University of Southampton

## Chemistry & Chemical Engineering Newsletter

#### Autumn/Winter 2024

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#### **Important Dates**

#### 2024/25 Term Dates:

Semester 1:

Mon 23<sup>rd</sup> Sept 2024 – Sat 25<sup>th</sup> Jan 2025 **Autumn Term:** Mon 30<sup>th</sup> Sept 2024 to Sat 14th Dec

Semester 1 Exams: Monday 13<sup>th</sup> Jan – Fri 25<sup>th</sup> Jan 2025

#### Semester 2:

Mon 27<sup>th</sup> Jan – Sat  $15^{th}$  June 2025

Spring Term: Mon 6<sup>th</sup> Jan – Sat 20<sup>th</sup> 2025 March 2025

Summer Term: Mon 28<sup>th</sup> April 2025 – Sat 14<sup>th</sup> June 2025

Semester 2 Exams: Mon 19<sup>th</sup> May – Fri 7<sup>th</sup> June 2025

#### **University Closure days:**

Tues 24<sup>th</sup> Dec 2024 – Wed 1<sup>st</sup> Jan 2025 (Public Holiday/Closure Days) Wed 16<sup>th</sup> Mon 21<sup>st</sup> April 2025 (Public Holiday/Closure Days) Monday 5<sup>th</sup> May 2025 (Public Holiday) Monday 26<sup>th</sup> May 2025 (Public Holiday)



#### Welcome to the newly named School of Chemistry and Chemical Engineering

The School of Chemistry has formally been renamed the School of Chemistry and Chemical Engineering. The renaming of the School reflects the enormous existing strengths of the School and the significant potential of building an integrated research and enterprise capability between the two disciplines and of raising the profile of Chemical Engineering at Southampton, both internally and externally.



Chemical Engineering is still a relatively new discipline for Southampton, with the first cohort of students recruited in 2021. It was launched joint as а enterprise between the School of Chemistry and the School of Engineering and was supported by a £6m University investment in teaching laboratory and virtual control room facilities.

Head of School, Professor Andrew Hector, commented:



"I am delighted that we are moving into this new chapter for our already high-achieving School. This is a significant and exciting step that will position us to further build on our strong capability and reputation in research, enterprise and for student experience."

"It is a hugely positive time for our School, with growing attractiveness to excellent students and staff. We have welcomed several new colleagues in Chemistry and in Chemical Engineering over the last two years, and recent appointments of Prof Annette Taylor, Prof Eileen Yu, and Dr Sergio Vernuccio have further increased our strength in Chemical Engineering."

#### Graduations and Awards

Southampton

Congratulations to all our Undergraduate students who graduated in the Summer of 2024, and further congratulations to the prize winners below:

**Katherine Marris - John Mellor prize,** *Outstanding project in Organic Chemistry or related field for a Y4 MChem project or placement completed in Southampton* 

**Victoria Nathan-Maister - Alan Carrington prize,** *Outstanding project in Physical Chemistry or a related field for a Y4 MChem project or placement completed in* 

**Agata Dawidowicz - Judith Corker prize,** *Outstanding project in Inorganic Chemistry or related field for a Y4 MChem project or placement completed in Southampton* 

Liam Hazzard - Progression Award, Academic development award across contributory part of degree

**Edward Andrew - A E Clarence Smith prize,** *Outstanding performance by a student graduating from a BSc degree* 

**Joshua Taylor - David Runciman Boyd prize,** *Outstanding performance by a student graduating from a MChem degree* 

Keziah Langdon – Prize for Outstanding Research Placement Project, Outstanding research placement project

Natalia Phillips - R E Parker Project prize, Best BSc Project

Haleema Khan - - R E Parker Project prize, Best BSc Project

**Edward Andrew - Roger Parsons prize,** *Highest level of academic achievement in the graduating cohort* 

# The following students received a Dean's prize certificate, awarded to any Part students who achieved an overall Part percentage >80%

#### Part 1:

Charlotte Hutchinson, Rosa Bridges, Lucy Mannie, Amelia Atkins Eade, Lily Taylor, Amy Clough, Hayley Davies, Rosie Cade, Reggie Kaczynski, Shreya Panchmatia, Oliver Souza, Jemima Cary, Ana Benedito Nunes, Matthew Jennings and Mia Wakeling

#### Part 2:

Imogen Daniel, Anna Sheppard, Weibo Ng, Emma Alston, Charlotte Caughley, Emma Pearce, Lauren Cheney, Daanyal Masoud and Evelyn Watson

### Congratulations to the following students on their PhD Awards since our last newsletter:

**Monika Papayova** -Development and optimisation of high throughput screening systems in mammalian cells

**Krzysztof Bolhuis** - Synthesis of supramolecular host architectures for rare-earth guests: new platforms for quantum technology

**Oryn Purewal-Sidhu** - Phosphodiester Foldamers

**Leonie Windeln** - Identifying antibiotic precursors by screening genetically encoded cyclic peptide libraries

**Callum Waller** - *Multiscale modelling of bacterial and viral sanitisation* 

**Molly Wilson** - Understanding the Nature and Origin of Fuel Powertrain Deposits by the use of High Resolution Chromatography and Mass Spectrometry

**Evan Lynch** - Developing Nanocomposite Materials for Catalytic Applications

**Oliver Ward** - Organic Semiconductor Design for Light-Emitting Electrochemical Cell Technology

**Bethany Bowden -** *Surface chemistry for point-of-care Raman spectroscopy* 

**Jake Keeley** - An Application of Artificial Intelligence to a Linear Inverse Problem in Dipolar Spectroscopy

**Jack Hodgson** - Synthesis of Organic Heterocycles via Electroreductive Cyclisations and the Computational Simulation of Electrochemical Reactors

**Laura Hayward** - *Bio-orthogonal chemistry methodologies and chemical biology of cysteine redox* signalling

**Jack Sawdon** - Investigating and Developing Skin Lipid Models for Molecular Dynamics

**Kler Huonnic** - Synthesis, Glycosidation and Glycosylation of Polyfluorinated Carbohydrates

**Ruxandra Moraru** - The Use of 2-Sulfonylpyrimidines As Warheads for Targeted Covalent Inhibition

**Dimitrios Stamatis** - Structure-Based Modelling of LK Peptides in Complex with AntagomiR-138 RNA

**Julian Holland** - *Computational Modelling of Modern Battery Material Interfaces* 

**Anna Cavalleri -** *Relative Binding Free Energies for Drug Discovery: Applications to p38 MAP Kinase* 

**Dawid Drelinkiewicz** - *Rapid Study of Organic Reactions in Flow Systems* 

**Andrea Savoini** - Synthesis and applications of mechanically interlocked molecules

**Evangeline McShane** - Nanoparticle Deposition onto Model AIPO Supports for Establishing Structure-Performance Relations in Catalytic Transformations

**Niama Ezzaidi** - Lead Optimisation of Small Molecule Sulfatase Reactivators for Multiple Sulfatase Deficiency

**Michail Skoulikas** - *Polyaromatic Molecules for OLEC Applications* 

Jiasheng Yi –Investigations on Three Kinds of Interfaces with SECM and Impact Electrochemistry: Experiments & Simulations

**Patrick Butler** – Characterising the Energy Landscapes of Molecular Organic Crystals

**Topaz Cartlidge** - *The theory and methodology of nuclear spins diffusing through porous media* 

**Joshua White** - Electrodeposition of 3D Nanostructured Materials Using a Lyotropic Liquid Crystal Template

**Junren Wang** - Self-supporting titanium carbide and nitride modified electrodes for lithium metal batteries

**Jack Doyle** - The Topological and Geometric Data Analysis of Organic Crystal Systems

**Tajwar Choudhury** - Analysis and Interpretation of Neural Networks used in Magnetic Resonance and Signal Processing

**Robert Carroll** - *Developing the Application of the Crystalline Sponge Method* 

**Zening Zhu** - Chalcogenides thin film battery electrodes by chemical vapour deposition

**Kahlan Newman** - Molecular Modelling and Simulation of the N-Glycosylated Efflux Machinery in Campylobacter jejuni

**Fabien Hannauer** - Transforming data to understanding and knowledge for the sequencing of therapeutic oligonucleotides by mass spectrometry

**Michael Blakey** - Wiswesser Line Notation in Modern Cheminformatics; Implementations for parsing, conversion and compression of chemical entities



#### **Celebrations and Congratulations**

#### **Congratulations to John Langley**

At the International Symposium of Chromatography held in Liverpool in early October, the Chromatographic Society awarded the 2024 Jubilee Medal to Professor John Langley for his contributions in the developments of separation science coupled with mass spectrometry.





At the same meeting John's PhD student Laval Nicolas was nominated as one of the 10 best posters and hence presented a flash presentation on "Multi-technique approaches for the classification and characterisation of new biofuels"



#### **Celebrations and Congratulations**

The School of Chemistry and Chemical Engineering would like to send their congratulations to all staff and students who have recently celebrated significant life events such as civil ceremonies, weddings and births.



Congratulations to Mohamed Hassan-Sayed who has been elected as Stakeholder Lead role on the CMI (Chartered Management Institute) South East Board to develop education links with industry.



Mohamed Hassan-Sayed CMgr MCMI Stakeholder Lead

Congratulations to Eleanor Soper for a poster prize award -

In June, I went to Liverpool to attend the UK Porous Materials conference, the annual meeting of the Royal Society of Chemistry's Porous Materials Interest Group. The conference focuses on a combination of new porous materials discovery, materials characterisation, and applications.

I was awarded a prize from the Leverhulme Research Centre for Functional Materials Design for my poster titled "Conformational Energetics and Molecular Strain in Crystalline Sponge Structures", summarising the work I have done in collaboration with Graeme Day and Simon Coles for my PhD over the last 3 years.



Congratulations to Nikolay Zhelev, who was awarded the poster prize at the 20th Raman Imaging Symposium, in Ulm, Germany.

The poster was selected by the judges due to the interesting use of correlative SEM



and Raman to characterise a laterally electrodeposited MoS<sub>2</sub>-WSe<sub>2</sub> heterostructure, as well as the study of using the same system to laser anneal the materials. Further, the Raman anti-Stokes lines of MoS<sub>2</sub> were also measured to calculate theoretical sample temperature versus laser power.

The University has recently published its latest postgraduate prospectus, with the front cover artwork being produced by 3rd year Chemistry PGR Jacob Kleboe.



The artwork depicts the distribution of organic

compounds in the skeleton of Desmophyllum dianthus, a coral species. Jake's research looks at the organic contributions within the biomineralization process that corals use to form their skeletons. Jake's ultimate aim is to enable us to protect corals more effectively for the future. He said: "I'm honoured to have my work highlighted by the University, it's a very proud moment of my PhD. I'm so grateful to be part of such an excellent team and that I get to contribute to impactful environmental research." **Congratulations to Eleanor and Thamer** on their Poster Prizes at the 34th European Crystallography Meeting ~ University of Padova.



#### **Eleanor Keil**

This August I was fortunate enough to attend the 34<sup>th</sup> European Crystallography Meeting in Padova, Italy, where Galileo Galilei had worked for over 18 years and the first university to award a degree to a woman, Elena Cornaro Piscopia.

I was given the chance to present a poster in the "In-Situ and Operando Diffraction" section where, at the closing ceremony, I was invited on stage to accept an award.



While in Padova I was also able to attend the Electron Crystallography School, thanks to the IUCr Young and Early Carer Scientist Award, gaining deeper theoretical insight into Electron Diffraction that I can now use in my PhD.

I am so grateful as the conference and school were an amazing opportunity for me to learn, meet new people and experience scientific communication first hand.

#### **Thamer Alotaibi**

At ECM34, the annual meeting organised by the European Crystallographic Association, I was privileged to be awarded the Cambridge Crystallographic Data Centre (CCDC) Poster Prize for Younger Scientists for my poster entitled "A Systematic Study of Crystal Size Influence on Crystal Sponge Experiment Outcomes". The conference provided an excellent platform to present my research on chemical crystallography and to engage with fellow scholars in the field.

The ECMs are significant events that foster collaboration and showcase advancements in crystallography within the ECA area.



I was honoured to receive a poster prize for my presentation at this prestigious conference.



#### Research News: Scientists develop pioneering diagnostic 'laser test' for dementia

Researchers are leading a pioneering study to investigate a new laser-based test that could detect different types of dementia early in the disease. If successful, the test will help doctors rapidly identify which patients may be eligible for new drug treatments at a point when they are most likely to be effective.

The project is a collaboration between University Hospital Southampton (UHS) and the University of Southampton, funded by UK Research and Innovation (UKRI).



Professor Sumeet Mahajan and Dr Niall Hanrahan

The test works by profiling a 'biochemical fingerprint' which experts believe can give an accurate diagnosis and help distinguish between different types of dementia. The development has been hailed as a "breakthrough in medical technology" by the study team, with initial results suggesting accuracy of up to 93%.

There are over 850,000 people living with dementia in the UK with the figure is expected to rise to 1.4 million by 2040. There are many different types of the condition, such as Alzheimer's disease and vascular dementia, which is progressive and get worse over time.

The new technology, known as Multi-excitation Raman spectroscopy (MX-Raman), uses lasers to analyse the composition of a single drop of a bodily fluid – this can be blood, spinal fluid or mucus. The revolutionary test can provide results in seconds and would be much cheaper than other diagnostic tests currently available. It could also be made available directly in a clinic setting.

Initial results suggest the test can accurately detect dementia with an average accuracy of over 93% when diagnosing Alzheimer's disease.

The project is called Holistic Optical Biomarkers to Transform Dementia Diagnosis (HOpE) and the research is being led by Professor Chris Kipps from University Hospital Southampton and Professor Sumeet Mahajan from the University of Southampton. Prof Kipps, consultant neurologist at University Hospital Southampton, said: "The slow progression of dementia, with a long presymptomatic phase, presents a formidable challenge in early diagnosis.



"This laser-based technique could change the way we approach dementia diagnosis and may significantly improve affordability and efficiency of current biomarker analysis. It represents a breakthrough in medical technology.

"This innovation is not just a leap in healthcare quality; it's a paradigm shift, redefining our approach to neurodegenerative disease in the clinic."



Prof Mahajan, professor of molecular biophotonics and imaging at the University of Southampton, said: "Our integrated approach has the potential to revolutionise dementia diagnostics. There is an urgent unmet clinical need for more discriminatory, efficient and costeffective solutions.

"Our holistic MX-Raman technique is uniquely equipped to address these challenges, and we want to see this technology lead to vastly improved patient outcomes."

The project is among the first to be funded by a new award from UKRI called the 'Cross Research Council Responsive Mode' – this supports emerging ideas from the research community spanning across many disciplines.

HOpE is one of 36 projects to receive this new funding out of almost 900 applications submitted by research teams across the UK.

The project will share £32.4m from the first round of UKRI scheme.

## Chemistry Publications: UG contributions to research papers

Important research outcomes are the result of work undertaken by undergraduate project students and summer placement students. Recent examples include:

Walerowski, M. G., Kyrimis, S., **Hewitt, V**. A., Armstrong, L-M. & Raja, R., *Rationalising catalytic performance using a unique correlation matrix* 2024, Chemical Communications; 60, p. 10314-10317. DOI: <u>https://doi.org/10.1039/D4CC03193H</u> UG: Victoria Hewitt

Walerowski, M. G., Potter, M. E., **Burke, E**. S., Kyrimis, S., Armstrong, L-M. & Raja, R., *Designing bifunctional catalysts for the one-pot conversion of CO2 to sustainable marine transportation fuels* 2024, Catalysis Science & Technology; 14, p. 3853-3863 11. DOI: <u>https://doi.org/10.1039/D4CY00020J</u> UG: Elizabeth Burke

Potter, M. E., Oakley, A. E., Le Brocq, J. J. M., **Riley, L**. N., Carravetta, M., King, S. M., Doherty, C. M., Vandegehuchte, B. D. & Raja, R., *Using small angle neutron scattering to explore porosity, connectivity and accessibility, towards optimised hierarchical solid acid catalysts* 2023, Journal of Materials Chemistry A. 11, p. 22822-22834 13.

DOI: <u>https://doi.org/10.1039/D3TA04763F</u> UG: Lauren Riley

Armstrong, L-M., Potter, M. E., Amsler, J., Spiske, L., Plessow, P. N., **Asare, T**., Carravetta, M., Raja, R., Cox, P. A. & Studt, F., *Combining theoretical and experimental methods to probe confinement within microporous solid-acid catalysts for alcohol dehydrations* 

2023, ACS Catalysis. 13, p. 5955–5968 14. DOI: <u>https://doi.org/10.1021/acscatal.3c00352</u> UG: Theresah Asare

#### Physical Sciences Data Infrastructure (PSDI) Internships

This summer PSDI ran a cohort of 9 internships with funding from PSDI, the University's research intern scheme, the AIHub AIChemy and sepNET schemes. The interns worked with colleagues from across PSDI and Chemistry on projects ranging from Data Conversion to Scientific Communication and Accessibility. As part of the internships PSDI ran a number of training events through the 'Skills 4 Scientists' programme including research skills such as literature searching, poster presentations and other technical and soft skills. Keep an eye out for this training programme which we intend to run again next year! There were also two workshops which were held in Sir James Matthews Building. The first workshop was on the Art of Storytelling and discussed how cartoons can be used to demonstrate complex scientific ideas. At the end of the event participants had the chance to draw their own cartoons which produced some interesting results! The second workshop focused on Ethics and Responsible Research Innovation (RRI). The internships culminated in a final presentation and report, in which evervone did а fantastic iob. The PSDI Interns also took part in the Undergraduate Summer Research Internships Showcase which took place in building 38. Interns were able to present posters and discuss their work with supervisors before a poster prize ceremony and celebratory lunch. Ashley Doel was awarded a runner-up prize for their poster on "Automated Metadata Generation and Semantic Tagging Investigation" and awarded £25. Congratulations to Ashley!

PSDI received some fantastic feedback on the programme, including from intern Oscar Robinson - "Wholeheartedly recommend PSDI to any applicants. They have a great objective, with a brilliant set of skills courses that benefited everyone. They're a wonderful group of people from a plethora of backgrounds and did an amazing job at providing a warm and welcoming environment to all interns."

Well done to all of the PSDI interns on a successful internship!



#### Enterprise Update: Sam Munday - Data Revival – We've Almost Span Out!



Over the past months (years?!) we've been working with the Library to digitise all the lab notebooks that are in the chemistry department. So far, approximately 450 have been painstakingly scanned in, with many hundreds still to go. This has created a dataset of around 43,000 pages, stored as high-quality images on the University's file store. We think there could be as many as 250,000 pages once everything is scanned. If you have any more laying around, please do get hold of Jeremy as he'll be more than happy to take them in ... probably!

We hope one day to apply Data Revival's software to the UoS archive mentioned above. In fact, our real goal, is to apply it to the estimated 25 million pages trapped in chemistry departments across the UK! In the meantime, however, we are generating results for our clients. We now have a small web app that enables the user to search documents via a molecule or substructure. Figure 1 shows the search interface, where users can draw chemical structures - in this example, a benzene ring - to query the archive. Figure 2 displays the search results in an intuitive layout. The digitised version of the page appears on the left, where all text and molecular structures have been converted to machine-readable format accompanied by automatically generated metadata. A preview strip along the bottom shows thumbnails of all pages containing the search term, while the original scanned document is displayed on the right for comparison.

Data Revival will hopefully spin out of UoS by the end of the year. We count companies like Merck and GSK among our clients, have hired staff and are gearing up for investment. We'd love to hear from you if you have any ideas for the technology or if you know of anyone that we should be put in touch with.

Please contact Jeremy at <u>j.g.frey@soton.ac.uk</u> or Sam at s.a.munday@soton.ac.uk.



Figure 1: The search page on Data Revival's web app. You can search an archive via typed name or drawn structure.



Figure 2: The results from the search shown in Figure 1. On the left, there is the digital version of the notebook, created by Data Revivals algorithms. Along the bottom are the thumbnails for each page that contains the substructure, and on the right is the original page.

## Sustainable Period Products in Chemistry and Chemical Engineering

Following a suggestion by the postgraduate students, the School of Chemistry EDI committee has been providing free emergency period products for staff, students and visitors since June 2023.

This year, thanks to donations from two companies with laboratories and offices within the Chemistry complex, ViridiCO2 <u>https://viridico2.co.uk/</u>; and ATDBio <u>https://atdbio.com/</u>, part of Biotage, the committee have been able to expand the provision to include more toilets and use sustainable organic products.

Julie Herniman from the Chemistry EDI team explains "whilst we initially provided period products from supermarkets, the use of sustainable products was important to our students and staff". Chemistry now offers free products from Hey Girls <u>https://www.heygirls.co.uk/</u> a social enterprise that donates 100% of profit to funding the fight to eradicate period poverty and lobby for period dignity across the UK.

Dr Daniel Singleton (Oligonucleotide Production Manager at ATDBio) said "we are delighted to support this important initiative in Chemistry that provides concrete support for people visiting and working in the complex, including our own staff and guests."

"I find the supplies in the bathroom very useful in case I have forgotten my own. I have used them on multiple occasions. I really appreciate the EDI committee making them available and also the company for helping them to do that" commented a ViridiCO2 employee.

More recently the EDI committee also initiated the provision of sanitary bins in some of the men's toilets to provide waste disposal items options for men and to support people of all gender identities. "We would like to see this provision rolled out across the campus and will be petitioning the University to do this as soon as possible" Julie Herniman, Chair of the EDI committee.



#### Equality, Diversity and Inclusion

ED&I is central to the ethos in Chemistry, and we have a committed team that works hard to build a positive environment for all members of our School to be able to develop and succeed. As a school we have been involved in the <u>Athena SWAN charter</u> for the advancement and career progression of women in science for many years and its principles run through all we do.

Chemistry holds a Silver Athena SWAN Award that was renewed in 2023, the first department at the University of Southampton to achieve this status three times.



If you would like to know more about our work, there is lots of useful information on our website which also includes our Early Career Support Hub.

#### https://www.southampton.ac.uk/chemistry/about/Eq uality/index.page

For more information about the ED&I or to raise any issues or concerns please contact Dr Paul Duckmanton or Dr Julie Herniman.

Do you have an article you wish to contribute to a future edition?

We also welcome your feedback on the newsletter.

Please email Julie Herniman J.M.Herniman@soton.ac.uk or Dawn Dunlop D.Dunlop@soton.ac.uk

#### Chemistry & Chemical Engineering Employability Fair 2024

On the 23rd of October we hosted our second annual Chemistry and Chemical Engineering Careers Fair. The School is very grateful to Prof Andrea Russell who has worked very hard in her role as Skills Employability & Placements Tutor to create this opportunity and establish it as an annual event. The following companies and professional societies attended the fair: TradeBe, RSC, Pharmaron, Kalvista, Dekra, AstraZeneca, IChemE, DSTL, UoS Careers, Renishaw and Mott MacDonald.



The day is a great for us way to provide an opportunity for our students to meet potential employees face-toface, find out about recruitment processes and opportunities and gain insight into the labour market.



We are already planning ahead for next year's fair in October and would encourage our alumni to get in touch if you would like your company to be represented. Our students really appreciate this event and we would like to see it grow.

We have received some great feedback from the event, here are some examples:

Lauren Bartlett – Chemistry Society President 2024/25 -The careers fair was a great success, and I'm personally really grateful that you put the time and effort into organising such a valuable event.

From my own experience and from what I've heard, lots of people feel they have a better idea of what to expect from a career, how to approach pursuing their career and that they are much more motivated to act upon that now! Despite how much it has already been emphasised, for some people attending the careers fair really highlighted first-hand how scarce and competitive grad schemes & internships are - which isn't a bad thing as hopefully now they won't miss out on potential opportunities! Joanna Murchie - UoS careers - What a great event! I had a lot of conversations, many more than last year – it was great having an actual stand with a banner, etc. Quite a few now booking in for 1-1 appointments. And all of our booklets went!

**IChemE** - a brilliant event. I have been to quite a few student events in the past 18 months and this was definitely one of the best in terms of buzz, engagement and potential impact.



**Pharmaron** - The students were so engaged and asked lots of great questions, which was really nice for us.

The value of this fair compared to general fairs, or even STEM careers fairs is much greater, as every single student we speak to has a relevant background for applying/working with us. This makes our effort to attend so much more worthwhile and enjoyable.

**Dekra** - it was an enjoyable event from my perspective, with a number of constructive and insightful conversations had with your undergrads.



#### Beyond Chemistry From run-voider to run-fanatic, how the COVID lockdown changed my relationship with running forever – Sami Pearman-Kanza

For anyone who meets me now or might hear me gossiping about my latest parkrun/race in the tearoom, it would be a fair assumption to think that I had always been a running enthusiast. However, nothing could be further from the truth! I used every trick in the book to get out of running when I was at school, the mere mention of the dreaded "cross country" had me weak at the knees, and I had to be coaxed out onto the field among a tirade of excuses, tears and rage.

All throughout university, whilst I took up other sports with enthusiasm, tennis, aerial hoop, taekwondo, I even braved the gym, running remained a key hate, a necessity reserved for sprinting for a bus or hurling myself down train station stairs in a bid to catch the last train. I thought all my friends who did parkrun were mad, what do you mean you get up PRE 9 AM ON A SATURDAY TO RUN...?! What is this madness?! I was convinced that I would never succumb.

However, when the lockdown hit, and I found myself stuck indoors with no gym, and no fitness or dance classes, I knew I had to find something else to occupy that space. I had vaguely flirted with the idea of running that year, and by that, I mean I had let friends drag me around on 2-3k run/walks with much complaining. But a desire to keep fit and get out of the house spurred me on to try my hand at running once again. I'm the kind of person who is very easily spurred on by gamification, so I signed up to some virtual distance challenges to incentivise me to complete a certain amount of running distance in a set time. No doubt as a consequence of this, the Facebook algorithm overlords linked me to a running club that had a lot of ridiculous and excellent virtual challenges, ranging from full on podcast accompanied runs with historical information about Henry VII's 6 wives, from challenges to run between the most amount of postboxes in your area, spell out words using street names, and my most favourite of all, Strava Art!

Before long I was hooked, what started out as something to keep fit until normal life resumed became one of my favourite activities. I take my running shoes with me for every holiday and conference and use my morning runs to explore the surrounding areas, which only sometimes leads to severe getting lost incidents...and I have entered races up and down the country, now running as part of the Itchen Spitfires Running Club. Parkrun has also become an essential part of my week, regardless of whether Т am visiting friends, or on holiday. If I can feasibly get to a parkrun, I will be there! lt has become such a way of life that I even did parkrun at all



five of my hen parties (with varying levels of enthusiasm and participation from said hens) and with my husband and many of our friends the morning of our wedding!

And most importantly, I learned that if you run in a very specific direction around Eastleigh, you can draw a cat!



Do you have an interest or hobby that you would like to share in the "Beyond Chemistry" section of a future edition?

> Please email Julie Herniman J.M.Herniman@soton.ac.uk or Dawn Dunlop D.Dunlop@soton.ac.uk

#### The Adventures of Sharkcat

PSDI's intrepid explorer Sharkcat has been out and about on adventures this summer. First stop was the 9th EuChemS Chemistry congress (co-organised with NFDI4Chem) in Dublin, Ireland where Sharkcat discussed the global challenges in Chemistry. Next, Sharkcat hopped on a train to Edinburgh, Scotland to attend a PSDI community data workshop which was organised with DCC (rocking the I heart Data top of course!) The workshop gave an overall view of the PSDI project, discussed the challenges in managing and sharing research data, and how this could be addressed by a new data infrastructure for the Physical Sciences.

If that was not enough, Sharkcat then PSDI attended two workshops in which Southampton were held in collaboration with the Research Concordat, one on unlocking the power of storytelling and cartoons and the other focusing on ethical research. Check out Sharkcat's very own cartoon!

Sharkcat's final stop was to the Faraday Discussions Meeting on Data-Driven Chemistry in Oxford where Sharkcat was joined by PSDI Intern Josh Cheung!

What a busy summer for Sharkcat but stay tuned for more adventures!



#### Baking for the Bros – Jake Kleboe

Baking for the Bros is a Movember fundraising challenge developed by me (Jake Kleboe) along with the support of the Biophotonics research group, it has been running for 4 years with 2024 being the final challenge.





The concept is that I bake as many loaves of Banana bread as possible in a 24hr period, I must do all the baking myself, but I have a support team of excellent volunteers to keep me motivated and to keep everything clean.

My previous records include: 67 loaves (2021), 132 loaves (2022), 6 loaves [Blindfolded] (2023- Rest Year) and finally I hit 200 loaves in 17hrs 14mins this year! This has always been a personal challenge as I really support the work the Movember do to advocate for better mental health support and awareness for men, having struggled with my own mental health in the past I really know how much a strong support system can help.

I've been supporting Movember since 2016, but the baking challenge really took off at the start of my PhD in chemistry, I bake as a form of relaxation and it's something that really helps with day-to-day wellbeing, so I wanted to incorporate this into something that could help raise money for the charity.



We give away the Banana breads, with more than 60 loaves going to a homeless charity in my hometown of Guildford and many more being given away on campus (Life Sciences, Chemistry and the NOC) to raise awareness and donations for the charity.

If anyone would like to donate to this cause, please follow the link:

https://uk.movember.com/mospace/13373856

#### Wellbeing Café

On Thursday 14th November a Wellbeing café was hosted in the common room of the School of Chemistry and Chemical Engineering. We were delighted to see many students join us and participate in the activities provided.



We're proud to have the space to facilitate these events to support your wellbeing.

Why not pop along to the next one, which will be on **Thursday 13<sup>th</sup> March 2025 from 11am to 1pm** – drop in if you are available whether for a short time or for the 2 hours. Free hot drinks and snacks are provided, and the fun, creative activities include arts & crafts, Lego, Painting, Sewing and Colouring. Look out for emails and the poster around the school in the Spring.



## Student Resources - Study tips and support for semester one exams and assessments

The exams and assessments period for semester one is coming up and we know it can be a stressful time, that's why we're sharing tips and practical guidance to help you head into your exams and assessments with confidence.

#### Optimise your revision with help from the Library

For top tips on how to get ahead this exam season, take some time to discover The Library's Exams website.

#### https://library.soton.ac.uk/sash/exams

From managing your time effectively to getting the most from your reading material, the study skills tab is a great resource for optimising your revision sessions.

#### **Use GenAl responsibly**

It's important that you align with our position on using Generative AI (GenAI) to supplement your studies. Check out the University website for guidance on how to use GenAI effectively and responsibly throughout your time here.

#### Academic Responsibility and Conduct

In addition to aligning with our position on GenAI, it's important that you understand and adhere to The University's Academic Responsibility and Conduct Regulations. They outline policy on topics such as plagiarism, cheating and collusion—breaches of which could negatively impact the outcome of your exam.

You have a responsibility to act in accordance with these regulations, so it's a good idea to familiarise yourself with them ahead of the next exams and assessments period. You can read our Academic Responsibility and Conduct Regulations on our website here:

https://tinyurl.com/yk2dc46z

#### Where to find support

#### Academic Skills Hub/Drop-in

The Academic Skills Service offers a variety of resources to help you develop your academic and study skills, including guidance on getting smart with online academic integrity.

#### https://library.soton.ac.uk/sash

You can join a writing café or drop-in to an academic skills 1:1 during the times below, or book a 1:1 online appointment at a time that works for you.

https://library.soton.ac.uk/appointment

Mondays & Fridays – Writing Café. Building 38, Lounge Cafe Space, 14:00-16:00

Tuesdays & Thursdays – Academic Skills Drop-in. Academic Skills Hub, Hartley Library, 13:00-16:00.

Wednesdays – Maths and Stats Drop-in. Academic Skills Hub, Hartley Library, 10:00-14:00.

#### Additional academic support

Your Personal Academic Tutor can provide one-to-one support throughout your time at university and help you to resolve any challenges you may be facing.

You can find out who your Personal Academic Tutor is, and how to get in touch with them, visit the Knowledge Base. Plus, get instant access to other additional support, including guidance on exam arrangements and Special Considerations, if things do not go to plan.

#### What to expect on the day

If you're sitting an exam or assessment in person, there are a few things you should know before heading into the exam room. We've covered everything, from standard process and what to bring to best practice and top tips, on the Exams and Assessments SharePoint https://tinyurl.com/47ce5yvb

We'd recommend taking some time to read it over and watch our helpful exams and assessments tips videos before the semester one period starts.

Exams and assessments guidebook – available here:

https://tinyurl.com/3kp757w5

And remember...

You've got this!

Remember to take frequent breaks, get lots of fresh air and plenty of exercise—check out activities from BeActive, on the MySouthampton App to help get you moving. If you need any further support with exam and assessment queries or if you just need someone to chat to The Student Hub is here for you 24/7. Reach us in person, using the online chat, by emailing studenthub@soton.ac.uk or calling 02380 599 599.

#### Student Wellbeing Resources

Here are some resources that may help students' find support with their Wellbeing and Mental Health.

Student Hub, Student Wellbeing Sharepoint: https://shorturl.at/qXY23



Managing Assessments, Study and Wellbeing <u>https://shorturl.at/yTZ48</u>



With Semester 1 exams period approaching, see these guides for managing stress before, during and after your assessments; and a guide to what you need to know about your assessments.

Wellbeing – Before, during and after exams https://rb.gy/0r93q6



Exams and assessments: A guide of what you need to know

https://rb.gy/c11r52





# Code of Conduct

## School of Chemistry & Chemical Engineering

- → We are resolute in our commitment to provide a supportive environment in which we value differences, respect diversity and treat each other with equity and respect.
- → We ensure individuals are treated equitably regardless of gender and gender identity/ expression, ethnicity, religion, nationality, sexual orientation, race, physical appearance, age or disability.
- → We do not condone or tolerate intimidating behaviour, including harassment (verbal, non -verbal or physical), bullying or victimisation.
- → We collaboratively preserve a community in which positive working relationships are forged and everyone feels valued, encouraged and supported.
- → We strive to maintain an environment free of inappropriate or offensive language or behaviour, where individuals consider their own behaviour and the impact that this can have on others.

- → We are dedicated to fostering a culture that empowers all members of our community to act promptly to challenge unacceptable behaviour.
- → We provide support to staff, students and visitors who feel they have been subjected to, or have witnessed, harassment, bullying or victimisation.
- → We ensure that allegations of harassment, bullying or victimisation are addressed fairly, with respect for the rights and dignity of all those involved.
- → Every member of the community is committed to playing an active role in creating and maintaining an environment that does not tolerate harassment, bullying and victimisation.

Together we can continue to ensure Chemistry & Chemistry Engineering is an outstanding and inclusive place to work and study.

"The time is always right to do what is right."

Martin Luther King, Jr



If you have experienced or witnessed abuse, bullying, or harassment at work or study, the university Harassment Contacts can offer support, and guidance for further action: www.southampton.ac.uk/hc

For further information please read the University Dignity and Work and Study policy, Embedding Collegiality and Whistleblower policy.