APMAS 2019

9th INTERNATIONAL ADVANCES IN APPLIED PHYSICS & MATERIALS SCIENCE CONGRESS & EXHIBITION

ENEFM 2019 5th INTERNATIONAL CONGRESS ON ENERGY EFFICIENCY & ENERGY RELATED MATERIALS

OCTOBER 22-28, 2019

Sentido Lykia Resort & Spa-Liberty Hotels Lykia, Oludeniz MUGLA / TURKEY

TENTATIVE P R O G R A M			
	SUNDAY, OCTOBER 20, 2019		
14:00-23:30 REGISTRATION FOR EARLY ARRIVALS			
	(14:00 Check-in)		

	TENTATIVE PROGRAM		
	MONDAY, OCTOBER 21, 2019		
9:00-23:30	9:00-23:30		
J.00 23.30	(14:00 Check-in)		

	TENTATIVE PROGRAM	
	TUESDAY, OCTOBER 22, 2019	
	HALL 1	
OPENING SESSION 11:00-11:15	Chairperson: A. Yavuz Oral OPENING CEREMONY	
	Chairperson: A. Yavuz Oral	
Daining Fang OO:21 OO:00 To:00 To		
NARY SESSI 11:15-12:00	(Plenary speaker)	
PLENARY 11:15-	"Smart Structures and 4D printing"	
<u>. </u>		

12:30- 14:00	LUNCH		
		APMAS	ENEFM
	HALL 1	HALL 2	HALL 5
	Chairperson: Diya Alhaq Alsafadi	Chairperson: Illia Fedorin	Chairperson: Peter Križan
PARALLEL SESSIONS 14:00-15:10	(14:00-14:30) Diya Alhaq Alsafadi Royal Scientific Society, Jordan "Production of biodegradable plastic polyhydroxyalkanoates from low-cost substrates for industrial applications" (14:30-14:50) Masahiro Mikuriya Kwansei Gakuin University, Japan ID1228- Magnetic Materials Based on Dinuclear Copper(II) Trimethoxybenzoates (14:50-15:10) Azza Hadj Youssef INRS, Centre Énergie Matériaux et Télécommunications, Canada ID1376- Giant thermally modulated and stable step bunching on epitaxialy grown SrTiO3 thin films on vicinal MgO	(14:00-14:30) Illia Fedorin National Technical University of Ukraine Igor Sikorsky Kyiv Polytechnic Institute, Ukraine "Topology states of iso-frequency surfaces of a hypercrystal with ferrite and semiconductor layers" (14:30-14:50) Yasin Bozkurt Yilmaz Yıldız Technical University / Gizem Frit R&D Center, Turkey ID1447- Investigation of Nickel Effects on Matt Cast Iron Enamel (14:50-15:10) Nurullah Copoglu Yıldız Technical University / Gizem Frit R&D Center, Turkey ID1446- Optimizing the Migration Behavior of Vitreous Enamel Coatings	Peter Križan STU in Bratislava, Slovakia "Optimizing of densification process parameters for solid biofuels production using the mathematical modelling" (14:30-14:50) Loreta Tamašauskaitė-Tamašiūnaitė Center for Physical Sciences and Technology, Lithuania ID36- Nitrogen-doped carbon supported gold nanoparticles as an efficient catalyst for glucose and ethanol electro-oxidation (14:50-15:10) Eulbum Lee & Jaemin Cho Pohang University of Science and Technology, Korea, Republic Of ID40-Detail Engineering Completion Rating Index System (DECRIS) for Optima Initiation of Construction Works to Improve Contractors' Schedule-Cost Performance for Offshore Oil and Gas EPC Projects
15:10- 15:30	(100) terraces COFFEE BREAK		
	APMAS		ENEFM
	HALL 1	HALL 2	HALL 5
PARALLEL SESSIONS 15:30-17:10	Chairperson: Marjeta Maček Kržmanc (15:30-16:00) Marjeta Maček Kržmanc Jožef Stefan Institute, Slovenia "Compositional engineering of (Ba, Ca)TiO3-based solid-solution plates: piezoelectric characteristics and phase transitions behavior" (16:00-16:30) Jinyang Xu Shanghai Jiao Tong University, China " Machining Challenges and Solutions to Aerospace Grade Composite-Titanium Stacks" (16:30-17:00) Tatheer Zahra Queensland University of Technology, Australia " Role of Auxetic Composites in Protection of Building Materials and Structures"	(15:30-16:00) Eduard Gevorkyan Plekhanov Russian University of Economics, Russian Federation "The Interaction Of Transition Radiation Of A Charged Particle With An Anisotropic Magnetodielectric Filling Of A Waveguide" (16:00-16:30) Zhen WU Xi'an Jiaotong University, China " Computational design of novel high-capacity Mg-based materials for hydrogen storage" (16:30-16:50) Svetlana Rempel Institute of Solid State Chemistry, Ural Branch of the Russian Academy of Sciences, Russian Federation ID1361- Self-assembly of colloidal nanoparticles Ag2S in water solution (16:50-17:10) Charles Hervoches Nuclear Physics Institute ASCR, v.v.i., Dept. of Neutron Physics, 25068 Řež, Czech Republic ID1439- Neutron diffraction analysis of cold rotary swaged tungsten heavy alloys and other engineering materials at	(15:30-16:00) Carmen Tuca I Horia Hulubei National Institute for Physics and Nuclear Engineering, IFIN-HI Romania "Radiological issues on the VVR-S nuclear research reactor buffer tank dismantling" (16:00-16:30) Xujin Bao Loughborough University, UK "Poly(2,5-benzimidazole) Nanocomposite PEMs for FC Application" (16:30-17:00) Erliza Noor IPB University, Indonesia " Efficiency of DSSC on the Variation of Chlorophyll Dye Concentration Extract from Sargassum Sp"

17:30-18:30

FOYER (Poster Session Area)

Chairperson: A. Yavuz Oral

POSTER SESSION – I

(APMAS2019-ENEFM2019)

TENTATIVE P R O G R A M WEDNESDAY, OCTOBER 23, 201

	APMAS	APMAS	ENEFM	ENEFM
	HALL 1	HALL2	HALL 5	HALL 6
	Chairperson: Andreja Bencan Golob	Chairperson: Arkady Zhukov	Chairperson: Yaeko Mitsumori	Chairperson: Alex Bondarchuk
PARALLEL SESSIONS 10:00-12:00	(10:00-10:30) Andreja Bencan Golob Jozef Stefan Institute, Slovenia "Designing domain walls in bismuth ferrite by controlling the type and concentration of defects" (10:30-11:00) Vitezslav Benda Czech Technical University in Prague, Czech Republic "Photovoltaic cells and modules for future energy systems" (11:00-11:30) Matsuo Masaru Dalian University of Technology, China "Heat Resistance of Conductive Filler- Polymer Composites evaluated by Dynamic Tensile Modulus under Electric field and Dielectric Measurement" (11:30-12:00) Jiri Brozek University of Chemistry and Technology Prague, Czech Republic "Advanced polymeric materials and preserving of polymer objects"	(10.00-10:30) Arkady Zhukov University of Basque Country, Spain "Stress- induced Magnetic Anisotropy Enabling Engineering of Magnetic Softness and Domain Wall Dynamics of Fe-rich Amorphous Microwires" (10:30-11:00) John Nicholas Karadelis Coventry University, UK "Advances in Polymer Enriched Concrete for Strengthening Concrete Roads and AirfieldsThe case of Green Overlays" (11:00-11:20) Albina Valeeva Institute of Solid State Chemistryof the Ural Branch of the Russian Academy of Sciences, Russian Federation ID1353-Transition metal oxide materials with a nonstoichiometry (11:20-11:40)) Vidit Gaur Indian Institute of Technology Roorkee, India ID1335- Prediction of fatigue lives of aluminum alloys using crystal plasticity framework (11:40-12:00) Ján Dugáček Masarykova Univerzita, Czech Republic ID1352- A computational model of chemical reactions occurring during thermal desorption spectroscopy	(10:00-10:30) Yaeko Mitsumori Osaka University, Japan "Japan gears up Renewable Energy Usage after 3.11 – A Case Study of a Small Hydropower Plant in Osaka" (10:30-11:00) Nikola Biliškov Rudjer Boskovic Institute, Zagreb, Croatia "Single- and Bimetallic Amidoboranes - Solid-State Synthesis and Decomposition" (11:00-11:30) Moo Hwan Cho Yeungnam University, Korea, Republic Of "Development of anode and cathode materials for Microbial Fuel Cells" (11:30-12:00) Monica Siroux INSA STRASBOURG ICUBE STRASBOURG UNIVERSITY, France "Hybrid photovoltaic/thermal PVT panels. State of the art and recent R&D activities"	(10:00-10:30) Alex Bondarchuk International Iberian Nanotechnology laboratory, Portugal "Accessing Electronic Structure of Electrode-Electrolyte Interface: Surface Science Approach" (10:30-11:00) Ajay P. Thakare Sipna College of Engg and Technology India "xxxxxx" (11:00-11:30) Zhiqiang Wu Xi'an Jiaotong University, China "Waste energy recovery from furnace slag of steel industrial based on chemimethod: thermochemical behavior of biomass" (11:30-12:00) Bo-Lun Yang Xi'an Jiaotong University, China "Synergistic Effect from Co-pyrolysis of Low-rank coal and Microalgae: Product Distribution, kinetic characteristics, an Radical Analysis"

SOCIAL PROGRAM 13:15-18:00 GHOST TOWN & BLUE LAGOON TOUR (Gathering at Congress registration desk)

		TENTATIVE PROGRA			
		THURSDAY, OCTOBER 24, 2	2019		
	Chairperson: Ersin Kayahan				
Z		Shizhang Qiao			
:SSIO					
NARY SESSI 09:45-10:30	The University of Adelaide, Australia				
PLENARY SESSION 09:45-10:30	(Plenary speaker)				
_		"XXXXX"			
10:30- 11:00					
	APMAS		ENEFM		
	HALL 1	HALL 2	HALL 5		
	Chairperson: Nerija Zurauskiene	Chairperson: Andreja Gajovic	Chairperson: Abosalah Elmehdi		
	(11:00-11:30) Nerija Zurauskiene	(11:00-11:30) Andreja Gajovic	(11:00-11:30) Abosalah Elmehdi		
	Center for Physical Sciences and Technology,	Ruđer Bošković Institute, Croatia	Azzaytuna University, Libya		
	Lithuania "Nanostructured lanthanum manganite films	"Modified TiO2 based nanostructures for photocatalysis"	"Frequency Synchronization of an PV Generation System Using PLL Technique"		
::40	grown by pulsed-injection MOCVD: tuning the	priotocatalysis	recinique		
0-12	magnetoresistive properties for magnetic field sensors applications"	(11:30-12:00) Zvezdana Bascarevic	(11:30-12:00) Thomas Waas		
11:0	sensors applications	Institute for Multidisciplinary Research	OTH Regensburg, Germany		
PARALLEL SESSIONS 11:00-12:40	(11:30-12:00) Satoshi Kokado	Belgrade University, Serbia "Methods to improve fly ash reactivity	"Energy monitoring and saving in medium-sized companies"		
SSIC	Shizuoka University, Japan	and increase its reuse potential in	(12:00-12:20)		
L SE	"Theoretical Study on Anisotropic Magnetoresistance Effect for Ferromagnets"	construction materials industry"	Waqas Ul Arifeen Yeungnam University, Korea, Republic Of		
ALLE		(12:00-12:20)	ID39-Thermally stable hybrid (polyacrylonitrile based) electrospun		
AR/	(12:00-12:30) Victor Rouco Gomez	Asha Attri ITER-India (Institute for Plasma Physics),	nanofibrous membrane for separator of lithium ion batteries		
	CNRS Thales, Université Paris-Sud, France	India	(12:20-12:40)		
	"Tunnel Electroresistance in Superconducting/Ferroelectric Junctions"	ID1324- Blister Formation in Tungsten by Deuterium Ion Irradiation: Energy and	Maria Kopsakangas-Savolainen Finnish Environment Institute, Finland		
	Superconducting/Terroelectric Junctions	Fluence Dependent Study	ID134- Virtual power plant operation with solar power forecast errors		
		(12:20-12:40)	and demand response		
		Tariq Al-Omran			
		University of Baghdad, Iraq ID1147- Silicon Carbide particles			
		dispersion Effect on the Yetturia Damage			
		Characterization			
12:40- 14:00	LUNCH				
PARALLEL SIONS <i>14:00- 17:00</i>	APM.	AS	ENEFM		
PARALLEL SESSIONS 14:00- 17:00	HALL 1	HALL 2	HALL 5		

Chairperson: Gabriel Potirniche **Chairperson:** Francesco Liberati (14:00-14:30) (14:00-14:30) **Gabriel Potirniche** Francesco Liberati University of Idaho, USA Sapienza University of Rome, Italy "Development of computational simulation "Model Based Control Algorithms for Electric Vehicles Recharging tools for fatigue and creep-fatigue crack Management: from Vehicle to Grid Control" growth in metallic alloys at elevated temperatures" (14:30-15:00) Elisa Carlucci (14:30-15:00) BHGE, italy Li Xin "Preventive Maintenance And Spare Parts Management Optimization In Institute of Metal Research, CAS, China Natural Gas Pipelines Operating Under Variable Conditions Across The "Effects of Si addition on oxidation of TiAIN Year" coating deposited on titanium andγ-TiAl based alloys" (15:00-15:30) Alice Elizabeth González (15:00-15:30) Universidad de la República, Uruguay **Alexey Mironov** "Environmental Impact Assessment of Wind Farms: Noise Issues" ISP SB RAS, Russian Federation "Effects of perforation on thin superconducting (15:30-16:00) films" Jim P. Zheng Florida State University, USA (15:30-16:00) "Pre-lithated carbon electrodes for high power and long cycle life Raed Abu-Reziq energy storage cells" The Hebrew University of Jerusalem, Israel "Magnetic Catalysts and Their Applications" (16:00-16:30) Sana'a Al-Zyoud (16:00-16:20) Al al-Bayt University, Jordan Gamze Nur Aspar "xxx" **ID1421**- Comparison of nanoscale adhesion energies, forces, pull-off distances and (16:30-17:00) repulsion energies measured between bacterial Balázs Kulcsár cells and silicon nitride under water by AFM (16:20-16:40) **Samed Halilov** QEERI, HBKU, Doha, Qatar

ID1217- Affinity-based Performance Analysis of

Heterojunction p-i-n PV cells

Experimental investigation

The Hashemite University, Jordan **ID1303**- On the choice of the geometrical extrapolation models for the Mg-Al-Sr system:

(16:40-17:00) **Mohammad Aljarrah** University of Debrecen Faculty of Engineering, Hungary "Settlement renewable energy production and sharing energy"

17:00-**COFFEE BREAK** 17:30 **FOYER (Poster Session Area)** 17:30-18:30 Chairperson: A. Yavuz Oral **POSTER SESSION – II** (APMAS2019-ENEFM2019)

TENTATIVE P R O G R A M				
FRIDAY, OCTOBER 25, 2019				
	APMAS	ENEFM		
	HALL 1	HALL 5		
	Chairperson: Dong-Joo Lee	Chairperson: Jerzy Mizeraczyk		
PARALLEL SESSIONS 10:00-12:00	(10:00-10:30) Dong-Joo Lee Yeungnam University, Republic of Korea "Effects of material constituent and magnetic field on mechanical properties of Magnetorheological elastomers" (10:30-11:00) George Kalosakas University of Patras, Greece "Uniaxial compression and buckling of graphenes" (11:00-11:30) Yoothana Suansook Defence Technology Institute, Thailand "Past Present and Future of Fractional Dynamics" (11:30-12:00) Ying Li Institute of Metal Research, China "Probing the combined self-repairing and antifouling multi-functionalities of polymer coatings doped with clay nanotubes treated with pH-responsive hydrogels: combined spectroscopic and EIS approaches"	(10:00-10:30) Jerzy Mizeraczyk Gdynia Maritime University, Poland "Hydrogen production by microwave plasma biogas reforming" (10:30-11:00) Viacheslav Nikitin Melentiev Energy Systems Institute of SB RAS, Russian Federation "The Modeling of planned Hydroelectric Power Plants influence on the ecosystem" (11:00-11:30) Juan M. Guerra Institut für Theoretische Physik, Germany "Ab initio parameters of thermoelectric magnesium silicide alloys" (11:30-12:00) Zhixin Wang Shanghai Jiao Tong University, China "Research on the Application of Multi-Energy Complementary Coordination and Optimization of Distributed Renewable Energy"		
12:00- 13:15	LUNCH			
13:15- 18:00 SOCIAL PROGRAM				
	13:15-18:00 FETHIYE CITY/SHOPPING TOUR & THE ROCK TOI	MBS		
	(Gathering at Congress registration desk)			

TENTATIVE P R O G R A M				
SATURDAY, OCTOBER 26, 2019				
Chairperson: Ersin Kayahan				
Geoffrey Qiping Shen				
The Hong Kong Polytechnic University, Hong Kong				
(Plenary speaker)				
"XXXXX"				
COFFEE BREAK				

	APMAS	ENEFM
	HALL 1	HALL 5
	Chairperson: Pinqiang Dai	Chairperson: Frank Ball
PARALLEL SESSIONS 11:00-12:30	(11:00-11:30) Pinqiang Dai Fujian University of Technology, China "Study on microstructure and properties of high-entropy alloys prepared by powder metallurgy" (11:30-12:00) Bohdan Padlyak University of Zielona Góra, Poland "Enhancement of the RE3+ ions luminescence in RE-Ag co-doped borate glasses" (12:00-12:30) Yuan Yuan Chongqing University, China "Improvement of the Sulfur Corrosion Resistance of Copper Windings by using Grain Boundary Engineering (GBE) and Its Effect for Oil-paper Insulation"	(11:00-11:30) Frank Ball Frank Ball Consulting, UK "Latency Evaluation as an Integral Part of the Design and Development Process for Time-Critical Smart Grid Measurement, Control and Protection Systems" (11:30-12:00) Tariq Sattar London South Bank university, UK "Inspecting critical infrastructure in the energy sector using mobile robots to perform non-destructive testing" (12:00-12:30) Wenfu Chen Chia nan University, Taiwan "Estimating in-situ thermal diffusivity by using temperature recovery model"
12:30- 14:00	LUNCH	
PARALLEL SESSIONS 14:00-17:00	APMAS	
PARA SESS 14:00-	HALL 1	HALL 5

	Chairperson: Felix N Chukhovskii	Chairperson: Charlotta Sanders
	(14:00-14:30) Felix N Chukhovskii Shubnikov Institute of Crystallography, Federal Scientific Research Centre "Crystallography and Photonics", Russian Academy of Sciences, Russia "Challenges Of The Inverse Problem Of The X-Ray Diffraction Tomography. Theory, Formulas And Computer Iterative Algorithms Towards The 3D Recovery Of Elastic Static Displacement Field Around The Point-Defects In A Crystal" (14:30-14:50) Yunus Emre Simsek Bilecik Şeyh Edebali University, Turkey ID1397 - Modeling and optimization of experimental parameters for the removal of heavy metal and production of porous adsorbents by RSM and ANN techniques (14:50-15:10) Roman Semenko Novosibirsk State University, Russian Federation ID1216- Vortex motion of an incompressible polymeric liquid (15:10-15:40) Aljun Yang Xi'an Jiaotong University, China "Gas Sensors Based on Nanomaterials in State Monitoring and Fault Diagnosis of Power Equipment" (15:40-16:10) Zhenyang Zhong Fudan University, China "Si-based mcirocavities with embedded GeSi nanostructures: fabrication and unique optoelectronic properties" (16:10-16:30) Zhanna Yermekova National University of Science and Technology MISIS, Research Center of Functional Nanoceramics, Russian Federation ID1190- Self-propagating high-temperature synthesis of Fe2TiSn1-xMX (M= Hf, V, Zr, Si) Heusler alloys with following spark plasma sintering (16:30-17:00) Hamaa Cansever Helmholtz Zentrum Dresden-Rossendorf- Institute of Ion Beam Physics and Materials Research, Germany "Ferromagnetic resonance detection in magnetic single objects via a novel microresonator and microantenna approach"	(14:00-14:30) Charlotta Sanders World Nuclear Association, UK "Achieving Energy Efficiency through the Harmonization of the Energy Market" (14:30-14:50) Manuel Frondel RWI, Germany ID21-Drivers' Response to Fuel Taxes and Efficiency Standards: Evidence from Germany (14:50-15:10) Marcin Holub West Pomeranian University of Technology, Poland ID133- Energy efficiency of small waste water treatment plants in the Baltic Sea region – a comparative case study (15:10-15:40) Janusz Smulko Politechnika Gdańska, Poland "Fluctuations phenomena in Electrostatic double-layer capacitors (EDLCs)" (15:40-16:10) Flox Cristina Aalto University, Finland "Enhancing the performance of all-copper redox flow batteries by ion exchange membranes"
17:00- 17:30	COFFEE BREAK	
17:30- 18:30	FOYER (Poster Session Area) Chairperson: A. Yavuz Oral POSTER SESSION — III (APMAS2019-ENEFM2019)	

	TENTATIVE P R O G R A M			
SUNDAY, OCTOBER 27, 2019				
ILLEL	APMAS	ENEFM		
PARA SESSI	HALL 1	HALL 5		

	Chairperson: Minoru Watanabe	Chairperson: Vladislav A. Sadykov
	(10:00-10:30) Minoru Watanabe Shizuoka University, Japan "Radiation-hardened system design" (10:30-11:00) Guozhang Wu East China University of Science & Technology, China "β-Relaxation Governs Damping Stability of Phenol/Acrylate Hybrids" (11:00-11:30) Seongtae Bae University of South Carolina, USA "Magnetic Nanofluid Hyperthermia with Exceptionally High AC Magnetic Heat Induction Using Newly Developed Mg shallow-doped γ-Fe2O3 Nanoparticles for	(10:00-10:30) Vladislav A. Sadykov Boreskov Institute of catalysis SB RAS, Novosibirsk State University, Russian Federation "Nanocomposite Catalysts Of Biofuels Transformation Into Syngas: Design, Reaction Mechanism And Performance" (10:30-11:00) Jan Vcelak CVUT UCEEB, Czech Republic "Novel Heating and Cooling Technology as a Flexible Load for Optimized PV Utilization in buildings" (11:00-11:30) Emmanuel Stamatakis
	Cancer Clinics" (11:30-12:00) Andrey Drozdov ITMO University, Russian Federation "Sol-gel derived magnetite for biomedical applications"	NCSR Demokritos, Greece "New materials for efficient hydrogen storage and hydrogen compression" (11:30-12:00) Jaakko Puhakka Tampere University, Finland "xxx"
12:00- 13:15	LUNCH	
13:15- 18:00	SOCIAL PROGRAM 13:15-18:00 THE BOAT CRUISE AROUND EXCELLENT BAYS OF BLUE LAGOON & VISIT TO St. NICHOLAS ISLAND	
	(Gathering at Congress registration desk)	

TENTATIVE P R O G R A M		
MONDAY, OCTOBER 28, 2019		
	APMAS & ENEFM	
	HALL 1	
1:30	Chairperson: Jianxin Geng	
SESSIONS 10:00-11:30	(10:00-10:30) Jianxin Geng Beijing University of Chemical Technology, China "Carbon Nanomaterials/Polymers Nanocomposites and Electrochemical Energy Storage"	
PARALLEL SESS	(10:30-11:00) Yoshiei KATO Okayama University, Japan "Possibility of silicon recycling from waste crystalline solar cells by a cascade process of metallic floatation and chemical etching"	
/d	(11:00-11:30) Farid Abed American University of Sharjah, United Arab Emirates "Effect of Dynamic Strain Aging on Thermomechanical Response of High Strength Steels"	
12:00	Hotel Check Out	

PROGRAM LEGEND DESCRIPTIONS		
ID-	APMAS 2019 oral presentations	
ID-	ENEFM 2019 oral presentations	