Australasian Colloid and Interface Society
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ACIS Newsletter – Issue 17, April 2019

Welcome

Dear members,
Welcome to our 17th issue of ACIS News! We produce a quarterly newsletter - sent around in March, June, October, and December - to keep ACIS members informed of our initiatives and for members to directly communicate with our Society. We publish job announcements, meetings of interests to our society, career development opportunities and any exciting research that you would like to share with us. To keep you up to date with the on-goings in our colloids society, please send your suggestions and items for the next newsletter to christine.browne@monash.edu.

News

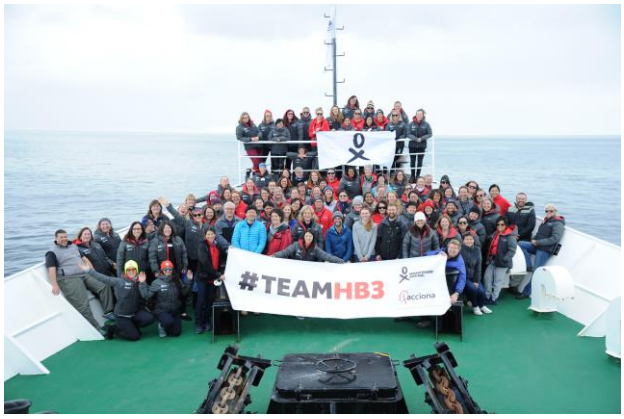
ACIS 2019 Conference

The 9th Biennial Australian Colloid and Interface Symposium was held in February 2019 in Hobart, Tasmania. Many thanks to the organising committee who were Ray Dagastine, Ben Boyd, Andrew Clulow, Charlotte Conn and Alison White. The conference was a great success and incorporated new sessions such as the first ever public lecture for ACIS and the Commercialisation and Translation session. Once again thank you!

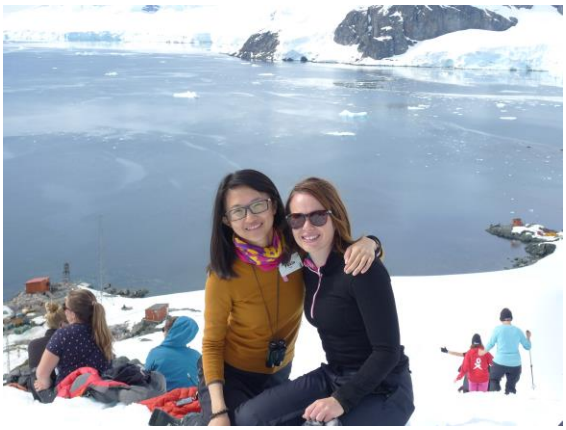
Congratulations on the Bill and Melinda Gates Funding

Muthupandian Ashokkumar at the University of Melbourne in Australia, along with Francesca Cavalieri, Meifang Zhou, and Srinvas Mettu, will produce edible microballoons made from protein that contain essential nutrients for adding to common foods to combat malnutrition in mothers and infants. Encapsulating the nutrients, rather than adding them directly to food, helps keep them stable and promotes their absorption in the body. It can also mask unpleasant tastes, and control the timing and location of nutrient release, which can increase their performance. They have developed a method that uses ultrasound waves to encapsulate oil- and water-soluble vitamins and minerals within edible shells made from a range of proteins including milk and pea proteins. They will analyze the stability and strength of microballoons made from different materials that contain the recommended daily doses of nutrients for mothers and infants. They will also develop methods to encapsulate water, which could be used to reduce the fat content of fat-rich products. Further information can be found here.

A Journey to Antarctica – Homeward Bound Project



On 31 December 2018 Charlotte Conn, ACIS Vice-President and Chair of the Equity and Diversity Committee, set sail for Antarctica as part of Homeward Bound, a year-long leadership program for women in STEM that aims to increase the visibility of female STEM professionals and their influence in policy and decision-making, with a particular focus on the future of our planet. Charlotte, an Associate Professor of Chemistry at RMIT University, Melbourne, spent 3 weeks exploring the Antarctic Peninsula with 78 other women from 28 countries, on Homeward Bound's third voyage. The participants, who ranged from African lion conservationists to US surgeons and Chinese social entrepreneurs, underwent an intensive 3-week leadership training program which was guided by common principles of fairness, integrity and empathy. Part of the on-board leadership faculty was Christiana Figueres, Executive Secretary of the UN Framework Convention on Climate Change from 2010 – 2016 who shared leadership lessons from her journey rebuilding the global climate change negotiating process towards successfully achieving the 2015 Paris Agreement.

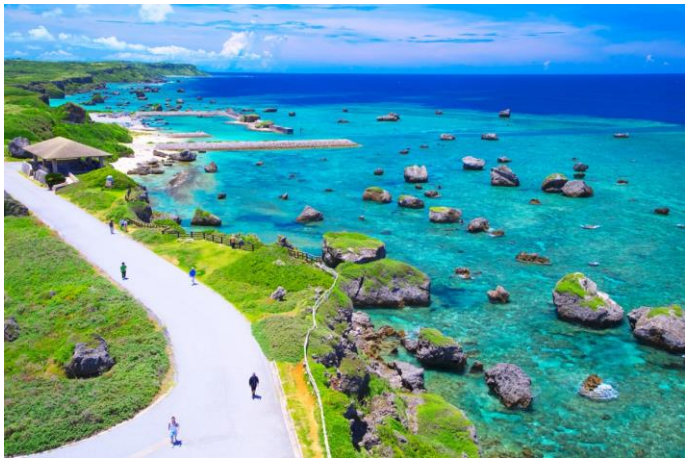


During the 3 week expedition, the participants visited Argentinian, British and Chinese research stations, as well as Gentoo, Adelie and Chinstrap penguin colonies. Sitting in silence with 90 other women at the top of a snow-covered hill, with 360° views of the Antarctic Peninsula and the only sounds that of a nearby penguin colony and whales breathing just under the water, was a personal highlight of the trip. However, Antarctica is not only breath-takingly beautiful, but a place where the effects of climate change are most immediately obvious, including retreating ice-shelves and an air temperature increase of 3° over the past 50 years. Global decisions, as they affect the future of our planet, have been dominated to date by male voices and male perspectives. Homeward Bound aims to create a global network of 1000 female leaders in STEM over a 10-year period, support them into leadership positions and increase diversity in the conversations and the decisions that will shape our shared future.

Charlotte is using many of the lessons she learned on-board towards maintaining an inclusive and diverse culture within the ACIS community. Applications have just closed for the 5th Homeward Bound cohort but anyone interested in applying should sign up for the mailing list for next year at https://homewardboundprojects.com.au/about/




Okinawa Colloids 2019 (3rd – 8th November 2019)



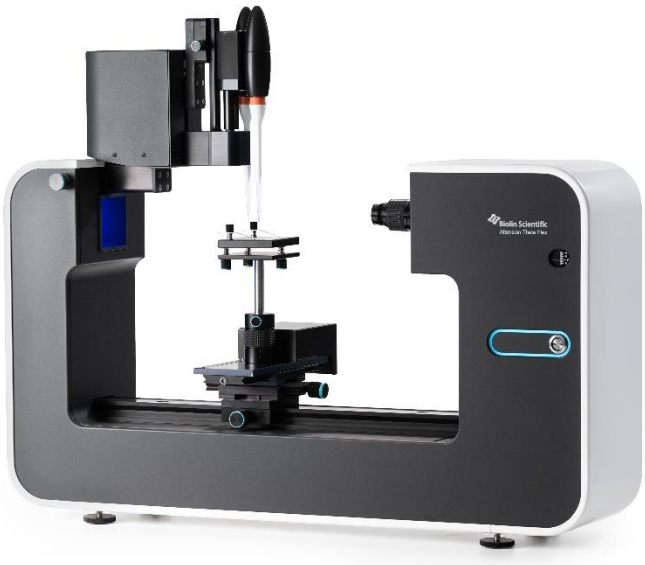
Okinawa Colloids 2019 is an international conference on colloid and surface science organized by Division of Colloid and Surface Chemistry (DCSC), The Chemical Society of Japan, to celebrate the 70th anniversary of the divisional meeting of DCSC. The conference will offer a fantastic opportunity to discuss the latest developments across the multidisciplinary fields of colloid and interface sciences, while also enjoying the tropical atmosphere of the southern island and visiting scenic locations. More details on the official website (http://okinawacolloids2019.chemistry.or.jp)

Themes will include:

- Surfactants and Self-Assembly
- Foams/Bubbles/Emulsions and Microemulsions
- Soft Matter (Polymers, Polyelectrolytes, Gels and Liquid Crystals)
- Membrane and LB film
- Colloidal Dispersions, Surface Forces and Rheology
- Nanoparticles and Nanomaterials
- Wetting and Adhesion
- Solid Surface -Adsorption, Catalysis, Tribology and Electrochemistry
- Biocolloids, Biointerfaces and Biomimetics
- Colloids in Environment and Energy
- Application of Colloids

Measure wettability and adhesion using the new Attension Theta Flex

New Attension Theta Flex, from Biolin Scientific, is an all-in-one fully automated contact angle meter designed to support high end imaging for even the most demanding industrial and research applications. The new modular design and all-inclusive software enable fast and simple operation while sophisticated analysis algorithms allow for reliable and repeatable results. Surface properties and interactions can be studied quickly and easily to understand the performance of a product or process. Measurements include static and dynamic contact angle, 3D surface roughness, surface free energy, surface and interfacial tension and interfacial rheology.
Theta Flex can be combined with a wide range of modules and accessories including the unique 3D Topography module. By measuring both contact angle and surface roughness of the sample in a single measurement, users can quickly distinguish the effect of roughness on contact angle and surface free energy.



The high pressure chamber module is designed for wettability research within enhanced oil recovery and enables measurements at pressures up to 400 bars and temperatures up to 200°C. The Pulsating Drop Module oscillates drop volume for interfacial rheology studies while the Picoliter Dispenser delivers picoliter-sized droplets for small sample areas and inkjet applications. For advancing and receding contact angles, a tilting cradle tilts the entire Theta Flex to provide fully automatic dynamic contact angle measurements commonly used as an indicator of surface homogeneity.
For more details about Attension Theta Flex or for a demonstration, please contact us.

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Activities

Join our Awards, Communications, Conferences and Events Committees

ACIS needs its members to be actively engaged. Please let us know if you would like to be involved in the committees that will run the activities of the Society: *Awards; Communications; Conferences and Events*. Or if you would like to propose other activities we should be running. **We especially invite students and early-career researchers to become involved.** Please email your interest to acis@colloid-oz.org.au.

Visiting Scientist Register

Are you planning to host a visit by an outstanding scientist in the colloid and interface field? Why not let ACIS members know about the visit? We aim to keep track of visiting scientists, to facilitate their introduction to the Australasian scientific community. Please email details of the visit to acis@colloid-oz.org.au.

ACIS Membership

Please encourage your colleagues, students and industrial partners working in the field of colloids and interface to join us. General membership is $100 per annum. The membership year is from 1st July each year. Memberships paid after this date are valid until 30th June of the following year. More information is available on our website http://colloid-oz.org.au/.

Use our LinkedIn Group to tell people your news

ACIS is now present on LinkedIn. Please join our LinkedIn group and post discussion items on job ads, conference calls, and interesting facts about the wonderful world of colloid and surface science.

The Newsletter team is:

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