



International Association of Colloid and Interface Scientists

In this newsletter you will find the following topics:

Welcome

In Memoriam: Jacob Israelachvili

From your newsletter editor

IACIS 2018

Call for Proposals Venue and Organization IACIS 2024

Selected announcements

People

Welcome



Dear members of the International Association of Colloid and Interface Scientists!

This year's Conference in Rotterdam brought a new increase in the number of members. IACIS has now 842 members! I would like to welcome in particular the new members of IACIS. After enjoying the conference in Rotterdam I hope you also join IACIS 2021 in Brisbane.

IACIS is a voluntary, non-profit-making organization of individuals who are interested in the field of colloid and interface science. We promote international cooperation among colloid and interface scientists, and encourage advancement and understanding in the field of colloid and interface science. Therefore we organize the triannual IACIS conferences.

We rely on the activity of our members. Therefore I would like to encourage you to actively participate by:

- joining the conferences e.g. with presentations and discussions,
- help linking IACIS to local organizations,
- nominate colleagues for the IACIS prizes,
- organize a conference yourself,
- provide information on other conferences in the field to the secretary or Saskia Lindhoud, our editor for the newsletter.

This year, we suffered from another great loss: On September 20th Jacob Israelachvili passed away following a year long struggle with cancer. Jacob Israelachvili made fundamental contributions to our understanding of interfacial forces. He inspired generations of researchers with his book on Intermolecular and surface forces. Jacob Klein, who knew Israelachvili from his childhood on, was kind enough to write an obituary.

Yours

Hans-Jürgen Butt, president of the IACIS

[Back to the top](#)

Jacob Nissim Israelachvili 1944 - 2018

Excerpt from the obituary by Jacob Klein

Jacob Israelachvili made important fundamental contributions to our understanding of intermolecular and intersurface forces. Such forces are central to a broad area of science, spanning surface and colloid chemistry, condensed matter physics,



materials engineering and the properties of 'soft' and biological matter. Israelachvili's pioneering work opened a new window that enabled a clear vision of a previously opaque domain, that of direct measurement of molecular and interfacial forces down to the angstrom level. This was many years before the advent of scanning probe microscopy, and Israelachvili's experimental methods and findings led to a transformation of the field.

Intermolecular and surface forces are among the most fundamental issues in chemistry and physics, and indeed in biology, and have been investigated and exploited from antiquity. Thus, the steric stabilization of colloidal carbon black dispersions by gum arabic, and the use of lubricants to slide heavy loads, both of which were documented in ancient Egypt, are two examples of such forces and how they were modified for practical use. In the modern era such luminaries as Newton, Maxwell, Boltzmann and van der Waals, and, in the past century, Hamaker, Langmuir, Landau, Overbeek and de Gennes, and many others, were major contributors to the theory of such forces. Classical investigations tended to focus on the forces that act between simple molecules in a gas, or between pure solids. However, the enormous area of intermolecular and surface interactions in and across liquids received relatively little attention. A major reason for this was the dearth of direct measurements concerning the nature of interparticle forces in such systems. While the theoretical treatments provided a framework for understanding such ubiquitous effects as van der Waals forces and double-layer electrostatic interactions between molecules and surfaces in liquids, and the effect of steric forces between polymer-coated surfaces, direct experimental confirmation of these forces at the molecular level was not available. Israelachvili was the first to enable and to carry out such measurements.

Israelachvili's prolific studies using the SFA (Surface Force Apparatus) revealed the nature of molecular forces and interfacial forces with a directness and resolution that had not previously been possible. Such studies also established the paradigms incorporated in subsequent techniques for studying molecular interactions, such as atomic force microscopy. At the same time, the SFA/SFB (Surface Force Balance) approach, now used by many groups world-wide, remains the gold standard for measuring forces between surfaces, or between the molecules which may coat them, across liquid media. The introduction of this method, and its exploitation for remarkable new discoveries, as well as for illuminating the origins of known interactions, is Israelachvili's chief monument.

Israelachvili's impact on the field was propagated by the large number of students and post-docs who worked with him, many of whom achieved their own distinction as academic faculty all over the world. His book, *Intermolecular and Surface Forces*, now in its 3rd edition, was a landmark synthesis of classic and modern ideas, and has been hugely influential, as have been his some-500 research publications. He received many national and international awards for his work, including the Tribology Gold Medal, the top award in the field.

Israelachvili was a much-loved mentor and supervisor. His kindness, generosity of spirit and sense of humour will be very much missed, not only by his family, and by his many friends, students and colleagues, but by our community as whole.

The complete obituary of Jacob Nissim Israelachvili written by Jacob Klein can be found [here](#).

Text from the complete
obituary adjusted by your
Newsletter Editor

[Back to the top](#)

From your Newsletter Editor



During the IACIS meeting in Rotterdam, I took over the responsibilities of Ger Koper, who has been the webmaster and newsletter editor of the IACIS for the past ten years. My first task was to renew our webpage, which can be found at: www.iacis.net. Please have a look and if you have suggestions for improvement, let me know. Also, please do send news for the newsletter, which will appear 2-3 times per year, to [me](#).

I would further like to draw your attention to the following. Daily we all receive invitations to conferences, some are more appropriate than others, but it appears that some are actually fake conferences or conferences at which anybody can present their work. We have reasons to believe that the "World Colloid Conference 2018" in Vienna is such

a fake conference and I have made a note of this on the announcement page of our website, which you can find [here](#). The conferences we announce on our webpage are from trusted sources, i.e., our members.

All the best!

Your Newsletter Editor,
Saskia Lindhoud

[Back to the top](#)

IACIS2018



The 16th Conference of the Association of Colloid and Interface Scientists (IACIS2018) in Rotterdam (May 21 - 25) was very successful, thanks to the scientific committee and session leaders who made a wonderful program, and the help of the conference bureau and many volunteers from Delft and Wageningen. For the program and abstract book, a full report and pictures, visit [here](#). The password to access the photos and abstract book is: Rotterdam_2018!

Ger Koper and Mieke Kleijn

[Back to the top](#)

Call for Proposals Venue and Organization for the 18th IACIS Conference in 2024

The procedure for determining the organization and venue for the 18th IACIS Conference in 2024 has started. IACIS members are cordially invited to send their proposals by e-mail to the [Honorary Secretary](#).

Information in the proposal should include:

- Proposer(s): titles, names, affiliations, positions
- Place and time: city, country and dates in 2024
- Development and present state of colloid and interface science in this country; strong research groups involved in the organization (1 A4 max)
- CV of the chair(s) of the Conference.
- Other members of the Organizing Committee (preliminary list)
- Members of the Scientific Committee and International Advisory Board (preliminary lists)
- Main conference topics (preliminary list)
- Venue - description of facilities (including main hall for plenary lectures, halls for the parallel sessions)
- Accommodation - hotels, dormitories/hostels, estimated prices
- Preliminary registration fees
- Financial support, possible sponsors

The deadline for submitting proposals is December 1, 2018. The proposals will be sent to all IACIS Council members requesting their opinions, after which the Standing Committee will take the final decision before April 1, 2019.

[Back to the top](#)

A Global Women's Breakfast-IUPAC100 Activity

As part of their hundredth anniversary in 2019, IUPAC invites scientists and students around the world to join in a Global Women's Breakfast. The event is titled "Empowering Women in Chemistry: A Global Networking Event." The Event takes place on the 12th February 2019. Please go to the IUPAC100 website here: [Global Women's Breakfast](#) for more information and registration.

[Back to the top](#)

In Memoriam: Tharwat Tadros 1937-2018



On 23rd May 2018 Tharwat Tadros passed away. Tharwat was President of the International Association of Colloid and Interface Scientists from 1990 to 1992. He served on the SCI surface and colloid chemistry section committee for some 15 years, being chair from 1987 to 1989. He was presented with a number of awards and medals. These included: the RSC Colloid and Surface Chemistry Medal in 1989; the RSC Silver Medal and Industrial Lectureship in 1990; and the SCI Founders Lecture (now the joint RSC/SCI Rideal Lecture) in 1991. The obituary written by Brian Vincent can be found on the [SCI webpage](#).

Congratulations to professor Eugene Shchukin at the occasion of his 90th birthday



On the 30th May it was the 90th Birthday of professor Eugene Shchukin. He graduated from the Department of Physics of the Moscow State University (MSU) in 1950. He was the leader of the scientific school at the Institute of Physical Chemistry (IPC) and head of the Laboratory of Physicochemical Mechanics in IPC, and at MSU he was professor of the Colloid Chemistry Department from 1973-1994. Since 1992 he has also been a professor of the Environmental Engineering Department, John Hopkins University (JHU), USA.

Scientifically he opened new pages in revealing molecular mechanisms of the surfactants effects at different interfaces, including fluorinated emulsions, the factors of strong stabilization of disperse systems, conditions of the thermodynamically stable dispersions formation. E. Shchukin and his research groups developed novel techniques allowing for highly precision studies of cohesive forces in the immediate individual contacts between particles.

The full letter by Vladislav Savenko to congratulate Prof. Shchukin can be found [here](#).

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[Back to the top](#)

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](#).

