

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



PROGRAM

**4th ISE Satellite Student Regional
Symposium on Electrochemistry
«Promising Materials and Processes in
Applied Electrochemistry»**



Kyiv 2019

We are very pleased to invite you to participate in the 4th ISE Satellite Student Regional Symposium on Electrochemistry in Ukraine «Promising Materials and Processes in Applied Electrochemistry», which will be held in Kiev on May 15, 2019. Its aim is to promote scientific contacts and discussions between scientists and students representing different areas of this versatile science.



We hope that the 4th 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

May 15, 2019

9.00-10.00	Final registration of participants, posters preparation <i>Hall for Academic Senate, building 1, floor 4</i>	
10.00-10.15	Opening ceremony <i>Academic Senate, building 1, floor 4</i>	
10.15-11.30	Oral presentations:	
10.15-10.40	1.1	METAL OXIDE LAYERS FOR ENERGY SAVING AND STORAGE E. Koudoumas, D. Vernardou <i>Department of Electrical and Computer Engineering Hellenic Mediterranean University, Greece</i>
10.40-11.00	1.2	MoO₂ / MESOPOROUS CARBON AND MoO₂ / REDUCED GRAPHENE OXIDE COMPOSITE ELECTRODES FOR SUPERCAPACITOR APPLICATIONS V. Boichuk , A. Kachmar, V. <u>Kotsyubynsky</u> , Kh. Bandura, S. Fedorchenko <i>Vasyl Stefanyk Precarpathian National University, Ivano-Frankivsk, Ukraine</i>
11.00-11.15	5.1	INVESTIGATION OF ELECTRICAL CONDUCTIVITY AND ELECTROMAGNETIC SHIELDING EFFECTIVENESS OF CARBON BASED COMPOSITES O. Butenko, V. <u>Khomenko</u> , V. Barsukov <i>Kyiv National University of Technologies and Design, Kyiv, Ukraine</i>
11.15-11.30	3.7	AGRICULTURAL BY-PRODUCT EXTRACTS AS SCALE INHIBITORS OF MILD STEEL IN TAP WATER G.Vasyliiev, V. Vorobyova, T. Zhuk, O. Kalinchuk <i>National technical university of Ukraine "Igor Sikorsky Kyiv Polytechnic Institute", Kyiv, Ukraine</i>
11.30-11.45	General Photography.	
11.45-13.00	Poster Session (in parallel with Coffee break)	
13.00-14.30	Lunch break	
14.30-16.00	Ceremony of Awarding for the Symposium & Student Olympiad. Closing Ceremony. <i>Hall for Academic Senate, building 1, floor 4</i>	

Poster Session:

Section 1. ELECTROCHEMICAL POWER SOURCES	
1.3	ALTERNATIVE BINDERS FOR ELECTRODES OF ELECTROCHEMICAL CAPACITORS -THE TRANSITION TO AQUEOUS AND ALCOHOL BASED SOLVENT ELECTRODE PROCESSING. O. Chernysh, V. Khomenko, I. Makyeyeva, V. Barsukov
1.4	A POLYMER SULFUR-BASED ELECTRODE FOR HIGH ENERGY LI BATTERIES. INFLUENCE OF THE MATERIALS OF CURRENT COLLECTOR AND ELECTRODE DESIGN ON THE PERFORMANCE OF LITHIUM-SULFUR BATTERIES Yu. Polishchuk, E. Shembel, Andrea Strakova Fedorkovac, A. Markevich, V. Redko, I. Lysytsya
1.5	NICKEL-COPPER METAL HYDROXIDE MULTILAYER COATING AS ANODE MATERIAL FOR ETHANOL OXIDATION. A.Maiselis
1.6	DIRECT CHANGING OF STRUCTURAL, MORPHOLOGICAL AND ELECTROCHEMICAL PROPERTIES OF THE SULFUR- DOPED NANO TiO₂ N. Romanovska, P. Manoryk, P. Yaremov, O. Byeda, K. Pershina, K. Kazdobin
1.7	ELECTROCATALITICAL PRODUCTION OF THE HYDROGEN FROM UREA-WATER SOLUTIONS O. Kordysh, K. Pershina
1.8	EFFECT OF CARBON MATERIALS ON THE ELECTROTECHNICAL CHARACTERISTICS OF STARTER LEAD ACID ACCUMULATORS V. Nefedov, I. Vashnevsky, N. Posadna, Yu. Polishchuk
1.9	PHOTOELECTROCHEMICAL PROPERTIES OF ANODIC Cu-WO₃ NANOSTRUCTURED MATERIALS M. Zych, K. Syrek, G. D. Sulka
1.10	GOLD ELECTRODES MODIFIED WITH POLYELECTROLYTE FOR BIOELECTROCHEMICAL APPLICATIONS J. Grudzień, M. Jarosz, G. Sulka

Section 2. ELECTRODEPOSITION	
2.1	SYNTHESIS OF Ni NANOWIRES BY ELECTRODEPOSITION FROM DEEP EUTECTIC SOLVENT R. Palowska, J. Bogusz, L. Zaraska, A. Brzózka, G.D. Sulka
2.2	COMPOSITION, TOPOGRAPHY AND ELECTROCATALYTIC PROPERTIES OF NI-TiO₂ COMPOSITE COATINGS N. Novytska, Ie. Zaverach
2.3	STUDY OF ELECTROCATALYTIC ACTIVITY OF THE VANADIUM-CONTAINING MATERIALS FOR THE HYDROGEN EVOLUTION REACTION B. Bairachniy, Yu. Zhelavska, O. Smirnova, A. Pilipenko, O. Finohenov
2.4	ELECTROCHEMICAL DEPOSITION OF Co-Mo-W AND Co-Mo-Zr COATINGS FROM COMPLEX ELECTROLYTES T. Nenastina, M. Ved', V. Proskurina, S. Zyubanova
2.5	ELECTROCHEMICAL SYNTHESIS OF NANOSTRUCTURED ZINC OXIDE LAYERS K. Mika, R.Socha, P. Nyga, G.Sulka, L. Zaraska
2.6	STRUCTURAL AND PHASE ANALYSIS OF COMPOSITES BASED ON TiO₂ V.Shtefan, N. Kanunnikova, A. Yepifanova, O.Kobziev
Section 3. CORROSION PROTECTION	
3.1	IMPROVING MILD STEEL CORROSION RESISTANCE IN TAP WATER: INFLUENCE OF WATER FLOW AND SUPPLY RATES G. Vasyliiev, O. Chyhryn
3.2	INHIBITION EFFICIENCY OF APRICOT POMACE EXTRACT AS A "GREEN" CORROSION INHIBITOR V. Vorobyova, M. Skiba, O. Chygyrynets', T. Pylypenko, T. Motronyuk
3.3	CORROSION AND MECHANICAL PROPERTIES OF NANOSTRUCTURE ELECTROLYTIC CO-W AND FE-CO-W ALLOYS M. Ved', N. Sakhnenko, T. Nenastina, M. Volobuyev, I. Yermolenko
3.4	INVESTIGATING OF THE MECHANISM OF STRESS CORROSION CRACKING OF CONTROLLABLE ROLLING PIPE STEEL X70 IN NEAR-NEUTRAL ENVIRONMENT L. Nyrkova, S. Melnichuk, S Osadchuk, P. Lisovyi, S. Prokopchuk

3.5	INFLUENCE OF PHASE COMPOSITION OF Zn-Ni FILM ON THE CORROSION RESISTANCE OF ZINC COATING V. Artemenko, A. Maizelis
3.6	CORROSION RESISTANCE OF WELDING JOINT OF ALUMINUM ALLOY OF THE SYSTEM Al-Mg-Cu-Si L. Nyrkova, T. Labur, S. Osadchuk, S. Melnichuk, M.Yavorska, Yu. Borysenko
3.8	PARTICULARITIES OF CATHODIC AND ANODIC PROCESSES ON CARBON STEEL DEPENDING ON THE DEPTH OF IMMERSION IN A NEUTRAL SOLUTION S. Osadchuk, L. Nyrkova, Yu. Fateev
3.9	APPLICATION OF POLARIZATION RESISTANCE METHOD FOR THE CORROSION MONITORING OF ALUMINUM ALLOYS O. Buket, N. Bilousova, N. Chornobryva, A. Kushmyruk
Section 4. ELECTROCHEMICAL SENSORS	
4.1	SUBSTITUTED BENZOIC ACID AMIDES AS THE MODIFIERS OF THE ETHANOL BIOELECTROOXIDATION USING NAD⁺-DEPENDENT ALCOHOL DEHYDROGENASE O. Kyslova, A. Monko
4.2	PROPERTIES AND SENSING BEHAVIOR OF RuO₂/Ti AND TiO₂/Ti FILMS K. Pershina, O. Linyucheva
4.3	LANGMUIR-BLODGETT TECHNOLOGY AS A TOOL FOR WIRING THE ELECTROCHEMICAL SENSOR FOR GLUCOSE A. Besimaluk, K. Prachova, K. Pershina
4.4	SYNTHESIS OF NANOSTRUCTURED ANODIC TiO₂ IMPREGNATED WITH Co, Cu, Fe IONS M. Soltys
Section 5. MODERN ELECTROCHEMICAL AND RELATED TECHNOLOGIES	
5.2	THE INVESTIGATION OF 10SC1CESZ STRUCTURE TRANSFORMATION AND IONIC CONDUCTIVITY I. Brodnikovska, N. Korsunskaya, L. Khomenkova, Yu. Polishchuk, M. Brychevskiy, Y. Brodnikovskiy, D. Brodnikovskiy, I. Polishko, O. Vasylyev
5.3	NANOSTRUCTURED PEO-COATINGS ON SILUMIN AS ENVIRONMENTAL CATALYSTS A. Karakurkchi, M. Sakhnenko, M. Ved', A. Gorokhyvskiy

5.4	SYNTHESIS OF SILVER NANOPARTICLES IN A PLASMA ELECTROCHEMICAL SYSTEM FOR DEGRADATION OF ENVIRONMENTAL POLLUTANTS M. Skiba, V. Vorobyova
5.5	ORGANIC-INORGANIC ION EXCHANGE MATERIALS FOR ELECTROMEMBRANE PROCESSING OF LIQUID WASTES PRODUCED BY DAIRY INDUSTRY Yu. Dzyazko, Yu. Borysenko, Yu. G. Zmievskii, V.V. Zakharov, V.G. Myronchuk
5.6	POLYMER-INORGANIC MEMBRANES MODIFIED WITH GRAPHEN-CONTAINING NANOCOMPOSITES: ELECTROCHEMICAL APPROACHES OF STRUCTURE INVESTIGATIONS Yu. Dzyazko, L. Rozhdestvenska, V. Ogenko, A. Bildukevich, T. Plisko, Yu. Borysenko, Yu. Zmievskii
5.7	THE INFLUENCE OF BUTANOL ON THE BRASS SURFACE MORPHOLOGY DURING THE ELECTROCHEMICAL TREATMENT IN PHOSPHORIC ACID SOLUTIONS D. Silchenk, A. Pilipenko, O. Smirnova, Yu. Zhelavska, V. Babenko
5.8	ANODE MATERIAL FOR OXIDATION OF ORGANIC ACIDS Kosohin O., Mazanka V.
5.9	ELECTROCHEMICAL POLISHING OF SILVER IN ACID THIOUREA-CITRATE SOLUTIONS O. Smirnova, A. Pilipenko, Yu. Zhelavska, B. Osypa, M. Ivashchenko
5.10	HYDRATED ANTIMONIC ACID AS A SOLID ELECTROLYTE O. Kosohin, O. Matvieiev, O. Linyucheva
5.11	PROTECTIVE PROPERTIES OF DIFFUSED CHROME-CALORIZING COATINGS WITH TiN AND Ti₂AIN BARRIER LAYERS ON VT6 ALLOY T. Loskutova, I. Pogrebova, V. Khyzhnyak, I. Smokovich, N. Nikitina
5.12	NANOSTRUCTURED POLYFUNCTIONAL TIN-BASED ELECTROCATALYST D. Ushchapovskyi, O. Linyucheva, T. Motronyuk, V. Klus, R. Redko, G. Podvashetsky, A. Zabaluev, O. Aksenova
5.13	EFFECT OF THE COLLOIDAL GRAPHITE FILLER ON THE PROPERTIES OF ELECTROCONDUCTIVE POLYETHYLENE COMPOSITIONS D. Novak, Y. Budash, V. Plavan, E. Kucherenko

5.14	HIGH-EFFICIENT ANODIC TREATMENT OF STAINLESS STEEL AISI 304 FOR MEDICAL PURPOSE IN DEEP EUTECTIC SOLVENT ETHALINE A. Kityk, N. Bannik, O. Kyn
5.15	ELECTROCHEMICAL DISSOLUTION OF PSEUDO ALLOYS OF TUNGSTEN CARBIDE TYPE IN ACID ELECTROLYTES M. Osmanova, L. Lyashok, S. Leshchenko, E. Ismahilova, I. Kolupaev
5.16	FEATURES OF FORMATION OF POROUS ALUMINUM OXIDE L. Liashok, H. Shevchenko, S. Leshchenko, O. Brovin
5.17	ANODIC OXIDATION OF CUPPER-ZINC ALLOY V. Datsenko, E. Khobotova, V. Larin
5.18	COMBINED CATHODE PROCESSES IN THE ELECTROCHEMICAL SYNTHESIS OF SODIUM HYPOCHLORITE K. Rutkovska, G. Tulsnyi , I. Chahine, A.Tulska
5.19	TERNARY Fe-Co-Mo ALLOYS AS CATALYTIC MATERIALS IN OXIDATIONS REACTIONS OF LOW MOLECULAR WEIGHT ALCOHOLS Yu. Sachanova, N. Sakhnenko, M.Ved', I.Yermolenko, M.Volobuyev
5.20	COMPARABLE INVESTIGATION OF "SHIELDING PAINTS" FOR SHADOWING ELECTROMAGNETIC RADIATION K. Buhaiova, O. Butenko, V. Tverdokhlib, V. Barsukov
5.21	THE INFLUENCE OF THE GRAPHITE POWDER PARTICLE SIZE ON ELECTRICAL CONDUCTIVITY OF CARBON-POLYMER COMPOSITES O. Budko, O. O. Butenko, V. Tverdokhlib, V. Khomenko
5.22	STUDY OF PHYSICAL AND CHEMICAL PROPERTIES OF POROUS NIOBIUM OXIDE L. Lyashok , S. Vodolazhchenko, , S. Deribo, V. Gomofov

For notes

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