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Editorial

Joint event:

7th Regional Symposium on Electrochemistry - South East Europe (RSE–SEE 7) and 8th Kurt Schwabe Symposium

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This special issue of *jESE* contains a collection of articles that were originally presented at 7th Regional Symposium on Electrochemistry-South East Europe (RSE–SEE 7) that was held jointly with 8th Kurt Schwabe Symposium, on 27-30 May 2019, in Split, Croatia. This gathering was intended to facilitate exchange of ideas and collaborations among experts, engineers and beginners in the field of electrochemistry.

The joint 4-day symposium was organized by the Association of South-East European Electrochemists (ASEEE) <http://www.aseee.eu> and gathered 176 participants from 23 countries, giving in total 5 plenary talks, 10 keynote talks, 65 oral presentations and 64 poster presentations. Also, the Satellite Student Symposium with 14 contributions was associated to the main symposium event. The Book of abstracts can be downloaded from here: <http://www.aseee.eu/userfiles/rse-7/Book-of-abstracts.pdf>.

The conference was dedicated to the memory of late Professor Zdravko Stoynov (1936–2017), a world distinguished Bulgarian electrochemist and one of the founders of the regional cooperation of electrochemists, established in 2008 through RSE–SEE chain of conferences.

The conference was aimed to highlight advances and new findings in electrochemistry area and its impact on technology development. In the year of Nobel prize–electrochemistry winners who developed Li-ion batteries and created a rechargeable world, it is of special importance to emphasize that the present symposium topics were: Batteries and electrochemical energy storage, Corrosion science and protection, Electrochemical engineering, Electroanalytical chemistry and sensors, Organic electrochemistry and bio-electrochemistry, Physical electrochemistry, Materials and electrochemical processing and General topics. This broadness of topics is reflected in this issue with papers not only on the basics of energy storage and energy storage devices such as batteries and fuel cells, but also on electrochemical sensing technologies, electrolytic production of metals, electrochemical synthesis for various purposes and corrosion inhibition.

Extended versions of 4 plenary, 4 keynote and 7 contributed talks can be found in this special *JESE* issue, together with the list of authors and titles of abstracts presented at the conference. Each published paper successfully passed the reviewing process that involved the participation of prominent international scientists.

As the Editors of this special issue of *JESE*, we would like to express sincere appreciation to all those who had contributed in producing it. Special thanks are going to the authors of contributions for their state-of-the-art articles and reviewers for their timely reviewing and valuable comments.

We hope that readers will find this special issue interesting and valuable. We are also convinced that it will be beneficial for a wide audience in academy and industry.

List of authors and titles of abstracts submitted to RSE-SEE 7 and 8th Kurt Schwabe Symposium (sorted alphabetically by the first author)

Plenary lectures (5)

- Miran Gaberšček, Sara Drvarič Talian, Jože Moškon, Jan Bitenc, Alen Vižintin, Robert Dominko. Reaction and transport mechanisms in lithium-sulfur batteries.
- Francois Lapicque. Electrolytic iron production from alkaline suspension of solid oxides: compared cases of hematite, iron ores and iron-containing processing waste.
- Arjan Mol (J.M.C. Mol). In-situ electrochemical, microscopic and spectroscopic studies of local corrosion and buried metal-polymer interfaces.
- Pavel Shuk, Hans-Ulrich Guth, Chad McGuire. [Gas sensing technologies in combustion: a comprehensive review.](#)
- Daria Vladikova, Blagoy Burdin. Advancement in the electrochemical testing and characterization of power sources.

Keynote lectures (10)

- Jiří Barek. [Novel electrode materials and arrangements for sensing biologically active organic compounds.](#)
- Jenia Georgieva, Nina Dimitrova, Sotiros Sotiropoulos, Tzvetanka Boiadjeva-Scherzer. A new environment-sparing method for preparation of nanomaterials applicable in fuel cells and electrolyzers.
- Anton Kokalj, Ingrid Milošev. Molecular modeling of corrosion inhibitors: a search for physically sounds descriptors.
- Jiří Ludvík, Alan Liška. Stereoelectrochemistry of reducible calix[4]arenes.
- Nicolas Murer, Jean-Paul Diard, Bogdan Petrescu. The effects of time-variance on impedance measurements: examples on a corroding electrode and a battery cell.
- Géza Nagy, Livia Nagy, Andras Kiss, Daniel Filotás, Abdelilah Asserghine, Ricardo M. Souto. [Results achieved fitting to- and using SECM in corrosion experiments.](#)
- Nebojša D. Nikolić. Formation of disperse deposits by electrolysis: morphology, structure and mechanism.
- Helena Otmačić Ćurković, Ekatarina Kristan Mioč, Zana Hajdari Gretić. Comparison of the protective properties of fatty acid films prepared by different application methods.
- Tamás Pajkossy, Soma Vesztegom. A fifty-years old problem re-visited: the voltammograms of diffusion controlled reactions.
- Igor A. Pašti. Computationally driven development of novel electrocatalysts.

Oral presentations (65)

- Ilona Acznik, Katarzyna Lota. The influence of conductivity and pH on the performance of electric double layer capacitors working in neutral electrolytes.
- Veronica Anăstasoae, Laura Enache, Mihaela Cristea, Raluca Isopescu, Gabriela Stanciu, Eleonora-Mihaela Ungureanu. Electrochemical properties of substituted thioxothiazolidin-azulene.
- Liana Anicai, Stefania Costovici, Aurora Petica, Sabrina Rosoiu, Aida G. Pantazi, Teodor Visan. Electrodeposition of Sn binary and ternary alloys involving deep eutectic solvents.
- Josefina Ballarre, Tuba Ademir, Liliana Liverani, Aldo R. Boccaccini. Sol-gel spray and electrophoretic deposition techniques to enhance bioactive and antibacterial response of titanium implants.
- Viaceslav Barsukov, V. Khomenko, Oksana Butenko. On the validity of using the diffusion coefficient in characterization of charge transfer reactions in systems with a solid-phase reagent.
- Galin Borisov, Denis Paskalev, Katerina Maksimova-Dimitrova, Elitsa Petkucheva, Evelina Slavcheva. Highly efficient carbon-free membrane electrode assemblies for electrolysis cells with anion exchange membrane (AEMEC).
- Blagoy Burdin, Dimitar Bojchev, Daria Vladikova. Introduction of differential resistance analysis in battery testing.
- Barbara Burnat, Andrzej Leniart, Sławomira Skrzypek. Functionalization of titanium dioxide coatings for biomedical applications – corrosion impact study.
- Manfred Decker, Arnold Wezel, Robert Hasler, Petra Teichmann, Michael Schneider, Winfried Vonau. Investigations about the simultaneous potentiometric determination of pH-value and potassium amount in freshly sampled soil on-site on the field.
- Nils Donker, Anastasiya Ruchets, Daniela Schönauer-Kamin, Jens Zosel, Ulrich Guth, Ralf Moos. Pulse polarization measurements on the system Pt|YSZ by varying the polarization voltage.
- Matija Gatalo, Leonard Moriau, Francisco Ruiz-Zepeda, Primož Jovanovič, Urša Petek, Nejc Hodnik, Marjan Bele, Miran Gaberšček. CO-assisted ex-situ chemical activation of gram-scale high-performance Pt-Cu/C ORR electrocatalyst.
- Bernhard Gollas, David Fuchs, Bernhard C. Bayer. Electrochemistry of macroscopic CVD-Graphene on non-conducting substrates in deep eutectic solvents.
- Rui Gusmão, Zdeněk Sofer, Martin Pumera. The advent of 2D layered materials for electrochemical energy applications.
- Thomas Herl, Daniel Böhm, Frank-Michael Matysik. Electrooxidation of nucleobases on disposable electrodes investigated by electrochemistry-capillary electrophoresis-mass spectrometry.
- Alexander Herms, Jingying Yao, Jens Zosel, Wolfram Oelßner, Michael Mertig. Coulometric titration of oxygen in the picomol range.
- Nejc Hodnik, Matija Gatalo, Francisco Ruiz-Zepeda, Andraž Pavlišič, Primož Jovanovič, Marjan Bele, Goran Dražić, Miran Gaberšček. Tracking and modeling of PtCu nanoalloy dealloying at the atomic-scale: spot the difference “game” at the atomic level.
- Magdaléna Hromadová, Viliam Kolivoška, Jakub Šebera, Táňa Sebechlebská, Jindřich Gasior, Štěpánka Nováková Lachmanová, Gábor Mészáros, Marcin Lindner, Marcel Mayor, Michal Valášek. Effect of tripodal anchoring groups (meta versus para position) on the charge transport in single oligophenylene molecular wires.
- Jelena Isailović, Vasko Jovanovski, Primož Jovanovič. Development of hydrogen peroxide gas sensor for security applications.

- Kaewta Jetsrisuparb, Sawitta Triamthaisong, Nontipa Supanchaiyamat, Andrew Hunt, Wirat Jarernboon, Chaiyaput Kruehong, Pornnapa Kasemsiri, Prinya Chindaprasirt. Porous composite electrode from pyrolyzed rice husk for rechargeable zinc battery.
- Primož Jovanovič, Kevin Stojanovski, Marjan Bele, Luka Suhadolnik, Goran Dražić, Gorazd Koderman Podboršek, Miran Gaberšček, Nejc Hodnik. Novel methodology for investigating electrochemical gas evolution reactions: a case study of oxygen evolution reaction using floating electrode for effective oxygen bubble removal.
- Vasko Jovanovski, Nana Ivana Hrastnik, Urša Klun. Insights into copper film electrodes for voltammetric determination of trace toxic elements.
- Jesper T.N. Knijnenburg, Napapon Massa-Angkul, Kaewta Jetsrisuparb. One-pot synthesis of CNT/Ni electrocatalysts using electrophoretic deposition.
- Katharina Kocher, Viktor Hacker. Design of polymer coated catalysts for enhanced oxygen reduction reaction toward durable polymer electrolyte fuel cells.
- Veniamin Kondratiev, Svetlana Eliseeva, Ekaterina Shkreba, Mikhail Kamenskii, Elena Tolstopjatova. Improved electrochemical performance of lithium titanate anodes with conductive polymer binder.
- Dževad Kozlica, Ingrid Milošev. The influence of surface preparation on efficiency of mercapto and phosphonic inhibitors adsorbed on aluminium and copper metal.
- Gyözö G. Láng, Mária Ujvári. On the electrochemical reduction of molecular oxygen in coexisting equilibrium phases of solutions of limited miscibility.
- Katarzyna Lota, Ilona Acznik, Agnieszka Sierczynska, Lukasz Kolanowski, Grzegorz Lota. The electrochemical properties of nitrogen-doped carbon materials.
- Peter Machata, Alexey Popov, Tyler T. Clikeman, Eric V. Bukovsky, Steven H. Strauss, Olga V. Boltalina. Spectroelectrochemical studies of perfluoroalkylated derivatives of PAHs.
- Andrei Ionut Mardare, Cezarina Cela Mardare, Christoph Cobet, Achim Walter Hassel. Combinatorial bandgap tuning of niobium-based anodic oxides for visible light application.
- Marija Marguš, Pierre-Jean Superville, Gabriel Billon. Understanding the gold microwire electrode behavior for the detection of trace metals.
- Kurt Mayer, Viktor Hacker. Monitoring and evaluation of polymer electrolyte fuel cells under harmful operating conditions.
- Ko-ichiro Miyamoto, Tatsuo Yoshinobu. In situ observation of crevice corrosion by a modified chemical imaging sensor system.
- Denise Molinnus, Petra Siegert, Holger S. Willenberg, Arshak Poghossian, Michael Keusgen, Michael J. Schöning. Adrenaline biosensing – from macroelectrode to chip-based biosensor to support tumor diagnosis
- Francisco Montes, Lucía Yohai, Marcela Vazquez, María B. Valcarce. Testing inorganic ions as “green” corrosion inhibitors for construction steel.
- Anne Müller, Susan Sachse, Manfred Decker, Frank-Michael Matysik, Winfried Vonau. Comparison of different screen printed sensors based on carbon paste with incorporated Prussian blue nanoparticles as electrode material for hydrogen peroxide detection.
- Georg Pchelarov, Dzhamaal Uzun, Konstantin Petrov. Electrocatalysts incorporating higher fullerenes and DWCNTs.
- Gonzalo Perelstein, Antonio da Cunha, Marcela Vazquez, Matías Valdés. Cu₂ZnSnS₄ prepared sulfurizing a stack of electrodeposited metallic layers.
- Elitsa Petkucheva, Galin Borisov, Elefteria Lefterova, Evelina Slavcheva. Comparative study of nanostructured electrocatalytic materials on 3D nickel foam for efficient water splitting.
- Birgit Pichler, Bernhard Gollas, Viktor Hacker. Status, challenges and possible solutions for rechargeable zinc-air flow batteries.

- [Johanna Pilas, Shahriar Dantism, Desiree Röhlen, Thorsten Selmer, Torsten Wagner, Michael Keusgen, Patrick Wagner, Michael J. Schöning. Electrochemical biosensors for on-line monitoring of biogas processes.](#)
- Ivan Pivac, Frano Barbir, Jagoda Radošević. Rejuvenation phenomena of proton exchange membrane fuel cells.
- Lidija D. Rafailović, Christoph Gammer, Tomislav Trišović, Bernhard Lutzer, Christian Rentenberger, Aleksandar Z. Jovanović, Igor A. Pašti, Hans-Peter Karnthaler. Electrochemical approaches in synthesis of high surface area materials.
- Gergana Raikova, Blagoy Burdin, Emilia Mladenova, Milena Krapchanska, Daria Vladikova, Zdravko Stoynov†. Reversibility in a new design of solid oxide fuel cell.
- [Timo Raith, Christian Iffelsberger, Stefan Wert, Frank-Michael Matysik. Hydrodynamic scanning electrochemical microscopy.](#)
- Rashko Rashkov, Vasil Bachvarov, Marina Arnaudova, Galin Borisov. Novel catalysts for water splitting.
- Saeedeh Ravandi, Tobias Zenger, Martin Eibelhuber, Achim Walter Hassel, Andrei Ionut Mardare. Surface pinning of voids in electromigration testing by anodization of combinatorial Al-Cu alloys.
- [Dominik Recktenwald, Cezarina Cela Mardare, Andrei Ionut Mardare, Achim Walter Hassel. Corrosion screening of Dysprosium-Magnesium-Zinc alloys for bioresorptive implants.](#)
- Peter Rodič, Dolores Zimerl, Ingrid Milošev. Hybrid sol-gel coatings modified with fluorinated (meth)acrylates for corrosion protection of AA2024-T3 in 0.5 M NaCl.
- [Anastasiya Ruchets, Nils Donker, Daniela Schönauer-Kamin, Ralf Moos, Jens Zosel, Ulrich Guth, Michael Mertig. Selective multi-gas measurements with solid electrolyte cells operated by cyclovoltammetry.](#)
- Denis Sačer, Suzana Sopčić, Davor Antonić, Davor Čapeta, Marijana Kraljić Roković. Supercapacitors based on reduced graphene oxide hydrogels.
- Miglena Slavova, Elena Mihaylova, Emilia Mladenova, Blagoy Burdin, Borislav Abrashev, Daria Vladikova. Zeolite based gas-diffusion electrodes for secondary metal-air batteries.
- Romana Sokolová, Veronika Majarová, Michaela Obluková, Jan Vacek, Vladimír Křen. On the reaction of polyphenols with copper dication.
- Ivan Spajić, Ingrid Milošev. Al₂O₃ and HfO₂ films prepared by atomic layer deposition for protection of commercially pure titanium for biomedical applications.
- [Sandra Steiner, David Moser, G. Kothleitner, Bernhard Gollas. Morphology control of aluminium anodes in secondary aluminium batteries.](#)
- Anamarija Stoilova, Matko Erceg, Frano Barbir. Impact of elevated temperature on structural changes of perfluorosulfonated ionomer for polymer electrolyte membrane fuel cells.
- Krisztina J. Szekeres, Éva Fekete, Gyözö G. Láng. Investigation of electrochemical behaviour of bisphenol A on gold in contact with 0.1 M aqueous NaClO₄ solution.
- Árpád Ferenc Szőke, Gabriella Stefánia Szabó, Zoltán Hórvölgyi, Emőke Albert, Liana Maria Muresan. Improving the anticorrosive properties of chitosan coatings by impregnation with inhibitors.
- Ludmila Šimková, Jiří Ludvík. Electrochemical investigation of fluorinated derivatives of 1,3-diphenylisobenzofuran, chromophores for singlet fission.
- Jesus Tartaj. Fuel cells, a clean and efficient way of producing electricity: brief description of different types of fuel cells and their application.
- Urša Tiringer, Janez Kovač, Shoshan Abrahami, Joost van Dam, Ingrid Milošev, Arjan Mol, Tatsuo Yoshinobu. In situ observation of crevice corrosion by a modified chemical imaging sensor system. The effect of pre-treatment on the surface chemistry and interfacial properties of sol-gel coating applied on aluminium and aluminium alloys.

- Mária Ujvári, Soma Vesztergom, Szabolcs Gyulai-Gaál, Gyöző G. Láng. Investigation of the vanadium redox system by dual voltammetry.
- Dzhamal Uzun, Elena Razkazova-Velkova, Venko Beschkov, Konstantin Petrov. An electrochemical process for the simultaneous purification of H₂S and SO₂.
- Soma Vesztergom, María de Jesús Gálvez-Vázquez, Vitali Grozovski, Noémi Kovács, Peter Broekmann. A model for hydrogen evolution on RDEs: Are the limiting current plateau lengths indicative of electrocatalytic activity?
- Daria Vishenkova, Elena Korotkova, Jiří Barek. Electrochemical behaviour of toluylene blue.
- [Winfried Vonau. Kurt Schwabe – Name given of an international symposium](#)

Poster presentations (65)

- Borislav Abrashev, George Pchelarov, Konstantin Petrov. Gas diffusion electrodes (GDEs) for MH-Air battery systems.
- Veronica Anăstasoae, Laura Enache, Cristian Omocea, Liviu Bîrzan, Raluca Isopescu, Eleonora-Mihaela Ungureanu. Electrochemical behaviour of new (azulen-1-yl-diazanyl)-heteroaromatic compounds containing 1,2,5-thiadiazol-3-yl moieties.
- Jasmina Anojčić, Valéria Guzsvány, Zoltán Kónya, Momir Mikov. Voltammetric characterization and trace level determination of dopamine by carbon paste electrode surface modified with oxidized multiwalled carbon nanotubes.
- Milka Avramov Ivić, Jelena Lović, Nemanja Trišović, Jelena Lađarević, Aleksandar Mladenović, Milka Jadranin, Slobodan D. Petrović, Dušan Mijin. The SWV determination of esomeprazole at Au and its degradation at IrO_x followed by HPLC and LC-MS.
- Josefina Ballarre, Aldo R. Boccaccini, Silvia M. Cere. Coatings of chitosan/gelatin/Si-Ge nanoparticles by electrophoretic deposition on surgical grade stainless steel: electrochemical and antibacterial behaviour.
- Krum Banov, Iliyan Popov, Todor Petkov, Branimir Banov. Comparative study of synthesis way influence on the electrochemical behaviour of NMC 811.
- Viacheslav Barsukov, Volodymyr Khomenko, Oksana Butenko, Ilona Senyk. An interaction of nanostructured carbon based composites with electromagnetic waves in the wide frequency range.
- Teri Bigham, Charnete Casimero, James Dooley, Nigel Ternan, William Snelling, James Davis. Electrochemical-biosensor for the detection of coliform presence in drinking water.
- Tanya Boyadzhieva, Violeta Koleva, Radostina Stoyanova. Effect of Mg-doping on the electrochemical properties of NaMn_{1-x}Mg_xPO₄ phospho-olivine electrodes.
- Tanya Boyadzhieva, Violeta Koleva, Radostina Stoyanova. Mixed Fe/Mn based phospho-olivines as electrodes in hybrid metal-ion batteries.
- George-Octavian Buica, Matei D. Raicopol, Nicoleta A. Chira. Modified electrodes with thiosemicarbazone receptors for metal ions complexation.
- Ivana Cvijović-Alagić, Zorica Cvijović, Jelena Bajat, Marko Rakin. Corrosive wear degradation of Ti-based implant alloy.
- Ana Cvitešić Kušan, Irena Ciglencečki. Electrochemical behaviour of methyl 3-mercaptopropionate (3-MPA) at the Hg electrode.
- Cornelia Diac, Cătălin Ceauș, Elena Iulia Cucolea, Valeriu Filip, Șerban Stamatina. pH-anion interplay in the electrochemical dissolution of platinum.
- Elena Diacu, Eleonora-Mihaela Ungureanu, Alexandru Anton Ivanov, Sabina-Vasilica Pistol, Veronica Anăstasoae, Cristian Omocea, Liviu Bîrzan. Study of electroactive properties of a new tetrazole azulene derivative for modified electrodes.

- Nina Dimitrova, Jenia Georgieva, Sotiros Sotiropoulos, Tzvetanka Boiadjieva-Scherzer. Preparation of Pt-IrO₂/TiO₂ bi-functional catalysts.
- Sanja Eraković, Miroslav Pavlović, Srećko Stopić, Miodrag Mitrić, Miroslava Varničić, Jasmina Stevanović, Vladimir Panić, Bernd Friedrich. Electrochemical performances of rare earth Co-based mixed oxides and their application as supercapacitors and fuel cells.
- Matjaž Finšgar, David Majer, Uroš Maver, Tina Maver. Sequential analysis of Pb(II) traces using unmodified and modified SPE electrodes.
- Regina Fuchs-Godec. The synergistic inhibition of Vitamin E and K3 in hydrophobic coatings on copper.
- Frank Gerlach, Kristina Ahlborn, Winfried Vonau. [New electrochemical and physical measurements on sensitive glasses in thin-film technology.](#)
- Christian Girginov, Stephan Kozhukharov. Substitution of chromium conversion coatings (CCC) by cerium oxide layers (CeOPL) deposition for protection of aluminium aircraft alloys.
- Petru Ilea, Marius Ioan Purcar, Sorin-Aurel Dorneanu, Alexandru Horațiu Marincaș. Enhancement of the mass transport by numerical simulation in an electrochemical reactor with concentric cylindrical electrodes.
- Alexandru Anton Ivanov, Elena Diacu, Eleonora-Mihaela Ungureanu, Sabina-Vasilica Pistol, Adinuta Paun, Magdalena-Rodica Bujduveanu. Analytical applications of new chemically modified electrodes based on crown ether for heavy metal analysis.
- Melanie Jablonski, Lukas Muschallik, Johannes Bongaerts, Torsten Wagner, Thorsten Selmer, Petra Siegert, Michael Keusgen, Michael J. Schöning. [Development of a field-effect biosensor to control the acetoin concentration during fermentation processes.](#)
- Žana Kajinić, Jelena Vešligaj Turkalj, Željka Romić, Anamarija Stanković, Maja Dutour Sikirić, Martina Medvidović-Kosanović. Electrochemical, zeta-potential and particle size characterization of groundwater samples.
- Saikrishnan Kandaswamy, Tanja Vidaković-Koch. Frequency response analysis of oxygen reduction reaction in concentrated alkaline solutions.
- Barbara Kapun, Ingrid Milošev. Sol-gel coating based on zirconium(IV) isopropoxide and epoxysilane for corrosion protection of aluminium alloy in deep-sea environment.
- Boriana Karamanova, Svetlana Veleva, Antonia Stoyanova, Radostina Stoyanova. Electrochemical performance of symmetric supercapacitors based on carbon biomaterials in different electrolytes.
- Jozefina Katić, Ankica Šarić, Ines Despotović, Marin Petković, Katarina Varzić, Mirela Leskovic, Željka Petrović. Surface modification of Ti dental implant by bioactive coatings: experimental and theoretical studies.
- Jozefina Katić, Zoran Grubač, Mirjana Metikoš-Huković. Design of semiconductor (photo)catalysts and investigation of their electronic structure.
- Andrea Kellenberger, Nicolae Vaszilcsin, Delia Duca, Mircea Laurentiu Dan, Narcis Duteanu, Svenja Stiber, Pia Assmann, Aldo S. Gago, K. Andreas Friedrich. Corrosion resistance of niobium coatings on copper bipolar plates for proton exchange membrane electrolyzers.
- Jong Seok Kim, Dae Won Kim, Tae Hyun Kim. Lithium diffusion properties of Fe₃O₄ nanoparticles as different morphologies for anode materials of lithium ion batteries.
- Myong Hwan Kim, Youngmo Goo, Ji-Young Park, Seung-Eul Yoo. A study on property and performance according to the pore structure of metallic porous separator for hydrogen fuel cell vehicles.
- Stephan Kozhukharov, Christian Girginov, Aleksandar Tsanev, Georgy Avdeev, Boriana Tzaneva. Evaluation of the electrochemical performance of Ag incorporated AAO layers after extended exposure to a model corrosive medium.

- Mila N. Krstajić Pajić, Sanja I. Stevanović, Vuk V. Radmilović, Piotr Zabinski, Nevenka R. Elezović, Velimir R. Radmilović, Snežana Lj. Gojković, Vladislava M. Jovanović. Catalysis at nano level: promoting Pt nanoparticle activity by Au decoration.
- Yuliya Kudryashova, Dmitrii Gryzlov, Anna Kuzmina, Tatiana Kulova, Alexander Skundin. Synthesis and study of phosphorus sulfide-based electrodes for lithium-ion and sodium-ion batteries.
- Anna Kuz'mina, Il'ya Gavrilin, Yuliya Kudryashova, Tatiana Kulova, Alexander Skundin. Study of the lithium insertion into germanium nanofilaments.
- [Andrzej Leniart, Mariola Brycht, Barbara Burnat, Sławomira Skrzypek. Application of a glassy carbon in the voltammetric determination of pesticides.](#)
- Olga Lipskikh, Elena Korotkova, Alena Nikolaeva. Voltammetric determination of drug based on indomethacin menthyl ester.
- Jelena Lović, Vladimir Jović. Ni-Sn coating as electrocatalyst for ethanol oxidation in alkaline solution.
- Gabrijela Ljubek, Nikola Vugrinec, Marijana Kraljić Roković. PEDOT-based composites prepared by one-step electrochemical method for supercapacitors applications.
- Vesna Maksimović, Milovan Stoilković, Nebojša Nikolić. Electrodeposition of NiCo alloy powders with coral presentation-like structure.
- Borislav M. Malinović, Duško Zorić, Tijana Djuričić. Efficiency testing of commercial corrosion inhibitor for stainless steel EN 1.4301 and copper EN 13601 in simulated cooling water.
- Delyana Marinova, Rosica Kukeva, Ekaterina Zhecheva, Radostina Stoyanova. Modelling of sodium manganese-based sulfates as a new class of polyanion electrode materials.
- Delyana Marinova, Rosica Kukeva, Ekaterina Zhecheva, Radostina Stoyanova. Nickel-manganese sulfates as electrode materials for hybrid lithium–sodium ion cell.
- Bernhard Marius, Željko Penga, Viktor Hacker. Mitigating mass transport limitations of PEFCs during dynamic operation.
- Dajana Mikić, Mia Gotovuša, Andreja Kišić, Helena Otmačić Ćurković. Formation and stability of protective films of phosphonic acid on various metal substrates.
- [Tomáš Mikysek, Milan Sýs, Miroslav Novák. Electrochemical study on biomimetic activity of selected copper complexes in comparison with enzymes.](#)
- Vesna Mišković-Stanković, Katarina Nešović, Ana Janković, Tamara Radetić, Aleksandra Perić-Grujić, Maja Vukasinović-Sekulić, Vesna Kojić, Kyong Yop Rhee. Poly(vinyl alcohol)/chitosan hydrogels with electrochemically synthesized silver nanoparticles for wound dressing applications.
- Liana Maria Muresan, Sorin Dorneanu, Eniko Kovacs, Simona Varvara, Petru Ilea. Voltammetric study of base metals recovery from brominated solutions used as lixiviants for waste printed circuit boards.
- [Jan Oberländer, Julio Arreola, Michael Keusgen. Combined calorimetric gas sensor/spore-based biosensor for monitoring of gaseous sterilization processes.](#)
- Michaela Obluková, Romana Sokolová, Ilaria Degano, Radomir Čabala. Electrochemical properties of 1-pentyl-3-(1-naphthoyl)indole and 1-pentyl-3-(2-methoxyphenylacetyl)indole.
- Tamara-Rita Ovari, Gabriella Szabo, Gabriel Katona, Liana Maria Muresan. Silica/graphene oxide composite coatings for corrosion protection of zinc.
- Marijana Pantović Pavlović, Sanja Eraković, Miroslav Pavlović, Ljiljana Veselinović, Jasmina Stevanović, Vladimir Panić, Nenad Ignjatović. Surface modification of titanium implants by adherent hydroxyapatite/titanium oxide composite coatings using novel in-situ synthesis.
- Valentina Popova, Elena Korotkova, Jiří Barek. Electrochemical determination of nitric oxide in human macrophage.

- Gabrijela Radić, Ivan Šajnović, Marijana Kraljić Roković, Željka Petrović. Reduced graphene oxide/ α -Fe₂O₃ fibres as active material for supercapacitor application.
- Matea Raić, Lara Mikac, Zoran Mandić, Vedran Petrić, Mile Ivanda. Silicon anode for lithium-ion batteries.
- Egon Rešetar, Damir Iveković. Magnetic biomass-derived pyrolytic carbon: an advanced electrode material for applications in bioelectrocatalysis and electrochemical sensing.
- Sanja Stevanović, Vladislava M Jovanović. Microwave-assisted polyol synthesis of Pt based catalysts: enhanced methanol activity and CO tolerance.
- Sanja Šekuljica, Valéria Guzsvány, Kurt Kalcher. Adsorptive stripping voltammetric determination of fungicide carbendazim by tetrabutylammonium chloride modified carbon paste electrode.
- Ivana Škugor Rončević, Nives Vladislavić, Marijo Buzuk, Maša Buljac, Anđela Lukin. Corrosion protection of tin by some carboxylic acids in sodium chloride solution.
- Graziella Liana Turdean, Eniko Kovacs, Sorin-Aurel Dorneanu. Optimisation of experimental parameters for the electrochemical monitoring of the metals concentration during the waste printed circuit boards recycling process.
- Simona Varvara, Sorin Aurel Dorneanu, Alexandru Okos, Roxana Bostan, Maria Popa, Liana Maria Muresan, Petru Ilea. An EIS study of metals dissolution mechanism in bromide-based electrolytes used as lixiviants for waste printed circuit boards.
- Svetlana Veleva, Ekaterina Zhecheva, Paulina Pórolniczak, Antonia Stoyanova, Radostina Stoyanova. Electrochemical performance of nanotube sodium titanate in hybrid Li-Mg ion cells.
- [Stefan Wert, Timo Raith, Frank-Michael Matysik. A simple approach for the preparation of ring ultramicroelectrodes in the context of combined scanning electrochemical microscopy and scanning ion conductance microscopy.](#)
- Dolores Zimerl, Stojan Stavber, Ingrid Milošev. From organic synthesis to testing of compounds with different anchor groups as corrosion inhibitors for aluminium.

Satellite Student Symposium (14)

- Barbara Priscila Andreon, Barbara Luiza Guenther, Welchy Leite Cavalcanti, Peter Plagemann, Lucio Colombi Ciacchi. On the use of scanning Kelvin probe for the in situ assessment of the delamination of adhesively bonded joints.
- Anđela Bačinić, Marina Mlakar. Characterization of cobalt(II)-4-nitrocatechol and cobalt(II)-humic acid complexes in aqueous solution.
- Iveta Boshnakova, Elefteria Lefterova, Denis Paskalev, Evelina Slavcheva. Investigation of Ir deposited on different non-carbon supports as catalyst for OER in PEMEC.
- Balázs Broda, György Inzelt. Investigation of the electrodeposition and dissolution of lead dioxide using electrochemical quartz crystal microbalance (EQCM).
- Nina Dimitrova, Jenia Georgieva, Sotiros Sotiropoulos, Tzvetanka Boiadjieva-Scherzer. IrO₂/TiO₂: synthesis and characterization.
- Lucija Knežević, Elvira Bura-Nakić. Investigation of formation and stability of V(IV)-EDTA and V(V)-EDTA complexes using hanging mercury drop electrode.
- Dawid Kutyla, Katarzyna Skibińska, Anna Kwiecińska, Karolina Kołczyk- Siedlecka, Piotr Żabiński, Remigiusz Kowalik. Electrochemical analysis of cobalt, nickel and selenium codeposition process from acidic solutions.
- Saša Marcinek, Dijana Jadreško, Dario Omanović. Determination of surface activity of natural organic matter by using pulsed techniques.
- Aida Ghiulnare Pantazi, Sabrina Rosoiu, Eduard Grigore, Marius Enachescu, Liana Anicai. Evaluation of Zr and Ti coated stainless steel bipolar plates for polymer electrolyte membrane fuel cells.

- Katarzyna Skibinska, Karolina Kolczyk-Siedlecka, Dawid Kutyla, Anna Kwiecinska, Remigiusz Kowalik, Piotr Zabinski. Synthesis of copper 1D nanocone array electrodes using aluminum oxide template.
- Krisztina J. Szekeres, Mária Ujvári, Gyözö G. Láng. Electrochemical and morphological investigations of poly(3,4-ethylenedioxy-pyrrol) films.
- Marija Riđošić, Eva Garcia-Lecina, Asier Salicio Paz, Ljiljana Živković, Jelena Bajat. Influence of the ultrasound on the properties of electrodeposited Zn-Co alloys.
- Sabrina Rosoiu, Aurora Petica, Aida Ghiulnare Pantazi, Marius Enachescu, Teodor Visan, Liana Anicai. Electrodeposition of Ag and Ag composites with carbon nanotubes using novel deep eutectic solvent formulations.
- [Stefan Wert, Timo Raith, Frank-Michael Matysik. Hyphenation of scanning electrochemical microscopy and scanning ion conductance microscopy using photoresist-coated micropipettes.](#)