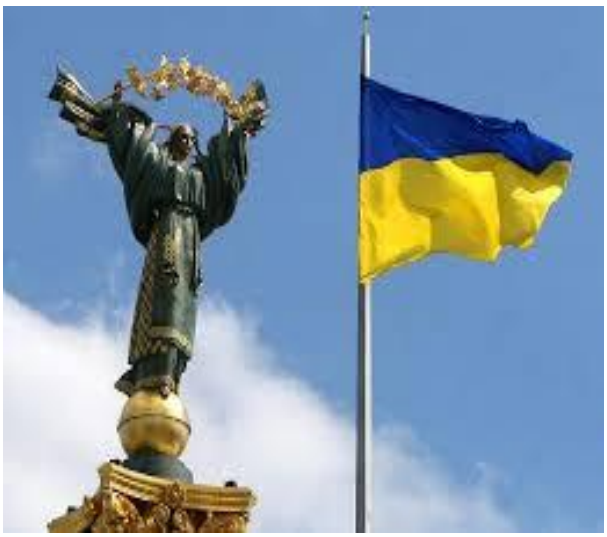
International Society of Electrochemistry
Ministry of Education and Science of Ukraine
Kyiv National University of Technologies and Design
Igor Sikorsky Kyiv Polytechnic Institute

PROGRAM

3nd ISE Satellite Student Regional Symposium on Electrochemistry «Promising Materials and Processes in Applied Electrochemistry»



Kyiv 2018

We are very pleased to invite you to participate in the 3nd ISE Satellite Student Regional Symposium on Electrochemistry in Ukraine «Promising Materials and Processes in Applied Electrochemistry», which will be held in Kiev on April 18, 2018. Its aim is to promote scientific contacts and discussions between scientists and students representing different areas of this versatile science.

We hope that the 3nd ISE Satellite Student Regional Symposium on Electrochemistry in Ukraine will be equally interesting and useful for you!

We wish the participants of Symposium to expand successfully their knowledge in electrochemical science, to receive scientific inspiration, to show their abilities and to relax a little!

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Dr. Victor TVERDOKHLIB — Kyiv National University of Technologies and Design (Ukraine).

SYMPOSIUM PROGRAM

April 18, 2018

9.00-10.00	**Final registration of participants, posters preparation** *Hall for Academic Senate, building 1, floor 4*	
10.00-10.15	***Opening ceremony*** *Academic Senate, building 1, floor 4*	
10.15-12.15	***Oral presentations:*** *10 minutes for presentation, 5 min for discussion*	
10.15-10.30	1.01	**Properties of 10Sc1CeSZ-3.5YSZ(33-, 40-, 50-wt.%) Composite Ceramics for SOFC Application** Y Brodnikovskyi[a], N McDonald[b], I Polishko[a], D Brodnikovskyi[a], I Brodnikovska[a], M Brychevskyi, L Kovalenko[c], O Vasylyev[a], A Belous[c], R Steinberger-Wilckens[b] *[a]Frantsevich Institute for Problems of Materials Science, Kyiv, Ukraine; [b]University of Birmingham, Birmingham, B15 2TT, United Kingdom; [c]Vernadsky Institute of general and inorganic chemistry, Kyiv, Ukraine*
10.30-10.45	1.02	**The Influence of Carbon Material Modification on The Pseudocapacitive Effect** Ł Kolanowski, M Graś, J Wojciechowski, M Baraniak, P Krawczyk, G Lota *Poznan University of Technology, Institute of Chemistry and Technical Electrochemistry, Poznan, Poland*
10.45-11.00	1.06	**Effect of binder's solvent on the electrochemical performance of electrodes for lithium-ion batteries and supercapacitors** O Chernysh, V Khomenko, I Makyeyeva, V Barsukov *Kyiv National University of Technologies and Design, Kyiv, Ukraine*
11.00-11.15	1.03	**Improvement of thermal stability and electrochemical performance of spinel-type cathode materials by carbon coating** K Chudzik *Jagiellonian University, Faculty of Chemistry, Kraków, Poland*
11.15-11.30	1.04	**Impact of liquid electrolyte on stability of manganese-based cathode materials for lithium-ion batteries** W Marszałowicz *Jagiellonian University, Faculty of Chemistry, Kraków, Poland*
11.30-11.45	1.05	**Bio-derived carbon nanostructures for Li-ion batteries** M Lis *Jagiellonian University, Faculty of Chemistry, Kraków, Poland*

11.45-12.00	3.02	**Influence of ultrasonic vibration on corrosion resistance of austenitic steel** G Vasyliev, M Pidburtniy *National technical university of Ukraine "Igor Sikorsky Kyiv Polytechnic Institute", Kyiv, Ukraine*
12.00-12.15	5.01	**The influence of various factors on corrosion of mild steel in deep eutectic solvents** A Kityk, Y Rublova, N Bannyk, V Protsenko, F Danilov *Ukrainian State University of Chemical Technology, Dnipro, Ukraine*
12.15-13.45	**Poster Session*** (in parallel with Coffee break)	
13.45-15.00	Lunch break	
15.00-17.00	Ceremony of Awarding for the Symposium & Student Olympiad. General Photography. Closing Ceremony. *Hall for Academic Senate, building 1, floor 4*	

*Poster Session:

Section 1. **ELECTROCHEMICAL POWER SOURCES**	
1.07	**Synthesized nanostructured FeS_2 for Li-batteries application. Influence of Microstructure** Yu Polishchuk, E Shembel, Yu Volfkovich, D Reisner, A Volfkovich
1.08	**Structural changes of CCL/Li_2MnSiO_4 in lithium-ion cell during electrochemical reaction** M Lis
1.09	**The review of syntesis methods of Li_2FeSiO_4 cathode material for lithium batteries** P Załuski
1.10	**Structural and electrochemical characterization of bio-derived and hierarchically porous carbons for Li-ion batteries** J Pacek
1.11	**Modification of natural Ukrainian graphite using nano structured oxides. Increasing performance of anodes and cathodes of Li - ion batteries** I Maksyuta, E Shembel, L Neduzhko, N Zaderey, I Kirsanova
1.12	**Electrochemical Properties of Powder Iron/Carbon System in Basic Solution** O Kravchenko, K Pershina, R Panteleymonov, O Potapenko
1.13	**Co-N-C electrocatalysts derived from nitrogen containing conjugated polymers for hydrogen evolution** D Mazur, O Pariiska, Ya Kurys

1.14	**The comparative study of SOFCs made of different yttria stabilized zirconia powders using MEDUSA RD test station** N Lysunenko, V Mokiychuk, I Polishko, Ye Brodnikovskyi
1.15	**Grains, grain boundaries and total ionic conductivity of 10Sc1CeSZ and 8YSZ solid electrolytes affected by crystalline structure and dopant content** I Brodnikovska, N Korsunska, L Khomenkova, Yu Polishchuk, S Lavoryk, M Brychevskyi, Y Brodnikovskyi, O Vasylyev
1.16	**Electrochemical properties of Sodium bis[salicylato(2-)]-borate - g-butyrolactone Electrolytes in Sodium Battery** V Diamant, S Malovanyy, K Pershina, K Kazdobin
1.17	**MnO_2 Polymorphs in Magnesium Battery Prototype with Non-aqueous Electrolytes: Mini Review** R Apostolova, Yu Polishchuk, A Savchenko
1.18	**Conductivity and Electrochemical Stability of Non-Aqueous Electrolytes for Magnesium Power Sources** O Kolomoiets, I. Kirsanova, I Lysytsya, E Shembel
1.19	**Magnesium Anode for Magnesium Power Sources with Non-Aqueous Electrolyte** D Bondar, O Kolomoiets, E Shembel
1.20	**β-$Ni(OH)_2$ / reduced graphene oxide composite as electrode for supercapacitors** V Boychuk, V Kotsyubynsky, B Rachiy, K Bandura, A Hrubiak, S Fedorchenko, V Stefanyk
1.21	**Electrochemical performance of supercapacitors based on carbon aerogels obtained from starch of various origin** K Chudzik
1.22	**Estimation of the Primary Batteries State of Charge and State of Art by Frequency Characteristics of Electrochemical Impedance Spectra** O Riabokin, O Bojchuk, K Pershina
1.23	**Toward bifunctional doped MnO_2 oxygen electrocatalyst** G Sokolsky, L Zudina, E Boldyrev, N Gauk
Section 2. **ELECTRODEPOSITION**	
2.01	**Refractory metals influence on the properties of Fe-Co-Mo(W) electrolytic alloys** M Ved', I Yermolenko, Yu Sachanova, N Sakhnenko
2.02	**Mixed Titania Nano-composite Oxide Coatings with Iron Triad Metals** M Sakhnenko, M Ved, A Karakurkchi, O Matykin, S Menshov
2.03	**Electrodeposition of Cr coatings from a trivalent chromium plating bath based on deep eutectic solvent** L Bobrova, D Holubtsov, V Protsenko
2.04	**Electrochemical coating based on tin-nickel alloy with antibacterial properties** A Pyanko, A Chernik, O Alisienok, D Sergievich
2.05	**Contact exchange in tetrafluoroborate-EDTA electrolyte for Cu-Sn alloy deposition** A Maizelis

2.06	**Studying the kinetics of electrode reactions on copper, silver and gold in acid thiourea-citrate electrolytes** O Smirnova, A Brovin, A Pilipenko, Yu Zhelavska
2.07	**Electrodeposition and characterization of Ni-TiO_2 composite coatings** Ie Zaverach, N Yermak
Section 3. **CORROSION PROTECTION**	
3.01	**Corrosion Behavior of the AISI 304 Steel in Acid Solutions** V Shtefan, N Kanunnikova, A Pilipenko, H Pancheva
3.03	**Investigation of corrosion process in the alloy AA6060 containing anodic-oxide coatings of vanadium.** A Keshin, M Matsius, A Chernik
3.04	**Corrosion Inhibition of AD31 Alloy by Cerium Nitrate (III) and Sodium Metavanadate** M Osipenko, V Yanushevskii, D Kharitonov, I Makarova, I Kurilo
3.05	**Effect of saccharin on corrosion resistance of bright Ni coatings under conditions simulating a wet tropical climate** D Ushchapovskiy, S Frolenkova, M Byk, O Linyucheva, T Motronyuk, V Klus
3.06	**Rape grist extract (Brassica napus) as a green corrosion inhibitor for water systems** G Vasyliev, V Vorobiova
3.07	**Carbon Steel (St.3) Corrosion Caused by the Circulating Water Flow** A Pilipenko, H Pancheva, O Smirnova, O Khrystych
3.08	**The research of construction materials for development and modernization of the acting equipment at refineries** Yu Danilov, I Sinkevich, A Tulskaya, A Mardupenko
3.09	**Inhibitors for acid corrosion of metals based on quaternary pyridinium salts containing carbonyl groups** I Pohrebova, T Pylypenko
3.10	**Protective properties of a new type coatings involving titanium, chromium, aluminum** T Loskutova, I Pogrebova, V Khyzhnyak, M Bobina, N Nikitina
3.11	**Marking of titanium passive film breakdowns as a function of their appearance time and to increase the contrast of SEM images** O Buket, D Chernysh, O Leonova
Section 4. **ELECTROCHEMICAL SENSORS**	
4.01	**Environmental monitoring of gas emissions into the air with a sensory block** O Linyucheva
4.02	**Electrochemical Oxidation of Thiocyanate on Metal Oxide Electrodes** O Kosohin, O Makohoniuk, A Kushmyruk
4.03	**Formation of multilayer metal-hydroxide electrode with developed surface for alkaline water electrolysis** A Maizelis, B Bairachniy

Section 5. **MODERN ELECTROCHEMICAL AND RELATED TECHNOLOGIES**	
5.02	**Tape casted SOFC based on Ukrainian 8YSZ powder** I Polishko, S Ivanchenko, R Horda, Ye Brodnikovskyi, N Lysunenko, L Kovalenko
5.03	**Electrochemical synthesis of peroxyacetic acid on Pt/PtO and PbO_2 anodes** T Bilous, A Tulskaya, I Chanine, V Bairachnyi
5.04	**Aluminum alloys using in hydrogen electrosynthensis** V Bairachnyi, N Rudenko, Yu Zhelavska, A Pilipenko
5.05	**Physico-chemical properties and electrocatalytic activity of Ni-doped PbO_2** O Shmychkova, T Luk'yanenko, L Dmitrikova, A Velichenko
5.06	**The comparative study of electrocatalytic activity of various anode materials in respect to the oxidation of nitroanilines** S Zahorulko, O Shmychkova, T Luk'yanenko, L Dmitrikova, A Velichenko
5.07	**Recent developments and perspectives of development of microbial fuel cells in Ukraine** K Shchurska, L Zubchenko, O Galkin, Ye Kuzminskiy
5.08	**Whey Desalination Using Polymer and Inorganic Membranes: Operation Conditions** Yu Dzyazko, L Rozhdestveskaya, Yu Zmievskii, V Zakharov, V Myronchuk
5.09	**Electrodeionization: transport of chromate anions through organic-inorganic sorbent containing hydrated zirconium dioxide** Yu Dzyazko, E Kolomyets, Yu Borysenko, V Chmilenko, I Fedina
5.10	**Carbon-polymer composite coatings for electromagnetic shielding: adhesion properties** O Butenko, I Senyk, O Kryukova, V Barsukov
5.11	**Composite PVC-Carbon screens for electromagnetic shielding: conductivity and shielding efficiency** O Butenko, Ya Kuryptia, B Savchenko, V Barsukov
5.12	**Influence of Electrochemical Destruction Products of Protective Coating On Properties of Pipe Steel in Neutral Medium** L Nyrkova, S Osadchuk, S Melnichuk, A Rybakov, S Ostapyuk, Yu Borysenko
5.13	**Generation of nonporous crystalline Ta oxide** L Lyashok, V Gomozov, S Vodolazchenko, L Skatkov
5.14	**Anodic processes in dimethyl sulfoxide water solution** O Matrunchyk, G Tulsky, S Deribo, O Muratova
5.15	**Copper plated graphite, carbon nanotubes and polyaniline effect on the properties of electroconductive polyethylene compositions** D Novak, V Plavan, N Bereznenko
5.16	**Electrochemical dissolution of pseudo alloys of tungsten carbide type in acid electrolytes** M Osmanova, L Lyashok, S Leshchenko, E Ismahilova, I Kolupaev

For notes

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