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Message from the Editor

Dear colleagues, ECIS members

As we are getting closer to the end of the year, we can only be satisfied with 2023 so far. In the first place, this year's Nobel prize in Chemistry, awarded to Luis Brus, Alexei Ekimov and Moungi Bawendi for the development of the science of quantum dots, is as close as it can get to the Colloid and Interface Science. Following the comment by Greg Warr in the recent IACIS newsletter, we also present our perspective on this important distinction of a scientific area strongly related to ours.

The 37th ECIS conference was held with great success in Naples. Everyone who visited the conference was impressed by its scientific level, while the city of Naples and the venue provided an excellent background. We present the final assessment of the Naples conference in this issue.

We are also happy with the success of the Marcoule training School, which took place at the end of August, and introduced a new concept: that of combining lectures on fundamentals with practical laboratory exercises and short presentations by groups of students. You can find more details about the School in this issue.

Next on line for 2024 is the 38th ECIS conference in Copenhagen. We are looking forward to a great event, judging by the excellent presentation of the organizers in the General Assembly of Naples, and reproduce parts of their presentation in the following pages.

## Message from the editor



However the next important ECIS event is the second ECIS webinar on 24/1/2024. The focus this time will be on the fundamentals of wetting, and the floor will be taken by Hans-Jürgen Butt and Joël de Coninck, who will discuss exciting recent developments in our understanding of wetting phenomena. We are also planning to organize a third ECIS webinar in May or June, and are looking forward to suggestions.

Our colleagues in Bordeaux (Serge Ravaine and Veronique Schmidt) are organizing the next Student Colloid Conference in June 2024, and we are providing here an update.

Many interesting conferences on Colloid and Interface Science are forthcoming in 2024. We present briefly some of these events, which include the Australasian Colloid Conference in Terrigal, Australia, the 19th Food Colloids conference in Thessaloniki, Greece, the 13th International Colloids conference in Sitges, Spain, and ECOF 18 in Evora, Portugal. More colloid conferences that take place later in 2024 will be covered in our next issue.

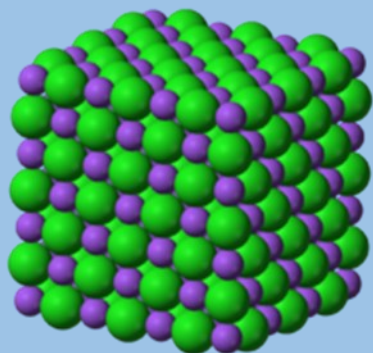
During the ECIS General Assembly in Naples, Prof. Gregory Warr, the current IACIS President, argued for a larger involvement of European scientists in IACIS. Strengthening the bonds of ECIS with sister societies around the globe is a primary concern of the present Board. In this respect, the meeting of the new ECIS President with his Australian and Japanese counterparts in Nagano, Japan, was a significant step in that direction, as is the co-organization of the 2025 ECIS conference in Bristol with the UK Colloid Group of RSC. In a scientific world full of “centrifugal forces”, this closer international collaboration of scientists in our discipline is a good way to move forward. In the ECIS Board, we are looking for additional actions to take these collaborations to a higher level.

On behalf of the Board

E. Leontidis

(Editor of ECIS newsletter)

## This year's Nobel prize in Chemistry



This year's Nobel prize in Chemistry has come as close to Colloid and Interface Science as can be! It has honored the discovery and development of quantum dots (QDs), nowadays an important tool in the physical sciences, biology and medicine. Aleksey Ekimov, Louis Brus, and Moungi Bawendi discovered that small (nano) particles of inorganic semiconductors developed quantum behavior below a certain size threshold (the now famous Bohr exciton radius), characteristic for each material.

They were able to show the effect of size quantization on a large number of properties that are relevant to all kinds of applications.

The strongest current research on QDs concerns materials chemistry and physics aspects, from the advanced ways to produce monodisperse, core-

multishell QDs or composite QDs to the study of their optical, electronic, magnetic and catalytic properties. We must not forget however the importance of colloid and interfacial chemistry of these materials. Fundamental aspects like controlling the nucleation, polydispersity and aggregation of the QDs, adsorbing and desorbing ligands on their surfaces, building colloidal crystals out of them, measuring their sizes and zeta potentials, are as important as using the QDs in biomedical or energy applications. And they should be, in order to achieve further real progress with these wonderful materials in the future!



**Solutions of PbS QDs in water change color as the particle size becomes smaller in the presence of a stabilizing polymer at the particle surfaces**

### Galena (PbS)



**Report from 37th ECIS  
conference. Naples, Ita-  
ly, 3-8/9/2023**



This year's conference in Naples, the 37th in the series, followed the long tradition of large, successful conferences that is typical of ECIS. More than 570 researchers from 41 different countries attended the week-long meeting. Most importantly, the conference was attended by a large number of young researchers at the PhD and post-doctoral level, proving once more the great vitality of the ECIS community. Five plenary lectures, in addition to the Overbeek and Solvay award lectures, 32 keynote presentations and 230 oral presentations in four parallel sessions were complemented by 370 poster presentations. Almost all sessions were well attended, and even the award ceremony on Friday, 8/9, was enthusiastically attended by a very large number of colleagues.

The organizers did their best to create a relaxed and congenial atmosphere, always around and always active to address any problem. The venue (Stazione Maritima) in the port of the historic city of Naples was excellent. Besides the very high quality science presented, every convener had the possibility of enjoying the beautiful and unique city of Naples and its environs, and to participate in a number of wonderful excursions planned by our hosts. On behalf of every ECIS member we would like to give our warmest thanks to Professors Luigi Paduano and Gerardino d' Errico, the main conference organizers, but also to the rest of the Naples team that made this conference a successful and memorable occasion for all of us.

**Large attendances in plenary lectures at the main lecture room**



**Report from 37th ECIS  
conference. Naples, Ita-  
ly, 3-8/9/2023**



**Lively discussions during the coffee breaks**



**And in the discussion rooms outside  
the lecture halls**

**The beautiful venue of the  
conference dinner allowed  
some fun in the swimming  
pool after all the hard  
work!**



**Report from 37th ECIS  
conference. Naples, Ita-  
ly, 3-8/9/2023**



**The Solvay award ceremony.  
Jean-Cristophe Castaing from  
Solvay and Tommy Nylander  
from ECIS with Prof. Regine for  
Klitzing, the 2023 winner**



**Dganit Danino from ECIS and Remco  
Tuinier from the Overbeek foundation with  
the 2023 Overbeek medal winner, Prof. Ber-  
nard Binks**



**The team that made it all happen. ➡  
Grazie mille Napoli!**



## 2023 Student Training School in Marcoule, France



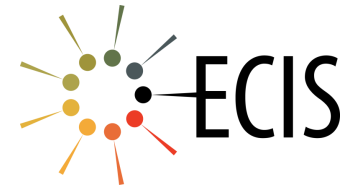
MARCOULE INSTITUTE IN SEPARATION CHEMISTRY  
JOINT RESEARCH UNIT (UMR 5257)  
BETWEEN CEA, CNRS, UNIVERSITY OF  
MONTPELLIER AND ENSCM

> SEE MORE ABOUT ICSM

Using a different format than past ECIS schools, the summer school associated with the 37th ECIS conference was organized at the Institute of Separation Chemistry (ICSM) in Marcoule, France, during the last week of August. It featured a combination of morning lectures (4x3 hr) and laboratory studies on the physicochemical principles behind important phenomena in soft matter. Two afternoons were devoted to experimental work. A total of thirty students from many European nations, the United States, Mexico and other countries tested this unusual format. Their experimental activities included working on practical tasks that a group of ICSM researchers — researchers, engineers, teacher-researchers, PhD students, and post-docs — had recommended and prepared. The participants were forced out of their scientific “comfort zones” since the proposed subjects did not correspond to their actual research subjects. The students, working in mixed groups (in terms of gender and place of origin), had to prepare and deliver a 10-minute oral presentation of their experiences in front of all other participants. It was a very constructive and stimulating exercise, much appreciated by all the participants and the organising team, even though the format was new.



## 2023 Student Training School in Marcoule, France



Many people must be thanked for the success of this School on behalf of the School organizers and of the ECIS Board:

- The four morning lecturers, Professors Dganit Danino (Technion, Israel), Dominik Horinek (Regensburg, Germany), Martin Inn (Montpellier, France), and Epameinondas Leontidis (Univ. of Cyprus, Cyprus), who covered a wide range of theoretical, computational and experimental aspects of colloid and interface science.
- The many ICSM researchers who prepared and supervised as volunteers the practical part of the work, an indispensable contribution.
- The safety team of the ICSM for setting up safety instructions and equipment.
- The sponsors, which included the Chemistry Division of the University of Montpellier, the CEA (DES and DRF), the CNRS, and ECIS.
- The secretariat, for taking excellent care of the needs of all participants.

It is encouraging, and indicative of the success of the School, that every contributor expressed the wish to participate in similar workshops in the future.



“Cool” times in the lab

A group presenting their project and fielding questions





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



Dear ECIS members

The second ECIS webinar is now finalized. It will be given **on 23/1/2024** and will focus on important fundamental issues related to wetting phenomena. Wetting has become a very important and active current research field, with numerous researchers working on superhydrophobic and superhydrophilic etc. surfaces, tribology, sliding friction and many other related areas, in which wetting phenomena play a fundamental role. We must not forget however that several wetting concepts are still not entirely clear and have been the 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., accepted.



**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 the abstract that he provided.



**Drop friction: a review.**

Friction is a force that opposes motion between two surfaces that are in contact. It is caused by the interactions between the molecules at the two surfaces. There are various models for friction, but they all involve parameters which must be measured or fitted, hence 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. We will also show how this mechanism can be used to design smart surfaces.

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.

By building new bridges between areas of science that had been seen as different until now, we can only continue to marvel more and more at the beauty of Nature.

[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](https://doi.org/10.1007/978-3-030-82992-6_2)

**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 this time 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](http://ecis2024.org).



**IMPORTANT NOTICE:** Anyone who registers on the day on 24th November 2023 goes into the draw for a FREE REGISTRATION!

**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

## Update on the next Student Colloid Conference in Bordeaux



Dear colleagues,

It is our great pleasure to inform you that the 19<sup>th</sup> European Student Colloid Conference will take place from 24<sup>th</sup> to 27<sup>th</sup> 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 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://esconf2024.org>

### Important dates

Abstract Submission deadline: March 22, 2024

Notification of Acceptance: April 12, 2024

Early Registration and Payment: April 30, 2024

## 19<sup>th</sup> European Student Colloid Conference

24<sup>th</sup> - 27<sup>th</sup> June 2024 - Bordeaux, France

List of invited speakers coming soon. Stay tuned!



The 19<sup>th</sup> European Student Colloids Conference will be held from the 24 to 27 of June 2024 in Bordeaux (France). This conference is aimed at young researchers, especially PhD students and masters and postdocs, working in the interdisciplinary field of colloids and interface science, with a broad background ranging from chemistry to physics, from biology to engineering.

The scientific programme will provide ample time for students to present their work in mainly oral presentations and additional posters. Invited plenary lectures by internationally renowned scientists will complement the conference. This event is an excellent opportunity for exciting scientific discussions between participants.

In addition to the rich scientific programme, varied social activities will offer participants the opportunity to discover the culinary culture and the beauty of Bordeaux, France, with the conference venue located close to the picturesque Bordeaux quay, the surrounding vineyards and the beach.



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Surfactants  
Scientific discussions  
Learn  
Bio-inspired  
Membranes  
Materials  
Phase behavior  
Gels  
Foams  
Network

Contact us for more information and to stay informed of the latest news!

### Informations

[esconf2024.org](https://esconf2024.org)

@esconf2024

esconf2024@crpp.cnrs.fr

Université de Bordeaux  
Talence/Pessac FRANCE



## Strengthening ties with our colleagues in Asia and Australia



Professor Hideki Sakai, chair of the Colloid and Interface Chemistry Division of the Chemical Society of Japan, Professor Erica Wanless, chair of Australasian Colloid and Interface Society (ACIS) 2024, and Professor Tommy Nylander, President of the European Colloid and Interface Society (ECIS) met at the 74th Division Meeting of the Division of Colloid and Surface Chemistry in Nagano. The meeting reflected the strong collaboration between the Japanese, Australasian and European Societies for Colloid and Interface science. At the Nagano meeting, Professors Wanless and Nylander got lectureship awards from the Colloid and Interface Chemistry Division of the Chemical Society of Japan.

At the ECIS annual conferences there is usually a significant number of participants from Australia and Japan. The close collaboration between the Societies is also reflected in the activities of the International Association of Colloid and Interface Scientists (IACIS), where Gregory Warr from Australia currently serves as a President. Professor Warr participated in the 2023 ECIS conference in Naples. During the ECIS General Assembly, Prof. Warr encouraged European colloid and interface scientists to become more involved in IACIS, pointing out the ease, with which one can now register as an IACIS member in the IACIS website.

As mentioned in the foreword, the ECIS Board is now looking for the best possible ways to bring these fruitful collaborations to a higher level.



**Interesting conferences on Colloids and Interfaces in 2024 : Terrigal AU**



Although it is now too late to submit an abstract, it is still possible to register in the Australasian Symposium, which will take place next February.



**Australasian Colloid and Interface Symposium**

Crowne Plaza Terrigal · NSW · Australia  
4-7 February 2024 · [www.acis2024.org](http://www.acis2024.org)



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

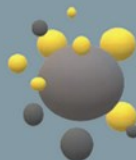


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## Interesting conferences on Colloids and Interfaces in 2024: Thessaloniki, GR



### 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:

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- Miguel Cabrero-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
- Anwasha 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: Sitges, ES**



13th International  
**COLLOIDS CONFERENCE**

Sitges, Barcelona, Spain

9-12 June  
**2024**

The well-known conference series organized by Elsevier will continue next June in Sitges. The 13th International Colloids Conference will cover the following topics:

- New materials for energy generation and storage, catalysis, separations, buildings, foods, clothing and packaging
- Advanced soft matter systems, covering functional and adaptive surfactants, polymers, gels and biocolloids
- Designed responsive and functional interfaces, surfaces, films, membranes and composites
- Bio materials, nano-medicines novel approaches to drug delivery and medical diagnostics
- New theory, novel phenomena and advanced experimental techniques

For more information go to the conference website:

<https://www.elsevier.com/events/conferences/international-colloids-conference>

## 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/>

## 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](mailto: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](mailto:psleon@ucy.ac.cy)), or the ECIS webmaster, Prof. Dominik Horinek ([dominik.horinek@ur.de](mailto:dominik.horinek@ur.de))