EUROPEAN COLLOID AND INTERFACE SOCIETY

Newsletter 8

January 2024

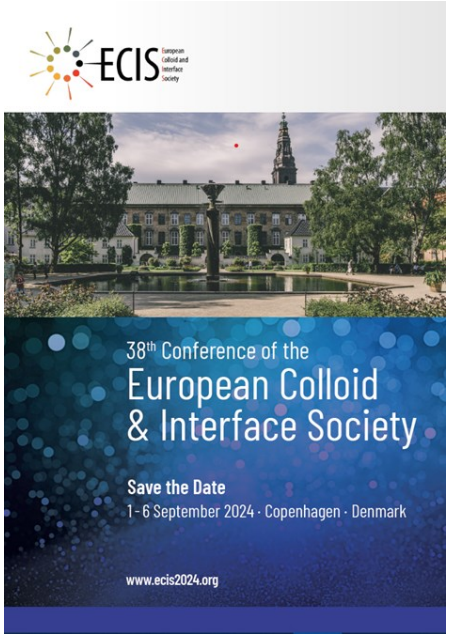
In this issue:

Message from the Editor

Dear colleagues, ECIS members

HAPPY 2024 !

2023 has been a year with significant innovations for ECIS. In May, the first ECIS webinar on fundamentals was given by Barry Ninham and Vincent Craig from ANU, Australia, who inaugurated this new concept with a lively discussion on "Nanobubbles in Colloid Science". Then, a Student Training School took place in August in Marcoule, France, where for the first time the participating students received some lab training and made presentations of their results. In September, the very successful 37th annual ECIS conference took place in Naples, Italy, sustaining the tradition of excellence established by ECIS in the last 40 years.



2024 will hopefully be an equally successful year. The second ECIS webinar will be given on 23/1/2024 by Hans-Jürgen Butt (Mainz, Germany) and Joël de Coninck (Mons, Belgium) on the fundamentals of drop friction. The event is described in some detail in the present newsletter.

The Junior Colloid Conference will take place again this year, and we are indebted to our colleagues in Bordeaux,

Message from the editor

France (special thanks to Prof. Serge Ravaine), for organizing this meeting that is so important for PhD students and postdocs working in the area of Colloid and Interface Science in Europe. Finally, the 38th ECIS conference will take place in Copenhagen and will highlight the current significant innovations in our science, while focusing on early career researchers. Both the Bordeaux and Copenhagen conferences are presented in the current newsletter.

Nominations are open for the 2024 editions of the Overbeek medal, Solvay award and Lyklema prize of ECIS, with a deadline on 30/4/2024.

Finally, as a service to our members, we advertise a postdoctoral position open in Rijeka, Croatia, and present some important conferences, related to ECIS, which will take place later this year.

On behalf of the Board

E. Leontidis

(Editor of ECIS newsletter)

The second ECIS webinar on the fundamentals of Colloid Science will take place on 23/1/2024!

Dear ECIS members

As already announced, the second ECIS webinar will be given **on 23/1/2024** and will focus on fundamental issues related to wetting phenomena. Wetting has become a very important and active current research field, where numerous researchers are working on superhydrophobic, superhydrophilic and other special surfaces, tribology, sliding friction and many other related areas, in which wetting phenomena play a key role. We must not forget however that several wetting concepts are still not entirely clear and have been subjects of considerable discussion for several decades. We mention the contact angle and its hysteresis, the line tension, and the contact line among other troubling issues. For a brief discussion of current fundamental issues in wetting phenomena we have solicited the help of two scientists that have contributed significantly to this area. Prof. Hans-Jürgen Butt (the 2022 Overbeek medal recipient) will give us his insights on the problem of drop friction. Prof. Butt has contributed in several ways (mainly experimentally, but also theoretically) to the fundamentals of wetting.

His suggested abstract is as follows:

Drop friction: How electric charges influence wetting

Whether a liquid drop sticks to a surface, or rolls off it, depends on contact angle hysteresis—the difference between the angles formed at the advancing and receding contact lines of a moving drop. While having been researched for a century, established theories have overlooked one essential contribution to contact angle hysteresis. We show that electric charges, spontaneously left on the surface by sliding water drops, can substantially influence contact angles through electrostatic interactions and thus hinder roll-off. The effect occurs for a wide range of surfaces and aqueous electrolytes. We explain the effect quantitatively by two mechanisms: Electrocapillarity, and an increase in effective surface energy of the solid surface behind the drop.

X. Li, A.D. Ratschow, S. Hardt, H.-J. Butt, Phys. Rev. Lett. 131, 228201 (2023)

The second ECIS webinar on the fundamentals of Colloid Science will take place on 23/1/2024!

On the other hand, Prof. Joël de Coninck from the University of Mons in Belgium has published extensively on many aspects of wetting and friction, examining both statics and dynamics. He is now interested in understanding wetting and friction at the molecular scale. Here is part of the abstract that he provided.

Drop friction: a review.

… the detailed mechanisms involved in friction are still a matter of discussion. Static friction is the force that resists the motion of an object when it is at rest and is pushed or pulled. Kinematic or dynamic friction is the force that opposes the motion of an object that is already in motion. Both types of friction are important in understanding the behavior of moving objects. Can we combine the knowledge we have for solid/solid friction to what is known for a liquid/solid system, or vice-versa, to improve our capability to predict what friction will be from basic measurements and mechanisms? The aim of the presentation is precisely to review this issue [1]. Using large scale numerical simulations, experiments, and theoretical considerations, we will focus on sliding drops to study the case of static friction … Complementary to the static aspect, we will show that dynamics of spreading or wetting is very often controlled by dynamic friction. Here again, we will use different techniques to illustrate the mechanism such as numerical simulations, experiments, and theories.

[1] J. De Coninck (2022) "An Introduction to Wettability and Wetting Phenomena". In: Marengo M., De Coninck J. (eds) The Surface Wettability Effect on Phase Change. Springer, Cham. https://doi.org/10.1007/978-3-030-82992-6_2

For participation in the webinar you are kindly invited to register at:
https://www.linxs.se/events/2024/01/23/ecis-fundamental-aspects-of-wetting-drop-friction-linxs-partner-event

Questions posed by registered members of the audience will be addressed to the speakers through either:

- Epameinondas Leontidis, leontidis.epameinondas@ucy.ac.cy , or
- Pierandrea Lo Nostro, pierandrea.lonostro@unifi.it

38th ECIS conference, Copenhagen, Denmark,

1-6/9/2024

The European Colloid and Interface Society (ECIS) will host its 2024 annual meeting in Copenhagen, Denmark, in the week of September 1-6. The meeting is the 38th ECIS conference since the inaugural meeting in 1987, and is organized by Prof. Ben Boyd and Assoc. Prof. Jacob Kirkensgaard from the University of Copenhagen. The conference will have a special focus on early career researchers with career development events on "Super Sunday", and aims to be as diverse and inclusive as possible. The organizers aim to provide a modern view on contemporary colloid science, with new specialized themes on artificial intelligence in colloid science, active matter, colloidal robotics, neoteric fluids and much more… Please visit the event website at **ecis2024.org**.

38th ECIS conference, Copenhagen, Denmark,

1-6/9/2024

Scientific program themes

- Colloids at Interfaces, Membranes and Biointerfaces, Emulsions and Foams
- Design and Synthesis of Colloidal Systems, Nanoparticles and Novel Materials
- Self-Assembly: New structures, Dynamics and Supramolecular Hierarchical Assemblies
- Colloids in Biomaterials and Biomedical Applications
- Polymers, Polyelectrolytes, Gels, Liquid Crystals, and Anisotropic Fluids
- Composite, Hybrid and Magnetic Colloidal Materials
- Wetting Phenomena and Surface Forces
- Colloidal robotics, devices and actuated materials
- Colloid and Interface Phenomena in Food and Pharma
- Theory, Modelling and Simulation of Colloidal Systems
- Rheology, Flow and Phase Behaviour of Complex Liquids
- Colloidal active matter
- Artificial Intelligence and Machine Learning in Colloid Science
- Advanced Colloid Science for Applications and Products
- Neoteric Fluids: Liquid metals, Porous fluids, and other emerging solvents
- Nanopaint theme: Dense and strongly interacting colloidal suspensions
- ESS theme: Developments in neutron and x-ray methods and novel characterisation approaches

Confirmed plenary speakers

Naomi Halas (Rice University, USA)
Rafal Klajn (Weizmann Institute of Science, Israel)
Kathleen Stebe (University of Pennsylvania, USA)
Raffaele Mezzenga (ETH Zurich, Switzerland)
Stefano Sacanna (New York University, USA)

Prize winning plenary speakers

Solvay Prize recipient
Overbeek Gold Medal recipient
Lyklema award recipient

Venue

Conference Hotel Scandic Falkoner
Falkoner Allé 9
2000 Frederiksberg
Denmark

Contact

For more information contact
ECIS 2024 Conference Secretariat

CAP Partner
Tel.: +45 70 20 03 05
info@cap-partner.eu

We look forward to seeing you in Copenhagen!

1 - 6 September 2024 · Copenhagen · Denmark

38th ECIS conference, Copenhagen, Denmark,

1-6/9/2024

Venue

The conference will be hosted in the newly-renovated and atmospheric hotel and event center, Scandic Falkoner, which is located in the charming theater district of Frederiksberg. The hotel is directly accessible from Copenhagen Airport on Metro 1/2 line – no change required.

Here you can experience a green, locally rooted small town community in the midst of one of the most densely populated areas in Europe. You will find everything from wild animals in the zoo, parks, beautiful buildings, modern theater culture, museums for romance, humor, and underground experiences, music, and unique shopping streets – as well as a rich and varied selection of restaurants.

Important dates

Registration opens: 24 November 2023

Abstract submission opens: 24 November 2023

Abstract deadline: 29 March 2024

Abstract notification: 15 May 2024

The 2024 Student Colloid Conference will take place in Bordeaux, France

Dear colleagues,

It is our great pleasure to inform you that the 19th European Student Colloid Conference will take place from 24th to 27th June 2024 in Bordeaux, France. It aims to bring together Master students, PhD students and postdocs working in the field of Colloid and Interface Science, and to give them the opportunity to present their work in a relaxed and welcoming environment.

The scientific programme will include seven (7) invited lectures given by renowned scientists, as well as contributed oral and poster presentations. We look forward to welcoming students and postdocs from all over Europe to Bordeaux in 2024.

The local organizing committee

Website: https://escconf2024.org

Important dates

Abstract Submission deadline: March 22, 2024
Notification of Acceptance: April 12, 2024
Early Registration and Payment: April 30, 2024

Call for nominations for the Solvay and Lyklema awards and the Overbeek medal

All ECIS members are invited to nominate candidates for the two major awards yearly bestowed by our Society. These are (i) the Overbeek medal, which is the ECIS lifetime-achievement award in Colloid and Interface Science, and (ii) the Solvay award, which is an award recognizing significant advances in a particular area in the past five years. Nomination rules and templates are available in the ECIS website at **https://www.ecis-web.eu/awards/** under "about the medal".

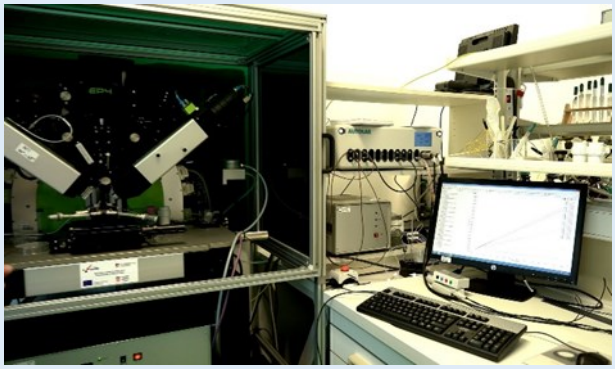
In addition to these two awards, after discussion in the General Assembly of 2023, ECIS has opened a Call for nominations for the Lyklema prize. This is an award given every few years to an excellent scientist who has provided valuable services to the ECIS community. In contrast to the Overbeek medal and Solvay award, the nomination in this case is open only to Past-Presidents of ECIS.

All nominations should be sent to the ECIS Secretary, Prof. Pierandrea Lo Nostro (Pierandrea.lonostro@unifi.it). The deadline has been set to 30/4/2024.

Postdoctoral position in Rijeka, Croatia

A postdoctoral position is available in the Laboratory for Colloids, Polyelectrolytes and Interfaces (LCPI), University of Rijeka, Croatia, under the supervision of Assoc. Prof. Duško Čakara, in the field of optics, spectroscopy, electrochemical and electrical measurements. The research is aimed at understanding the ion-to-electron charge transfer in conducting polymer and organic/inorganic composite thin films that exhibit a range of structural properties, resulting in complex optical and electrical response. In particular, the postdoc will be focusing on the development of electrochemical spectroscopic ellipsometry and the related interpretation of measurements.

The University Campus in Rijeka



Setup for ellipsometric spectroelectrochemistry

Job Information

Organization: University of Rijeka, Croatia, Centre for Nano and Micro Sciences and Technologies (NANORI)

Research Fields: Applied physics or Physical chemistry

Application Deadline: 25 Feb 2024 - 23:59 (Europe/Zagreb)

Type of Contract: Temporary (1 year with prolongation opportunity up to max. 4 years), Full-time employment

Salary range: 2100 – 2300 Euros/month brutto (status and benefits as per Croatian law), funded by EU Research Framework Programme (HORIZON-EIC-2023-PATHFINDEROPEN-01)

More at **https://collsurf.uniri.hr/postdoc-position/** or **https://euraxess.ec.europa.eu/jobs/180975**

The NANORI staff (from left to right: Assoc. Prof. Duško Čakara, Prof. Marin Karuza, Assoc. Prof. Robert Peter, Assoc. Prof. Iva Šarić)

Interesting conferences on Colloids and Interfaces in 2024 : Thessaloniki, GR

Interesting conferences on Colloids and Interfaces in 2024: Thessaloniki, GR

National Organizing Committee:

- **E.P. Kalogianni,** International Hellenic University, Thessaloniki, Greece
- **C. Biliaderis,** Aristotle University, Thessaloniki, Greece
- **V. Evageliou,** Agricultural University of Athens, Athens, Greece
- **S. Hatziantoniou,** University of Patras, Patras, Greece
- **M. Krokida,** National Technical University of Athens
- **E. Leontidis,** University of Cyprus, Department of Chemistry, Nicosia, Cyprus
- **T. Moschakis,** Aristotle University, Thessaloniki, Greece
- **V. Papadimitriou,** National Hellenic Research Foundation, Athens, Greece
- **C. Ritzoulis,** International Hellenic University, Thessaloniki, Greece
- **A. Xenakis,** National Hellenic Research Foundation, Athens, Greece
- **M. Zoubanioti,** National Hellenic Research Foundation, Athens, Greece

International Steering & Scientific Committee:

- **Björn Bergenståhl,** Lund University, Sweden
- **Miguel Cabrerizo-Vilchez,** University of Granada, Spain
- **Martin Leser,** Nestlé Research Center Lausanne, Switzerland
- **Julia Maldonado-Valderama,** University of Granada, Spain
- **Reinhard Miller,** Technical University Darmstadt, Germany
- **Brent Murray,** University of Leeds, UK
- **Lars Nilsson,** Lund University, Sweden
- **Anwesha Sarkar,** University of Leeds, UK
- **Elke Scholten,** Wageningen University, The Netherlands
- **Ulrike van der Schaaf,** Karlsruhe Institute of Technology, Germany
- **Nicolai Taco,** Le Mans University, France

Interesting conferences on Colloids and Interfaces in 2024: Evora, PR

The European Conference of Organized Films will take place in Evora, Portugal

The main topics of the conference include:

- **STRUCTURE**:

Langmuir monolayers, LB and LS multilayers. Self-assembly and self-organized systems. Supramolecular architectures. Nanostructures and nanofabricated films. Nanoparticles, graphene and 2D materials for smart hybrid coatings. Biological and biomimetic interfaces

- **PROPERTIES**:

Linear and non-linear optical properties. Electrical and magnetic properties. Dynamic and mechanical properties. Transport phenomena

- **APPLICATIONS**:

Materials for molecular electronics and OLEDs. Photovoltaics, plasmonics, photonics, sensors. Holography, surface patterning. Molecular recognition and biosensing applications

More information available in the conference website: **https://ecof.events.chemistry.pt/**

Interesting conferences on Colloids and Interfaces in 2024: Dresden, DE

On 30/9-2/10/2024 the 52nd Biennial Assembly of the German Colloid Society will take place in Dresden. Details can be found in the conference website: **https://cfaed.tu-dresden.de/kolloidtagung2024**

The most important information about the conference is summarized in the circular below, provided by the organizers:

52. Hauptversammlung der Kolloid-Gesellschaft
52nd Biennial Assembly of the German Colloid Society

KOLLOID GESELLSCHAFT

September 30 – October 2, 2024 in Dresden, Germany

TOPICS

- Surfactant Science, Membranes, Foams, Microemulsions, Emulsions, Amphiphilic Copolymers
- Polyelectrolytes
- Gelation, Hydrogels, responsive colloids
- Nanoparticles
- Theory / Modelling / Simulation of Colloids and Interfaces including Predictive Modelling and Artificial Intelligence / Deep learning approaches
- Applications and Sustainable Formulations of Colloidal Systems
- Wetting Phenomena
- Functional Interfaces and Bio-Interfaces
- Particle based functional materials: Towards Device Integration
- Polyelectrolyte Coacervates Renaissance

Organized by

Andreas Fery (IPF Dresden, TU Dresden)
Michael Gradzielski (TU Berlin)
Annette Andrieu-Brunsen (TU Darmstadt)
Jens-Uwe Sommer (IPF Dresden, TU Dresden)

IMPORTANT DATES

Abstract Submission Deadline: ***May 31, 2024***

Early Registration: ***July 21, 2024***

https://cfaed.tu-dresden.de/kolloidtagung2024

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cfaed CENTER FOR ADVANCING ELECTRONICS DRESDEN | TECHNISCHE UNIVERSITÄT DRESDEN | ipf Leibniz-Institut für Polymerforschung Dresden

Final notes

- You receive this newsletter as a registered member of ECIS
- If you are not an ECIS member, please contact our Secretary, Prof. Pierandrea Lo Nostro (pierandrea.lonostro@unifi.it)
- If you have comments or suggestions and if you wish to contribute to future newsletters, please contact the newsletter editor, Prof. Minos Leontidis (psleon@ucy.ac.cy), or the ECIS webmaster, Prof. Dominik Horinek (dominik.horinek@ur.de)