHERBATYI, Stefyuk VLADISLAV

**S4 P6**

**BIOPHYSICAL STUDY OF A1AT BINDING, UNFOLDING AND CORONA FORMATION AROUND CHEMICALLY SYNTHETIZED FERRIHYDRITE NANOPARTICLES**

Claudia G. CHILOM, Nicoleta CAZACU, Sorina IFTIMIE, Adriana BĂLAN, Maria BĂLĂȘOIU, Dmytro SOLOVIOV, Andrey ROGACEV, Oleg ORELOVICH, Roman YAROSLAVTSEV, Sergei STOLYAR

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**STUDY OF THE ELECTROCHROMISM PHENOMENON ON 1,3,3-TRYPHENYLTRIAZ-1-ENE BY DFT CALCULATIONS OF EPR AND NMR SPECTROSCOPIES**

Atoumane NDIAYE, Insa SECK, Corneliu I OPREA, Mohamed Lamine SALL, Mamadou MBAYE, Aboubaker Chedikh BEYE

**S4 P8**

**WASTEWATER TREATMENT BY NEW BACTERIA STRAINS/BIOFILTER SYSTEMS**

Nicoleta Oana NICULA, Eduard-Marius LUNGULESCU, Gimi RIMBU, Ortansa CSUTAK

**S4 P9**

**MODELING TiO<sub>2</sub> NANOCCLUSERS FOR PHOTOCATALYTIC DEGRADATION OF PENICILLINS**

Corneliu I OPREA, Petre PANAIT, Mihai A GÎRȚU

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**NANOTOXICITY OF IRON OXIDE NANOPARTICLES INTERNALIZED IN MAIZE SEEDLINGS**

Mihaela RĂCUCIU, Simona OANCEA, Andreea TECUCIANU

**S4 P11**

**ASSOCIATION OF AIR POLLUTION AND METEOROLOGICAL VARIABLES WITH PANDEMIC COVID-19 MULTI-WAVES IN BUCHAREST**

Maria ZORAN, Roxana SAVASTRU, Dan SAVASTRU, Marina TAUTAN, Daniel TENCIU

**S4 P12**

**ASSESSING COMPUTATIONAL TOOLS FOR MODELING LANTHANIDE-BASED LUMINESCENT MATERIALS**

Ana Maria TOADER, Maria Cristina BUTA, Adela MIHAI, FANICA CIMPOESU

**S4 P13**

**BIODEGRADABLE Mg-Zn ALLOYS FOR ORTHOPEDIC IMPLANTS**

Violeta TSAKIRIS, Magdalena Valentina LUNGU, Dorinel. TĂLPEANU, Mihai IORDOC, Delia PĂTROI, Gabriela Beatrice SBĂRCEA, Virgil Emanuel MARINESCU, Diana Cristiana CÎRSTEA

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**CARBON NANOTUBE SENSOR MATHEMATICAL MODEL USED FOR A METHAN DETECTION**

Adrian Eracle NICOLESCU, Francesco LAMONACA, Monica VASILE

**S4 P15**

**STUDY OF THE INTERACTION OF THE COMPOUNDS PRESENT IN THE (HYDRO)ALCOHOLIC EXTRACTS OF PROPOLIS WITH TWO TYPES OF MODEL LIPID MEMBRANES**

Bogdan ZORILA, Elena Livia CHILUG

**S5 – ENGINEERING AND INDUSTRIAL PHYSICS**

**S5 L1**

**SILICON NANOMATERIALS FOR ENERGY STORAGE**

Sorin MELINTE

**S5 O1**

**HfO<sub>2</sub>/AlN MULTILAYER DEVICES AND THEIR FUNCTIONAL CHARACTERIZATION**

Cristina BESLEAGA, Andrei NITESCU, Andra Georgia BONI, Mihaela BOTEJA, Cristian RADU, Lucian PINTILIE

**S5 O2**

**METAMATERIAL CNT BASED RESONATOR FOR CO<sub>2</sub> SENSING APPLICATIONS**

Alina CISMARU, Martino ALDRIGO, Mircea DRAGOMAN, Cosmin OBREJA, Sergiu IORDANESCU, Catalin PARVULESCU, Damir MLADENOVIC

**S5 O3**

**MESOPOROUS SILICA–METAL COMPOSITES FOR THERMAL ENERGY STORAGE**

Daniel LINCUI, Raul-Augustin MITRAN, Simona IONIȚĂ, Mihaela DEACONU, Florica PAPA, Cristian MATEI, Daniela BERGER

**S5 O4**

**LARGE- AND SMALL-SIGNAL ANALYSIS OF PEROVSKITE SOLAR CELLS: THE ROLES OF IONIC CHARGE ACCUMULATIONS AND IONIC CURRENTS**

Nicolae FILIPOIU, Amanda Teodora PREDA, Dragos-Victor ANGHEL, Roxana PATRU, Andrei TOMULESCU, Viorica STANCU, Cristina BESLEAGA, Ioana PINTILIE, Andrei MANOLESCU, George Alexandru NEMNES

**S5 O5**

**THERMAL AND MECHANICAL PROPERTIES OF POLIVINYLDEN FLUORIDE/NANOSILICA NANODIELECTRICS**

Denis PANAITESCU, Catalina USURELU, Adriana FRONE, Roxana TRUSCA, Cristian NICOLAE, Raluca GABOR, Laura ANDREI, Florin CIUPRINA

**S5 O6**

**DEVELOPMENT OF A ROBOTIC LOWER LIMB REHABILITATION DEVICE**

Roxana ANDREIAS

**S5 O7**

**VERSATILITY OF IRON OXIDES AND FERRITES: FROM BIOMEDICAL APPLICATIONS TO HYDROGEN STORAGE HOSTS AND CATALYSTS**

Cezar COMANESCU, Petru PALADE, Nicu IACOB, Victor KUNCSEK

**S5 P1**

**NEW EXTRACTION CONCEPT FOR IDENTIFICATION AND QUANTIFICATION OF MICROPLASTICS IN MILK AND DAIRY PRODUCTS**

Andreea-Laura BANICA, Cristiana RADULESCU, Ioana-Daniela DULAMA, Ioan-Alin BUCURICA, Raluca-Maria BUCUR (POPA)

**S5 P2**

**SURFACE WATER QUALITY ASSESSMENT USING ELECTROANALYTICAL METHODS AND INDUCTIVELY COUPLED PLASMA MASS SPECTROMETRY (ICP-MS)**

Ioan-Alin BUCURICA, Ioana-Daniela DULAMA, Cristiana RADULESCU, Andreea Laura BANICA

**S5 P3**

**CORRELATIONS BETWEEN MICROSTRUCTURE AND THERMO-ELECTRICAL PROPERTIES OF TI BASED SHAPE MEMORY ALLOYS OBTAINED BY POWDER METALLURGY**

Cristiana-Diana CIRSTEĂ, Violeta TSAKIRIS, Monica ENCULESCU, Jana PINTEA, Vasile CIRSTEĂ, Gimi RIMBU

**S5 P4**

**THE ANALOGY BETWEEN SPECTRAL RATIOS COMPUTED ON AMBIENT VIBRATION AND EARTHQUAKE RECORDS**

Alina COMAN, Elena Florinela MANEA, Carmen Ortanza CIOFLAN

**S5 P5**

**MACROSEISMIC STUDIES IN ROMANIA**

Angela Petruta CONSTANTIN, Iren Adelina MOLDOVAN, Mihail DIACONESCU

**S5 P6**

**STRESS FIELD ASSOCIATED WITH ACTIVE FAILURES IN THE NORTH EAST AREA OF ROMANIA**

Mihail DIACONESCU, Angela Petruta CONSTANTIN, Eduard Gabrie CONSTANTINESCU

**S5 P7**

**MONITORING THE OSCILATIONS OF THE BLACK SEA LEVEL WITH THE IDSL MESUREMENTS DEVICES**

Cristian GHITA, Leontin TUTA, Alexandru MARMUREANU, IA MOLDOVAN, Constantin IONESCU

**S5 P8**

**PERFORMANCE ANALYSIS OF THERMOELECTRIC SELF – COOLING SYSTEM FOR ELECTRONIC CHIPS**

Viorel IONESCU

**S5 P9**

**RADIATION SPECTRUM OF ELECTRONS MOVING IN SPIRAL IN VACUUM AND MEDIUM**

Ivan Konstantinovich, Aurel Konstantinovich

**S5 P10**

**ON THE EFFICIENCY OF GYROTROPIC THERMOELEMENTS IN COOLING MODE**

Ivan Konstantinovich, Aurel Konstantinovich, Radion Cherkez

**S5 P11**

**COPPER AND TiO<sub>2</sub> NANOPARTICLES EFFECTS OVER THE PHOTOSYNTHESIS PROCESS IN PLANTS**

Bogdan Ciprian MITREA, Cornelia NICHITA, Cornelia DIAC, Tom Iacob MATEI, Bogdan DOBRICA, Ioan STAMATIN

**S5 P12**

**SUBSTRATE INFLUENCE ON THE SPIN AND CHARGE TRANSPORT PROPERTIES OF GRAPHENE-LIKE MATERIALS**

Amanda Teodora PREDA, Calin Andrei PANTIS-SIMUT, Alaa ALLOSH, Nicolae FILIPOIU, George Alexandru NEMNES

**S5 P13**

**EARTHQUAKE SOURCE PROPERTIES OF A LOWER CRUST SEQUENCE GENERATED IN THE MARASESTI AREA (ROMANIA)**

Anica Otilia PLACINTA, Felix BORLEANU, Emilia POPESCU, Mircea RADULIAN, Ioan MUNTEANU

**S6 – TOPICS IN PHYSICS EDUCATION RESEARCH**

**S6 L1**

**PROJECT-BASED LEARNING METHODS FOR SCIENCE AND ENGINEERING EDUCATION. AN APPROACH BASED ON BACKWARD EDUCATIONAL DESIGN AND DESIGN THINKING**

Daniela CĂPRIOARĂ, Iuliana LUNGU, Mihaela BĂICEANU, Claudia POPA, Claudia SĂLCEANU, Mirela DOGA, Mihai A. GÎRȚU

**S6 L2**

**A PROJECT-BASED LEARNING UNIT ON INTRODUCTORY THERMODYNAMICS DEvised BY BACKWARD EDUCATIONAL DESIGN AND DESIGN THINKING**

Jeanina M. LUNGU, Mihai A. GÎRȚU

**S6 L3**

**BUILDING A STEM LEARNING ENVIRONMENT IN ROMANIA. A CASE STUDY**

Laura Elena MARINAS, Ionut CROITORU

**S6 O1**

**SOFTWARE TOOLS FOR INVESTIGATING GEOMETRICAL OPTICS PHENOMENA**

Anda CIOBANU, Cristina MIRON, Catalin BERLIC, Valentin BARNA

**S6 P1**

**TEACHING PHYSICS USING COMPUTER GAMES**

Carmen PROFIROIU