

# Program

5<sup>TH</sup> INTERNATIONAL SYMPOSIUM ON ELECTROCHEMISTRY SOUTH-EAST EUROPE  
7-11 JUNE, 2015 | RIU PRAVETS | PRAVETS, BULGARIA

## Sunday June 7, 2015

16:30 - 17:30	Departure by bus from IEES and Sofia Airport to Pravets and accommodation in hotel "RIU PRAVETS"
18:30 - 19:30	Registration
19:30 - 20:30	"Meet and Greet"

## Monday June 8, 2015

Technical Exhibition /Lobby/	8:30 - 8:45	<b>RSE-SEE5 Opening Ceremony</b>	
		Welcome address by the Co-Chairs of the Organizing Committee Welcome addresses by Representative of the Bulgarian Academy of Sciences and by ISE	
		<b>Chairs: Visnja Horvat-Radošević and Ingrid Milosev</b>	
	8:45 - 9:30	PL-01	<b>N. Pebere</b> Contribution of local electrochemical impedance spectroscopy to study corrosion processes
	9:30 - 10:00	KN-01	<b>D. Rosestolato, S. Ferro, A. De Battisti</b> On the Complex Mechanism of a "Simple" Electrochemical Reaction: State of the Art and Some New Results on Chlorine Evolution Reaction
	10:00 - 10:30	KN-02	<b>J. Moskon, M. Gaberscek, R. Dominko</b> Li ion insertion battery cathodes: determining different transport contributions
10:30 - 11:00	KN-03	<b>M. Hromadová, L. Pospíšil</b> Electrochemical Oscillation Reactions on Mercury Electrodes	
11:00 - 11:20	Coffee Break		
	<b>Session 1 /Hall A/ Chairs: Sanjin Gutić and Sotiris Sotiropoulos</b>		<b>Session 2 /Hall C/ Chairs: Ján Tkáč and Alain Thorel</b>
11:20 - 11:40	CPA-O-01	<b>P. Piccardo, R. Spotorno</b> Interaction between differently coated commercial stainless steels and contacting layer (LSCF) aged in air at 800 °C	ECS-O-02 <b>A. Arico, S. Siracusano, V. Baglio, E. Moukheiber, L. Merlo</b> Advanced electro-catalysts and membranes for proton exchange membrane water electrolysis
11:40 - 12:00	CPA-O-02	<b>J. Bajat, L. Živković, B. Jegdić, J. Popić, V. Mišković-Stanković</b> Corrosion stability of cerium modified cathaporetic epoxy coatings on Al6060 alloy	ECS-O-03 <b>S. Ivanov, C. Vlaic, R. Peipmann, A. Eisenhardt, M. Himmerlich, S. Krischok, A. Bund</b> Electrochemical lithiation of thin silicon based layers potentiostatically deposited from an ionic liquid
12:00 - 12:20	CPA-O-03	<b>P. Plegemann, A. Friedemann</b> Investigation of Porous Titanium Dioxide Layers by Plasmaelectrolytic Oxidation	ECS-O-04 <b>V. Beschkov, E. Razzkova-Velkova, M. Martinov, N. Vaszilcsin, K. Petrov, D. Uzun</b> Production of energy from marine water by sulfide-driven fuel cell
12:20 - 12:40	ESD-O-01	<b>A. Hushegyi, J. Tkáč</b> Ultrasensitive detection of glycan-protein interactions with electrochemical impedance spectroscopy (EIS)	ECS-O-05 <b>J. Filip, J. Sefcovicova and J. Tkáč</b> Simple integration of nanomaterials with biocatalysts for clean electricity generation
12:40 - 13:00	ESD-O-02	<input checked="" type="checkbox"/> <b>L. Kluková, J. Filip, J. Tkáč</b> Graphene-based lectin biosensor as a promising tool for glycans analyses	ECS-O-06 <b>A. Pavlisic, P. Jovanović, G. Dražić, M. Bele, M. Gaberšček</b> 3-D Atomistic Modeling: Dealloying of Bimetallic Alloys

## Lunch

- The voting sign next to the contribution codes signifies a presentation/poster by a young scientist. The top three oral presentations and posters will be awarded. Poster presentations are evaluated by a RSE Committee. Oral presentations are voted on by all participants. Vote for your favorite oral presentation at the voting table outside the conference hall! Write down the contribution code and cast your vote in the ballot box.

**Chairs: Eleonora-Mihaela Ungureanu and Atanaska Trifonova**

14:00 - 14:45	PL-02	<b>N. Wagner, C.A. Cañas, D. Wittmaier, K.A. Friedrich</b> Post Li-ion batteries
14:45 - 15:15	KN-04	<b>C. Cristea, M. Tertis, O. Hosu, L. Fritea, R.Sandulescu</b> Innovative carbon-based nanoplatfoms for biosensing design
15:15 - 15:45	KN-05	<b>S. Gutić</b> Electrochemistry of self-doped polyanilines in neutral and alkaline media
15:45 - 16:15	KN-06	<b>J. Tkáč, T. Bertók, J. Filip, L.Kluková, A. Hushegyi, D. Pihíková, Š. Belický</b> Nanoscale-controlled interfaces for construction of ultrasensitive lectin biosensors and effective biofuel cells

16:15 - 16:35 Coffee Break

**Session 3 /Hall A/ Chairs: Achille De Battisti and Jelena Bajat**

16:35 - 16:55	ESD-O-04	<input checked="" type="checkbox"/> <b>G. Borisov, S. Avramov, E. Slavcheva, W. Lehnert</b> Stability and durability of gas diffusion ORR electrodes for HT - PEMFC
16:55 - 17:15	FSP-O-02	<b>D. Sazou, K. Saltidou</b> The influence of donor density on electrochemical processes taking place across the Ti TiO <sub>2</sub> interface
17:15 - 17:35	FSP-O-03	<b>G. Láng, M. Ujvári, S. Vesztergom, K. Szekeres, J. Gubicza</b> Structural changes during the overoxidation of electrochemically deposited poly(3,4-ethylenedioxythiophene) films
17:35 - 17:55	FSP-O-04	<b>A.Mintsouli, J. Georgieva, A.Papaderakis, E.Valova, S.Armyanov, K.Papazisi, S.Balomenou, D.Tsiplakides, S.Sotiropoulos</b> Galvanic replacement as a route for the preparation of multi-metallic Mnoble (M) electrocatalysts
17:55 - 18:15	FSP-O-05	<input checked="" type="checkbox"/> <b>N. Cotoian, L. Mureşan, M. Bele, I. Miloşev</b> Synthesis of Ag-TiO <sub>2</sub> coatings on titanium substrate by sol-gel method and their characterization

**Poster Session 1**

BEH-P-01	<input checked="" type="checkbox"/> <b>S. Eraković, A. Janković, M. Vukašinović-Sekulić, K. Y. Rhee, V. Miškov-ić-Stanković</b> Biomedical composite silver/hydroxyapatite/graphene coatings
BEH-P-02	<b>L. Fritea, M. Tertis, C. Cristea, A. le Goff, S. Cosnier, R. Săndulescu</b> A Novel Graphene/B-Cyclodextrin Biosensor For Dopamine Detection
BEH-P-03	<b>Š. Komorsky-Lovrić, I. Novak Jovanović</b> Abrasive stripping square-wave voltammetry of some natural antioxidants
BEH-P-04	<b>Š. Komorsky-Lovrić, M. Lovrić</b> Influence of product adsorption on catalytic reaction determined by Michaelis-Menten kinetics
BEH-P-05	<b>S. Patriche, E. Lupu, A. Cârăc, R. Dinică, G. Cârăc</b> Electrochemical Investigations Of Lipase Enzyme Activity On New Pyridinium Ligands
CPA-P-01	<b>L. Skatkov, V. Gomošov, S. Deribo</b> Role of Metal Impurities in Generation of Defects in Anodic Layers of Nb <sub>2</sub> O <sub>5</sub>
CPA-P-02	<input checked="" type="checkbox"/> <b>B. Volarić, I. Miloşev</b> Lanthanide, their mixtures conversion coatings as a potential replacement of chromate coatings on 7075-T6 aluminum alloy
CPA-P-03	<input checked="" type="checkbox"/> <b>U. Tiringler, J. Kovač, I. Miloşev</b> The optimization of cleaning pre-treatment of aluminum alloy AA 7075, testing of commercial conversion coating
CPA-P-04	<b>M. Bučko, S.Touazi, L.Makhloufi, A.Legat, J.B.Bajat</b> Corrosion of Zn-Mn alloy coating in carbonated concrete solution
ECS-P-01	<b>Á. Jakab, N. Vaszilcsin</b> Cathodic hydrogen evolution reaction on copper in sulphuric acid catalyzed by proton vectors
ECS-P-02	<b>A. Iacob, N. Vaszilcsin, M. Dan, A. Kellenberger</b> Electrocatalytic hydrogen evolution reaction on platinum nanoparticles nickel activated electrodes
ECS-P-03	<b>A. Skundin, T. Kulova, D. Gryzlov, V. Reeve, A. Mironenko, A. Rudy, V. Gusev, V. Naumov, D. Pukhov</b> Cyclic voltammetry study of thin-film electrodes from Si-O-Al composites

**Session 4 /Hall C/ Chairs: Raicho Raicheff and Marijana Kraljić Roković**

ECS-O-07	<b>M.P. Carpanese, A. Giuliano, D. Clematis, A. Bertei, C. Nicoletta, M. Delucchi, M. Panizza, R. Botter, A. Barbucci</b> Kinetic mechanism that influence the electrochemical behaviour of different type of cathodic materials for intermediate temperature solid oxide fuel cells
ECS-O-08	<b>K. Lota, I. Acznik, A. Sierczynska, G. Lota</b> Supercapacitors Based on Polypyrrole/Carbon Nanotubes Composites
ECS-O-10	<b>V. Horvat-Radošević, K. Magdić, K. Kvastek</b> Impedance aspect of graphite and glassy carbon electrodes in redox electrolyte
ECS-O-11	<input checked="" type="checkbox"/> <b>R. Spotorno, P. Piccardo, M. Viviani, Z. Stoynov, D. Vladikova, G. Schiller</b> Influence of Working Parameters on Anode-Supported Cells studied by Electrochemical Impedance Spectroscopy
ECS-O-12	<b>S. Brkić, Z. Mandić</b> Anodic deposition of PbO <sub>2</sub> on Nafion-covered Au electrodes

ECS-P-04	<input checked="" type="checkbox"/> <b>T. Kulova, A. Mironenko, A. Skundin, A. Rudy, V. Gusev, V. Naumov, D. Pukhov</b> Cyclic behavior of Si-O-Al composite
ECS-P-11	<input checked="" type="checkbox"/> <b>M. Brychevskiy</b> Structural dependence of 1Ce10ScSZ electrolyte strength
EMD-P-01	<b>R. Zlatev, C. Iniguez, M. Stoytcheva, J-P Magnin, E. Rodríguez, B. Valdez, G. Montero</b> Dissolved hydrogen voltammetric sensor, its application for bacterial photosintetic hydrogen production evaluation
EMD-P-02	<input checked="" type="checkbox"/> <b>L. Mandoc, E. Diacu, E. Ungureanu, L. Birzan, G. Buica, L. Pascu</b> Detection of heavy metal ions using chemically modified electrodes based on polyazulene
EMD-P-03	<input checked="" type="checkbox"/> <b>K. Dönmez, E. Çetinkaya, S. Karadağ, Emel Eren</b> Determination of Boron in Environmental Samples with Voltammetric Method
EMD-P-04	<input checked="" type="checkbox"/> <b>D. Levi, Z. Stoynov, D. Vladikova</b> Dielectric Impedance Spectroscopy – a New Technique for Rapid Screening of the Complex State of Motor Oils
FSP-P-01	<input checked="" type="checkbox"/> <b>A. Deac, C. Cotet, G. Turdean, L. Muresan</b> Simultaneous determination of Cd(II), Pb(II) by square wave voltammetry based on carbon paste electrode modified with Bidoped carbon xerogel
FSP-P-02	<input checked="" type="checkbox"/> <b>I. Antonopoulos, D. Pantelis, A. Karantonis</b> Fabrication of superhydrophobic stearic, myristic salt layers by anodic growth, cathodic deposition
FSP-P-03	<input checked="" type="checkbox"/> <b>M. Košević, S. Stevanović, G. Šekularac, V. Pavelkić, V. Jovanović, V. Panić</b> Controlled colloidal synthesis, basic electrochemical properties of TiO <sub>2</sub> -supported Pt
FSP-P-04	<b>N. Rajasekaran, L. Pogány, Á. Révész, B.G. Tóth, S. Mohan, L. Péter, I. Bakonyi</b> Structure, giant magnetoresistance of electrodeposited Co/Cu multilayers prepared by two-pulse (G/P), three-pulse (G/P/G) plating
FSP-P-05	<b>K. Boros, K. Neuróhr, L. Pogány, Z. E. Horváth, K.n Vad, A. Csik, L. Péter</b> Electrodeposition of Cd-Ni alloys: comparison of the modified Watts bath, the chloride bath

**Monday June 8, 2015**

Technical Exhibition /Lobby/	18:15 - 19:45	<b>Poster Session 1 /continued/</b>		
		FSP-P-06	<b>T. Kolonits, P. Jenei, B.G. Tóth, Z. Czigány, J. Gubicza, L. Péter, I. Bakonyi</b> TEM, XRD investigation of grain, defect structure in electrodeposited nanocrystalline nickel	IND-P-10 <b>V. Theoharis, D. Koutsaftis, E. Koronaki, G. Pashos, A. Boudouvis, A. Karantonis</b> Computational study of chlorine production in a bipolar electrochemical reactor for ballast tank water treatment
		FSP-P-07	<b>M. Dan, N. Vaszilcsin, A. Kellenberger, N. Duteanu</b> Electrochemical studies of YBaCO <sub>2</sub> Fe <sub>2</sub> O <sub>7.5</sub> in aqueous solutions	IND-P-11 <input checked="" type="checkbox"/> <b>N. Halilović, B. Malinović, S. Gutić, F. Korać, N. Avdić</b> Electrochemical treatment of leader industry wastewater
		IND-P-01	<b>B. Jović, N. Krstajic, V. Jović, U. Lačnjevac, Lj. Gajić-Krstajić</b> Ni-(Ebonex-supported-Ir) composite coatings as cathodes for hydrogen evolution reaction in alkaline solution	IND-P-12 <b>N. Vaszilcsin, M. Dan, D. Duca, L. Bunduc</b> Expired streptomycin as additive in a watts nickel electroplating bath
		IND-P-02	<b>C. Modrogan, A. Miron, O. Orbulet</b> Removal of heavy metals from wastewaters by electrodialysis in the presence of ion exchange membranes	PEA-P-01 <b>R. Zlatev, M. Stoytcheva, R. Ibarra, B. Valdez, R. Ramos</b> Clark Oxygen Probe Application For On-Line H <sub>2</sub> O <sub>2</sub> Quantification in Gaas Etching Solution In Semiconductor Industry
		IND-P-03	<b>A. Miron, C. Modrogan, D. Pascu, S. Căprărescu, H. Al-Ani, A. Rikabi, D. Clej</b> Mathematical, kinetic modeling of aluminium anodes behavior during electrocoagulation process	PEA-P-02 <b>R. Zlatev, M. Stoytcheva, S. Romero, B. Valdez, P. A. Romero, M. Argüelles</b> On-line Zn <sup>2+</sup> traces voltammetric quantification in 105 excess of Ni <sup>2+</sup>
		IND-P-04	<input checked="" type="checkbox"/> <b>D. Pascu, M. Neagu, G. Traistaru, A. Nechifor, A. Miron</b> Iron, manganese removal from drinking water	PEA-P-03 <b>M. Stoytcheva, R. Zlatev, V. Gochev, Z. Velkova</b> Electrochemical biosensor with pulsed amperometric detection for organophosphorus pesticides determination
		IND-P-05	<input checked="" type="checkbox"/> <b>M. Duinea, A. Sandu, L. Birsa, E. Matei, M. Baibarac, P. Chirita</b> The effect of organic compounds on the oxidative dissolution of chalcopyrite (CuFeS <sub>2</sub> )	PEA-P-04 <b>S. Yavuz, A. Erkal, Z. Üstündağ, İ. Mülazımoğlu</b> A novel highly sensitive graphene oxide based carbon electrode: Preparation, characterization, heavy metal analysis in food samples
		IND-P-06	<input checked="" type="checkbox"/> <b>A. Sandu, M. Duinea, P. Chirita</b> The oxidative dissolution of galena (PbS) in the presence of hydrogen peroxide	PEA-P-05 <b>A. Adir, E. Yılmaz, A. Mülazımoğlu, İ. Mülazımoğlu</b> A Novel MPTHP Modified Glassy Carbon Sensor Electrode: Determination of Cu (II) Ions by DPV technique
		IND-P-07	<b>V. Chakarova, Tz. Boiadjieva-Scherzer, H. Kronberger, M. Monev</b> Corrosion resistance of electrodeposited Zn-Cr alloy coatings	PEA-P-06 <input checked="" type="checkbox"/> <b>E. Andreou, P. Stamatopoulos, A. Karantonis</b> Computational, experimental study of coupled pairs of electrochemical oscillators: spatio-temporal distributions, effect of external perturbations
		IND-P-08	<input checked="" type="checkbox"/> <b>F. Giannopoulos, N. Chronopoulou, E. Pavlatou, A. Karantonis</b> Co-electrodeposition of nickel, hybrid multi-walled carbon nanotubes/Al <sub>2</sub> O <sub>3</sub> particles	PEA-P-07 <b>V. Andronic, C. Cristea, L. Muresan, V. Danciu, L. Gaina, E. Gal, E. Ungureanu</b> Electrochemical study of novel azomethine-bridged phenothiazine dyads
		IND-P-09	<b>B. Malinovic, M. Pavlovic</b> Decolorization of reactive violet 5 dye in textile wastewater by electrocoagulation	

**Tuesday June 9, 2015**

Technical Exhibition /Lobby/	<b>Chairs: Dimitra Sazou and Zoran Mandić</b>		
	8:30 - 9:15	PL-06	<b>I. Valov</b> Atomically scaled systems in action – past and future of memristors
	9:15 - 9:45	KN-08	<b>S. Vesztergom, N. Kovács, M. Ujvári, G. Láng</b> Generator/Collector Systems under Full Potentiodynamic Control: Aspects of Instrumentation and Modelling
	9:45 - 10:15	KN-09	<b>A. Karantonis, P. Chryssafidis, D. Karaoulanis</b> Electrochemical resonance: theoretical and experimental aspects under different modes of operation

10:15 - 10:40 Coffee Break

	<b>Session 5 /Hall A/ Chairs: Magdaléna Hromadová and Venko Beshkov</b>		<b>Session 6 /Hall C/ Chairs: Antonio Barbucci and Veselin Naydenov</b>	
10:40 - 11:00	BEH-O-01	<input checked="" type="checkbox"/> <b>D. Pihíková, J. Tkáč</b> Fabrication of lectin-based immunosensor with reduced non-specific interactions in favour of early-stage cancer diagnosis	ECS-O-13	<input checked="" type="checkbox"/> <b>Y. Brodnikovskiy</b> Zirconia powder for SOFC anode
11:00 - 11:20	BEH-O-04	<b>I. Milošev, B. Kapun, P. Rodič, J. Iskra, M. Bele, N. Veronovski, M. Rak, A. Cör</b> Functionalized hybrid sol-gel coatings deposited on titanium	ECS-O-20	<input checked="" type="checkbox"/> <b>P. Nikolov, M. Matrakova, D. Pavlov, P. Atanassova, A. Pasquier, M. Oljaca</b> Carbon additives for advanced lead-acid battery application
11:20 - 11:40	BEH-O-05	<b>Y. Hubenova, M. Mitov</b> Mechanisms of electron transfer in eukaryotic biofuel cells	ECS-O-09	<input checked="" type="checkbox"/> <b>A. Alexandrova, M. Dimitrov, D. Pavlov</b> Evaluation of polyethylene separators influence on charge acceptance of negative plates of lead-acid batteries
11:40 - 12:00	BEH-O-06	<b>M. Mitov, Y. Hubenova</b> Bioelectrochemical systems as an innovative approach for electrical energy generation, biosynthesis and bioremediation	ECS-O-21	<b>M. Matrakova, M. Foudia, L. Zerroual</b> Effect of a mineral additive on the structure and electrical characteristics of the positive active mass of a lead-acid battery

12:30 Excursion to Veliko Tarnovo

Known as the "City of the Tsars", Veliko Tarnovo is located on the Yantra River and is famously known as the historical capital of the Second Bulgarian Kingdom (13-14th century). The old part of the city is situated on the three hills Tsarevets, Trapezitsa, and Sveta Gora, rising amidst the meanders of the Yantra. During the trip, you will visit the skillfully restored medieval fortress. Dinner will accompanied by the fantastic audio-visual spectacle "Tsaravets Sound and Light".

Technical Exhibition /Lobby/	<b>Chairs: Evelina Slavcheva and Gyözö G. Lang</b>	
	8:30 - 9:15	PL-04 <b>S. Sanchez, R. Salazar, C. Chappaz-Gillot, S. Berson, D. Aldakov, V. Ivanova</b> Electrochemically and Chemically Prepared Materials for Solar Energy Application
	9:15 - 9:45	KN-10 <b>M. Roković, D. Sačer</b> Incorporation of graphene oxide into polypyrrole films for supercapacitor application
9:45 - 10:15	KN-11 <b>B. Esat, S. Bahceci, S. Akay, A. Momchilov</b> Organic Electrode Materials in Rechargeable Batteries	
10:15 - 10:30 Coffee Break		
<b>Session 7 /Hall A/ Chairs: Cecilia Cristea and Mario Mitov</b>		<b>Session 8 /Hall C/ Chairs: Tamara Petkova and Ljubomir Arsov</b>
10:30 - 10:50	ECS-O-15 <b>A. Stoyanova, D. Kovacheva, M. Mladenov, R. Raicheff</b> Symmetric and hybrid battery-supercapacitor systems for energy storage	MOE-O-01 <b>R. Sokolová, J. Fiedler, Š. Ramešová, J. Nycz, I. Degano, M. Szala, V. Kolivoška, M. Gál</b> Self-deprotonation in oxidation mechanism of quinoline compounds
10:50 - 11:10	ECS-O-16 <b>N. Hassan, M. Kilicc, E. Okumus, B. Tunaboylu, A. Soydan</b> Experimental determination of optimal clamping torque for Air Breathing PEM Fuel cell	MOE-O-02 <b>A. Liska, J. Ludvík</b> Stereoelectrochemistry of molecules with multiple redox centres. Influence of structure on electrochemical reduction of isomeric mono- and di-, nitro- or nitrosocalix[4]arenes
11:10 - 11:30	ECS-O-17 <b>Y. Vlamidis, E. Scavetta, D. Tonelli</b> Pseudocapacitors based on Layered Double Hydroxides electrodeposited on Pt electrode	PEA-O-02 <b>T. Takamura, J. Suzuki, K. Sekine</b> Investigation of Li Mass Transfer in Metal
11:30 - 11:50	ECS-O-18 <b>M. Krstajić, S. Stevanović, V. Radmilović, J. Rogan, A. Wohlmuther, V. Radmilović, S. Gojković, V. Jovanović</b> Shape controlled, carbon supported Pt anodic catalysts for DFAFC	PEA-O-03 <b>K. Takamura, A. Kotani, F. Kusu</b> Quinone-Mediated Electrochemical Detection for the Determination of Total Acid in Food
12:00 - 13:30 Lunch & Organizing Committee meeting		
<b>Chairs: Norbert Wagner and Tamás Pajkossy</b>		
13:30 - 14:15	PL-05 <b>Z. Stoynov</b> Mathematical Fundamentals of Impedance Spectroscopy	
14:15 - 14:45	KN-12 <b>V. Tsakova</b> Electrochemical nucleation and growth on foreign substrates – emerging challenges in an old scientific field	
14:45 - 15:15	KN-13 <b>V. Jović</b> Electrodeposited coatings as cathodes for hydrogen evolution in industrial chlor-alkali electrolysis	
15:15 - 15:30 Coffee Break		
<b>Session 9 /Hall A/ Chairs: Igor Povar and Konstantin Petrov</b>		<b>Sofia Electrochemical Days 2015 /Hall C/ Chairs: Vessela Tsakova and Victor Boev</b>
15:30 - 15:50	PEA-O-01 <b>E. Ungureanu, G. Buica, L. Birzan, A. Razus, C. Amarandei</b> Concept of new azulene modified electrodes for heavy metal ions analysis	SED <b>A. Milchev</b> Presentation of the book "Electrochemistry in a Divided World" to be published by Springer in 2015
15:50 - 16:10	PEA-O-04 <b>O. Spinu</b> Thermodynamic Approach for Calculating Potential - PH Diagrams in the System Cr – Natural Waters	SED-O-01 <b>O. Koleva, D. Kochnitcharova, M. Krapchanska, E. Lefterova, D. Vladikova, T. Petkova</b> Structure-conductivity correlation of $(TiO_2)_x(V_2O_5)_y(P_2O_5)_{100-x-y}$ system for SOFCs application
16:10 - 16:30	EMD-O-01 <b>K. Dönmez, S. Deveci, E. Çetinkaya, M. Doğu</b> Determination of plant available Mn(II) in soil samples with Voltammetric method after UV-Digestion	SED-O-02 <b>N. Dimcheva, E. Horozova, T. Dodevska</b> Electrochemistry of immobilized multicopper ascorbic oxidase (Cucurbita sp.): a third generation amperometric biosensor for ascorbate
16:30 - 16:50	EMD-O-02 <b>G. Mészáros</b> Some fundamental aspects of EIS data validation	SED-O-03 <b>R. Boukoureshtlieva, Y. Milisheva, I. Popov, A. Trifonova, A. Kaisheva</b> Investigation and application of pyrolyzed CoTMPP catalysts
16:50 - 17:10	ECS-O-14 <b>B. Drenchey, M. Dimitrov, V. Boev, A. Aleksandrova</b> Absorptive glass mat separator coating and its influence on the heat generation in VRLA battery cells	SED-O-04 <b>P. Angelov, S. Slavov, E. Lefterova, Y. Dimitriev</b> Applications and Trends of Ultrasound Treatment for Activation and Preparation of Perspective Nanosized Materials for Energy Conversion and StorageA
17:10 - 17:30	ECS-O-19 <b>I. Acznik, K. Lota, K. Fic, G. Lota, A. Sierczyńska</b> Hybrid solutions for high-energy storage systems	SED-O-05 <b>K. Maksimova, E. Lefterova, E. Slavcheva</b> Influence of metal loading on morphology and performance of Co-based Magnelli-phase titania supported electrocatalyst
17:30 - 17:50	ECS-O-22 <b>M. Carpanese, S. Presto, M. Viviani, A. Pesce, A. Pecunia, V. Bongiorno, R. Spotorno, D. Clematis, F. Perrozz, D. Clematis, A. Giuliano, A. Barbucci, P. Piccardo</b> Evaluation of glass sealant properties versus thermal ageing simulating switch on and off of an SOFC stack	SED-O-06 <b>S. Avramov, G. Borisov, W. Lehnert, E. Slavcheva</b> Stable and efficient catalyst support for OER in HT-PEMWE

*Held since 1997, Sofia Electrochemical Days (SED) has established itself as an important national forum for exchanging information on the latest scientific and technical developments in the field of electrochemical science and technology. In 2015, SED joins RSE-SEE to bring together both young and experienced scientists, engineers, and researchers from university, industry, and government from the region to share results and discuss issues on a wide scope of electrochemical topics.*

**Session 10 BROKERAGE Chair: Antonino Aricò**

17:50 - 18:05

**O. Vasylyev, Y. Brodnikovskiy, M. Brychevskiy** Implementing ScSZ electrolyte SOFC for Combined Heat and Power Production

18:05 - 18:20

**A. Thorel** RIGEL, a Reversible and Innovative fuel cell based system for Grid balancing and Energy storage from Large green hydrogen production

18:20 - 18:35

**B. Burdin, D. Vladikova, Z. Stoynov** Project for Hydrogen Fuel Cell Forklift

18:35 - 19:00

**Short Contributions from:** **N. Hailiović** Electrochemical treatment of leader industry wastewater  
**T. Pajkossy** Electrochemical energy storing and transformation devices  
**B. Esat** Opportunities for Collaboration in Fatih University  
**Y. Kaya** Mir R&D Inc presentation  
**A. Aricò** Hydrogen and Fuel Cells Joint Undertaking – project opportunities.

19:00 - 20:00

**Poster Session 2**

- MOE-P-01  **C. Negut, E. Ungureanu, C. Tanase, G. Arnold, F. Harja** Electrochemical characterization of some obesity regulation n oleoylamides
- ESD-P-01  **M. Pazalja, E. Kahrović, E. Turkušić** Development of a new amperometric sensor for L-cysteine and 2,5-dimercapto-1,3,4-thiadiazole based on carbon electrode modified with sodiumdichloro-bis[N-phenyl-5-bromosalicylideniminato-N,O]ruthenate(III) complex
- ECS-P-05  **A. Chekannikov, R. Kapaev, S. Novikova, T. Kulova, A. Skundin, A. Yaroslavtsev** Electrochemical study of doped lifepo4 as a cathode material for lithium-ion battery
- ECS-P-06  **G. Šekularac, A. Dekanski, V. Pavelkić, S. Stevanović, M. Košević, S. Drmanić, I. Kostić, V. Panić** Microwave synthesis of unusually-shaped crystalline RuO<sub>2</sub> supercapacitor
- ECS-P-07  **S. Sertkol, B. Esat, A. Momchilov, M. Yilmaz** Antraquinone Decorated Reduced Graphene Oxide Nanosheets for Rechargeable Batteries
- ECS-P-08 **M. Piano, C. Artini, M. Pani, M. Carnasciali, S. Presto, M. Viviani** Structural and electrical properties of ternary oxides in the CeO<sub>2</sub>-Sm<sub>2</sub>O<sub>3</sub> system
- ECS-P-09 **H. Aydin, A. Bozkurt** Enhanced ionic conductivity in borate ester plasticized Polyacrylonitrile electrolytes for lithium battery application
- ECS-P-10  **I. Genov, B. Burdin, D. Vladikova, Z. Stoynov, M. Geagea, A. Chesnaud, A. Thorel** Gas Permeability Studies of Ni-YSZ Cermet Anodes for SOFCs
- SED-P-01 **T. Petrova, B. Tzaneva, L. Fachikov, J. Hristov** Silver cementation by iron from used photographic solutions by magnetically assisted beds: batch and recirculation modes
- SED-P-02  **L. Mihaleva, M. Tanovska, P. Tsonev, S. Apostolova, V. Uzunova, R. Tzoneva** An impedance study of the influence of anti-cancer agent Erufosine on breast cancer cells
- SED-P-03 **S. Stefanov, E. Velkova, M. Martinov** Sulfite Driven Fuel Cell: Choice of Membrane
- SED-P-04  **G. Ilieva, M. Loukaycheva, B. Tzaneva, L. Gekova, L. Fachikov** Corrosion Behaviour of Nitrogen - Containing Stainless Steel in Ringer's Solution
- SED-P-05  **I. Stoycheva, B. Tsyntsarski, B. Petrova, T. Budinova, N. Petrov, M. Mladenov** Porous carbon for electrochemical application
- SED-P-06 **M. Loukaycheva** Investigation of pitting corrosion by potentiostatic polarisation
- SED-P-07 **K. Ignatova, D. Lilova** Comparative study on electrodeposition of Co-Cu alloys from ammonia-sulphate and citrate electrolyte
- SED-P-08 **B. Tzaneva, T. Petrova, J. Hristov, L. Fachikov** Application of the potentiodynamic method for investigation of cementation processes

- SED-P-09  **J. Georgieva, S. Sotiropoulos, E. Valova, S. Armyanov, G. Hristova, I. Avramova** Electrochemically obtained bi-component catalysts with enhanced photoelectrocatalytic activity under visible light
- SED-P-10  **G. Hristova, E. Valova, T. Vassilev, St. Armyanov, J. Dille, O. Steenhaut, J. Georgieva, I. Vandendael, A. Hubin** Electroless deposited Ni-Ce-P coatings
- SED-P-11 **S. Armyanov, N. Stankova, P. Atanasov, E. Valova, K. Kolev, J. Georgieva, O. Steenhaut, K. Baert, A. Hubin** XPS study of nanosecond-laser processing of polydimethylsiloxane (PDMS) as a pretreatment for electroless metallization
- SED-P-12 **I. Gadzhov, D. Dimitrov, D. Lilova** Electrolytic membrane preparation of boron hydrofluoric tin concentrates
- SED-P-13  **D. Dimitrov, I. Gadzhov, D. Lilova** Anodic dissolution of tin in boron hydrofluoric electrolytes
- SED-P-14 **E. Mladenova, Z. Stoynov, D. Vladikova** Behavior of polarizable dielectric liquid in functional ceramics by Permittivity Spectroscopy
- SED-P-15 **G. Pchelarov, D. Uzun, R. Stojanova, V. Obretenov, K. Petrov** Electrocatalysts incorporating higher fullerenes
- SED-P-16 **V. Ilcheva, I. Kanazirski, E. Lefterova, P. Petkov, V. Boev, T. Petkova** Electrical conductivity of (As<sub>2</sub>Se<sub>3</sub>)<sub>100-x</sub>Ag<sub>x</sub> bulk glasses
- SED-P-17  **S. Veleva, L. Stoyanova, A. Stoyanova, D. Kovacheva, M. Mladenov, R. Raicheff** Electrochemical properties of synthetic Fe<sub>2</sub>O<sub>3</sub> as electrode materials for hybrid battery-supercapacitor systemsxerogel
- SED-P-18  **V. Karabozhikova, V. Tsakova** Effect of dopant used in synthesis of poly(3,4-ethylenedioxythiophene) for electrocrystallization of silver
- SED-P-19  **B. Abrashev, R. Boukoureshtlieva, D. Nicheva, T. Petkova, P. Petkov, K. Petrov** Bifunctional oxygen electrodes for the Zn-air battery
- SED-P-20 **N. Solakov, E. Horozova, N. Dimcheva** Studies on the selectivity of an ascorbate biosensor
- SED-P-21 **H. Nichev, B. Georgieva, M. Petrov, K. Lovchinov, V. Georgieva, G. Alexieva, L. Vergov, D. Malinovska** Effect of the surface structure of the electrochemically deposited ZnO films on the quartz crystal microbalance on its response to NO<sub>2</sub>
- SED-P-22 **T. Petkov, L. Petkov, A. Momchilov** Synthesis and characterization of LiV<sub>3</sub>O<sub>8</sub> as a negative electrode materials for Li-ion battery with water electrolyte
- SED-P-23 **M. Monev** Hydrogenation and cracking of nickel electrodeposited in the presence of brighteners
- SED-P-24 **A. Nakova, M. Ilieva, V. Tsakova** Palladium-poly(3,4-ethylenedioxythiophene)-composite layers for electrooxidation of glycerol in alkaline medium
- SED-P-25  **K. Yosifov, L. Petkov** Glassy carbon modified with Zr, Ce and Y oxides as cathode in hypochlorite production

**Wednesday June 10, 2015**

Technical Exhibition /Lobby/	19:00 - 20:00	<b>Poster Session 2 /continued/</b>	
	SED-P-26	<b>K. Tsvetanov, V. Lyutov, V. Tsakova</b> Electrocatalytic properties of polypyrrole-based composite layers for oxidation of bioactive compounds	SED-P-32 <b>V. Bachvarov, R. Rashkov</b> Ni based multicomponent electrodeposited alloys for hydrogen evolution reaction
	SED-P-27	<b>T. Valkova, I. Krastev</b> Electrodeposition of Sn-Co alloys from gluconate electrolytes in the presence of glycine	SED-P-33 <input checked="" type="checkbox"/> <b>Z. Slavkova, O. Koleva and T. Petkova, M. Frączek, P. Ławniczak, Ł. Lindner</b> Study of LiNaSO <sub>4</sub> as electrolyte material
	SED-P-28 <input checked="" type="checkbox"/>	<b>D. Dimitrov, L. Komsalova, D. Lilova, M. Sendova, G. Popkirov, P. Vitanov, I. Gadjov, M. Ganchev</b> Optical characterization of CDB SnS thin films	SED-P-34 <input checked="" type="checkbox"/> <b>V. Kostov, L. Petkov, I. Krastev, T. Dobrovolska</b> Methanesulfonate and pyrophosphate electrolytes for deposition of copper-antimony alloys
	SED-P-29 <input checked="" type="checkbox"/>	<b>I. Boshnakova, P. Ublekov, E. Slavcheva</b> Novel cost efficient corrosion resistant catalytic carrier for PEMWE applications	SED-P-35 <b>L. Stoyanov, G. Ivanova, A. Ivanova, S. Terzieva, A. Stoyanova, M. Mladenov, R. Raicheff</b> Superconductive BSCCO ceramics as additive to the zinc electrode mass in the nickel-zinc rechargeable batteries
	SED-P-30	<b>D. Ivanova, L. Fachikov</b> Phosphating of Zinc surfaces by modifying zinc-phosphate solutions	SED-P-37 <b>N. Boshkova, P. Petrov, D. Koleva, N. Boshkov</b> Corrosion behavior of zinc composite coatings with Cr(III)-based conversion layers
	SED-P-31	<b>R. Andreeva, E. Stoyanova, A. Tsanev, D. Stoychev</b> Corrosion behavior of anodically formed oxide films on aluminum, sealed in cerium-ions containing solutions	

20:30 Gala dinner

**Thursday June 11, 2015**

Technical Exhibition /Lobby/	<b>Chairs: Paolo Piccardo and Jaroslav Filip</b>	
	8:45 - 9:30	PL-03 <b>J.C. Grenier, J-M. Bassat, AFLura, F. Mauvy, V. Vibhu, A. Rougier</b> Structural features and electrochemical properties of Lanthanide Nickelates as oxygen electrodes for application in SOFC, PCFC and Steam Electrolysers
	9:30 - 10:00	KN-14 <b>I. Povar, O. Spinu</b> Thermodynamic evaluation of disproportionation and comproportionation equilibria in heterogeneous systems „solid phase-aqueous solution” under real conditions
	10:00 - 10:30	KN-15 <b>I. Mickova, L. Arsov</b> Ellipsometric study of passive and anodic oxide films formed on Nb and Ti substrates
	10:30 - 11:00	KN-16 <b>O. Vasylyev, Ye. Brodnikovskiy, M. Brychevskiy</b> From powder to power: Ukrainian experience

11:00 - 11:15 Coffee Break

**Session 11 /Hall A/ Chairs: Massimo Viviani and Oleksandr Vasylyev**

11:15 - 11:35	ECS-O-01 <input checked="" type="checkbox"/>	<b>A. Bertei, C. Nicoletta</b> Physically-based impedance simulation to decouple convoluted transport and reaction phenomena in SOFC cathodes
11:35 - 11:55	ECS-O-24 <input checked="" type="checkbox"/>	<b>B. Abrashev, T. Spassov, S. Vassilev, A. Popov</b> Hydrogen sorption and electrochemical properties of TiFe based alloys synthesized by mechanical alloying
11:55 - 12:15	ECS-O-25 <input checked="" type="checkbox"/>	<b>E. Petkucheva, E. Lefterova, J. Heiss, U. Schnakenberg, E. Slavcheva</b> Influence of the Gold Sublayer to the Catalytic Properties of Magnetron Sputtered Pt, Ir and Irox Thin Films
12:15 - 12:35	ECS-O-26	<b>D. Vladikova, D. Montinaro, I. Genov, P. Piccardo, Z. Stoynov, Z. Willemin, R. Spotorno, A. Pecunia, V. Bongiorno, M. Rolland, B. Burdin</b> In situ impedance monitoring of NiO-YSZ anode behavior during its initial reduction and redox cycling

**RSE-SEE5 Closing Remarks**

12:35 - 12:50  
13:30 Departure by bus from Pravets to Sofia Airport and IEES

**Presentation Types**

- PL **Plenary** (40 minutes)
- KN **Keynote** (25 minutes)
- O **Oral** (15 minutes)
- P **Poster**
- Young scientist** presentation/poster

**Session 12 /Hall C/ Chairs: Tsvetina Dobrovolska and Soma Vesztergom**

IND-O-01	<b>É. Fekete, B. Lengyel, T. Cserfalvi, T. Pajkossy</b> Electrocoagulation: an electrochemical process for water cleaning
IND-O-02	<b>T. Boiadjieva-Scherzer, H. Kronberger, M. Monev</b> Zn-Cr electroplating of steel
IND-O-03	<b>L. Peter, K. Neuróhr, Á. Marsai, L. Pogány, Á. Révész, B. Tóth, I. Bakonyi</b> Electrodeposition of nickel and nickel alloys from alcoholic solutions
IND-O-04 <input checked="" type="checkbox"/>	<b>N. Touabi, S. Martinez, M. Bounoughaz</b> Optimization of Electrochemical Copper Recovery Process: Effect of the Steering Speed in Chloride Medium of pH=3

**Presentation Topics**

- BEH **Bioelectrochemistry and Biomedical Applications**
- CPA **Corrosion, Passivation and Anodic Films**
- ESD **Electrochemical and Electronic Sensor Devices**
- ECS **Electrochemical Energy Conversion and Storage** /batteries, fuel and solar cells/electrolyzers, electrochemical capacitors/
- IND **Electrochemical Industrial Applications** /plating, syntheses, environmental protection/
- EMD **Electrochemical Methods and Devices**
- FSP **Electrochemistry of Functional Structures and Materials**
- MOE **Molecular Electrochemistry, Mechanisms and Intermediates**
- PAE **Physical and Analytical Electrochemistry**