4th George Olah Conference

XX Conference of the George Olah Doctoral School

26 September 2022

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Program

EVENT VENUE: BME CHC14

Online streaming (only morning sessions): YouTube

8^{30} Opening – Prof. Dr. László Poppe

ORAL PRESENTATIONS

Chairman: Prof Dr. László Poppe

8^{35}-9^{05} **Dr. Brigitta Nagy** – Mathematical modeling for modernizing the development and quality assurance of pharmaceuticals – Invited lecturer, George Olah Prize winner in 2021

9^{05}-9^{35} **Dr. Antal Kováts** – Industrial research and academic cooperation at Furukawa Electric Institute of Technology – Invited lecturer from Furukawa Electric Institute of Technology

9^{35}-9^{55} **Dr. Zsolt Rapi** – Carbohydrate-based crown ethers – Invited lecturer from the Department of Organic Chemistry and Technology

9^{55}-10^{15} **Dr. Viktória Feigl** – Re-use of bauxite residue: 15 years of research at BME – Invited lecturer from the Department of Applied Biotechnology and Food Science

10^{15}-10^{40} Coffee Break

Chairman: Prof Dr. László Nyulászi

10^{40}-11^{00} **Prof. Dr. Krisztina László Nagyné** – Carbon beyond adsorption– Invited lecturer from the Department of Physical Chemistry and Materials Science

11^{00}-11^{20} **Dr. Lajos Höfler** – Investigating Electrochemical Devices in the 21st Century: Experimental Approaches and Machine Learning Methods – Invited lecturer from the Department of Inorganic and Analytical Chemistry

11^{20}-11^{40} **Dr. Róbert Kun** – Supercritical carbon dioxide assisted synthesis of ultra-stable sulfur/carbon composite cathodes for Li-S batteries – Invited lecturer from the Department of Chemical and Environmental Process Engineering

11^{40}-12^{25} **Prof. Dr. Hansjörg Grützmacher** – Functional groups for organophosphorus chemistry – Invited lecturer from Eidgenössische

Technische Hochschule, Zürich, Deputy head of Laboratory of Inorganic Chemistry

12^{25}-14^{00} Break

14^{00}-15^{00} Poster session – 3rd floor

Jury: Dr. László Hegedűs, Dr. Mónika Molnár, Dr. Benjámin Gyarmati

P01	Samantha Kathiuska Samaniego Andrade	Effect of GO dopping on N, S co-doped carrageenan-based porous carbon.
P02	Niloofar Bayat	Synthesis and characterization of some metal complexes: ammine complexes of cobalt
P03	Vajk Farkas	Biodegradable polymer synthesis via acyclic diene metathesis (ADMET) polymerization
P04	Hamsasew Hankebo Lemago	Fabrication and characterization of ZnO and ZnO-Al_2O_3 composites inverse opals by thermal and plasma-assisted ALD for photocatalysis
P05	Bettina Rávai	Multicomponent reaction of isatins, beta-ketophosphonates and primary amines
P06	Bence András Sármezey	Tunable thermoresponsive behavior of N,N'-diethylacrylamide and poly(ethylene glycol)acrylate and poly(ethylene glycol)methacrylate based copolymers
P07	Gergely Solymosi	Towards accurate control of surface charge of gold nanoporous membranes through covalent surface modification
P08	Kármen Szabó	Synthesis of potentionally biologically active acyclic aminophosphonate derivatives
P09	Zsuzsanna Szalai	The synthesis of hydroxymethylene-bisphosphonate derivates and their rearranged products by the Pudovik reaction
P10	Lan Yi	Drug formulation by electrospinning fibers from water soluble polymers: encapsulation and drug release
P11	Ábel Zsubrits	Investigation of the electrochemical ferrate synthesis: comparison of pure iron and white cast iron electrodes

P12	Amer Aljamal	The utilisation of phytic acid as a reactive flame retardant in a fully biobased waterborne epoxy system
P13	Réka Babai	Maintenance of genomic integrity in the malaria parasite Plasmodium falciparum
P14	Marcell Bohus	Atomic layer deposition surface-modified carbon nanosphere and carbon nanopowder nanofluids for thermal conductivity enhancement

P15	Balázs Decsi	Investigation of the biomimetic oxidation of Chloroquine in continuous flow mode
P16	Kata Enikő Decsov	Silica-based microfibrous structures for the flame retardancy of poly(lactic acid)
P17	Júlia Domján	Stability study of infliximab in electrospun and liquid formulations containing HPβCD
P18	Milán FerdináND	A novel approach to the impact modification of PLA
P19	Eszter Holub	Effects of thymidylate synthase inhibitors on cell cycle and cell viability
P20	Koppány László Majzinger	Effect of HHP treatment on the quality characteristics of mangalica flesh and bacon
P21	Reem Mourad	Studying the changes in probiotics fermented egg white drink during storage time
P22	Zoé Sára Tóth	Examination of structural basis of proteinaceous *M. tuberculosis* dUTPase inhibition
P23	Zalán István Várady	Investigation of rheological properties and thermal conductivity of SiO_2-TiO_2 composite nanofluids prepared by atomic layer deposition
P24	Dorottya Vaskó	Development of inline monitoring technology for diagnostic protein purification and filtration

STUDENTS' ORAL PRESENTATIONS

Section A – CH201

Chairman: Prof Dr. Miklós Kubinyi

15^{00}-15^{15} **Aiman Aitkazina** – Synthesis of novel sulfur-containing amphiphilic polymer conetworks

15^{15}-15^{30} **Andor Vancza** – Studying the ultrafast dynamics of Fe(II) coordination complexes

15^{30}-15^{45} **Daniel Karajz** – Photocatalytic photonic inverse opals crystals

15^{45}-16^{00} **Sarah Morais Bezerra** – Reaction mediated quantum bit generation in silicon carbide

Section B – CH308

Chairman: Prof Dr. Béla Pukánszky

15^{00}-15^{15} **Álmos Botond Orosz** – Population balance based modeling of diastereomeric salt crystallization process of pregabalin tartrate

15^{15}-15^{30} **Dóra Fecske** – Amphiphilic ABA triblock copolymers as self-assembling drug delivery systems with extraordinarily high solubilization capacity

15^{30}-15^{45} **Jonathan Wavomba Mtogo** – Comparison of extractive distillation and pressure-swing distillation for tetrahydrofuran dewatering: energy and controllability

15^{45}-16^{00} **Petra Záhonyi** – Continuous integrated production of glucose granules with enhanced flowability and tabletability

16^{00}-16^{20} Coffee Break

Section A – CH201

Chairman: Prof. Dr. Krisztina László Nagyné

16^{20}-16^{35} **Anna Petróczy** – Synthesis and characterization of polystyrene-l-poly(dimethylsiloxane) conetworks

16^{35}-16^{50} **Daniel Janos Incze** – Mycotoxin inactivating enzymes as feed additives

16^{50}-17^{05} **Nikolett Nagy** – Discovery of novel isoforms of the human DUT gene

17^{05}-17^{20} **József Kozma** – Solid-contact ion-selective electrodes based on redox-functionalized carbon nanotubes for improved potential and batch-to-batch reproducibility

Section B – CH308

Chairman: Dr. Alfréd Kállay-Menyhárd

16^{20}-16^{35} **Mihály Mátyás Rudolf** – Synthesis and properties of spinel nanocrystals with X-ray excited optical luminescence

16^{35}-16^{50} **Áron Bajcsi** – New types of nanohybrids based on polymer conetworks

16^{50}-17^{05} **Ali O. Imarah** – Development of new enzyme-coated magnetic nanoparticle (MNP)-based bioreactors

17^{05}-17^{20} **Zsófia Bognár** – In situ silver nanoparticle coating of virions for quantification at single virus level

17^{35} Closing – CH201 – Prof Dr. László Nyulászi