**Newsletter 75, January 2022**

# International Association of Colloid and Interface Scientists

In this newsletter you will find the following topics:



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## From your Newsletter Editor

Here is a fresh IACIS newsletter, the first one of 2022. This news letter contains important information about IACIS council elections. It contains updated information about the emerging investigators award.
If you have information that is relevant for our community, send me an email so it can be included in our next NL, deadline March 15.

Stay safe, take care and make the best of it.

Your Newsletter Editor, Saskia Lindhoud

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## IACIS Lifetime Achievement Award Winner

The IACIS Life Time Achievement Award (LTAA) recognizes a lifetime of distinguished achievement, and outstanding contribution to the advancement of the art, science and industrial practice of Interface and Colloid Science together with participation in IACIS. The Award is presented once every three (or four in this case - due to Covid) years at the IACIS Conference. It is an incredible honour to be nominated and considered for the award. The Selection Committee for LTAA 2022, chaired by Professor Björn Lindman (Lund, Sweden), have now evaluated all the eligible nominations received.

We are delighted to announce that the IACIS Life Time Achievement Award 2022 has been awarded to Professor Kazue Kurihara, Tohoku University, Japan. The citation from the Selection Committee reads, "The 2022 IACIS Lifetime Achievement Award is given to Professor Kazue Kurihara of Tohoku University, Sendai, Japan, for her outstanding research on surface force measurements, including major innovations, which have broadened the range and scope of the technique. Professor Kurihara has also been instrumental in encouraging young scientists and by dedicated work promoting our society."
Professor Kazue Kurihara will receive a framed certificate together with the citation and will deliver a plenary Award Lecture during the IACIS Conference to be held on 26-29 June 2022 in Brisbane, Australia https://www.iacis2022.org

Congratulations Kazue!

Prof. Bjorn Lindman (Chair, LTAA 2022 Selection Committee)
Prof. Hans- Jürgen Butt (IACIS President) and the IACIS Standing Committee

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## IACIS Emerging investigator award

IACIS is proud to announce the establishment of the IACIS Emerging Investigator Awards. Three awards valued at AUD3000 (with accompanying certificate) will be presented for outstanding fundamental or applied research in the field of colloid and interface science. These will be presented for the first time at IACIS2022 in Brisbane, thanks to generous support from the KAO Corporation.
Eligibility. Nominees who are within 6 years of receiving their Ph.D. will be eligible for the Award. Nominees outside this time frame due to career interruptions or other circumstances will be considered on a case-by-case basis.
Nomination/Application Process. Nominations can be made by the candidates themselves or by a nominator (with the agreement of the candidate) prior to Tuesday, 8 February 2022. Nominations should include

- The candidate's CV including a list of publications and patents
- A copy of the abstract submitted to IACIS2022
- A cover letter addressing key achievements as well as any other contributions to colloid and interface science such as teaching, outreach, responsibilities for societies, etc. This letter may also address any career opportunity factors to be considered by the jury, especially if the candidate is outside the 6 year eligibility window.

Nominations should be sent by email to the Scientific Program Chair (gregory.warr@sydney.edu.au). with all documentation included as a single pdf file by Tuesday, 8 February 2022.
Two-Stage Selection Process. From the nominations, up to 12 candidates will be selected before the IACIS conference. Each finalist will receive a certificate recognizing their selection, and will be invited to present their results in a talk at IACIS2022. As IACIS2022 is a hybrid conference, both online and in-person presentations are eligible.
The Jury will then select the three award winners based on their scientific achievements, including the nomination documents, their oral presentation, and discussion at the IACIS conference.
The jury is nominated by the chair of the conference and will comprise: 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. The decision of the jury is final, and no correspondence will be entered into.

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## IACIS Council and President-Elect Elections 2022

The ultimate responsibility for IACIS activities rests with the elected 12-membered Council and that for its daily running with its 5-membered Standing Committee. The composition of the current Council (2018-2022) can be found at the IACIS website. Six of the 12 ordinary council members and a new President-elect are elected every three years, with the exception of a 1-year COVID extension to the current council. As stipulated in the IACIS constitution, the IACIS Council would like to call for the nominations for the above elections so that a new Council will be established at the IACIS2022 (26-30 June 2022 in Brisbane, Australia). At the IACIS2020, Professor Hans-Jürgen Butt (MPI, Mainz) will pass his IACIS presidency to Professor Greg Warr (Sydney, current President-elect) and will remain to serve on the Standing Committee as the Immediate Past President.

- Elections for the Ordinary Council members (Tenure: 6 years): One of the Council members, Prof. Peter Kralchevsky (Sofia), sadly passed away in 2020. The following five ordinary Council members will retire at the IACIS2022 and the IACIS Council would like to thank them wholeheartedly for their services and look forward to their continuing contributions: Emeritus Prof. Brian Vincent (Bristol, UK), Prof. Russell Crawford (RMIT, Australia), Prof. Thomas Zemb (ICSM, France), Prof. Jasper van der Gucht (Wageningen, the Netherlands), and Prof. Nicholas Abbott (Cornell, USA).
- Election for President-elect (Tenure: 3 years): The new President-elect will join the Council and the Standing Committee at the IACIS2022.
- Co-opted council members (Tenue: 3 years): The Standing Committee may co-opt up to eight additional members, if this benefits the IACIS through balanced regional representation and contact with Regional Organisations. Six co-opted members currently serve alongside the IACIS Council (see here) and we would like thank them for their contributions.
- Election logistics: The nomination deadline is on 28th Feb 2022 and that for elections on 31st Mar 2022. A separate email to call for the nominations will be sent out to the IACIS members, in which the eligibility for the Council and the President-elect will be specified.

Wuge H. Briscoe (IACIS Hon. Secretary and Treasurer, University of Bristol)

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## Showcase your publication

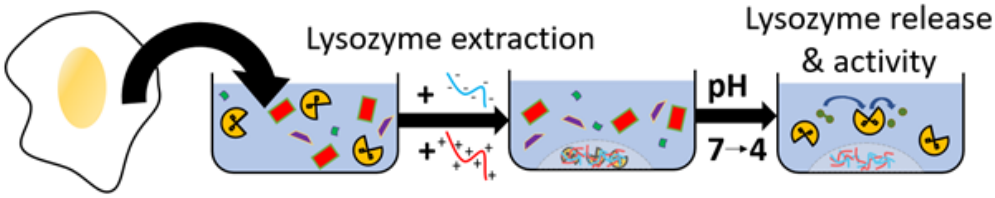
A side effect of the current pandemic is the lack of opportunities for young scientists to present their work at international conferences. Therefore we would like to invite PhD students to showcase recent publications in the IACIS Newsletter. The idea is to write a short text in which you explain about 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 beginning of April, the deadline for submitting your showcase text is March 15. In this newsletter there is a contribution from the Netherlands and New Zealand.

Your Newsletter Editor, Saskia Lindhoud

## Extraction of Lysozyme from Chicken Albumen Using Polyelectrolyte Complexes

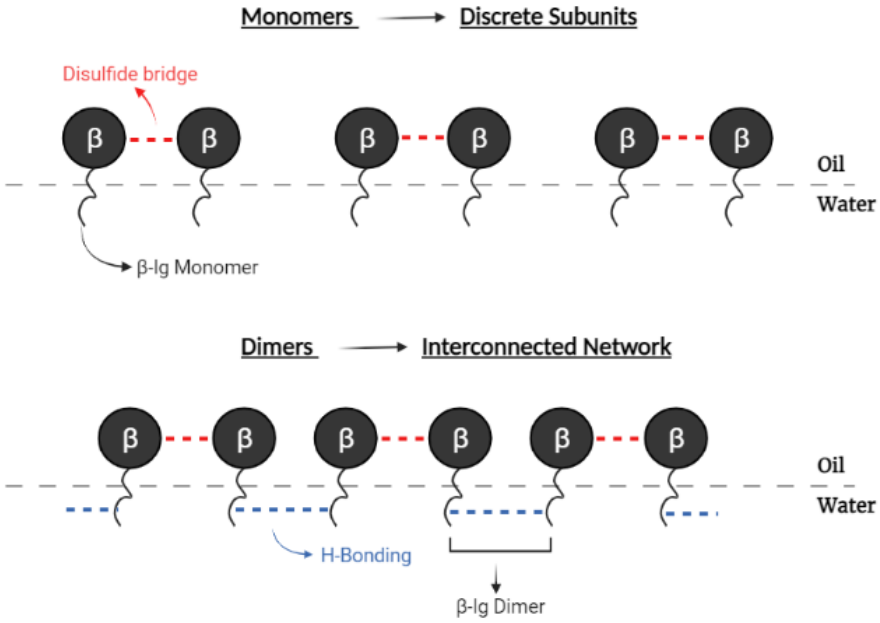
I am Jéré van Lente, and I just finished my PhD project at the University of Twente in the Netherlands where I was supervised by Wiebe de Vos and Saskia Lindhoud. During my PhD project I studied the properties of complexes made by mixing aqueous solutions of oppositely charged polyelectrolytes. These polyelectrolyte complexes are inspired by liquid-in-liquid droplet condensates called membraneless organelles that we can find within our cells. The current hypothesis is that these condensates ensure proper spatiotemporal organisation of molecules. We have discovered that the polyelectrolyte complexes have interesting interactions with other molecules, especially proteins. One of the things we have learned is that proteins are very sensitive to the ratio of polycations to polyanions and that changing this can drastically alter the extent to which proteins partition into the complex.
In our most recent article in Small, we used a specific polyanion/polycation ratio to capture the protein lysozyme from commercial chicken egg whites. Egg white is a naturally occurring aqueous mixture of mostly different proteins. With our complexes, we can selectively extract lysozyme while leaving the rest of the species of proteins untouched. The lysozyme could then be back-extracted from the complexes into new water, where they retain their original catalytical activity. This new application of polyelectrolyte complexes can open interesting research fields where the complexes are used as selective extraction media. In our paper we show that this protein extraction is feasible in principle, though we'll need to develop a greater understanding of the up-take mechanisms of proteins and other molecules into the complexes.
The doi for the full article is doi.org/10.1002/smll.202105147.




## The rheological properties of bovine ß-Lactoglobulin stabilized oil/water interfaces depend on the protein's quaternary structure

My name is Sashikumar Ramamirtham and I am a PhD student in the Biophysics and Soft Matter group at Massey University in New Zealand, under the supervision of Prof. Bill Willliams and A/Prof. Catherine Whitby. My project investigates the interfacial structure-rheology relationships of protein assemblies, in particular, ß-lactoglobulin (ß-lg).
Protein assemblies fulfil various functions at physiological fluid/fluid interfaces including mechanical strengthening. The enhanced interfacial strength of such protein assemblies at

higher salt concentrations including that of ß-lg, a bovine whey protein, is conventionally justified using the screening of intermolecular electrostatic repulsion. However, in our study, we reveal the important role of hydrophobic forces by investigating the salt-specific interactions on ß-lg's interfacial rheology. We further showcase the contrasting rheological behaviors of ß-lg monomers and ß-lg dimers along with a proposed mechanism explaining the reasons behind the crucial dependence on the protein's quaternary structure. Although ß-lactoglobulin is a well-studied model protein, it is exciting to uncover such fundamental structure-function relationships which could ultimately divulge its yet unresolved physiological functions. This study could also act as a precursor in exploring the structure-function relationships of other proteins using interfacial techniques.
The doi for the full article is 10.1016/j.foodhyd.2021.106834.

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## IACIS2022 Brisbane Update


Early-bird Registration and Abstract submission for the 17th Conference of the International Association of Colloid and Interface Scientists, IACIS2022, are closing soon, on February 8th. Please note the extended closing date. As Australia re-opens its borders, we hope to welcome you in person to Brisbane from June 26-29, and for some follow-up events. However, if you are unsure about your travel plans to Brisbane, please note that early-bird online registration can be upgraded to in-person at the early-bird rate.

In addition to plenary lectures from Prof. Stephen Hyde (Sydney University, AE Alexander Lecturer) and Prof. Kazue Kurihara (Tohoku University, IACIS Lifetime Achievement Award winner), we are also pleased to announce a plenary lecture from Prof. Lidia Morawska (Queensland University of Technology). Prof. Morawska was recently recognised as one of Time Magazine's 100 Most Influential People of 2021 for her work on aerosol transmission of COVID-19.

Nominations also close on February 8 for the IACIS Emerging Investigator Awards, supported by KAO Corporation. Award finalists' lectures will be an important part of a diverse and exciting scientific program spanning all areas of colloid and interface science, from fundamentals to applications.

Please also plan to stay on after IACIS2022 for our Advanced Workshop on the Characterisation of Colloids and Interfaces at the University of Queensland on June 30th. This will feature hands-on training as well as masterclass lectures and workshop sessions on writing proposals for major beamline facilities, with contributions from the Australian Centre for Neutron Scattering and Australian Synchrotron.

Check the website https://www.iacis2022.org regularly for other updates on the conference as well as satellite and related events, and follow us on Facebook, Twitter, Instagram, or WeChat using @IACIS2022.

Students, don't forget the Koala Lloyd competition for a free registration (online or in-person). As we are becoming more free to move around more freely, share your photos of Koala Lloyd also getting out and about on social media with the tags @IACIS2022 |

#IACIS2022 | #koalalloyd.
For more information about sponsorship or to discuss the added possibilities that the hybrid conference offers, please contact our professional conference organiser's sponsorship and exhibition manager, Mr Jonathon Walker (jwalker@arinex.com.au).
We are committed to creating an inclusive, accessible, supportive, and harassment-free environment for scientific exchange for every participant, regardless of gender, sexual orientation, disability, physical appearance, race, or religion.

We look forward to seeing you in Brisbane, or online.

Ian Gentle and Greg Warr
on behalf of the IACIS2022 Organising Committee.

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## 18th European Student Colloid Conference

Call for the Next Generation of Colloid and Interface Scientists

The European Colloid a Interface Society (ECIS) and the Hungarian Chemical Society (MKE) invite you to participate in the 18th European Student Colloid Conference, to be held at the University of Szeged (USz) in Szeged, Hungary, from 26th to 30th of June, 2022.
ECIS organizes these biannual meetings to motivated students at PhD and MSc level who are undertaking research at a European University, or being in collaborative linkage with European research groups. These meetings are intended for students to present their work to their peers and to promote scientific and social interactions.
We cordially welcome you and hope that you will all enjoy a stimulating and fruitful five days during the 18th ESC in Szeged!
Information about the conference can be found on our website: escconf2022.mke.org.hu


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## In Memoriam: Maria Miguel

It is with a heavy heart that we, former collaborators and above all friends, write these lines, on the event of Professor Maria Miguel's passing. Professor Maria Miguel was a beloved and highly appraised member of the scientific community of IACIS and the European Interface and Colloid Society (ECIS). She was member of the ECIS board between 2006-11 and served as president for 2008-09. Her presence never went unnoticed, and she handled her tasks very professionally with a clear sense of duty, always serving the common good. She was always on the move, quick minded and ready with a smile and a friendly comment. She will be dearly missed.

In 1986, she obtained a Ph.D. degree from Coimbra with a thesis on the photochemistry and photophysics of the uranyl ion. Alongside with her passion for photochemistry for which she achieved international recognition, early in her career she developed an interest for the self-assembly of lipids and surfactants, membrane models and biointerfaces. She is well known for her research in photochemistry and photophysics, fluorescence methods, surfactant self-assembly, DNA/surfactant and DNA/biopolymer interactions, DNA gels for drug and gene delivery. As a successful female professor she has been a role model for many.

The complete obituary of Maria Miguel written by Karin Schillén, Artur Valente, Tommy Nylander and Eduardo Marques can be found here.

Text from the complete obituary was adjusted by your Newsletter Editor

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