

European Student Colloid Conference 2022

26th – 30th June, 2022.

University of Szeged, Szeged

Programme

Oral Presentations

Remember that all scientific sessions will be held at Dóm tér 7-8.

June 26th (Sunday)

Szálka Halászcserda /6726 Szeged, Közép Kikötő sor 9/A./

17:00 - 18:00 **Registration**

18:00 - 20:00 **Welcome reception**

June 27th (Monday)

Albert Szent-Györgyi Lecture Room (1st floor)

08:00 – 08:45 **Registration**

08:40 – 09:00 **Opening**

Biomedical aspects of colloids / Surfactants, micelles, self-assembly

Chairman: István Szilágyi

09:00 – 10:00 PL-1 **Prof. Marco Lattuada**

From particles, to aggregates and gels...What can we learn about colloidal (in)stability from models and simulations.

Chairman: Kadosa Sajdik

10:00 – 10:20 OP-1 **Dominik L. Braunmiller**, Susan Babu, David B. Gehlen, Maximilian Seuß, Tamás Haraszti, Andreas Falkenstein, Julian Eigen, Laura De Laporte and Jérôme J. Crassous

3D control of pre-programmable composite microgels for magnetic actuation and tissue engineering

10:20 – 10:40 OP-2 **Gyöngyi Gombár**, Ditta Ungor, Edit Csapó

Small molecule-stabilized fluorescent gold nanostructures: preparation and structural analysis

10:40 – 11:00

COFFEE BREAK in lecture room 123 (1st floor)

Chairwoman: *Bojana Katana*

11:00 – 11:20 OP-3 **Adél Szerlauth**, Tamara Madácsy, Árpád Varga, Dániel Sebők, József, Maléth, István Szilágyi
Immobilization of antioxidant enzymes on layered double hydroxide nanosheets to prevent oxidative stress

11:20 – 11:40 OP-4 **Árpád Turcsányi**, Ditta Ungor, Edit Csapó
Utilization of gold nanoclusters and bimetallic silver-gold nanoclusters as fluorescent reporters

11:40 – 12:00 OP-5 **Sotiria Demisli**, Maria Goulielmaki¹, Tanja Ilić, Fotios Kyrilis, Farzad Hamdi, Panagiotis L. Kastritis, Frédéric Nallet, Vasiliki Pletsas, Snežana Savić, Aristotelis Xenakis, Vassiliki Papadimitriou
Oil-in-water nanoemulsions versus nanoemulsion-based hydrogels as delivery systems for cannabidiol. Structural study and biological evaluation.

12:00 – 13:30 *LUNCH at Szálka Halászsárda*

Chairman: *Prof. Ladislau Vékás*

13:30 – 14:30 PL-2 **Prof. Pál Jedlovszky**
Computer simulation methods in colloid and interface science

14:30 – 15:30 **POSTER SECTION & COFFEE BREAK in lecture room 123**

Chairman: *Nizar B. Alsharif*

15:30 – 15:50 OP-6 **Parth Kadakia**, Stefan Salentinig
Development and characterization of a pH-responsive lipid-based nutrient delivery vehicle

15:50 – 16:10 OP-7 **Smaragda-Maria Argyri**, Lars Evenäs, Romain Bordes
Acoustic levitation and Machine learning to determine surface properties

16:10 – 16:30 OP-8 **Rebeca Fortes-Martín**, Joachim Koetz
Reverse Microemulsions as versatile Soft-Templates for the Surface Assembly of Nanoparticles into Heterostructured Filament Networks

June 28th (Tuesday)**Albert Szent-Györgyi Lecture Room (1st floor)**

Please consider that there are two parallel sessions from 14:30.

Chairman: Tamás Szabó

- 09:00 – 10:00 PL-3 **Prof. Teresa J. Bandosz**
Beyond Adsorption and Because of Adsorption: Exploring the silent aspect of carbon porosity
- 10:00 – 10:20 OP-9 **Anderson Paiva**, Andrew Jones, Timo Müller, Barbara Pühr, Benedikt Schrode, Praveen Vir
Basics of X-ray diffraction and applications
- 10:20 – 10:40 OP-10 **Frida Bilén**, Antoine Balzano, Robson Rosa da Silva, Hannes Schomaker, Pernilla Tanner, Paul Erhart, Kasper Moth-Poulsen, Romain Bordes
Machine learning assisted interpretation of UV-Vis spectra of gold nanoparticles
- 10:40 – 11:00 *COFFEE BREAK in lecture room 123*

Chairman: Prof. Imre Dékány (University of Szeged)

- 11:00 – 12:00 PL-4 **Prof. Brian Vincent**
Mimicking Molecular Behaviour with Colloidal Particles
- 12:00 – 13:30 *LUNCH at Szálka Halászsárda*

Chairman: Prof. Pál Jedlovsky

- 13:30 – 13:40 PL-5 **Prof. Piotr Warszyński**
Surfactants; more than heads and tails

Section 1 – Zoltán Szabó Lecture Room (3rd floor)***Colloidal dispersions, foams, emulsions, suspensions***

Chairman: Kadosa Sajdik

- 14:30 - 14:50 OP-11 **Lakshmi Shiva Shankar**, Kun Robert
Preparation of Carbon/Sulphur Nanocomposites by means of Colloidal Heterocoagulation Route for New-Generation Li-S Battery Electrodes

14:50 - 15:10 OP-12 **Viktor Eriksson**, Jules Mistral, Ting Yang Nilsson, Markus Anderson Trojer, and Lars Evenäs
Microencapsulation for controlled release of active substances from fiber materials

15:10 – 16:10 **POSTER SECTION & COFFEE BREAK in lecture room 123**

Chairman: László Mérai

16:10 – 16:30 OP-13 **Borbála Tegze**, Emőke Albert, Adrien Paudics, Miklós Kubinyi, Gyula Tolnai, Balázs Borbás, Zoltán Hórvölgyi
Upconverting nanoparticles and their composite coatings

16:30 – 16:50 OP-14 **Flavio Massignan**, Éva Kiss
Nanoencapsulation of polar bioactive compounds

Section 2 – Albert Szent-Györgyi Lecture Room (1st floor)

Interfacial phenomena and adsorption

Chairman: Péter Gyenes

14:30 - 14:50 OP-23 **Lee Shool**, Alexander V. Butenko, Eli Sloutskin
Apparent Young-violating concave-convex switching of curved oil-water menisci

14:50 - 15:10 OP-24 **Angelo Musicò**, Rossella Zenatelli, Miriam Romano, Andrea Zendrini, Marina Cretich, Chiara Urbinati, Marco Rusnati, Giuseppe Pomarico, Paolo Bergese, Annalisa Radeghieri
Protein Corona and EV surface engineering

15:10 – 16:10 **POSTER SECTION & COFFEE BREAK in lecture room 123**

Chairwoman: Zsófia Árok, Mrs Varga

16:10 – 16:30 OP-25 **Tin Klačić**, Klemen Bohinc, Davor Kovačević
Supporting Anion and Heating Effect on Properties of Dry Layer-by-layer Assemblies Containing Poly(allylamine hydrochloride) and Poly(acrylic acid)

16:30 – 16:50 OP-26 **Marta Kalbarczyk**, Aleksandra Szcześ, Zoltan May
Biphasic calcium phosphate (BCP) material originated from avian eggshells: the synthesis and adsorption studies

June 29th (Wednesday)

Please consider that there are two parallel sessions from 10:00 to 10:40 and from 14:30 to 15:30.

Chairman: Prof. Brian Vincent

09:00 – 10:00 PL-6 **Prof. G. Julius Vancso**
Smart memory hydrogels for function

Section 1 – Zoltán Szabó Lecture Room (3rd floor)***Colloidal dispersions, foams, emulsions, suspensions***

Chairwoman: Dóra Takács

10:00 – 10:20 OP-15 **Giovanni Russo**, Marco Lattuada
Synthesis of Non-spherical Polymer Particles Using the Activated Swelling Method

10:20 – 10:40 OP-16 **Meron Debas**, Rafael Freire, Stefan Salentinig
Design of CO₂-responsive nanomaterials with potential for triggered drug delivery

10:40 – 11:00 *COFFEE BREAK in lecture room 123*

Chairman: Péter Nagy

11:00 – 11:20 OP-17 **Kata Dorbic**, Marco Lattuada
Synthesis of polymeric particles with multiple lobes

11:20 – 11:40 OP-18 **Katalin V. Bere**, István Szilágyi
Modelling the colloidal behavior of nano-sized particles in natural waters

11:40 – 12:00 OP-19 **Klaudia Skorzevska**, Luc Girard, Pierre Bauduin
Superchaotropic flotation: an innovative method and a new concept for the extraction and separation of ions by foams.

12:00 – 13:30 *LUNCH at Szálka Halászsárda*

Chairman: Prof. Julius G. Vancsó

13:30 – 14:30 PL-7 **Prof. Ladislau Vékás**
Ferrofluids – ultrastable magneto-responsive colloidal systems. Properties and some applications

Chairman: Nizar B. Alsharif

- 14:30 – 14:50 OP-20 **Zeeshan Ali**, Jens-Petter Andreassen, Sulalit Bandyopadhyay
Influence of Iron Oxide Nanoparticles in Silanization Process
- 14:50 – 15:10 OP-21 **Nico Leister**, Heike P. Karbstein
Coalescence phenomena in double emulsions examined via models with different droplet sizes
- 15:10 – 15:30 OP-22 **Eleni Galani**, Constantina Chalkiopoulos, Theodora Katsilla, Maria D. Chatzidaki, Aristotelis Xenakis
Preparation and Characterization of emulsions stabilized by Pea and Soy Protein Isolates for the encapsulation of α -tocopherol and squalene.

Section 2 – Albert Szent-Györgyi Lecture Room (1st floor)

Interfacial phenomena and adsorption

Chairman: Péter Gyenes

- 10:00 – 10:20 OP-27 **Samantha K. Samaniego Andrade**, István Bakos, Attila Farkas, Miklós Mohai, Krisztina László
Effect of GO doping on marine biomass based porous carbon and implications for oxygen reduction reaction
- 10:20 – 10:40 OP-28 **Eszter Kása**, Ivett Petri, Márton Szabados, Bence Kutus, Pál Sipos
Modified sodalite with O-type additives for efficient removal of basic fuchsine dye from aqueous solutions
- 10:40 – 11:00 *COFFEE BREAK in lecture room 123*

Chairman: Kadosa Sajdik

- 11:00 – 11:20 OP-29 **Mirela Evgenieva Encheva**, Xiaomei Li, Hans-Jürgen Butt, Rüdiger Berger, Ellen H. G. Backus
Water Induced Polymer Reorientation at a Polystyrene/Polyacrylic Acid Surface
- 11:20 – 11:40 OP-30 **Matteo Frigerio**, Stefan Salentini
Phosphate ion triggered modifications of oil/water interfaces
- 11:40 – 12:00 OP-31 **Adrianna Biedrzycka**, Ewa Skwarek
Physicochemical properties of hydroxyapatite/iron oxide composite surface - zeta potential measurements
- 12:00 – 13:30 *LUNCH at Szálka Halászsárda*

Chairman: Prof. Julius Vancsó

13:30 – 14:30 PL-7 **Prof. Ladislau Vékás**
*Ferrofluids – ultrastable magneto-responsive colloidal systems.
Properties and some applications*

Chairwoman: Zsófia Árok, Mrs Varga

14:30 – 14:50 OP-32 **Bojana Katana**, Dóra Takács, Istvan Szilagyí
*Halloysite Nanotube Colloids – Ion Specific Effects and Enzyme
Immobilization*

14:50 – 15:10 OP-33 **Dóra Takács**, Bojana Katana, Istvan Szilagyí
*Effect of ionic liquid constituents on the stability of layered double
hydroxide dispersions*

15:10 – 15:30 OP-22 **László Mérai**, Ágota Deák, László Janovák
*Composite coatings with thermoresponsive wetting and visible light
photoreactivity*

15:30 – 16:00 *COFFEE BREAK in lecture room 123*

16:00 – 16:45 //To Be Announced// programme

19:30 – 21:30 Conference Dinner

June 30th (Thursday)

Albert Szent-Györgyi Lecture Room (1st floor)

Polimer solutions, gels and phase behaviour

Chairwoman: Adél Szerlauth

09:00 – 09:20 OP-35 **Zsófia Árok**, Szilárd Sáringer, Coline Bretz, Sándor Puskás, István Szilagyí
*Effect of brine on the rheological properties of polymers used in
enhanced oil recovery*

09:20 – 09:40 OP-36 **Zofia Krasnińska-Krawet**, Ewelina Jarek, Tomasz Kruk, Krzysztof Szczepanowicz, Lilianna Szyk-Warszyńska, Łukasz Lamch, Sylwia Ronka, Kazimiera A. Wilk, Piotr Warszyński
*Adsorption and aggregation properties of hydrophobically
functionalized polyanions*

09:40 – 10:00 OP-37 **Péter Márton**, Örs Tamás Nagy, Dorina Kovács, Beáta Szolnoki, János Madarász, Norbert Nagy, Gabriella Stefánia Szabó, Zoltán Hórvölgyi
Permeability of chitin and chitosan nanolayers

10:00 – 10:20 *COFFEE BREAK in lecture room 123*

Chairwoman: Katalin Viktóra Bere

10:20 – 10:40 OP-38 **Alexandra N. Kovács**, Edit Csapó

Protein-polymer complex colloidal carriers: synthesis and optimization

10:40 – 11:00 OP-39 **Nizar B. Alsharif**, Katalin Bere, Gergely F. Samu, Istvan Szilagyi

Biocatalytic Hybrids of Manganese Oxide and Sulfate Latex Particles

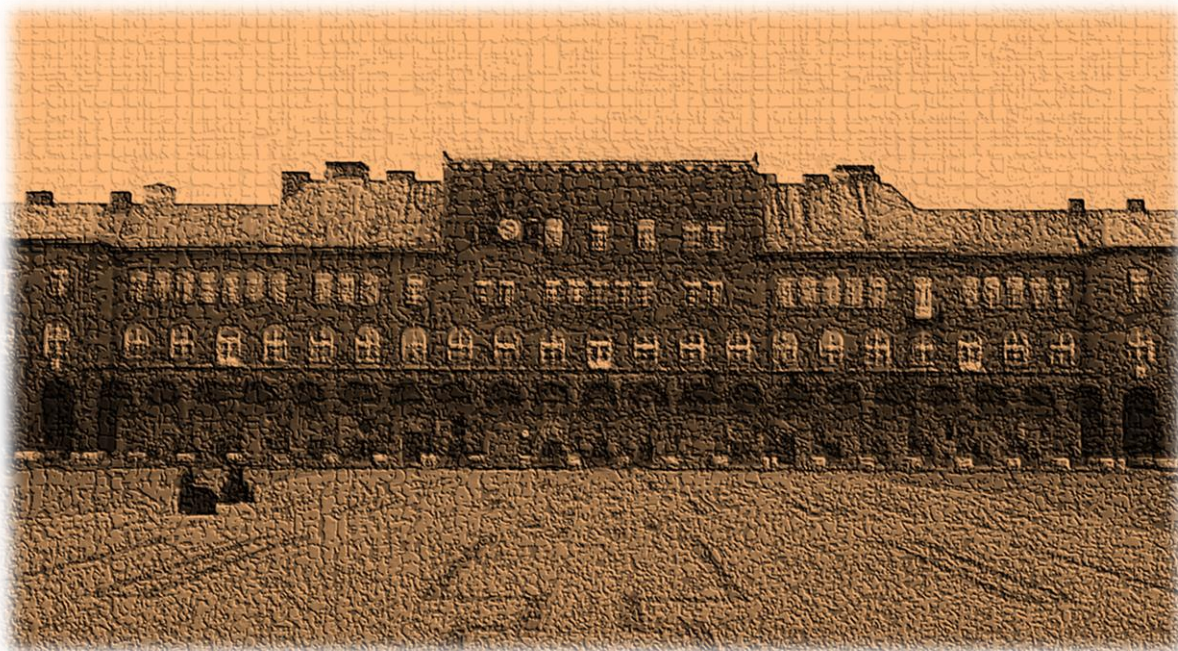
11:00 – 11:20 OP-40 **Péter Nagy**, Tamás Szabó, Badrul Mohamed Jan, Rabia Ikram

Potential sources, synthesis methods and industrial applications of waste generated graphene-based nanocomposites

11:20 – 11:50 **Awards & Closing Ceremony**

11:50 – 13:20 *LUNCH at Szálka Halászsárda*

13:20 – 14:30 Sightseeing



Poster section

27th June (Monday) 14:30 – 15:30, PP-1 to PP-10

28th June (Tuesday) 15:10 – 16:10, PP-11 to PP-19

The poster section will be held in lecture room 123, in the 1st floor in Dóm sq. 7.

- PP-1 **Owais Abdul Hameed**, Mark Gontsarik, Michael Walch, Stefan Salentinig
Design of antimicrobial protein-lipid complexes: From purification to delivery of antimicrobial peptides derived from cytotoxic T cells
- PP-2 **Balázs Borbás**, Borbála Tegze, Adrien Paudics, Miklós Kubinyi, Zoltán Hórvölgyi
Synthesis and Characterization of Upconverting Nanoparticles in Suspensions and Chitosan-Matrix Thin Films
- PP-3 **Teona Teodora Borović**, Snežana Papović, Jovana Panić, Nikolett Cako Bagány, Slobodan Gadžurić, Marija Bešter-Rogač, Milan Vraneš
A thermodynamic study: Effect of cationic structure of ionic liquids on their aggregation and micellization properties
- PP-4 **Anna Bulátkó**, Miklós Mohai, Krisztina László
Investigation of the surface chemistry of graphene oxide and reduced graphene oxide
- PP-5 **Alexandra M. Chiriac**, Ștefania D. Iancu, Andrei Ștefancu, Nicolae Leopold
Chemical interface damping of the surface plasmon resonance of single silver nanoparticles due to amino acid adsorption
- PP-6 **Dániel Fülöp**, Éva Kiss, Gergő Gyulai
Interfacial properties of PLGA nanoparticles
- PP-7 **Péter Gyenes**, Hala Roumia, Kadosa Sajdik, Alberto Tiraferri, Tamás Szabo
Graphene oxide / bovine serum albumin composite ultrafiltration membranes
- PP-8 **Georgiana Ion**, Stefania D. Iancu, Nicolae Leopold
Raman-related effects on carotenoids: a systematic study
- PP-9 **Jin Hau Lew**, Omar K. Matar, Erich A. Müller, Myo Thant Maung Maung and Paul F. Luckham
Effect of polymer chemistry on polyacrylamide adsorption onto calcium carbonate
- PP-10 Gabriela I. Saavedra Isusi, Miriam Weilandt, Ildi Majollari, **Désirée Martin**, Heike P. Karbstein, Ulrike S. van der Schaaf
Emulsions stabilised with pectin-based microgels: Investigations into the effect of pH and microgel particle concentrations on emulsion stability

- PP-11 **Konstantina Matskou**, Berke Kisaoglan, Barbara Mavroidi, Maria Pelecanou, Maria Zoumpanioti, Ilias Matis, Aristotelis Xenakis
Inducing the formation of a colloidal albumin carrier of curcumin
- PP-12 **Dmytro Miakota**, Katarína Zakutanská, Peter Kopcanský, Natália Tomašovicová
Memory effect in 5CB liquid crystal based composites
- PP-13 **Lea Pašalić**, Danijela Bakarić
Impact of different cations on thermal properties of DPPS and DPPC lipid bilayers
- PP-14 **Eva Rütten**, Philipp Schochat, Luzie Allert, Heike P. Karbstein
Influence of mixing stream on droplet coalescence during emulsification in HPH process
- PP-15 **Meriem Saadli**, Ahmed Mourran and Jérôme Crassous
Hybrid soft magnetic micro-actuators with thermo-programmable response to the external magnetic field
- PP-16 **Kadosa Sajdik**, Tamás Szabó
Monitoring the effect of pH and ionic strength on the interaction between Bovine Serum albumin molecules and graphene oxide nanosheets
- PP-17 **Krastina Stefanova**, Vasil Georgiev, Zlatina Mitrinova, Slavka Tcholakova
Effect of addition of glycerol on foamability and antifoam efficiency of low molecular mass surfactants
- PP-18 **Máté Sütő**, Gábor Peintler, Tamás Szabó, Kadosa Sajdik
pH-dependent removal of paracetamol from aqueous solutions by nanofiltration
- PP-19 **Anna Katalin Vas**, Erzsébet Illés
Graphite oxide/nickel ferrite nanocomposites for magnetic hyperthermia