



## International Association of Colloid and Interface Scientists

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[I prefer to read the pdf.](#)



From the IACIS President



We were recently invited by IUPAC to contribute to their search for the [Top Ten Emerging Technologies in Chemistry for 2024](#) (extended closing date April 17). IUPAC describes an emerging technology as “a discovery that hovers between an embryonic “Eureka” moment in the lab and an industrial application.” Although we are not making a submission on behalf of the society, I encourage all our members to look at and reflect on the [2023 list](#). Many of us would recognise that it is rich in colloid and interface science, which prominently features in wearable sensors, photocatalytic hydrogen and synthetic electrochemistry and (separately) chloride mediated electrochemical ocean CO<sub>2</sub> removal, alongside depolymerisation, PET recycling, and artificial muscles. This should not be surprising as it is part of the great tradition of our field that it bridges fundamental and applied science.

My thoughts turned to mRNA/lipid nanoparticle vaccine formulations although, despite the lingering cold-chain problem, this technology has probably already *emerged*. Perhaps recent developments exploiting structured nanointerfaces to produce smart functional materials for water capture or achieve superlubrication are a candidate? What other areas of colloid and interface science have the capacity for new opportunities and technologies? Please use the [nomination form](#) to tell IUPAC about them.

Sticking with the emerging theme, I am happy to confirm that the [IACIS Emerging Investigator Awards](#) will again be offered with the generous support of Kao Corporation at IACIS2025 in Edmonton. The official call for nominations will come out in the next newsletter, so now is the time to encourage prospective nominees to become IACIS members to ensure their eligibility. As in the inaugural round at IACIS2022, the jury will choose finalists to make oral presentations at IACIS2025 from the list of nominees, with up to three awards being made at the end of the conference. All finalists and winners will receive certificates acknowledging their achievements.

Greg Warr

## FROM YOUR NEWSLETTER EDITOR



### Welcome to IACIS Newsletter 83

The organisation of IACIS 2025 is slowly starting up. With that also the nominations for the IACIS awards are expected to open soon. Please visit the [iacis website](#) for more information about these awards.

Another interesting news item I would like to highlight is that the second edition of *COLLOIDS AND THE DEPLETION INTERACTION*, by Lekkerkerker, Vis and Tuinier has been published and is available as an open excess book.

As always contact me when you have news, or would like to put your recently published article in the spotlight. The deadline of the NL84 is June 15.

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

## 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> July 2024.*

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> Dec 2024.

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 June 15

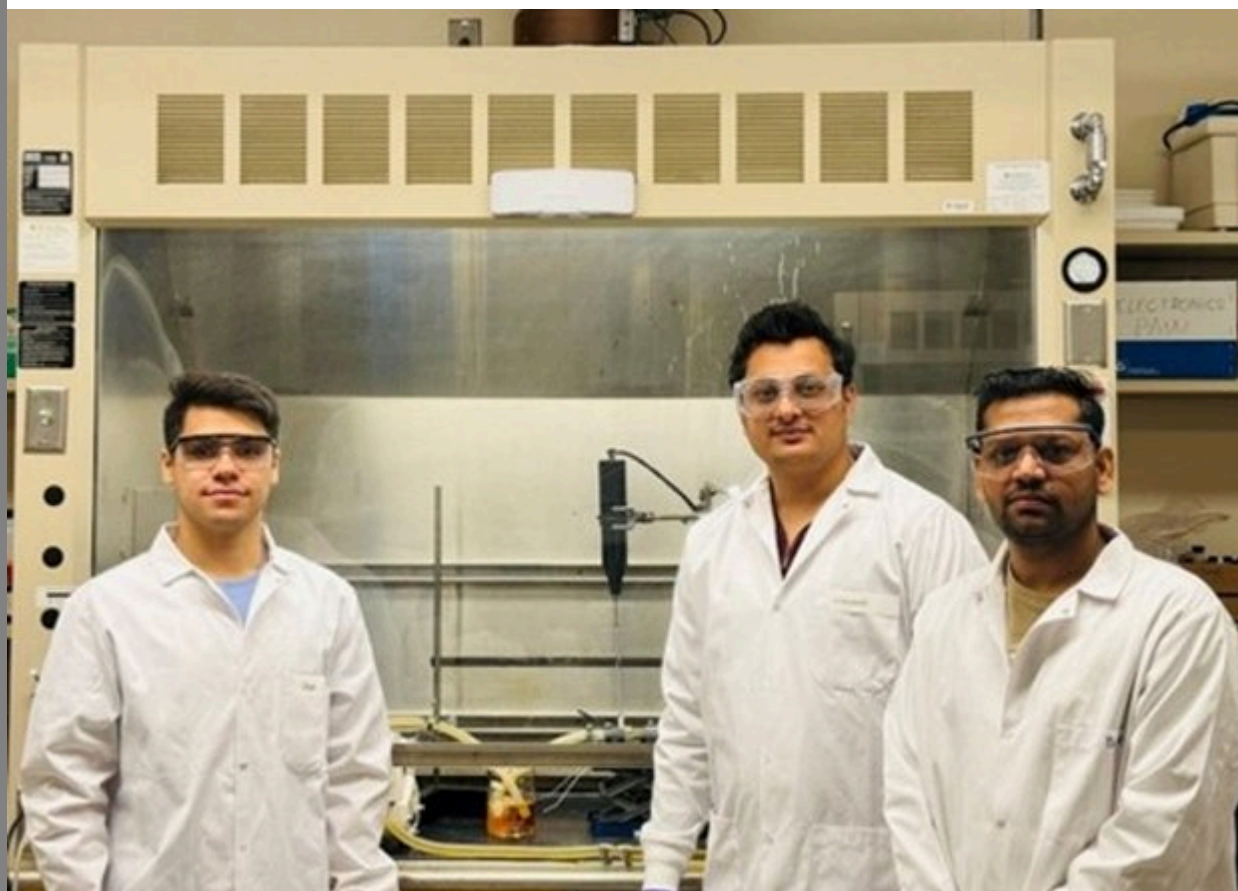
Your Newsletter Editor, Saskia Lindhoud

## Stable and efficient microbubble-enhanced cold plasma activation for treatment of flowing water

[The Soft Matter & Interfaces research group](#), at the University of Alberta (UofA), led by Professor Xuehua Zhang, has improved the efficiency of cold plasma technology for water treatment by taking advantage of microscopic bubbles at the gas-liquid interface. The reactive species generated from high-voltage cold plasma discharge degrade stubborn chemical and biological pollutants in water. Ziya Saedi (MSc student), Muzammil Kuddushi (a postdoc fellow) and others discovered that by simply placing the electrode inside a small inlet located in the neck of a venturi tube, the plasma discharge can be coupled with the water flow. The team demonstrated that with the smart design in coupling cold plasma and a flow, stubborn pollutants and pathogens can be eliminated in the water. They went further to do the test outdoor by a portal system driven by the electricity from a solar panel. Their technology is another example for effective transfer of gas species into flow by microbubbles.

The team is excited about the advance in the cold plasma technology as it is clean, and environment friendly with potential for possible applications in wastewater treatment, disinfectant, food processing, and sustainable agriculture. If you are interested, you can find the article [here](#), and write to [xuehua.zhang@ualberta.ca](mailto:xuehua.zhang@ualberta.ca) for more details.

From left to right: Ziya Saedi (MSc student), Muzammil Kuddushi (Postdoc fellow), Deepak Panchal (Postdoc fellow)



**THE SECOND EDITION OF 'COLLOIDS AND THE DEPLETION INTERACTION'**

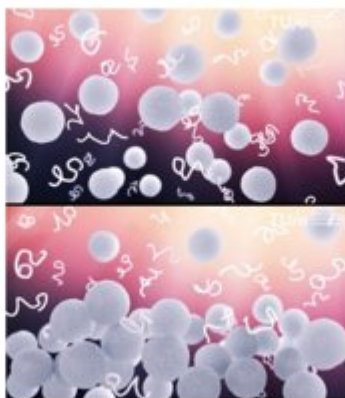


Recently, the Second Edition of the book 'Colloids and the Depletion Interaction', written by Henk N.W. Lekkerkerker, Remco Tuinier and Mark Vis, appeared. This Second Edition is published **open access** and is available via:

<https://link.springer.com/book/9783031521300>.

This Second Edition contains 12 Chapters is an updated and enlarged version of the First Edition (6 Chapters). Since the first edition (2011) there has been substantial experimental and theoretical progress in the multidisciplinary field of colloids and the depletion interaction. This updated edition includes recent developments in the field and selected references from the last decade.

The depletion interactions and resulting phase behaviour induced by colloidal spheres and rods have been extended with recent developments and are now presented as separate Chapters. The Chapter 'Phase behaviour of colloidal rods with depletants' has been extended with recent experimental and theoretical developments. This Second edition also contains several entirely new chapters, such as 'the interface in demixed colloid–polymer dispersions' and chapters on the phase behaviour of colloidal platelets and colloidal cubes in the presence of depletants.



## CONFERENCE ANNOUNCEMENTS AND UPDATES



### ECIS Online Webinar on Fundamentals

Last year ECIS started with a webinar series on Fundamentals.

The webinar series kicked off with a session on Effects of Bubbles and Dissolved Gases in Colloid Science presented by Barry Ninham and Vincent Craig. On January 23 the second webinar took place with the topic: Fundamental aspects of wetting – drop friction, presented by Hans-Jürgen Butt and Joël de Coninck.

Recordings of these webinars are available online

[Visit ECIS Webinars on Fundamentals](#)

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

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

**Abstract Submission now OPEN!**

more info on [esconf2024.org](https://esconf2024.org)



## International invited speakers



Agustin  
Mihi

Katherine  
Elvira



Jan  
Vermant

Pawel  
Majewski



Marleen  
Kamperman

Debora  
Berti



Frank  
Smalenburg

Please visit [esconf2024.org](https://esconf2024.org) for more information about the 19th EUROPEAN STUDENT COLLOID CONFERENCE



The registration of ECIS 2024 in Copenhagen has been opened.

The conference is organised by the following scientific 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 and Ionic Liquids
- Composite, Hybrid and Magnetic Colloidal Materials
- Wetting Phenomena and Surface Forces
- Colloidal Robotics, Devices, and Actuated Materials
- Rheology, Flow, and Phase Behavior of Complex Liquids
- Colloid and Interface Phenomena in Food and Pharma
- Theory and Multi-scale Modeling of Colloids and Interfaces
- Colloidal Active Matter
- Advanced Colloid Science for Applications and Products
- Neoteric Fluids: Liquid Metals, Porous fluids, and Other Emerging Solvents
- Nanopaint theme: Nanoparticle Interactions in Dense Suspensions
- Artificial Intelligence and Machine Learning in Colloid Science

- ESS theme: Developments in Neutron and X-ray Methods and Novel Characterisation Approaches

For more information, registration and abstract submission visit: <https://ecis2024.org/>



ACS COLLOID & SURFACE SCIENCE SYMPOSIUM

**Save the Date**  
**June 23rd - 26th, 2024**

Seattle, Washington

Dear colleague,

Abstract submission for the 98th ACS Colloids and Surface Science Symposium is now Open for Oral Presentations and Posters.

The Symposium will be held **June 23-26, 2024** at the **University of Washington** in Seattle. The Symposium features outstanding plenary speakers and award talks for the Unilever Award, LaMer Award and graduate student Langmuir Award.

The technical sessions are organized around 16 broad topics:

- Colloidal and Surface Forces
- Rheology and Complex Fluids
- Surface Science, Catalysis and Electrochemistry
- Emulsions, Bubbles and Foams
- Wetting and Adhesion
- Environmental and Sustainability Topics
- Biological, Bio-Inspired and Biomimetic Colloids and Interfaces
- Directed and Self-Assembly
- Active and Dissipative Systems
- Automation, ML and AI in Colloid and Surface Science
- Electrokinetics and Microfluidics
- Polymers
- General Fundamentals and Applications
- Synthesis of Colloids, Crystals and Nanomaterials
- Programmable Materials and Additive Manufacturing
- Connecting the Dots (Colloids and Surfaces in Industry)

The full list of session organizers, invited speakers and the link to abstract submission is provided on the Symposium website: [www.colloids2024.org](http://www.colloids2024.org)

Deadline for abstract submission is **March 1, 2024**

Lilo D. Pozzo, Jim deYoreo, Shuai Zhang and Zachary Sherman  
Symposium Co-Chairs



13th International  
**COLLOIDS CONFERENCE**

Sitges, Barcelona, Spain

9-12 June  
**2024**

## Save the date 13th International Colloid Conference

the 13th International Colloids Conference, will take place from 9-12 June, 2024, Sitges, Barcelona, Spain

This conference aims to provide a forum for researchers from across the world to join in a relaxed atmosphere, to communicate and share the latest developments from these research areas.

The Conference will covers 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

[Visit the conference website for more information](#)



The 24th International Symposium on Surfactants in solution" will be held at BITS Pilani K K Birla Goa Campus from June 16-21, 2024. This Symposium is jointly organized by BITS Pilani K K Birla Goa Campus, IISER Pune and ICT Mumbai, in association with Society for Industrial Chemistry & Indian Society for Surface Science and Technology.

### Scope of the Symposium

- Thermodynamics, modelling, simulation and theory of surfactants-based systems
- Surfactants adsorption at interfaces and pseudo-phase formation
- Mixed surfactant systems, surfactants in separation processes
- Kinetics of surfactant-based systems
- Bio derived, bioinspired and Gemini surfactants, sustainability in surfactants
- Polymeric and polymerizable surfactants
- Surfactants in applications
- Surfactants wetting, spreading and capillary phenomena
- Monolayers and Langmuir-Blodgett films
- Surfactants – experimental methods, techniques and approaches
- Surfactants in tribology
- Adsorption layer dynamics at interfaces
- General/other topics
- Young Scientist Forum

More information can be found on the SIS2024 website: [sis2024.surfinol.org](https://sis2024.surfinol.org)



**Neutrons and Food 7** will take place from June 10-14, 2024 at the STAR Tower, University of Delaware, Newark, DE

At this time, we are inviting oral (~20 minutes) and poster presentations. The following session topics are particularly encouraged:

Relevant topics include:

- Food Shelf-life and Processing | High-pressure, Rheology, Psychorheology, Tribology
- Food Safety and Quality | Packaging | Traceability
- Foams and Emulsions | Pickering, Oleogels, Polysaccharides
- Neutron Research Facility Access | Collaboration and Outreach
- Protein Sources | Plant-based and Dairy | Drinks and Beverages
- Digestion and Metabolic Processes
- Food standards | Food Taste and Perception
- Technology and the Global Food system

[Follow this link for more information](#)



52ND BIENNIAL ASSEMBLY OF THE  
GERMAN COLLOID SOCIETY

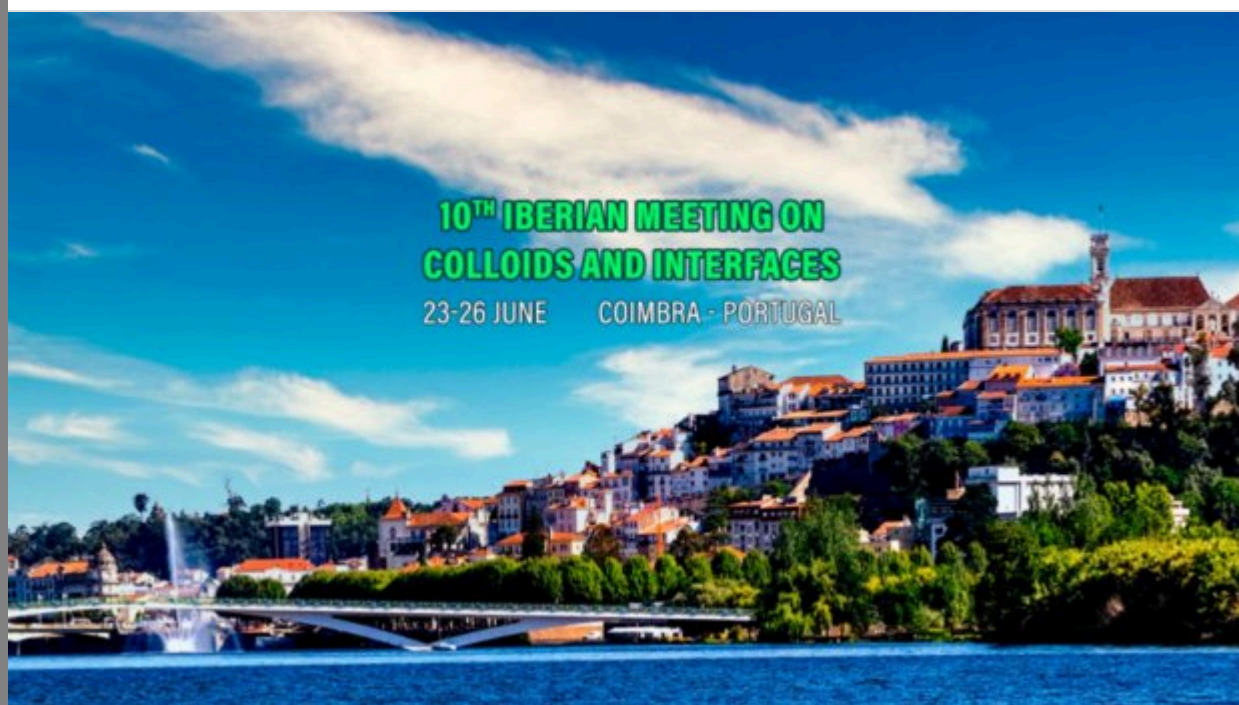
*DRESDEN, September 30 - October 2, 2024*

The 52nd Biennial Assembly of the German Colloid Society adds to a successful series of conferences. This time the meeting will take place 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

[More information](#)



The 10th edition of the Iberian Meeting on Colloids and Interfaces (RICI X) meeting, scheduled to take place from June 23th to June 26th, 2024, at the historical city of Coimbra, Portugal.

Topics include:

- Colloids, Biocolloids, Nanoparticles, and Colloidal Nanoscience
- Surfaces, Interfaces, and Films
- Polymers, Foams, Emulsions, Liquid Crystals, and Gels
- Surfactant Science and Technology

- Advanced Materials and their Characterization
- Theory and Modeling Applied to Soft Matter
- Colloidal Biotechnology, Medical, Pharmaceutical, and Food Applications
- Experimental Methods in Colloidal and Interface Science
- Colloids and Surfaces in Energy and Environmental Technologies

[Visit the website of the Iberian Meeting on Colloids and Interfaces meeting for more information](#)

# IUPAB 2024

## 21<sup>ST</sup> IUPAB & 62<sup>ND</sup> BSJ JOINT CONGRESS 2024

### JUNE 24<sub>(MON)</sub> - 28<sub>(FRI)</sub>, 2024 / ICC KYOTO ( KYOTO INTERNATIONAL CONFERENCE CENTER )

The 21st IUPAB Congress 2024 (IUPAB2024) In Collaboration With the 62nd Annual Meeting of the Biophysical Society of Japan will be held in the Kyoto International Conference Center from June 24 (Mon) – 28 (Fri), 2024.

[More information can be found here](#)



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

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