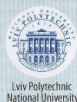


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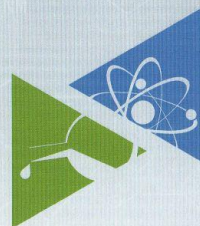


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**EASTWEST**  
Chemistry Conference



*CERTIFICATE OF PARTICIPATION*

**SUTOPO HADI**

*has participated in the EastWest Chemistry Conference 2018  
which was held in Lviv, Ukraine on October 10-12, 2018.*

Prof. Dr. Stanislav Voronov  
Co-chair

Prof. Dr. Mustafa Culha  
Co-chair

October 10-12, 2018 / Lviv, Ukraine



October 10-12, 2018  
Lviv, Ukraine

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September 5, 2018

Dear Sutopo Hadi:

It is our pleasure to invite you to present your research at the EastWest Chemistry Conference (EWCC) during October 10-12, 2018, in Lviv, Ukraine. The details of your contribution as reviewed by our scientific committee is summarized as follows:

**Accepted Presentation Type:** Oral Presentation

**Authors:** Sutopo Hadi, Noviany Noviany, Tati Suhartati, Hardoko Inaan Qudus

**Title of abstract:** The Biological Activity of Some Organotin(IV) benzoate compounds

We believe that your valuable contribution will enhance the scientific atmosphere of the conference. We are looking forward to seeing you in Lviv, Ukraine.

Sincerely yours,

Conference Co-Chair  
Prof. Dr. Mustafa Cülha  
on the behalf of the organization committee

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October 10, 2018		October 10, 2018	
08:00-08:30	<b>REGISTRATION</b> (Main building of Lviv Polytechnic National University)	<b>Parallel Session: Oral presentations</b> <b>Room 2 (Lviv Polytechnic National University)</b>	
08:30-09:20	<b>Opening Ceremony</b> Rector Yan J. Kobus, Prof. Stanislav Voronov, Prof. Mustafa Celik	11:00-11:30	<b>Polymers</b> Chair: Prof. Sergey Minko
09:20-10:00	<b>PLENARY SESSION</b> Chair: Prof. Mustafa Celik	11:30-12:00	<b>S-001 - Anzely Kehut</b> (Lviv Polytechnic National University, Ukraine), Andriy Voronov, Stanislav Voronov "Amphiphilic Invertible Polymers: Synthesis, Properties, and Application"
09:20-09:50	<b>Invited Speaker</b> (Prof. Manfred Strohriegl, Leibniz Institute of Polymer Research, Germany) "Functional Coatings with Polymer Brushes"	12:00-12:30	<b>S-002 - Szymon Zapotoczny</b> (Jagiellonian University, Poland), Karol Wolski, Michal Szewczyk, Anna Grzeskiewicz, Małgorzata Skowronka, Anna Jurek, Magdalena Wytrwał-Sarna, Andrzej Bernasik "Macromolecule engineering on surfaces – conjugated polymer brushes with ladder-like architecture"
09:50-10:20	<b>Invited Speaker</b> (Prof. Andrzej Budkowski, Jagiellonian University, Poland), Katarzyna Gajda, Przemysław Petrow, Joanna Rapińska, Andrzej Budkowski "Surface analysis of biosensor interface for enhanced immunoassay performance"	12:30-13:00	<b>S-003 - Viktor Sokolov</b> (Lviv Polytechnic National University, Ukraine), Oleh Shevchuk "Reactive polymer networks for in-situ synthesis of semiconductor nanocrystals"
10:20-10:50	<b>Invited Speaker</b> (Prof. Sergey Minko, University of Georgia, USA) "Polymer Brush Architecture for Interfaces"	13:00-13:30	<b>S-004 - Arunas Ramanašiusas</b> (Vilnius University, Lithuania), Mindaugas Gercikas, Gintautas Raglinskius, Artūras Popas, Benas Braskas, Almis Ramanašienė "Conjugated Polymers in a Design of Electrochromic and Electrochemical Sensors"
10:50-11:30	<b>Coffee Break</b>	13:30-14:00	<b>S-005 - Igor I. Pokorný</b> (Lomonosov Moscow State University, Russian Federation), Andrey A. Rukh, Rustam A. Gumerov, Ivan V. Portnikov, Sergey A. Filippov "Some physical properties of microgels at surfaces and liquid interface"

October 10, 2018

10:00-10:30	<b>Invited Speaker</b> (Prof. Sergii Ribov, Institute of Macromolecular Chemistry of NASU, Ukraine) "Functional materials based on cyclodextrin: development and application"
10:30-10:45	<b>Invited Speaker</b> (Prof. Andriy Varenko, North Dakota State University, USA) Andriy Varenko, Zoltan Demchuk, Kyle Knapczyk, Oleg Shvachuk, Wladyslaw Grzesiak, Anuska Kollai, Viktor Polovnikov, Stanislav Vorobov "Monomers and Polymers from Plant/Vegetable Oils"
10:45-10:55	<b>Coffee Break</b>
<b>Parallel Sessions: Oral presentations</b>	
<b>Hall 3 (Chemistry Hall)</b>	
10:55-11:30	<b>Polymers</b> Chair: Prof. Sergii Ribov
10:55-11:30	<b>S-016 - Inna Senchenko</b> (Taras Shevchenko National University, Ukraine), Oleksandra Benichuk "A near infrared electroluminescence polymeric systems containing $\beta$ -diketones and ketones as emitters for organic light-emitting diodes"
11:30-11:55	<b>S-017 - Alexander Zalchewski</b> (Lviv Polytechnic National University, Ukraine), Nataliya Mishra, Olesya Pukh, Orest Havas, Khrystyna Hunka, Nataliya Kinech, Nataliya Rysak, Rostyslav Stokha "Functional block, comb-like and block/branched polyamphiphilic Contained Radical and Non-radical Routes of Controlled Synthesis"
11:55-12:15	<b>S-018 - Oleg Shvachuk</b> (Lviv Polytechnic National University, Ukraine), Nataliya Kivariyk, Maryna Chobot, Vitalii Seduk, Viktor Tokars "Cross-linked polymer hydrogels with embedded mineral nanoparticles"

October 10, 2018

<b>Hall 2 (Bio)</b>	
10:55-11:30	<b>Environmental/Chemical/Biochemistry, Analytical Chemistry and Physical and Biophysical Chemistry</b> Chair: Prof. Olena Alaimontseva
10:55-11:30	<b>S-020 - Mustafa Erdo</b> (Sakarya University, Turkey) "Controlled Membrane Membranes"
11:30-11:55	<b>S-021 - Rok Hui Tan</b> (D66) - Leibniz Institute for Interactive Materials, Germany, Roman Fedorov, Igor I. Poterkin, Andriy Pich "Bio-inspired selenium incorporated micropores for catalysis"
<b>Hall 3 (Bio)</b>	
10:55-11:30	<b>Organic and Inorganic Synthesis</b> Chair: Dr. Anurag Khatu
10:55-11:30	<b>S-022 - Sultana Hadd</b> (University of Comoros, Madagascar), Navin Navin, Taty Suhartati, Harfala Inna Qadus "The Biological Activity of Some Organic (M) bivalent compounds"
11:30-11:55	<b>S-023 - Nataliya Polynovska</b> (Ivan Franko National University, Ukraine), Olga Shyba, Mykola Obushak "A Novel Chemoselectivity in the Base-Promoted Reaction of Azides with Ketone/Alkyne Compounds: Mechanistic Insights"
11:55-12:15	<b>S-024 - Roman Lytaye</b> (Ivan Franko National University, Ukraine), Khrystyna Pukovych, Andriy Vachula, Iryna Hladka, Gritavita Bagdasari, Yon Deryla, Oleksandr Boudakov, Vasy Honsk, Mykylo Khutylko, Dmytro Malynuk, Jacek Witek, Orest Havas, Mykola Obushak "Synthesis of conjugated heteroaromatics based on the products of copper-catalyzed arylation reactions"
12:15-12:30	<b>POSTERS PRESENTATIONS - 1</b> (Main building of Lviv Polytechnic National University, second floor, hallway (posters #12-54))

# The Biological Activity of Some Organotin(IV) benzoate compounds

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## ABSTRACT

The organotin(IV) carboxylate and its derivatives are widely known since the derivative of these compounds are very active and strong even at very low concentration. This condition makes these compounds continue to attract more attention to be used in many biological activities. We have previously succeeded in the syntheses and performed many activity studies of some organotin(IV) benzoates, in this work, we reported the antibacteria and antimalaria activity studies of some organotin(IV) derivatives. The targeted compounds were prepared from their organotin(IV) chlorides via the intermediate products of dibutyltin(IV) oxide, diphenyltin(IV) dihydroxide and triphenyltin(IV) hydroxide, respectively and followed by reacting the intermediate products with benzoic acid desired. The antimalaria activity was performed against *Plasmodium falcifarum*. While the antibacterial activity was performed against *Pseudomonas aeruginosa* and *Bacillus subtilis*. The results showed that the IC<sub>50</sub> of all organotin(IV) compounds tested were little bit higher than the chloroquine as the positive control, however one advantage is that the organotin(IV) compounds are not resistant to the Plasmodium, thus making the use of organotin(IV) as antimalaria is widely opened. The triphenyltin(IV) compound is more potent to be used as antimalaria and has potential to be developed as antimalarial drug in the near future. The results of antibacterial activity revealed that the triphenyltin(IV) 4-chlorobenzoate was the most active compound at concentration of  $3.956 \times 10^{-4}$  M (200 ppm), while the chloramphenicol gave inhibition of  $6.1894 \times 10^{-4}$  M (200 ppm).

**Keywords:** antibacteria, antimalaria, organotin(IV) benzoate