CONFERENCE PROGRAMME

22.11.2024 AULA RB0A5

FACULTY OF SCIENCE,
PAVOL JOZEF ŠAFÁRIK UNIVERSITY IN KOŠICE

NOVEL TRENDS IN CHEMISTRY, RESERCH AND EDUCATION 2024

The event was supported by:

CONFERENCE PROGRAMME

INVITED AND PLENARY LECTURES	**08:00 – 08:20**	**REGISTRATION**
	08:20 – 08:30	**WELCOME AND OPENING** **prof. RNDr. Zuzana Vargová, Ph.D.**
	CHAIRMAN:	**doc. Ing. Viera Vojteková, PhD.**
	08:30 – 09:00	**prof. PharmDr. Josef Jampílek, Ph.D.** *Design and properties of new multi-target Michael acceptors* Department of Analytical Chemistry, Faculty of Natural Sciences Comenius University, Ilkovičova 6, 842 15 Bratislava, Slovak Republic
	09:00 – 09:30	**prof. Ing. Ľubomír Švorc, DrSc.** *Novel electrode materials - towards a more environmentally friendly electroanalysis* Institute of Analytical Chemistry, Faculty of Chemical and Food Technology, Slovak University of Technology in Bratislava, Radlinského 9, 812 37 Bratislava, Slovak Republic
	09:30 – 10:00	**prof. RNDr. Jan Veselý, Ph.D.** *Stereocontrolled strategies using organocatalysis* Department of Organic Chemistry, Charles University, Hlavova 8, 128 00 Prague 2, Czech Republic
	10:00 – 10:30	**COFFEE BREAK + POSTER SESSION I**
	CHAIRMAN:	**prof. Dr. Yaroslav Bazeľ, DrSc.**
	10:30 – 11:00	**doc. Ing. Dana Dvoranová, PhD.** *Research and education at Institute of Physical Chemistry and Chemical Physics, FCHPT STU in Bratislava* Institute of Physical Chemistry and Chemical Physics, Faculty of Chemical and Food Technology in Bratislava, Radlinského 9, 812 37 Bratislava, Slovak Republic
	11:00 – 11:30	**RNDr. Jana Kubacková, PhD.** *Optically actuated microstructures prepared by two-photon polymerization for biophysical applications* Department of Biophysics, Institute of Experimental Physics, Slovak Academy of Sciences, Watsonova 47, 040 01 Košice, Slovak Republic

CONFERENCE PROGRAMME

INVITED AND PLENARY LECTURES	11:30 – 12:00	**prof. RNDr. Zuzana Vargová, Ph.D.** *Silver(I) and zinc(II) coordination compounds in the context of their structural-biological evaluation* Department of Inorganic Chemistry, Institute of Chemistry, Faculty of Science, Pavol Jozef Šafárik University in Košice, Moyzesova 11, 041 54 Košice, Slovak Republic
	12:00 – 12:30	**doc. RNDr. Lukáš Smolko, PhD.** *Metal(II) diflunisalato complexes as potential anticancer therapeutics* Department of Medical and Clinical Biochemistry, Faculty of Medicine, Pavol Jozef Šafárik University in Košice, Trieda SNP 1, 040 11 Košice, Slovak Republic
	12:30 – 13:30	**LUNCH**
	CHAIRMAN:	**doc. RNDr. Taťána Gondová, CSc.**
	13:30 – 14:00	**doc. PaedDr. Katarína Kotuľáková, PhD.** *Teachers in the context of a new curriculum* Faculty of Education, Trnava University in Trnava, Priemyselná 4, 917 01 Trnava, Slovak Republic
	14:00 – 14:30	**prof. RNDr. Erik Sedlák, DrSc.** *Alternative design of efficient genetically encoded photosensitizers* Department of Biochemistry, Institute of Chemistry, Faculty of Science, Pavol Jozef Šafárik University in Košice, Moyzesova 11, 041 54 Košice, Slovak Republic
	14:30 – 15:00	**doc. RNDr. Mária Ganajová, CSc.** *Developing future chemistry teachers' digital competences within the activating methods in chemistry teaching subject* Department of Didactics of Chemistry, Institute of Chemistry, Faculty of Science, Pavol Jozef Šafárik University in Košice, Moyzesova 11, 040 01 Košice, Slovak Republic
	15:00 – 15:30	**COFFEE BREAK + POSTER SESSION II**
	CHAIRMAN:	**RNDr. Rastislav Serbin, PhD.**

CONFERENCE PROGRAMME

INVITED AND PLENARY LECTURES	15:30 – 15:50	**Serhii Zaruba, PhD.** *Microextraction by packed sorbent for phosphate determination in natural water samples with UV-Vis detection* Department of Analytical Chemistry, Institute of Chemistry, Faculty of Science, Pavol Jozef Šafárik University in Košice, Moyzesova 11, 041 54 Košice, Slovak Republic
	15:50 – 16:10	**doc. RNDr. Ladislav Janovec, PhD.** *Disubstituted acridines as selective inhibitors of human DNA topoisomerases* Department of Organic Chemistry, Institute of Chemistry, Faculty of Science, Pavol Jozef Šafárik University in Košice, Moyzesova 11, 041 54 Košice, Slovak Republic
	16:10 – 16:30	**RNDr. Natália Podrojková, PhD.** *Application of computational simulations in research and development of hydrogen and battery technologies* Department of Physical Chemistry, Institute of Chemistry, Faculty of Science, Pavol Jozef Šafárik University in Košice, Moyzesova 11, 041 54 Košice, Slovak Republic
	16:30	**CONFERENCE CLOSING** **prof. RNDr. Zuzana Vargová, Ph.D.**

POSTER SESSION

SESSION I	
P1	A. Gajdošová, J. Šandrejová. *In-syringe microextraction with in-tip detection using an optical probe for the determination of cadmium.*
P2	B. Benická, E. Kupcová. *Determination of muscimol using HILIC.*
P3	S. Kakalejčíková, D. Harenčár, Y. Bazeľ. *A combination of vortex–assisted liquid–liquid microextraction with fluorescence detection for the determination of picric acid.*
P4	E. Kupcová, J. Ševčíková, B. Benická. *Extraction of PAHs from acid tar samples.*
P5	K. Capko, E. Sedlák, M. Tomková. *Optimization of yeast display for GPCR solubilization and structural studies.*
P6	A. Gucký, J. Korábečný, M. Kožurková. *Self-structure formation in polyriboadenylic acid induced by novel acridine derivatives with topoisomerase I inhibitory activity.*
P7	T. Gulyásová, V. Holotová, C. Díaz, E. Sedlák, V. Huntošová. *Design of genetically encoded proteins for targeted cancer treatment.*
P8	V. Fedorová, T. Bíró, V. Huntošová, K. Šipošová, M. Humenik. *Spider silk protein-DNA bioconjugates binding functional ligands.*
P9	E. Kipikašová, S. Stuchlík, Z. Levarski, I. Karatkevich, E. Sedlák, M. Tomková. *Efficient testing of directed evolution-selected staphylokinase variants via expression in Vibrio natriegens.*
P10	H. Matajová, A. Gucký, K. Krochtová, B. Bolgár, L. Janovec, M. Kožurková. *DNA binding properties and topoisomerase inhibition of novel 2-substituted acridones.*
P11	O. Ozhelevska, A. Gucký, J. Korábečný, O. Soukup, L. Pulkrábková, M. Kožurková. *Study of new 2,6,9-trisubstituted derivatives of acridine with albumin and monitoring of their MTT activity.*
P12	D. Pitková, L. Trizna, V. Víglaský. *Non canonical 3WJ DNA motif-helical ligand interaction.*
P13	M. Matiková-Maľarová, K. Pigulová, J. Tomičová, M. Vavra. *The interactive map of the chemical industry – expansion.*
P14	J. Tomičová, M. Matiková-Maľarová, A. Bilá. *Expansion of the interactive map of the chemical industry with a focus on ecology.*

POSTER SESSION

SESSION II	
P15	A. Migasová, V. Huntošová, T. Zelenka, M. Almáši. *Material UiO-66-NH_2 surface-modified with folic acid as a drug carrier.*
P16	K. Micheľová, J. Kuchár, L. Smolko. *Potential biological activity of copper complexes contains planar N-donor ligands and glutamic acid.*
P17	J. Kurjan, Z. Jendželovská, V. Buľková, I. D. Radojevic, M. Vilková, M. Litecká, R. Jendželovský, I. Potočňák. *Synthesis and biological activity of Ag(I) and Cu(II) complexes of (3E)-3-(1-{[(pyridin-2-yl)methyl]amino}ethylidene)-3,4-dihydro-2H-benzopyran-2,4-dione.*
P18	L. Zelená, M. Almáši, T. Zelenka, J. Bednarčík, P. Diko. *MMM-MOF composites: textural and morphological properties.*
P19	M. Szabó Dózsa, R. Smolko, E. Samoľová, J. Černák. *Novel heteroleptic Ni(II) complexes based on 8-hydroxyquinoline derivates.*
P20	N. Vargová, N. Király, R. Serbin, M. Almáši. *Exploring porous coordination networks for heterogeneous catalysis.*
P21	M. Budovská, R. Michalková, J. Mojžiš. *Bis-indole compounds with various linkers: synthesis and antiproliferative profile.*
P22	P. Michalčin, T. Pončáková, M. Fábian, M. Martinková, J. Kuchár, M. Litecká. *Synthesis and biological evaluation of C-alkyl piperidine-containing sphingomimetics.*
P23	G. Ondrejkovičová, K. Stanková, T. Rožek, M. Martinková, M. Bago Pilátová, J. Kuchár, M. Litecká. *A straightforward route to novel isomeric sphingofungin-based aminopolyols.*
P24	J. Špaková Raschmanová, K. Stanková, M. Martinková, M. Bago Pilátová, J. Kuchár, M. Litecká. *A simple approach to cytotoxic isomeric anhydrophytosphingosine mimetics.*
P25	V. Niščáková, N. Podrojková, A. Straková Fedorková, M. Almáši, N. Király, J. Asenjo, E. Romadina. *Redox properties of viologenes as alternative to vanadium electrolyte for redox flow battery.*
P26	M. Paračková, R. Oriňaková, M. Strečková, A. Gubóová. *A novel high-entropy electrocatalyst for water electrolysis.*
P27	J. Shepa, I. Šišoláková, R. Oriňaková. *Nanomodified electrochemical sensor for uric acid detection.*