



## International Association of Colloid and Interface Scientists

In this newsletter you will find the following topics:

- From the IACIS president
- From your newsletter editor
- Call for abstracts the Joint 99<sup>th</sup> American Chemical Society (ACS) Colloids & Surface Science Symposium & 18<sup>th</sup> International Association of Colloid and Interface Scientists (IACIS) Conference ([Colloids2025](#))
- Call for Nominations: Life Time Achievement Award and Emerging Investigator Award
- Call for Proposals Venue and Organization for the 19<sup>th</sup> IACIS Conference in 2028
- Showcase your publication
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[I prefer to read the pdf.](#)



### From the IACIS President



I know it is something of a cliché, but I was genuinely shocked to wake up earlier this week and realise that it was already October. I mean, I knew ECIS in Copenhagen was in September, but has that always been so close to October?!

In Australia this means that shops and shopping malls are torn between promoting things to sell for Halloween (which we don't do that much) and Christmas. In universities it also means we are only a few weeks from the end of our teaching period and the start of final exams. Even my School's end-of-year party has been scheduled.

This also means that IACIS2025 (June 22-26 next year in Edmonton, Canada) is getting closer. Details, a link to the website, and the call for abstracts are below.

The deadline for *IACIS Lifetime Achievement Award* nominations is October 31<sup>st</sup>. If you've been putting off nominating someone, please don't delay any longer. The awardee will be announced on the IACIS and conference websites in December, and will be a plenary lecturer at IACIS2025.

Details of nomination process for the *IACIS Emerging Investigator Awards* will also be posted on the IACIS2025 website shortly. Please encourage eligible colleagues to apply and, if they are not already members, to join IACIS so that they are eligible to be finalists.

The IACIS Council is currently looking at ways to expand our presence in new and under-represented regions and build a worldwide representative community for exchange of ideas. I am delighted to welcome Prof. Margarita Sánchez Domínguez from CIMAV Monterrey, Mexico as a co-opted member of the IACIS Council. Margarita is involved in several Latin American regional networks for colloid and interface science, which we hope we can help link to our global IACIS membership. We are actively engaged with potential Council members from other regions, and I hope to update you in early 2025.

Early best wishes for the Christmas and (Gregorian calendar) New Year season.  
Greg Warr

## FROM YOUR NEWSLETTER EDITOR



### Welcome to IACIS Newsletter 85

Here it is our the IACIS October 2024 Newsletter. With information about the IACIS 2025 conference: abstract submission is open!

In this Newsletter there are two contributions of PhD students, from two continents! My dream still is that we have three from three continents, therefore I have been actively recruiting during the poster session of the ECIS conference in Copenhagen, last September. Where I also learned that this year Björn Lindman, the recipient of the Lyklema Prize (named after my scientific grandfather), wrote an article about the "[The History of the European Colloid and Interface Society](#)." In this article the connections between the IACIS and ECIS become very clear.

Let's stay connected!

Your Newsletter Editor

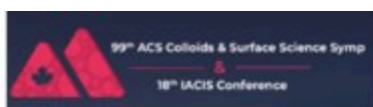
Best regards,  
Your newsletter editor Saskia Lindhoud

## IACIS 2025

We are excited to share that the preparations for IACIS 2025 is progressing well, and that University of Alberta has been chosen for the site of the conference after careful consideration. As you know this is a joint conference with ACS's Colloid Symposium. Last time such a joint event was held, it proved to be a smashing success! So, we like to continue this by calling upon the community to write to us at [cochair@colloids2025.com](mailto:cochair@colloids2025.com) with their ideas about:

1. An early research career (within 10 years from PhD) that we should highlight in the program, consider the Diversity, Equity and Inclusion principles.
2. Nominating or Self-nomination for organizing special session within the joint conference.
3. Let us know which high profile researcher you want to see potentially to be invited as a Plenary Speaker.
4. The website for the conference is being constructed and its address is: <https://colloids2025.com/>
5. We welcome any suggestions you may have for making this conference a success whether on the scientific, professional, or social aspects, so write to us!
6. Please pass on the above messages to your students and postdoctoral fellows to get them involved as well. They are our future!

From Conference Co-Chairs  
Alidad Amirfazli & Tian Tang



**The Joint 99<sup>th</sup> American Chemical Society (ACS) Colloids & Surface Science Symposium  
& 18<sup>th</sup> International Association of Colloid and Interface Scientists (IACIS) Conference  
(Colloids2025) is accepting abstracts!**

Submission deadline: January 10, 2025



Abstracts are now being accepted for the [Colloids2025 Conference](#), which runs during June 22-26, 2025, at the University of Alberta in Edmonton, Canada. This must-attend event for colloid and interface researchers features 16 technical tracks in the following areas:

- [1. Additive manufacturing and colloidal metamaterials](#)
- [2. AI Methods in Surface and Colloid Sciences](#)
- [3. Biological, Bio-Inspired, and Biomimetic Colloids and Interfaces](#)
- [4. Capillary Phenomenon and Field Effects](#)
- [5. Colloids for Sustainability and Energy](#)
- [6. Colloidal Systems for Food: production, processing and sustainability](#)
- [7. General Aspects of Colloid and Interface Science](#)
- [8. Industrial Applications of Colloid and Surface Systems](#)
- [9. Microfluidics and Nano/Biosensing Devices](#)
- [10. Molecules and Particles at Fluid Interfaces](#)
- [11. Rheology and Tribology of Complex Fluids](#)
- [12. Self and Directed Assembly](#)
- [13. Soft Matter](#)
- [14. Surfactants and Colloidal systems in Resource Extraction](#)
- [15. Surfactants and Emulsions](#)
- [16. Wetting and Adhesion](#)

The [Colloids2025 Conference](#) brings together the most active researchers in academia, government, and industry—professionals and students—to engage, discuss, and innovate in the areas of colloid, surface, and interface science and technology. This premier destination for industry professionals provides five days of learning, technical presentations, business development, and networking opportunities.

Make sure to [submit your abstract today!](#)

## CALL FOR NOMINATIONS FOR THE IACIS AWARDS

### IACIS Lifetime Achievement Award

*Dear IACIS Member,*

*In 2010 IACIS introduced the IACIS Lifetime Achievement Award (LTAA). This prestigious award was established to recognize the awardee's outstanding lifetime contributions to colloid and interface science research, and also their contributions to IACIS.*

We are seeking nominations for the award and the accompanying plenary lecture to be presented in June 2025 at the next IACIS conference in Edmonton, Canada (conference website <https://colloids2025.com/>).

The first IACIS Lifetime Achievement Award was made in Japan in 2012 to Tom Healy, followed by Björn Lindman (2015), Helmuth Möhwald (2018), and Kazue Kurihara (2023). This award replaced the previous "IACIS Lectureship" Award, the recipients of which were, in sequence: Hans Lyklema, Egon Matijevic, Bob Hunter, and Brian Vincent.

All IACIS members are eligible to nominate candidates for the Award. No member may nominate more than one candidate. Candidates should have been members of IACIS for at least 3 years.

If you wish to make a nomination, please send the name of your nominee, together with the suggested paperwork, as stated [here](#), to myself, as chair-person of the selection committee (cc IACIS Secretary [wuge.briscoe@bristol.ac.uk](mailto:wuge.briscoe@bristol.ac.uk)), by **31 October 2024** at the latest. Seconders are not a requirement, but if you wish to add the names of other persons supporting a particular nomination, that is fine.

Yours sincerely,

Professor Kazue Kurihara ([kazue.kurihara.b7@tohoku.ac.jp](mailto:kazue.kurihara.b7@tohoku.ac.jp))

Chair of the LTAA Committee

## IACIS Emerging Investigator Award

The IACIS Emerging Investigator Award is an award for outstanding fundamental or applied research in the field of colloid and interface science. Three prizes will be presented every three years at the IACIS conference. Candidates should demonstrate their own profile by publications or patents and a presentation at the IACIS conference.

Prior to a IACIS conference, nominations can be made by the candidates themselves or by a nominator. Nominations should include a cover letter explaining the contribution of the candidate to the field of colloid and interface science, a CV including a list of publications and patents, information about teaching activities and outreach activities. Typically nominees are within 6 years of receiving their PhD, however career interruptions or other circumstances will be considered on a case by case basis by the jury. The jury will be nominated by the chair of the conference and comprising: one representative of the IACIS council, one member of the local organizing Committee, one representative selected from the plenary speakers and one member of the International advisory board.

Candidates are selected by the jury in two steps. Before the IACIS conference, from the nominations up to 15 candidates will be selected to present their work during the IACIS conference. During the conference the jury, will select the three award winners based on this presentation.

All presenters will receive a certificate "IACIS Early Career Researcher Award Finalist". The three award winners will receive a certificate and a generous cash



award sponsored by KAO Corporation. Application procedure and deadlines will be announced in the next newsletter.

## CALL FOR PROPOSALS VENUE AND ORGANIZATION FOR THE 19TH IACIS CONFERENCE IN 2028

*Proposals should be sent to [Wuge H. Briscoe](#), with a deadline on 1<sup>st</sup> April 2025.*

To promote international co-operation among colloid and interface scientists, and to promote the stature and understanding of colloid and interface science, IACIS sponsors and supports the triennial IACIS Conference. A brief history of the conferences is here <https://www.utwente.nl/en/iacis/iacis-conferences/#previous-conferences>.

The immediate past 17<sup>th</sup> edition was held in Brisbane, Australia, in June 2022 (postponed from 2021 due to Covid-19). I am reminded to thank the Aussie organising committee for their heroic efforts in navigating through the minor inconvenience of the little rude virus, delivering a highly memorable event.

The 18<sup>th</sup> IACIS Conference will be in June 2025 in Edmonton, Alberta, Canada, jointly with the 98<sup>th</sup> American Chemical Society (ACS) Colloid and Surface Science Symposium. I hear from the organisers that an exciting update will be provided very soon.

We would now like to invite proposals from all IACIS members for the organization and venue for the 19<sup>th</sup> IACIS Conference in 2028. We will also publicise this invitation widely, reaching out to wider international colloids communities in different regions and countries. A guideline for the bid information and the procedure for selection are below, and questions can be directed to any of the Standing Committee members <https://www.utwente.nl/en/iacis/about/>.

### Information in the proposal should include:

- Proposer(s): Titles, names, affiliations, and current positions
- Place and time: City, country, and dates in 2028
- A brief description of the development and present state of colloid and interface science in this country, and research groups involved in the organization (1 A4 max)
- Brief CV of the chair(s) of the Conference
- Members of the Organizing Committee (preliminary)
- Members of the Scientific Committee and International Advisory Board (preliminary)
- Main conference topics (preliminary)
- Venue: A brief description of facilities (for plenary lectures and parallel sessions)
- Accommodation: Hotels, dormitories/hostels, and estimated prices
- Estimated registration fees

- Potential financial support and possible sponsors

The proposals received will be sent to all IACIS Council members for discussions and consultation, with the provision for a voting process in the event of multiple bids. The Standing Committee will take the final decision before 1<sup>st</sup> June 2025.

From IACIS Honorary Secretary & Treasurer

## SHOWCASE YOUR PUBLICATION

During the pandemic there was a lack of opportunities for young scientists to present their work at international conferences. Therefore we started to invite PhD students to showcase recent publications in the IACIS Newsletter. We have decided to continue this Newsletter item, because it gives an opportunity for young scientists to explain their recent discoveries. The idea is to write a short text in which you explain about your PhD topic, your recent publication and why it is interesting for our community. Detailed guidelines can be found [here](#).

The aim is to include 2 or 3 showcase texts in each Newsletter, preferably from three different continents. The next Newsletter will appear in July, the deadline for submitting your showcase text is December 16.

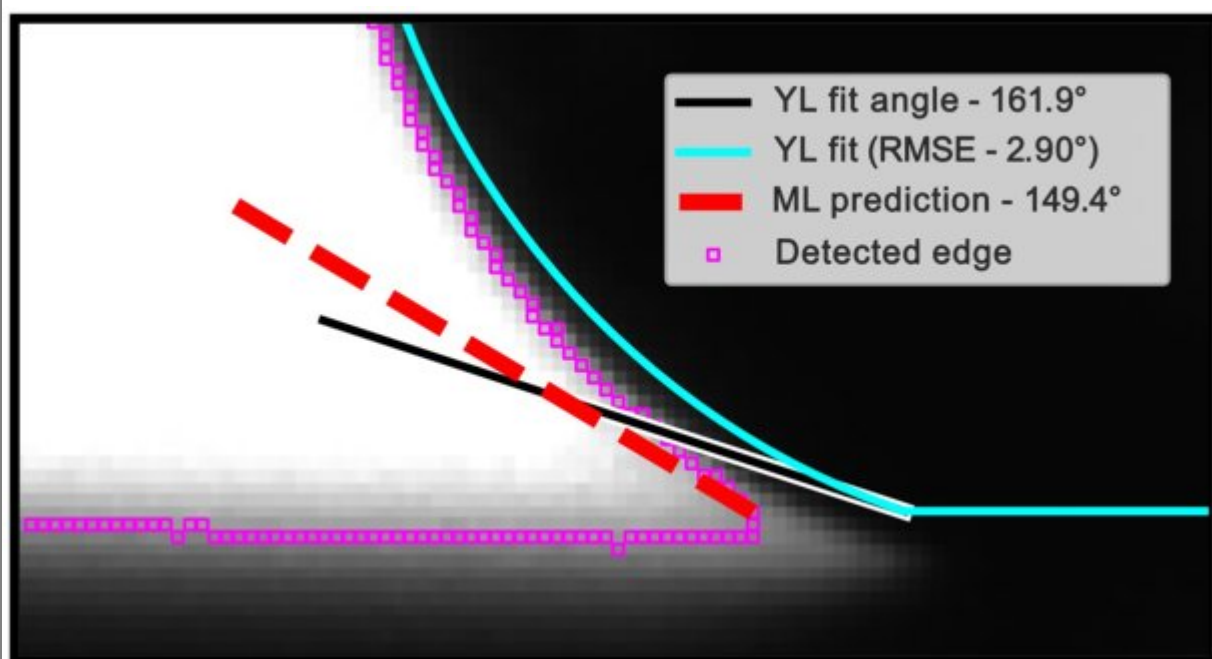
Your Newsletter Editor, Saskia Lindhoud

## Accurate and robust static hydrophobic contact angle measurements using machine learning

My name is Daniel Shaw, I am a PhD student working under the supervision of Dr. Joe Berry in the Department of Chemical Engineering at the University of Melbourne in Australia. My PhD uses machine learning to develop an autonomous, high throughput, and reproducible workflow for highly accurate surface wettability and surface energy measurements.

I am proud to present my first publication, which presents a new contact angle measurement technique using machine learning, which is more accurate and faster than the current best practice commercial approach. This work is a proof of concept focussed on contact angles 110-180°, and so is applicable to anyone who regularly performs contact angle measurements in this range. It is completely open source, allowing researchers to integrate the measurement into their existing experimental systems, and comes with a simple graphical user interface for users who are unfamiliar with Python. All existing methods have also been fully automated for users who are more comfortable with regular fitting approaches.

This research represents a significant step forward in the field of contact angle measurement, offering improved accuracy, efficiency, and accessibility. I am excited to share this work, as it has the potential to streamline and enhance surface characterization processes across various disciplines.

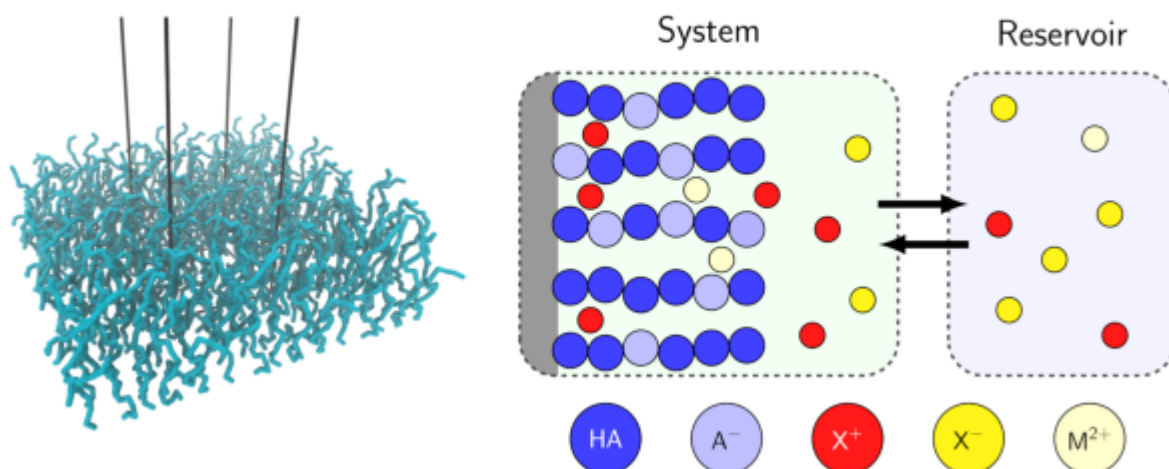


## Unexpected Two-Stage Swelling of Weak Polyelectrolyte Brushes with Divalent Counterions

My name is David Beyer and I am a PhD student in the group of Christian Holm at the Institute for Computational Physics, University of Stuttgart. My research is concerned with the molecular modeling of soft matter systems. A particular focus are coarse-grained simulations of weak polyelectrolytes, i.e. chain molecules whose electrical charge can be controlled by external parameters such as the pH-value. To model these systems, we use a combination of Molecular Dynamics (MD) and Monte Carlo (MC) techniques, which are implemented in our open-source software package ESPResSo.

In our most recent publication, we study the effect of divalent counterions on the behavior of a weak polyelectrolyte brush. Polymer brushes consist of polymer chains that are grafted to a surface such as a flat wall. Weak polyelectrolyte brushes are particularly interesting, because they can be used as smart responsive interfaces, e.g. for the capture and release of proteins. Our simulations show that divalent ions, which are ubiquitous in biological systems, significantly alter the behavior of a weak polyelectrolyte brush. The most striking effect we observe is a two-stage swelling, i.e. the brush swells in two distinct steps as the pH-value is increased, a behavior that is absent for the purely monovalent case. An analysis of our simulation results reveals that the two swelling steps have distinct physical origins: the first step is related to the acid-base equilibrium ("charge regulation") while the second step can be explained as a consequence of ion partitioning. Overall, we expect our results to have important implications for the rational design of pH-responsive interfaces in biomedical applications.





## CONFERENCE ANNOUNCEMENTS AND UPDATES

Below an overview of interesting conferences for the IACIS community.  
Include your conference?

CONTACT THE NEWLETTER EDITOR

**The 17<sup>th</sup> International Hydrocolloids Conference**  
Nov 12-15, 2024, Palmerston North, New Zealand

Topics include:

- Behaviour of food biopolymers during digestion.
- Hydrocolloid design for delivering optimal nutrition.
- Polysaccharide structures and gut microbiome.
- Bioactive polysaccharides and human health.
- Future sustainable sources of natural hydrocolloids for food and non-food applications.
- Functional hydrocolloids for plant-based dairy and meat alternatives.
- Alternative proteins in new product development.
- Hydrocolloids in pharmaceuticals and health/personal care products.

Visit the website of [17th International Hydrocolloids Conference](#) for more information



# THE 3<sup>RD</sup> INTERNATIONAL CONFERENCE ON NATURE INSPIRED SURFACE ENGINEERING (NISE 2024)

November 20-22, 2024 / Granada, SPAIN

Third International Conference on Nature Inspired Surface Engineering ([NISE 2024](#)), will be held on November 20-22, 2024 at the University of Granada, Granada, Spain.

Topics include:

- Fundamental understanding of surface and interface science and phenomena such as wetting, adhesion, adsorption, desorption, friction, (bio)tribology, wear, corrosion, biofouling, icing/deicing, phase changes, heat/energy transfer, electrochemistry, optics/photonics, etc.
- Material processing and fabrication techniques for functional surfaces including novel techniques such as 3D printing and self-assembly
- Surface modification and coating techniques for functional surfaces
- Machine Learning (ML) and Artificial Intelligence (AI) for surface engineering
- Hydro-, aero, ice-, and oleo-phobic/philic surfaces
- SLIPS (slippery liquid infused porous surfaces) and LIS (lubricant impregnated surfaces)
- Stimuli-responsive and adaptive materials and surfaces
- Self-healing/self-repairing materials and surfaces
- Surface engineering in energy applications
- Surface engineering in water-related applications
- Surface engineering in biomedical applications
- Surface engineering in optical and electrical applications
- Surface engineering in industrial applications
- Surface characterization and metrology
- Novel phenomena and applications of engineered surfaces/coatings



### Formula XII Conference

16-18 June 2025, Sofia, Bulgaria

**New strategies for innovation and performance prediction**

#### Topics:

- Formulants: sourcing, lifecycle, safety and performance
- Formulation design: sustainability and disruptive innovation
- Fundamental science: mechanisms, structure-function relationship and theoretical modelling
- Formulation performance and measurement techniques
- Formulation stability and its prediction
- Formulation and delivery of hydrophobic drugs, biologics and other bio-actives
- Controlled release formulations
- Automation in formulation: high throughput screening and analysis
- AI/ML in formulation design, performance and process optimization

#### Important dates

Abstract submission opening: 1 Nov 2024

Abstract submission deadline: 1 Feb 2025

Early registration: 1 May 2025

<https://formula12.org>



### ACIS Student Conference - Save the Date

The 2025 Student Conference will be held in Melbourne from 28th to 31st of January.

Save the dates in your calendar because this is an event not to be missed!

More information will be coming soon.



You receive this newsletter because you are registered as a member of IACIS.  
If you happen not be a member, please contact the [Honorary Secretary](#).  
For comments or suggestions, please contact the [Newsletter Editor](#).

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