

16.10.2022, Sunday	
17:00 – 20:00	Registration
20:00 – 22:00	Welcome drink (Lobby bar)
17.10.2022, Monday	
9:00 – 9:30	Opening of the conference
Chairperson	Karel Bouzek
9:30 – 10:30	Plenary lecture: Mária Omastová (Polymer Institute SAS, Bratislava, Slovak Republic) Two-dimensional nanomaterials and their hybrids for advanced applications
10:30 – 10:50	M. Mičušík (Polymer Institute SAS, Bratislava, Slovak Republic) Aging of 2D MXene nanoparticles in air: An XPS and TEM study
10:50 – 11:10	S. Cogal (Polymer Institute SAS, Bratislava, Slovak Republic) Two-dimensional transition metal dichalcogenide/conducting polymer based-electrocatalysts for overall water splitting
11:10 – 11:40	Coffee break
Chairperson	Karel Bouzek
11:40 – 12:00	P. Machata (Polymer Institute SAS, Bratislava, Slovak Republic) An in-depth study of the wettability of MXene films
12:00 – 12:20	T. Evgín (Polymer Institute SAS, Bratislava, Slovak Republic) Electrical and thermal properties of elastomer nanocomposites with hybrid carbon based-nanofillers
12:20 – 12:40	T. Sopčák (Institute of Materials Research SAS, Košice, Slovak Republic) Glycerol-citrate polymer incorporation into calcium phosphate cements
13:00 – 14:00	Lunch in Hotel Patria
Chairperson	Mária Omastová
14:00 – 15:00	Plenary lecture: Milan Sýkora (Laboratory for Advanced Materials, Comenius University, Bratislava, Slovak Republic) Size-dependent electronic properties of strongly-confined graphene quantum dots
15:00 – 15:20	N. Jaykhedkar (Laboratory for Advanced Materials, Comenius University, Bratislava, Slovak Republic) Understanding structure-bandgap relationship in chalcogenide perovskites: insights from machine learned MD-NPT study
15:20 – 15:40	A. Haque (Laboratory for Advanced Materials, Comenius University, Bratislava, Slovak Republic) Investigation of the growth mechanism and optical properties of heterostructures of binary and ternary chalcogenide nanocrystals
15:40 – 16:10	Coffee break

Chairperson	Renáta Oriňaková
16:10 – 16:30	F. Zechel (Laboratory for Advanced Materials, Comenius University, Bratislava, Slovak Republic) Preparation of MoS ₂ nanocrystals by colloidal methods using nontoxic precursors
16:30 – 16:50	R. Bystrický (Laboratory for Advanced Materials, Comenius University, Bratislava, Slovak Republic) Synthesis and characterization of the ternary chalcogenide perovskites
16:50 – 17:10	I. Božeková (Laboratory for Advanced Materials, Comenius University, Bratislava, Slovak Republic) Colloidal synthesis of gold and silver nanocrystals for studies of antimicrobial activity
17:10 – 17:30	G. R. Mini Rajendran (Laboratory for Advanced Materials, Comenius University, Bratislava, Slovak Republic) Effect of charging on the electronic structure and plasmonic properties of derivatized anthracenes
19:00	Dinner in “Koliba” Patria

18.10.2022, Tuesday

Chairperson	Andrea Straková Fedorková
9:00 – 10:00	Plenary lecture: Arnaldo Visintin (Institute of Theoretical and Applied Physicochemical Research (INIFTA), La Plata, Argentina) News of the research and technology in lithium battery in INIFTA, Argentina
10:00 – 10:20	Invited lecture: K. Saksl (Institute of Materials Research SAS, Košice, Slovak Republic) High entropy alloys for energy storage
10:20 – 10:40	M. Mačák (Brno University of Technology, Brno, Czech Republic) Empirical modelling of Li-S batteries
10:40 – 11:00	D. Capková (Pavol Jozef Šafárik University, Košice, Slovak Republic) Lithium-sulfur batteries: fundamental and applied research
11:00 – 11:20	Coffee break
Chairperson	Karel Saksl
11:20 – 12:20	Plenary lecture: Karel Bouzek (University of Chemistry and Technology, Prague, Czech Republic) Material aspects of the energy conversion devices based on hydrogen as an energy vector
12:20 – 12:40	V. Fíla (University of Chemistry and Technology, Prague, Czech Republic) CO ₂ separation using mixed matrix membranes based on 6FDA-BisP
12:40 – 13:30	Lunch in hotel Patria
13:30 – 13:50	M. Strečková (Institute of Materials Research SAS, Košice, Slovakia) Transition bimetallic phosphides for electrocatalytic water decomposition
13:50 – 14:10	J. Hnát (University of Chemistry and Technology, Prague, Czech Republic) Catalyst coated membranes for alkaline water electrolysis
14:10 – 14:25	Peter Barath, Milan Láska (Metrohm company) Get to know Metrohm
14:25 – 18:00	Individual program
18:00 – 19:00	POSTER SESSION
19:00 – 20:00	Dinner in hotel Patria
20:00 – 22:00	Best poster award in Vatra Bar in Hotel Patria with bowling and drinks

19.10.2022, Wednesday

10:00 - 11:30	Panel discussion, Business-to-business meeting
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