

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



PROGRAM

**5th ISE Satellite Student Regional Symposium on
Electrochemistry «Promising Materials and
Processes in Applied Electrochemistry»
dedicated to the 90th anniversary KNUTD and
DEPARTMENT OF ELECTROCHEMICAL
POWER ENGINEERING & CHEMISTRY KNUTD**



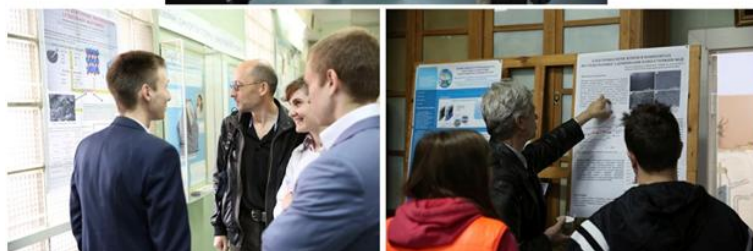
Kyiv 2020

We are very pleased to invite you to participate in the 5th ISE Satellite Student Regional Symposium on Electrochemistry in Ukraine «Promising Materials and Processes in Applied Electrochemistry», dedicated to the 90th anniversary KNUTD and DEPARTMENT OF ELECTROCHEMICAL POWER ENGINEERING & CHEMISTRY KNUTD

which will be held in Kiev on October 21, 2020.

Its aim is to promote scientific contacts and discussions between scientists and students representing different areas of this versatile science.

We hope that the 5th ISE Satellite Student Regional Symposium on Electrochemistry in Ukraine will be equally interesting and useful for you!



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SYMPOSIUM PROGRAM

October 21, 2020

9.00-10.00	Final registration of participants zoom video conferencing http://en.isestudents.knutd.edu.ua/		
10.00-10.10	<p style="text-align: center;"><i>Opening ceremony zoom video conferencing</i></p> <p>WELCOME SPEECH Liudmyla Hanushchak-Yefimenko — Prof. Dr., Vice-Rector for Research and Innovation, Kyiv National University of Technologies and Design (Kyiv, Ukraine)</p>		
10.15-12.30		<i>Oral presentations:</i>	
10.15-10.30	0.1	<p>DEPARTMENT OF ELECTROCHEMICAL POWER ENGINEERING & CHEMISTRY KNUTD: 90th ANNIVERSARY <u>Barsukov V.Z., Borysenko Yu.V.</u></p>	Ukraine
10.30-10.45	1.1	<p>MICROPOROUS CARBON AS ELECTRODE MATERIALS FOR SYMMETRIC SUPERCAPACITORS: COMPARATIVE ANALYSIS OF AQUEOUS ELECTROLYTES PERFORMANCE <u>Kotsyubynsky V. O., Rachiy B.I., Boychuk V. M., Budzullak I.M., Hodlevska M. A., Kachmar A. I.</u></p>	Ukraine
10.45-11.00	1.2	<p>TUNING THE BAND GAP OF NANOPOROUS ANODIC TIN OXIDE FILMS BY SIMPLE SOAKING IN WATER <u>Magdalena Gurgul</u></p>	Poland
11.00-11.15	2.1	<p>SIMULATION APPROACH IN THE DEVELOPMENT OF POLYFUNCTIONAL ELECTRODE MATERIALS <u>Ushchapovskyi D.Yu., Linyucheva O.V., Redko R.M., Kushmiruk A.I., Zabaluev A.S.</u></p>	Ukraine
11.15-11.30	2.2	<p>FEATURES OF THE ELECTROLYTIC DEPOSITION OF SILVER COATINGS FROM ACIDIC THIOUREA-CITRATE SOLUTIONS. <u>Smirnova O., Pylypenko O., Brovin A., Nikonov A., Mukhin Z.</u></p>	Ukraine

11.30-11.45	3.1	MECHANISM OF INTERNAL CORROSION OF ZIRCONIUM ALLOY Zr1Nb IN FUEL ELEMENTS <u>Hapon Yu.K.</u> , Kalugin V.D, Kustov M.V., Kamyshan I.I.	Ukraine
11.45-12.00	5.1	INFLUENCE OF Cu OXIDES AND PEDOT ON THE PHOTOACTIVITY OF NANOPOROUS TiO₂ <u>Renata Palowska</u> , Monika Sołtys-Mróż, Joanna Kapusta-Kołodziej, Grzegorz D. Sulka, Agnieszka Brzózka	Poland
12.00-12.15	5.2	FORMATION OF THIN INTERFERENCE-COLORED OXIDE FILMS ON THE TITANIUM-ALUMINUM-VANADIUM ALLOY BY ELECTROCHEMICAL OXIDATION IN SUCCINATE ELECTROLYTES <u>Mukhina Yu.</u> , <u>Smirnova O.</u> , Shevchenko G., Shkolnikova T., Pylypenko O.	Ukraine
12.15-12.30	5.3	COMPREHENSIVE STUDY OF Co (II) HYDROXIDE PRECIPITATION PROCESS <u>Frolova L.</u> , Butyrina T.	Ukraine
12.30		Closing Ceremony	

Poster Session:

Section 1. ELECTROCHEMICAL POWER SOURCES		
1.3	Ti-Si-C IN-SITU COMPOSITE AS A POTENTIAL MATERIAL FOR LIGHTWEIGHT <i>SOFC</i> INTERCONNECTS <u>Podhurska V.</u> , Brodnikovskiy D., Vasyliv B., Gadzyra M., Tkachenko S., Ladislav Čelko L., Ostash O., Brodnikovska I., Brodnikovskiy Y., Vasylyev O.	Ukraine, Czech Republic
1.4	THE EFFECT OF WATER BINDER ON ELECTROCHEMICAL PROPERTIES OF SILICON OXIDE AS THE ANODE MATERIAL FOR LITHIUM ION BATTERIES <u>Krushevskiy O.V.</u> , Potapenko A.V., Potapenko O.V.	Ukraine, P.R.China

1.5	CYCLING EFFICIENCY OF NANOSIZED TiO₂ IN LITHIUM AND SODIUM BATTERIES Lisnycha T.V., Globa N.I., Shmatok Yu.V., Chykyda T.Yu., Kirilov S.A.	Ukraine
Section 2. ELECTRODEPOSITION		
2.3	FEATURES OF COBALT ALLOYS BASED COATING ELECTROLYTIC FORMATION Nenastina T., Proskurina V., Ved` M., Horokhivska N.	Ukraine
2.4	THE ROLE OF ELECTROLYSIS REGIMES IN THE FORMATION OF METAL AND METAL OXIDE COATINGS FROM COMPLEX CITRATE ELECTROLYTES Sachanova Yu.I., Sakhnenko N.D., Ved` M.V., Yermolenko I.Yu., Pospelov A.P.	Ukraine
2.5	THE INFLUENCE OF COMPOSITION OF ELECTROLYTE AND REGIME OF ELECTROLYSIS ON THE FORMATION OF ZINC COATING Yevtushenko M. P., Makyeyeva I. S.	Ukraine
2.6	THE INVESTIGATION OF THE PROPERTIES OF THE COMPOSITE COATING Sn-Ni-TiO₂ Melnik O. G., Makyeyeva I. S.	Ukraine
2.7	INVESTIGATION OF ELECTRODEPOSITED SHINY CHROME COATING STRUCTURE AND PROPERTIES Petryk E.A., Kyslova O.V.	Ukraine
2.8	FEATURES OF ELECTRODEPOSITION OF CHROMIUM FROM ELECTROLYTE SOLUTION BASED ON CR (III) COMPOUNDS Kalyuzhin O.S., Kyslova O.V.	Ukraine
2.9	THE ECONOMIC DATA OF ELECTROCHEMICAL COATING BY CHROMIUM IN STANDARD ELECTROLYTES AND THE ELECTROLYTES WITH CHROMIUM (III) Tkachenko O., Kwasha O.	Ukraine

2.10	ECONOMIC FACTORS FOR CONSIDERING OF COMPOSITION OF ALKALINE AND NEAR-NEUTRAL ELECTROLYTES OF ZINC PLATING Tkachenko A., Yarmolenko S.	Ukraine
Section 3. CORROSION PROTECTION		
3.2	INVESTIGATION OF COLOR AND ANTICORROSIVE PROPERTIES OF SPINELS IN THE QUADRUPLE SYSTEM Fe-Al-Mg-O <u>Frolova L.</u> , Butyrina T., Zaichuk A.	Ukraine
3.3	COMBINED PROTECTION OF CARBON STEELS BY DIFFUSION COATINGS WITH Ti, Cr, Al AND CORROSION INHIBITORS Pogrebova I.S, Loskutova T.V, Khyzhnyak V.G, Bobina M.M, Yaresko A.R.	Ukraine
3.4	PECULIARITIES OF STRESS CORROSION CRACKING OF LOW ALLOY AND CARBON PIPE STEEL FOR MAIN GAS PIPELINES AT POTENTIALS CLOSE TO THE MAXIMUM PROTECTIVE POTENTIAL Nyrkova L, Osadchuk S., Lisovyi P., Prokopchuk S., Goncharenko L., Borysenko Yu.	Ukraine
Section 4. ELECTROCHEMICAL SENSORS		
4.1	EFFECT OF THE Cu IONS IMPREGNATION CONDITIONS ON THE ANODIC TiO₂ PROPERTIES Monika Sołtys-Mróż, Karolina Syrek, Grzegorz D. Sulka	Poland
4.2	INFLUENCE OF ADSORPTION AND DECOMPOSITION OF GASES ON MATERIALS OF STRUCTURAL ELEMENTS OF SENSORS AND MICROGENERATORS Linyucheva O.V., Homelia M.D., Liniuchev O.G., Kushmiruk A.I., Buket O.I., Ushchapovskyi D.Yu.	Ukraine
4.3	MEDIATOR SYSTEMS FOR SENSORY MEANS OF ENVIRONMENTAL MONITORING Liniuchev O.G., Linyucheva O.V., Kushmiruk A.I., Kosogin	Ukraine

	O.V., Motronyuk T.I.	
4.4	ELECTROCHEMICAL OXYGEN SENSOR FOR THE AQUATIC ENVIRONMENT Pichkorsky V.I., Buket O.I., Linyucheva O.V., Kushmyruk A.I., Kosogin O.V.	Ukraine
Section 5. MODERN ELECTROCHEMICAL AND RELATED TECHNOLOGIES		
5.4	THE ROLE OF GRAPHITE MORPHOLOGY ON THE SURFACE CONDUCTIVITY OF POLYMER BASED COMPOSITES Budko O., Tverdokhlib V., Butenko O., Chernysh O., Khomenko V., Barsukov V.	Ukraine
5.5	THE OPTIMIZATION OF COATING MATERIAL FOR ELECTROMAGNETIC INTERFERENCE (EMI) SHIELDING Zosimchuk O., Butenko O., Chernysh O., Tverdokhlib V., Khomenko V., Barsukov V.	Ukraine
5.6	ELECTROCHEMICAL SYNTHESIS AND OPTICAL PROPERTIES OF POLYAMINOTHIAZOLE (PAT) ON SEMICONDUCTIVE ELECTRODES Dubenska L., Horbenko Yu., Aksimentyeva O.	Ukraine
5.7	ELECTROCHEMICAL PROPERTIES OF COMPOSITE MEMBRANES MODIFIED WITH HYDRATED ZIRCONIUM DIOXIDE AND GRAPHENE OXIDE: EFFECT OF POLYMER MATRIX Yu.S. Dzyazko, L.M. Rozhdestvenska, K.O. Kudelko, V.M. Ogenko, V.V. Chmilenko, Yu.V. Borysenko	Ukraine
5.8	PHYSICAL MODELING OF ION TRANSPORT IN SOLID-PHASE SYSTEMS Koshel N.D., Smirnova E.V., Volkova V. I.	Ukraine
5.9	PHYSICAL AND CHEMICAL PROPERTIES OF AQUEOUS SOLUTIONS OF SOME IONIC LIQUIDS Koshel N.D., Koshel S.A., Sverdlikovskaya O.S., Chervakov O.V.	Ukraine

5.10	THE ROLE OF IRON IN COATING MATERIAL FOR ELECTROMAGNETIC INTERFERENCE (EMI) SHIELDING Godunko A., Chernysh O, Butenko O, Tverdokhlib V., Khomenko V., Barsukov V.	Ukraine
5.11	THE DIFFERENTIAL VOLTAMETRY METHOD FOR STUDYING THE COMBINED CATHODIC PROCESSES IN AQUEOUS NaCl SOLUTION K. Rutkovska, G.Tulsky, A. Tulska, V. Homozov	Ukraine
5.12	INFLUENCE OF ELECTROLYTE COMPOSITION ON THE ELECTROCHEMICAL SYNTHESIS OF PEROXYLACTIC ACID Vodolazhenko S.A., Deribo S.G., Chahine I.H.	Ukraine
5.13	ELECTROCHEMICAL AND SPECTROPHOTOMETRIC EVALUATION OF THE ANTIOXIDANT CAPACITY OF SILVER NANOPARTICLES Vasyliiev G.S., Vorobyova V.I., Pylypenko I.V., Linyuchev O.G.	Ukraine
5.14	SELECTION OF LINGOSULPHANATE FOR THE DISPERSION OF CARBON MATERIALS Bugayova K., Butenko O, Chernysh O, Tverdokhlib V., Khomenko V., Barsukov V.	Ukraine
5.15	INVESTIGATION OF THE FILLER CONTENT INFLUENCE ON THE POLYETHYLENE COMPOSITES ELECTRICAL PROPERTIES Novak D., Zavalnytsky M., Nyzhnyk O.	Ukraine
5.16	ANALYSIS OF FACTORS AFFECTING THE CARRYOVER OF ELECTROLYTE IN SYSTEMS WITH GAS EVOLUTION Golovko D., Nefedov V., Goncharova I., Chepinskaya A.	Ukraine