

Conference Program

Sunday, 15 June

14.00-17.30 Registration (in Hotel Eger & Park)

18.10-18.30: Conference opening

Session 1 (chair: Pál Jedlovsky):

18.30-19.20: **Colin Bain** (Durham, UK): *(Mis)-conceptual frameworks in colloid and interface science*

19.20-21.30: Welcome reception

Monday, 16 June

Session 2 (chair: Sofia Kantorovich):

09.00-09.50: **Damien Laage** (Paris, France): *Acidity of the air-water interface: excess proton thermodynamics, dynamics and spectroscopy*

09.50-10.10: **Bence Kővágó** (Vienna, Austria): *Polymers at the air-water interface*

10.10-10.30: **Helga Tóth Ugyonka** (Eger, Hungary): *Computer Simulation Investigation of the Molecular Scale Structure and Dynamics of the Free Surface of Imidazolium-Based Ionic Liquids*

10.30-11.10: Coffee break

Session 3 (chair: Mónika Kéri):

11.10-11.40: **Oldamur Hollóczki** (Debrecen, Hungary): *Modeling the effects of microplastics on biomolecular systems*

11.40-12.00: **Edit Kaszab** (Gödöllő, Hungary): *Microplastics and heavy metals in sewage sludge and the effect of their co-occurrence on Pseudomonas aeruginosa*

12.00-12.20: **Quian Liu** (Aarhus, Denmark): *S100B chaperone modulates phenol-soluble modulin amyloid formation in Staphylococcus aureus biofilm*

12.20-12.40: **Bence Prikler** (Gödöllő, Hungary): *Quantifying Biofilm Formation on Different Plastic Surfaces*

12.40-13.00: **Guansen Zhao** (London, UK): *Thermal transport and coupling effects in molecular liquids and aqueous solutions under thermal gradients*

13.00-14.30: Lunch

Session 4 (chair: Damien Laage):

14.30-15.20: **Heather Allen** (Columbus, USA): *Aqueous Interfaces: Molecular and Ion Organization*

15.20-15.50: Coffee break

15.50-18.30: POSTER SESSION

19.00-22.00: Wine tasting (optional event)

Tuesday, 17 June

Session 5 (chair: Miklós Kellermayer):

09.00-09.50: **Marco Monopoli** (Dublin, Ireland): *Understanding the nanomaterial interaction with biomolecules, a journey from safety to healthcare applications*

09.50-10.10: **Constantinos Voniatis** (Budapest, Hungary): *Nanofibrous dual polymer meshes for surgical tissue regeneration*

10.10-10.30: **Árpád Turcsányi** (Szeged, Hungary): *Bimetallic nanoclusters: Synthesis optimization and biological studies*

10.30-11.00: Coffee break

Session 6 (chair: Judith Mihály):

11.00-11.20: **Miklós Zrínyi** (Budapest, Hungary): *Mechanical Behaviour of Fibrous Materials*

11.20-11.40: **Menglin Chen** (Aarhus, Denmark): *Electrohydrodynamics based Functional Fibers for Wireless Neuromodulation*

11.40-12.00: **Kenigen Manikion** (Budapest, Hungary): *Fabrication, Degradation Dynamics and Mechanical Integrity of Advanced Composite Electrospun Meshes*

12.00-12.20: **Kristóf Molnár** (Budapest, Hungary): *Synthesis and properties of hydrogel fibers*

12.20-12.40: **Zsuzsanna Kónya** (Szeged, Hungary): *Co-immobilization of protease enzyme and molecular antioxidant on anionic clays*

12.40-13.00: **Veronika Pálos** (Budapest, Hungary): *Polysuccinimide-based electrospun scaffolds loaded with different salts for potential use in wound dressings*

13.00-14.30: Lunch

Session 7 (chair: Marco Monopoli):

- 14.30-15.20: **Antonio Figueiredo Neto** (São Paulo, Brazil): *Oxidative Stress and Lipid Profile During Acute Phase of COVID-19 Infection and After Recovery: Evidence of a Sequel in LDL*
- 15.20-15.50: Coffee break
- 15.50-16.20: **Miklós Kellermayer** (Budapest, Hungary): *Single-molecule mechanics of chemically modulated DNA*
- 16.20-16.40: **Li Lei** (London, UK): *Molecular Dynamics simulation of adsorption and aggregation of therapeutic antibody fragments at water-oil interfacees*
- 16.40-17.00: **Deniz Mostarac** (Vienna, Austria): *Influence of Crowders and Ligands on the Polymeric Properties of G-Quadruplex Multimers*
- 17.00-17.20: **João Santos** (Coimbra, Portugal): *Host–Guest Chemistry of β -Cyclodextrin with Platinum(II) Drugs: Inclusion Complex Formation and Cytotoxic Profiles*

Wednesday, 18 June

Session 8 (chair: Angéla Jedlovsky-Hajdú):

- 09.00-09.50: **Quentin Pankhurst** (London, UK): *Some recent developments in magnetic field hyperthermia: from standards to clinical studies*
- 09.50-10.10: **Oksana Bilous** (Vienna, Austria): *Self-diffusion and clustering phenomena in magnetically controlled ferrogranulate system*
- 10.10-10.30: **Sarolta Halmóczy** (Budapest, Hungary): *Development of Electrospun Wound Healing Matrices Using Metal Nanoparticles*
- 10.30-11.00: Coffee break

Session 9 (chair: Zoltán Kónya):

- 11.00-11.20: **István Bányai** (Debrecen, Hungary): *NMR for Colloids: Achievements and Pitfalls*
- 11.20-11.40: **Jure Kovač** (Ljubljana, Slovenia): *From Hydrogen to Fluorine: Structural and Dynamic Consequences in Alcohols Explored by MD and SWAXS*
- 11.40-12.00: **Levente Novák** (Debrecen, Hungary): *Relaxivity properties of paramagnetic metal ion complexes with polymers synthesized from smaller building blocks*
- 12.00-12.20: **Tamás Szabó** (Szeged, Hungary): *Ultrasonic fracture and dispersion of regular and novel carbon nanostructures: from graphite to soft mesoporous graphene frameworks*
- 12.20-12.40: **Mónika Kéri** (Debrecen, Hungary): *Swelling and structure of biodegradable crosslinked polyurethanes by NMR*
- 12.40-13.00: **Júlio Santos** (Budapest, Hungary): *Molecular dynamics simulations of Magneto-active elastomers*

13.00-14.30: Lunch

Session 10 (chair: Oldamur Hollóczy):

14.30-15.20: **Sofia Kantorovich** (Vienna, Austria): *In silico investigations of magnetic soft matter*

15.20-15.50: Coffee break

15.50-16.10: **Judith Mihály** (Eger, Hungary): *Extracellular vesicles detection via surface enhanced IR spectroscopy using plasmonic gold nanoparticles*

16.10-16.30: **László Seres** (Szeged, Hungary): *Liposomal formulations of flavonoids*

16.30-16.50: **Bálint Budavári** (Eger, Hungary): *Budesonide-loaded liposomes for inhalation*

16.50-17.10: **Abelneh Terefe** (Nagykanizsa, Hungary): *The Effect of Surfactants on Polyelectrolyte Multilayer Nanofiltration Membranes*

18.00-22.00: Conference banquet

Thursday, 19 June

Session 11 (chair: István Szilágyi):

09.00-09.30: **Mingdong Dong** (Aarhus, Denmark): *Controlled Self-Assembly and Disassembly of Amyloid Peptide Crystals*

09.30-09.50: **Krisztina László** (Budapest, Hungary): *3D plasma assisted adsorptive removal of organic pollutants from water by porous carbon*

09.50-10.10: **Kadosa Sajdik** (Szeged, Hungary): *Water Pollution Mitigation by Removal of Local Anesthetics via Liquid-phase Adsorption on Graphene Oxide*

10.10-10.30: **Pedro Matias** (Coimbra, Portugal): *From powder to beads: insights into an imine-linked triazine porous organic polymer for the remediation of fluoroquinolone antibiotics from water*

10.30-11.00: Coffee break

Session 12 (chair: Pál Jedlovszky):

11.00-11.50: **Zoltán Kónya** (Szeged, Hungary): *Surfaces and interfaces in heterogeneous catalysis*

11.50-12.10: **Meng Mao** (Harbin, China): *Swimming nanorobots for targeted therapy in glioblastoma treatment*

12.10-12.30: **János Kóth** (Budapest, Hungary): *Visible Light Photocatalytic-Adsorption Effect of Recyclable Industrial Waste*

12.30-12.50: **Yong Mei Chen** (Xi'an, China): *Tough gel based ionotronics for flexible electronics*

12.50-13.15 Conference closing

13.10-14.30: Lunch

List of Posters

1. **Márton Ács** (Budapest, Hungary): *Freeze-dried liposomes for inhalation*
2. **Orsolya Adamcsik** (Nagykanizsa, Hungary): *Comparative analysis of virus nucleic acid extraction methods from wastewater samples*
3. **Bálint Alács** (Budapest, Hungary): *Characterization of immobilised enzyme kinetics on magnetic nanoparticles*
4. **Mónika Bak** (Budapest, Hungary): *Structuring liquids through solvent-assisted interfacial association of oppositely charged polyelectrolytes and amphiphiles*
5. **Bálint Bakk** (Szeged, Hungary): *Role of Fluorocarbon Chain Length in the Adsorption of Perfluoroalkyl Substances on Nanoplastic Particles*
6. **Christodoulos Chrysanthou** (Budapest, Hungary): *Fabrication of poly (amino acid) based meshes for enhanced postoperative pain relief*
7. **Viktória Cseh** (Szeged, Hungary): *Monolayer-forming properties of bovine serum albumin and its composite multilayers on solid surfaces*
8. **Zhibo Deng** (London, UK): *Modeling Asymmetry in Flat Bilayers and Exosome-Like Vesicles: A Focus on Cholesterol Dynamics under Temperature Gradients*
9. **Eszter Fabó** (Budapest, Hungary): *Development and Characterization of Fiber-Reinforced Biodegradable Packaging Materials*
10. **Evelin Forró** (Budapest, Hungary): *Multi-Scale Mechanics of Cryopreserved Human Arterial Allografts Across a Six-Month Period*
11. **Dániel Fülöp** (Budapest, Hungary): *Fluidic Synthesis of Cationic Carbon Quantum Dots: Investigating Reaction Mechanism and Fluorescence Properties*
12. **Melkamu Birlie Genet** (Nagykanizsa, Hungary): *Magnetite-reduced graphene oxide nanocomposite for the simultaneous removal of bisphenol A and glyphosate from aqueous solutions*
13. **Adél Hordós** (Budapest, Hungary): *Fabrication and Mechanical Characterization of Polymer Fiber Systems in Physiologically Relevant Environment*
14. **Marius Horváth** (Budapest, Hungary): *Biocompatible composite protective thin layer using sol-gel chemistry*
15. **Erzsébet Illés** (Szeged, Hungary): *Polycarboxylate coated Ni ferrite nanomagnets and the bio nano interface*
16. **László Janovák** (Szeged, Hungary): *Development of hydrophobically modified chitosan-pluronic nanoparticles for sustained and targeted drug release in ischemic brain tissues*
17. **Byung Suk Jin** (Seoul, South Korea): *Shear-induced catastrophic phase inversion of high oil content O/W emulsions*
18. **Agaya Johnson** (Vienna, Austria): *Coarse-grained simulations of peptide LGE1₁₋₈₀*
19. **Dorottya Kis** (Budapest, Hungary): *Development of coaxial electrospun PSI fibers containing zinc and strontium salts for wound dressing application*

20. **Enikő Krisch** (Budapest, Hungary): *Poly(aspartic acid) hydrogels with PriamineTM 1075 as a crosslinker*
21. **Krisztina László** (Budapest, Hungary): *Binding characteristics of fluorescent probes to pillararene modified graphene oxide nanosheets and their implications for indicator displacement assays*
22. **Lerato Emelda Mothoa** (Gödöllő, Hungary): *Microbial colonization and phenotypic resistance profile investigation across common polymer types*
23. **Zoltán Murányi** (Eger, Hungary): *New process for producing nanosilver*
24. **Gréta Papp** (Szeged, Hungary): *Biopolymer-enhanced viscosity in salt solutions: effect of inorganic and organic cations*
25. **Noémi Péli** (Budapest, Hungary): *Enzyme Replacement Therapy via Silica-Immobilized Human Tyrosine Hydroxylase*
26. **András Rázi** (Eger, Hungary): *Connections between the spread of respiratory diseases and the weather*
27. **Vivien Rizmajer** (Budapest, Hungary): *Preparation of Magnetite-Containing Polymer Wound Dressing by Electrospinning*
28. **Kadosa Sajdik** (Szeged, Hungary): *Colloidal (de)stabilization of graphene nanoplatelets using graphene oxide*
29. **Salman Shabbir** (Veszprém, Hungary): *CaCl₂ transport in nanopores: competition of ions and water at the charged surface groups and the effect of charge scaling on selectivity*
30. **Tamás Stummer** (Budapest, Hungary): *Engineered magnetic nanoparticles as advanced carrier materials for enzyme catalyst*
31. **Donát Szalai** (Budapest, Hungary): *Investigation of pH-dependent swelling of nanohydrogel fibrous fibers*
32. **Kata Szayly** (Budapest, Hungary): *Characterization of mucoadhesion of polymer tablets on a hydrogel surface applying tensile and shear stress*
33. **Viktor Szilágyi** (Budapest, Hungary): *Simulation-assisted Electrostatic Fibre Formation and Cellular Adhesion into the Nanofibre Structure*
34. **Ildikó Y. Tóth** (Szeged, Hungary): *Wetting and evaporation on CNT- and ZnO-forests*
35. **Dániel Viczián** (Szeged, Hungary): *Effects of electrolytes and polyelectrolytes on the colloidal stability and enzyme-like activity of CeO₂ nanozymes*
36. **Attila Vörös** (Szeged, Hungary): *Papain functionalized Prussian blue nanozyme colloids of triple enzymatic function*
37. **Chao Zeng** (London, UK): *Interfacial thermal conductance of Janus nanoparticles*
38. **Anna Zrinyi** (Budapest, Hungary): *Development of selective sol-gel enzyme immobilization methods on magnetic nanoparticles*