



GRADUATE STUDENT SYMPOSIUM ON ADVANTAGEOUS ELECTROCHEMISTRY

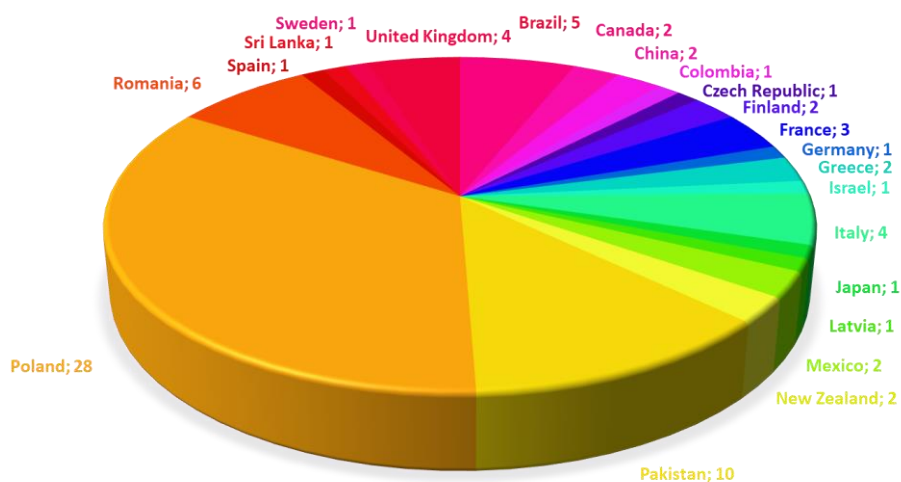
belonging to
ISE Satellite Student Regional Symposium on Electrochemistry

Organized by the
Institute of Physical Chemistry, Polish Academy of Sciences
with the support of
International Society of Electrochemistry

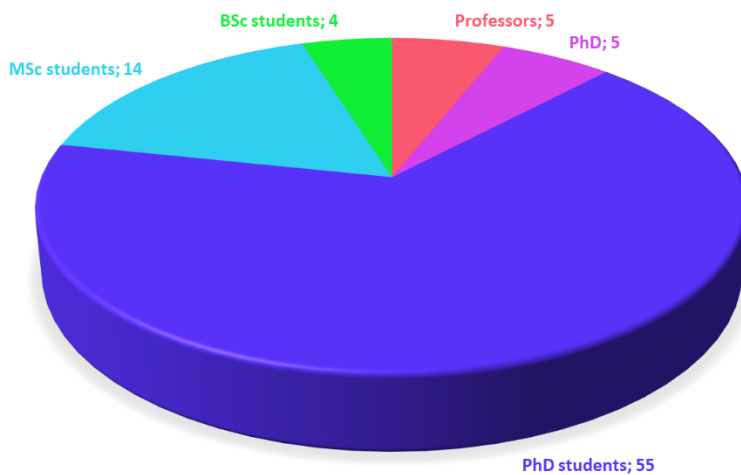
Warsaw, Poland
10 - 11 September 2020

Conference Report

Graduate Student Symposium on Advantageous Electrochemistry, belonging to ISE Satellite Student Regional Symposium on Electrochemistry, was held on September 10-11 2020 as a webinar on a ZOOM platform. Because of the current pandemic situation it was not recommended to meet in person, however maybe because of this issue, among the participants we were able to virtually host 83 people from 22 countries, including Poland, Pakistan, Romania, Brazil, Italy, United Kingdom, France, Canada, China, Finland, Greece, Mexico, New Zealand, Latvia, Japan, Israel, Germany, Czech Republic, Colombia, Sweden, Sri Lanka and Spain. During the conference, at least half of the registered participants were active online.



The vast majority of conference participants were doctoral students:



In every of two conference days there were three presentation sessions, separated by coffee breaks. Four of these sessions were open by keynote lectures, respectively:

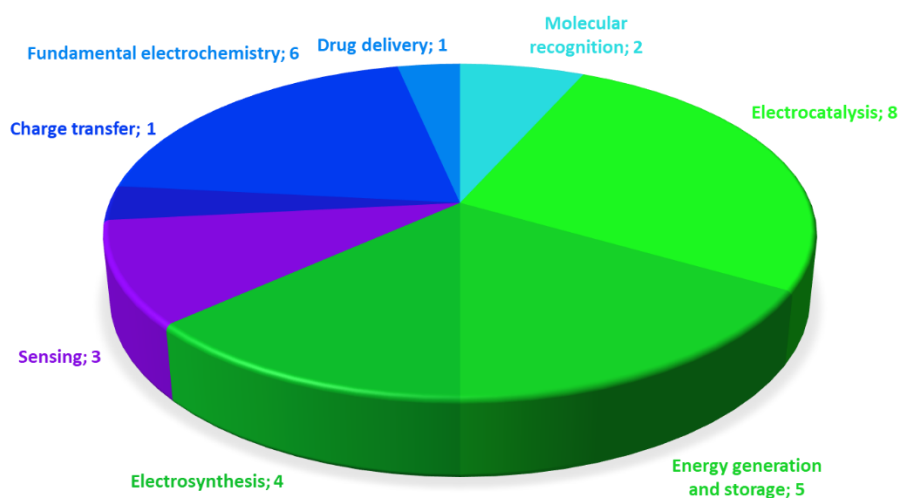
“ORR and HER at liquid-liquid interface” given by **Prof. Marcin Opallo**, Director of the Institute of Physical Chemistry of the Polish Academy of Sciences, Warsaw

“Electrochemical imaging: How to reveal redox-active sites and why?” given by **Dr. Wojciech Nogala**, ISE representative in Poland, Institute of Physical Chemistry of the Polish Academy of Sciences, Warsaw

“Application of affinity-based biosensors in clinical diagnostics” given by **Dr. Marta Jarczewska**, Faculty of Chemistry, Warsaw University of Technology

“Electrochemical sensors enabled by 3D printing” given by **Prof. Rodrigo Munoz**, Institute of Chemistry – Federal University of Uberlândia in Brazil.

The main element of the conference were student contributed presentations. Among them, eight main areas of electrochemistry can be distinguished:



There were 30 student contributed presentations, listed below:

Suzuki Shoyo, Kyushu University, Fukuoka, Japan

Alternative Me-N-C based Carbon Foams Materials as Fe-free and non-PGM Electrocatalysts

Dominik Korol, Institute of Physical Chemistry Polish Academy of Sciences, Warsaw, Poland

Melamine determination based on molecularly imprinted polymers

Ewelina Kwiatkowska, University of Warsaw, Warsaw, Poland

The influence of a soluble polyaniline doping on its spectroscopic, electrochemical properties and possible application in solar cells

Zuzanna Zarach, Gdańsk University of Technology, Gdańsk, Poland

Electrode materials for photo-supercapacitors

Madara Darzina, Latvian Institute of Organic Synthesis, Riga, Latvia

Electrosynthesis of α,β -unsaturated esters from furfuryl alcohol and furfuryl amine derivatives

Marta Wala, Silesian University of Technology, Gliwice, Poland

Electrocatalytic properties of NiCuGO composite

Jyoti, Institute of Physical Chemistry Polish Academy of Sciences, Warsaw, Poland

Molecularly imprinted polymer nanoparticles as the recognition unit of the electrochemical chemosensor for cilostazol

Katarzyna Szwabińska, Institute of Chemistry and Technical Electrochemistry, Poznan University of Technology, Poznań, Poland

Mixed diffusion-kinetic control of H_2O_2 oxidation at Pt in an alkaline electrolyte: Implications for oxygen electroreduction studies with RRDE

Aleksandra Nyga, Silesian University of Technology, Gliwice, Poland

Electropolymerized photoactive selenophene – fullerene dyad capable of singlet oxygen photogeneration

Anna Jędraczką, AGH University of Science and Technology, Kraków, Poland

Electrochemical analysis of cobalt and tungsten codeposition process from acidic solutions

Katarzyna Leśniak-Ziółkowska, Silesian University of Technology, Gliwice, Poland

Plasma electrolytic oxidation of Ti alloy in suspensions containing particles with antibacterial properties

Karolina Chat, AGH University of Science and Technology, Kraków, Poland

Influence of bath composition and chemical post-treatment on surface properties of electrodeposited nickel

Xiangui Ma, Changchun Institute of Applied Chemistry, Chinese Academy of Sciences, Changchun, China

A portable wireless single-electrode system for electrochemiluminescent analysis

Martin Konhefr, Faculty of Science, Masaryk University, Brno, Czech Republic

Sensing possibilities of diferrocenylborinic acid immobilized in 2D-titanate nanosheet host

Tanguy Picard, LEPMI, Gières, France

Tetraglyme - $Ca(TFSI)_2$, a non-monotonic liquid electrolyte

Dimitrios Zouraris, National Technical University of Athens, Athens, Greece

TacV for immobilized and free in a solution electroactive species

Rajendra Prasad Shukla, Kreitman School of Advanced Graduate Studies Ben-Gurion University of the Negev, Beer Sheva, Israel

Intelligent Multi-Electrode Array for Real-Time Treatment Monitoring of Antipsychotic Clozapine

Jie Luo, University of Padova, Padova, Italy

Electrochemical Study of The Effect of Al^{3+} on The Stability and Performance of Cu-Based Catalysts in ATRP in Organic Media

Piotr Kamedulski, Nicolaus Copernicus University, Toruń, Poland

Innovative graphene-based materials and their electrochemical applications

Jan Stępień, Institute of Physical Chemistry Polish Academy of Sciences, Warsaw, Poland

Bursting oscillations of current in discrete lattice simulations of metal passivation

Hermes Ariel Llaín Jiménez, University of Warsaw, Warsaw, Poland

Faster batteries, longer cycle life: LTO electrochemical characterization compared to commercial materials

Gheorghe Melinte, "Iuliu Hațieganu" University of Medicine and Pharmacy Faculty of Pharmacy, Cluj Napoca, Romania

Electrochemical Gold Nanostructured Aptasensor for Tetracycline Selective Detection

José Carlos Bueno Rodríguez, University of Seville, Seville, Spain

The study of the reduction and the adsorption of the anticancer drug doxorubicin on gold electrodes using electrochemical techniques and spectroelectrochemical methods

Tianxiao Ma, University of British Columbia, Vancouver, Canada

On the investigation of the influence of local packing density and underlying surface crystallography on the stability of thiolated DNA SAMs

Hui Mun Man, Aix-Marseille University, CNRS, Marseille, France

Studying enzymatic catalysis by fluorescence microscopy – electrochemistry coupling (EC-CLSM)

Patricia Bassil, Rennes 1 University, Rennes, France

Solubilization of anthraquinones in different medium: application to redox flow batteries

Miriam Moro, Alma Mater Studiorum - University of Bologna, Bologna, Italy

Nano-graphitic templates and hierarchical nanostructures in multi-functional electrocatalysts for CO₂ conversion

Ting Wu, University of Canterbury, Christchurch, New Zealand

Covalent Carbon Surface Modification with Iron Porphyrin for Oxygen Reduction Reaction

Katarzyna Skibinska, AGH University of Science and Technology, Kraków, Poland

Influence of magnetic field on Ni nanocones array electrode synthesized using crystal modifier

Paola Zimmermann Crocomo, Silesian University of Technology, Gliwice, Poland

Spectroelectrochemical studies of charge carrier species of electropolymerized compounds

After the conference, the voting for the best presentation took place. All registered participants could take part in it. During the voting, it was necessary to indicate three authors of the presentation who stood out from the others in the voters' opinion. The top three places and cash prizes of 250, 150 and 100 euro respectively went to:

Zuzanna Zarach - 29% of the vote
Ma Xiangui - 26% of the vote
Ewelina Kwiatkowska - 23% of the vote

We want to thank all participants once again for their attention! Especial acknowledge to the International Society of Electrochemistry and the Institute of Physical Chemistry, Polish Academy of Sciences for support in this conference organizing.

Student Organizing and Programme Committee:

Elżbieta Jarosińska
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