Australasian Colloid and Interface Society
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ACIS Newsletter – Issue 8, December 2015

Welcome

Dear members,
Welcome to our eighth issue of ACIS News! We plan to 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 their Society. Please send your suggestions and items for the next newsletter to C.P.Whitby@massey.ac.nz.

News

Western Pacific Colloids 2015 and Advance Notice of Colloid and Interface Chemistry meeting in Hokkaido in September 2016

Vince Craig (ANU) and Catherine Whitby (Massey) are pleased to report that Western Pacific Colloids conference was a success. 65 delegates from Japan, Australia, China, Korea and New Zealand attended. We thank our plenary speakers, and all our speakers and poster presenters for making it such a memorable event. Our Japanese colleagues are hosting a Colloid and Interface meeting in Asahikawa, Hokkaido on 22 -24th of September 2016. Please keep an eye on their website for more details (http://colloid.csj.jp/).

Announcing Our Site Visit Program in 2016

By Tim Davey (Dulux)

Have you ever wondered how colloid and interface science is used in industry to develop new and improved materials and products? From early 2016 a program of site visits will commence, allowing ACIS members to gain an understanding of how fundamental science is translated into applied outcomes. These events will involve tours of industry R&D labs and production areas, as well as the opportunity to hear from industrial scientists about how they use colloid and interface science in their field. Keep an eye on the ACIS website for more details.

Advanced Materials and Nanotechnology-8 will be in Queenstown

On behalf of the MacDiarmid Institute for Advanced Materials and Nanotechnology, Paul Kruger (Canterbury) would like to extend a warm invitation to join him in Queenstown, New Zealand for AMN8, in February 2017.

AMN is a biennial series of meetings that focus on the latest research in advanced materials and nanotechnology. Plenary speakers include David Leigh (Manchester), Juliet Gerrard (Auckland), Andrew Cooper (Liverpool) and Michelle Simmons (UNSW).There will be a range of cutting-edge invited and contributed talks, interactive poster presentations and convivial social events. The intimate scale of AMN conferences and the broad interests of fellow delegates offer many opportunities for networking and interdisciplinary discussions. Keep an eye on their website (http://www.amn8.co.nz).

Queenstown sits on the shore of the South Island's Lake Wakatipu and is set against the dramatic Southern Alps. As one of New Zealand's premiere tourist destinations, Queenstown truly offers something for everyone, from breath-taking scenery to world-renowned vineyards and adventure sports.

2016 Student Conference Open for Registrations

By Chiara Neto (Sydney Uni)

We are are on track for the next Student Conference, to be held at the ANU Kioloa Coastal Campus on 1-4 February 2016. Don't forget that registration closes on December 18th. Please visit our website for all details.

By Virginia Mazzini, PhD student at ANU

The Kioloa Coastal Campus is a field station of The Australian National University (ANU), located on the South Coast of New South Wales. Several ANU Departments and research groups organise retreats and conferences here. To us ANU students, annual events like those are something to look forward to, and the campus closeness to the beach is not the only reason.

The station consists of a few cottages surrounded by green pastures, and is only a 5 minute walk from a breezy beach. The property is 350 hectares and includes an amazing diversity of natural sceneries: from the beach to bushland, from swamps to rainforest.

It is a fantastic place to connect to nature, and to interact with fellow students and colleagues in a relaxed and inclusive environment. Kangaroos are right outside your cottage door when you wake up. A side effect of having so many hanging around, is that you have to watch where you put your feet.

You can have a walk along the beach, and take a dip, before starting your conference day. Often, you will spot dolphins cruising close to the shore. The conference venue is made of poles and straw bale, galaxies away from the trite and cold lecture venues. During the free time, you can rent a mountain bike and have a ride up the hills, go bush walking, or head down to the beach to collect shells and look for fossils. Or just hang around and relax.

To me, this is the ideal setting to take a break from the urban office routine and do science at a different pace. Being a natural scientist, a place like this is just mesmerising. The accommodation is essential, but you won't be missing anything - actually, you will be reminded of how much you don't need (except, if you have long hair, for a hair dryer – bring one with you!).

The "Mess" is the large communal dining area, we will all gather there a few times a day. At night, a fire is usually lit in the fire pit right outside, and you might end up chatting around the bonfire until late at night...plenty of coffee will be available the morning after. I look forward to being in Kioloa again next February: I hope you and your insect repellent will be there too!
https://www.youtube.com/watch?v=GJD-NSMp5rs&feature=youtu.be

Nucleating Colloids – a Column for Students & Early Career Researchers

Exoplanets and Alien Life - An insight into NASA's International Astrobiology Conference on the theme of Habitability, Habitable Worlds, and Life.

By Saffron Bryant, PhD student at Sydney Uni

To say this conference was epic would be an understatement. Topics ranged from individual molecules to entire galaxies, and touched on everything in between, including questions (and answers) about Life, the Universe, and Everything. It swept across disciplines, time, countries, and scale, and left behind a sea of ideas. Unlike most conferences, attendees came from all areas, biologists, geologists, chemists, physicists, astronomers, engineers, social scientists, and even members of the public filled the ornate ballroom to answer a single question; what's out there?

Physicists and astronomers described the planetary environments necessary for temperature and atmospheric stability, refining the 'Habitable Zone'. While geologists looked back in time at remnants of early evolution to suggest what evidence we might find of life on other planets, such as microfossils and organic deposits.

Representatives from NASA discussed the Mars 2020 mission, including possible landing sites, and asked for input from the audience regarding astrobiological applications and focuses.

I had the opportunity to present my research in both poster format, and as a brief five-minute talk. My focus is on 'Compartmentalisation in Ionic Liquids', where I've demonstrated vesicle formation in non-aqueous solvents.

With most of the conference focused on finding liquid water and the 'Habitable Zone', my research demonstrating that maybe you don't need water at all certainly raised a few eyebrows. But, it was accepted as another piece of information towards the quest for extra-terrestrial life.

But, most interesting to me, were the chemists and biologists who described recreating prebiotic conditions and generating organic compounds, including polymers. They spoke about early life on Earth and how that could relate to life on other planets. Variations on the Miller-Urey experiment demonstrated abundant amino acid and hydroxy acid formation, as well as other organic compounds, from simple precursors to subsequent polymerisation under wet/dry conditions.

Basic principles, such as evaporation, followed by refilling of a shallow puddle, were used to demonstrate prebiotic assembly due to simple molecular forces. I could easily picture a shallow rock basin filling with rain water and then drying out under the sun, only to be filled again, and so on in a continuous cycle. These experiments showed almost spontaneous substrate concentration, vesicle formation, polypeptide and polynucleotide formation, using just the forces of nature.

All of these talks led me to the following conclusion: "Well of course there's life out there. Look how easy it is to make all the building blocks!" This conference provided an unparalleled opportunity to not only see the latest research in this field but also to network with people whose ideas are literally out of this world. I hope to go to the next one but in the meantime I'll be keeping one eye to the sky – I have no doubt we'll find extra-terrestrial life eventually (unless of course, they find us first).

To stay or to leave academia: story behind the scene

By Hien Duong, postdoctoral researcher at Sydney Uni

I was awarded an Australian Government scholarship for my PhD study. Having arrived in Australia as a migrant I had to work with three shift schedule on a regular basis (9 hours in the lab, then 3 hours for family and another 3 hours at late night in front of computer for reading and writing) enabling me to complete my PhD smoothly at an Australian University at the same time as raising my son.

I have been fortunate to have a postdoc position right after I finished my PhD. It was enjoyable to work in a multidisciplinary team and I was very proud of the quality of the research that we have done. However, I realized it is very tough to progress in academia due to the long list of obstacles particularly for early career researchers who are facing hard time with temporary contracts, high competition in a small pool of academic positions and funding opportunities, "publish or perish" and "not continuing an academic career after a PhD is a failure" attitude. Working hard is no longer sufficient to overcome these difficulties. One question was always in my mind "Should I stay or leave academia?" I was very uncertain about my future career, especially when my funding application was not successful. It was really hard for me to give advices for my Honors students if they should pursue their PhD at this time.

I decided to take another postdoc position working on a linkage grant with an industrial partner. I developed an understanding the outcomes required for business success useful for any future industry collaborations. Undeniably, the experience in working with industry is invaluable. However, it is desirable for me to find a permanent job more than ever. Where can I start and where I can find help?

Recently, I was awarded a Women's Leadership Award to attend the conference for female postdocs and early career researchers. I had an opportunity to meet some amazingly successful female researchers who, early in their career, were not able to get permanent position even though they had excellent track records. The lesson I have learnt is I should keep applying for a post I like. I have to be in it to win it and more importantly I should overcome the fear of failure. If I like what I do, working hard comes naturally and with a little luck, success will come. Then, I can answer my own question with certainty.

Soapbox - a Column for Colloid and Interface Scientists

What Shape is your School?

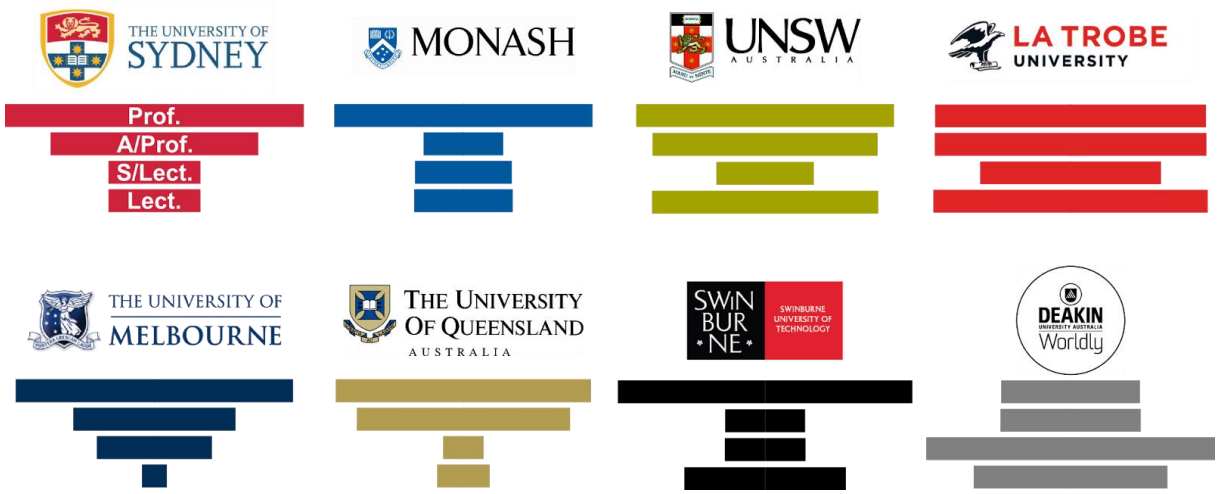
By Rico Tabor (Monash)

It is a time of change in the School of Chemistry at Monash. We've recently welcomed a new (externally appointed) Head of School, and the term of our current Dean of Science ends mid-2016. Combined with the increasingly challenging funding situation from the ARC, the spotlight has been thrown onto the direction and structure of the school. Along with our new Head, we have had a few high-profile Professorial hires over the last couple of years, although curiously few at lower academic levels.

I often think that, relative to our size, a very high proportion of the academic staff in chemistry at Monash are professors. In fact, that number is 16 of 33, or half, as near as makes no difference. This is certainly a far cry from the school's beginnings, where there was one Professor – just one, pilfered from the University of Melbourne, naturally – who ruled the roost. Eventually, there were 3, then more, and so on to the current day, our highest ratio of professors. The question becomes: what effect does this have on the dynamics of the school? Is it healthy?

If we think of the relative proportions of the different ranks - lecturer, senior lecturer, associate professor and professor - the school has evolved in shape. Starting from a Christmas tree, thick in the lower ranks and peaking to a single professorial zenith, we now have what looks like a bird-bath, engorged at the top with leadership and wisdom.

This set me wondering whether this was a feature unique to Monash, or a general trend in the way that academic roles are changing across Australia. Counting up the numbers in various positions across a few example chemistry schools (or the school/department that encompasses chemistry in some cases) at a few universities – whose websites were amenable to such a simple head-count – resulted in the image below. Apologies for the shamelessly Victorian focus, but they're the places I know best.



Monash is clearly not alone in its bumper crop of professors, though it does have the most significant imbalance between professor and the other levels. In fact, with the exception of UNSW, the Group of 8 universities have a much more pronounced 'inverted pyramid' structure compared to the non-Go8s. Beyond this, there is apparently little correlation between the department shape with other factors such as age, total number of academic staff, *etc.*

Now clearly this 'blunt tool' glosses over a vast sea of complexity – including the unaccounted for roles of active emeriti, adjuncts, research fellows, sessional staff and more. I'm sure those of you who are, or have been, department heads or deans know best the remarkable complexity of the animal that is an academic school. But the simple glyphs above do raise some interesting questions.

The shape of a school has many implications – both good and bad – in terms of staffing cost, potential for growth, stagnation, availability and quality of teaching, access to leadership and mentoring, and so on. An interesting question going forward will be whether the current shape we have is sustainable, and will it last? The present state could barely be further removed from the original one-professor-per-school/discipline model, but is it here to stay? What shape is your school?

ACIS needs its members to be actively engaged. Please email us your articles if you would like to contribute to the Nucleating Colloids or Soapbox columns.

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.

Job Ads

Physical chemistry teaching position available at Massey University

We are urgently seeking a physical chemist to teach two papers (subjects) at our partner campus in Singapore. This short term position is expected to start in May 2016 and finish in January 2017.

Massey University is working with Singapore Institute of Technology to offer a food science degree. This course includes two second year physical chemistry papers taught by staff at the Institute of Fundamental Sciences at Massey. The food science programs at Massey University have an excellent reputation in New Zealand and in Singapore.

We are looking for a highly motivated individual with a PhD in chemistry and teaching experience. To express interest in this position, please contact Prof. Simon Hall (S.B.Hall@massey.ac.nz), Head of the Institute of Fundamental Sciences, with your curriculum vitae.

Please email us ads for PhD and postdoc positions in the area of colloids and interfaces.

Future Events

2nd Annual World Congress of Smart Materials (4-6 March, 2016, Singapore)
Abstract submissions close on 25 December, 2015 (http://www.bitcongress.com/wcsm2016/default.asp)

16th Food Colloids Conference (10 – 13 April, 2016, Wageningen, the Netherlands)
(http://www.foodcolloids2016.nl/home)

PARTEC 2016 (19 – 21 April, 2016, Nuremburg, Germany)
https://www.partec.info/

10th World Biomaterials Conference (17-22 May, 2016, Montreal, Canada)
http://www.wbc2016.org/

90th ACS Colloid and Surface Science Symposium (5-8 June, 2016, Cambridge, USA)
http://projects.iq.harvard.edu/colloids2016/about

Surfactants in Science Symposium (5-11 June, 2016, China)
Abstract submissions close on 15 February, 2016 (http://www.sis2016.org/about_conference/invitation_message/)

6th International Colloids Conference (19 - 22 June, 2016 Berlin)
Abstract submissions close on 5 February, 2016 (http://www.colloidsconference.com/)

EUFOAM 2016 (3 - 6 July, 2016, Trinity College, Dublin, Ireland)
Abstract submissions close on 29 February, 2016 (http://eufoam2016.iopconfs.org/home)

27th International Congress on Rheology (8-13 August, 2016, Kyoto)
Abstract submissions close in April 2016 (http://icr2016.com/)

30th Conference of the European Colloid and Interface Society (4-9 September, 2016, Rome)
(https://ecis2016.org/)

4th International Conference on Soft Matter (12-16 September, 2016, Grenoble)
Abstract submissions close on 1 March 2016 (http://www.ismc2016.org/)

International Session at the 67th Divisional Meeting on Colloid & Interface Chemistry (22-24 September, 2016, Hokkaido)
Information will be posted shortly on the Japanese Chemistry Society webpage (http://colloid.csj.jp/)

8th International Conference on Advanced Materials and Nanotechnology (12-16 February, 2017, Queenstown)
Abstract submissions close on 31 August 2016 (http://www.amn8.co.nz)

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@wildapricot.org.

Sponsorship of Events

ACIS Sponsorship is available for events (symposia, workshops, industry networking events, and short courses) held in Australia or New Zealand and organised by ACIS members for the benefit of the colloids and interface science community. Prospective event organizers, who wish to request ACIS endorsement and sponsorship, should supply the information requested in the form available on the website https://acis.wildapricot.org/ at least three months in advance.

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@wildapricot.org.

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 https://acis.wildapricot.org/.

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