

Chemistry Newsletter

Summer 2021

Inside your Newsletter:

- 1 Introduction
- Important dates
- 2 Graduation & Awards
Celebrations & Congratulations
Deans Awards 2021
- 6 Building News
- 7 Re-opening Chemistry buildings
- 8 Undergraduate experience
- 9 Mature Student Champions.
Chemistry UG contributions to
research papers
- 10 Outreach activities
- 11 Diversity
- 12 Wellbeing & Mental Health
support
- 13 2021 #RSCPoster Twitter
Conference
- 14 Beyond Chemistry
Gardening and Crafts
- 15 RSC fund and ED&I

Important Dates

Semester 2:

Mon 1st February 2021 to
Sat 12th June 2021

Term dates:

Summer: 12th April to 12th June 2021

Semester 2 exam period:

17th May to 5th June 2021

Undergraduate Open Days:

Sat 3rd and Sun 4th July 2021 (online)

Sat 11th & Sun 12th Sept 2021

Sat 9th October 2021

2021/2022 Academic Year

Semester 1:

Fresher's week: Thurs 30th Sept 2021

Start of Teaching: Mon 4th Oct 2021



2015 Silver Award Winners - Chemistry at Southampton

Thank you from the Head of School

Some of our valued colleagues from different parts of our School have left us recently. We would like to take this opportunity to sincerely thank them for their contributions to the smooth running of our School and the sense of community we all gained from our interactions with them; they will be really missed. We wish them every happiness in their future.



Bev Macey

Bev served as PA to the Head of School, supporting several different Heads over the years. Bev brought a huge amount of very valuable experience to the role and helped to ensure its smooth running – and her sense of humour often lightened the mood! Many of us benefited from her knowledge of 'how to get things done' in the Faculty and University. We wish her the very best in her retirement.



Ann French

You will all know Ann as the smiling, chatty face of our coffee room. Ann worked in the Chemistry coffee room for almost 10 years, providing a friendly place for all of us to go and mix with friends and colleagues over a drink. Ann was always warm and welcoming, and the School will really miss her.



Rob Dalley

Rob was one of the longest serving members of Chemistry joining the Mechanical Workshop in 1977 and was Head of the Workshop when he retired in 2021. Rob's contributions ranged from creating bespoke scientific equipment, installation of gas pipework and equipment, and from repairs to general maintenance of key infrastructure. Rob was always willing to help out, and during the pandemic he was one of the team that kept the Chemistry Stores running. His last day was rather quiet, due to the pandemic. However, Rob is planning to come back and say goodbye properly when things are more normal again! We wish him all the best in his retirement.



Sarah Clark

Sarah provided technical support for the Characterisation and Analytics section for 8 years. Many of Sarah's tasks were often unseen by the users of open access MS, NMR, and powder diffraction, but were (and continue to be) essential for the smooth running of these facilities. Sarah's great organisational skills and support are missed by all C&A staff and facility users.

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

Please email Lynda Brown L.J.Brown@soton.ac.uk or Dawn Dunlop D.Dunlop@soton.ac.uk

Two of our Chemistry Professors have been awarded emeritus status to recognise their distinguished service and a continuing association with the University. We thank them for their contributions to the School and wish them every continued success in their new roles.



Professor George S Attard
Professor of Chemical Sciences
Emeritus Professor of Chemistry



Professor Brian E Hayden
Professor of Physical Chemistry
Chief Scientific Officer of Ilika
Technologies
Emeritus Professor of Chemistry

Prof Jon Essex
Head of School

Thank you!

I would really like to say thanks to those Postdocs and Postgrads who have helped us keep the show on the road, e.g. by serving as Fire Wardens, by organising lab rosters and by selflessly undertaking a host of duties for the benefit of others. Their professionalism is hugely appreciated so I think it would be appropriate and timely to express our heart-felt gratitude to them.

David Harrowven, on behalf of all in Chemistry

Graduations and Awards

Congratulations to the following students on their awards since our last newsletter:



PhD awards:

Ningjin Zhang *Structural Studies into π - π Interactions and their Cooperativity Effect on the Spin Crossover Behaviour of a Novel Series of Naphthalimide Compounds*

Liam Furness *Development of Analytical Techniques for Lithium-Sulfur Batteries*

Reece Gardner *The Development of Cyclic Peptide Inhibitors of Hypoxia-Inducible Factors*

Danielle Smith *Coordination Chemistry of High Valent Early Transition Metals with Neutral Donor Ligands: Towards Precursors for the Electrodeposition and LPCVD of Molybdenum and Tungsten Dichalcogenides*

Antonio Iborra Torres *Perovskite Oxynitrides of Tantalum, Titanium and Niobium and their Solid Solutions as Self-Cleaning Coatings.*

Haoliang Huang *X-ray Absorption Spectroscopy and Electrochemical Studies of Pt-Sn Electrocatalysts*

Lauren Marie Reid *Computer Simulations of Cell-Penetrating Peptides*

MPhil award:

Steven Worswick *Artificial Neural Network Processing of Double Electron-Electron Resonance Data*

Celebrations and Congratulations

Deans Awards 2021: Congratulations to the following Chemistry winners.

Samantha Kanza

For outstanding adaptability and initiative in expanding activities and membership of the AI for Science Discovery Network, alongside maintaining her own research profile.



Nicola Knight

For exceptional citizenship in driving change for the UK Physical Sciences Data-science Service during the COVID-19 pandemic, and spearheading the new direction of teaching activities.



Hilman Razali, FOS

For exceptional contribution, expertise and reliability in his role, and further voluntary input above and beyond requirements in support of the SmartT programme.



Chemistry teaching laboratories technician team Jing Lu, Diana Dias Fernandes, Tom Ogden

For excellent service to the School during the COVID-19 pandemic and enabling the opening of teaching labs for face-to-face teaching.

Congratulations to Professor Syma Khalid who shared her hope for a scientific future with equal opportunities and treatment for all as she was honoured at the Engineering and Physical Sciences Suffrage Science awards.



The virtual 'group photo' of the Engineering and Physical Sciences Awardees 2021.

Syma, Professor of Computational Biophysics, was one of 12 UK scientists to be presented Suffrage heirlooms in an online ceremony on International Women's Day.

Syma says: "I am surprised and utterly delighted to receive this honour. Opportunities for women in science are improving enormously at all levels and are being fostered by groups such as Suffrage Science. A lot has changed in the last 20 years, and the trends are very positive, but there is still a lot of work to be done.

"Scientists are scientists irrespective of their gender, racial background or sexual orientation. It is very encouraging to see how women are changing science, but my overwhelming hope is that we can shape a future marked with equality, diversity and inclusivity such that there is no longer any need for this award."

RSC Chemical Information and Computer Applications Group, Winner of the 2021 Inspirational Committee Award

Congratulations to Jeremy Frey on receiving this RSC award.

The Chemical Information and Computer Applications Group (CICAG) is a Royal Society of Chemistry special interest group



which supports users of chemical information, data and computer applications by promoting the latest developments in these areas, as well as tools and techniques for handling chemical information.

In response to the COVID-19 pandemic, the sub-committee formed a team that engendered collaboration, building on each other's strengths, to come up with new, exciting – but also workable – ideas for its members to interact. At short notice, CICAG transitioned from physical to online meetings, developing a series of virtual events and workshops that explored the benefits, risks and likely future developments associated with open chemistry.

Congratulations to Sam Munday on his success with the ICUR programme. We asked Sam about his experience:

I was really excited to hear our team had been accepted onto the Innovation to Commercialisation of University Research (ICUR) program at the beginning of the year. This fantastic program gave us £30k in funding and the opportunity to thoroughly test the commercial viability of our Data Revival platform – the culmination of work we had been doing into automatically extracting and contextualising chemical knowledge from documents (pdf/paper etc).

The program started in January with a week-long bootcamp preparing my team and I with the skills we'd need to properly engage with potential future partners. Over 3 very successful months I was able to have >125 conversations with organisations in 9 different countries and show that Data Revival has the potential to offer significant value – something I would never have been able to do without the brilliant support and training that ICUR offers. Due to COVID this was all facilitated online, however future post COVID cohorts will have the opportunity to travel in person to all the different countries they speak with!

Taking what we'd learnt from the market validation stage we then successfully pitched our findings to a panel of investors at the ICUR options roundabout at the end of March. We secured an extra ≈£15k in funding as well as 3 months of follow-on training to learn how to capitalise on the good work we had already done. We are now halfway through this period and have made some excellent progress in setting up trial runs with several different organisations.

Overall, the ICUR program has been an amazing experience, and one I would highly recommend to anyone who thinks their research could have commercial applications.

www.data-revival.com

How trapped is your information?

Do you have a mass of chemical information locked away in papers or pdfs? Would a service to automatically extract this knowledge add value to your processes?



Contact Sam at **Data Revival** to discuss:



1) Transform your papers, pdfs and lab books into formats that are easily searchable



2) Automatically extract the information in context ready for advanced analytics



3) Add value to your data by curating, contextualising and consolidating it ready for future projects



Samuel Munday

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We are developing systems that will transform these documents into a valuable pooled resource accessible to all who need access whilst preserving valuable context.



Our prototype allows you to ask questions of the information you're trying to access, providing for better knowledge curation than simple key word searching.



Digitisation is only the first step. Contextualising this information maximises the ease with which knowledge can be returned.

Congratulations to former chemistry student Kyran Whymark who has been presented a Salters' Graduate Award following an exceptional industrial placement during his chemistry degree at the University of Southampton.



Kyran gained practical experience in a placement with GlaxoSmithKline on route to a first-class honours in his MChem Chemistry degree.

“It was an honour to have been chosen to represent the University of Southampton and I am absolutely delighted to have been selected to receive one of the five national chemistry awards,” Kyran says. “I would like to take this opportunity to thank those who nominated me and especially the lecturers and supervisors that have guided and supported me throughout my MChem years.”

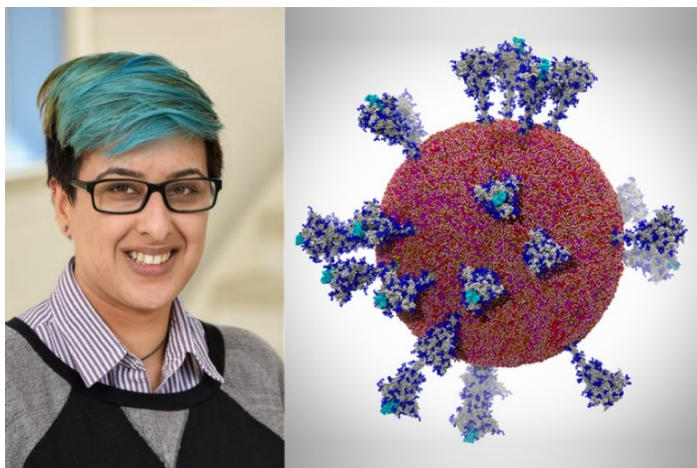
“Receiving this award further motivates me to continue to work hard and aim high as I take the next steps in my career by undertaking a PhD in synthetic organic chemistry at the University of Nottingham.”

“My chemistry degree at Southampton has prepared me well for industry, with its good balance between lab work and theory,” Kyran says. “It was a challenging and rewarding time with good facilities and great staff. Without doubt the highlight during this time has been meeting and working with so many talented and inspirational people.”

Congratulations to Professor Syma Khalid who was part of an international team of researchers who have been recognised for successfully simulating the behaviour and vulnerabilities of a coronavirus in a first-of-its-kind feat in high performance computing. The computational chemistry team, including Syma, have been awarded the Gordon Bell Special Prize for High Performance Computing-Based COVID-19 Research by the Association for Computing Machinery (ACM).

The study, led by UC San Diego's Professor Rommie Amaro and Argonne National Laboratory's (ANL) Dr Arvind Ramanathan, has investigated the movement and rearrangements in shape of the SARS-CoV-2 spike protein to understand how it triggers the process of infecting human cells.

The team were honoured at the virtual SC20, the International Conference for High Performance Computing, Networking, Storage, and Analysis this month.



Syma said: "The project has predicted a key step in the process of the virus infecting our cells. The simulations were able to predict how the spike protein of the virus - the protein that latches on to our cells - will move and change shape, this is not possible to predict from static structures. If this change in shape can be prevented, then potentially infection can be prevented."

Over 30 researchers contributed to the pioneering project as it built a workflow based on artificial intelligence to more efficiently simulate the spike.

Syma adds: "I am delighted to have played a small part in a large team effort lead by Rommie Amaro at UCSD. The team worked incredibly hard, and in particular the graduate students from UCSD showed a lot of dedication and maturity.

"It is gratifying to be able to contribute expertise I have been gained from my work on simulating bacterial membranes at Southampton, to help the team on their work on viral and eukaryotic membranes. We are still working together to simulate some of the other viral proteins, so we will hopefully have more to present soon."

The results led to discoveries of one of the mechanisms that the virus uses to evade detection as well as a characterisation of interactions between the spike protein and a protein that the virus takes advantage of in human cells. This deeper understanding provided valuable insight the search for therapeutics or vaccines that might work to mitigate the virus.

Congratulations to Professor Andrea Russell who has been elected as Vice President of International Society of Electrochemistry.



The International Society of Electrochemistry champions electrochemical science and technology, while promoting international cooperation across its 3,000 members.



Andrea will advance the teaching of electrochemical science across the globe in a new executive role for the International Society of Electrochemistry. As Vice President, Andrea will be responsible for educational activities at the historic society. Her term in the Executive Committee will last until 2023.

Professor Russell says: "Electrochemistry will play a key role in helping society move towards a greener and less carbon-intensive future, be that through the increased use of electrochemical power sources, the use of electrochemical sensors, or through electrosynthesis. The ISE serves electrochemists worldwide and I am honoured to have been elected a Vice-President, having previously served the society through the organisation of symposia at the annual meeting and as Chair of the Physical-Electrochemistry Division."

Building News from Mansoor

It has been six months since I started my new position at the University of Southampton. So far life has been both exciting and challenging, dealing with new issues, new faces and learning from talented people. Where even failures are new opportunities in disguise.

We are born risk takers and maintaining the desired momentum to keep our safety program at the highest possible level at all times it seems an impossible task. Yet, I believe continuously improving health and safety in the workplace is a valuable activity in itself and good for all in the long run.

During this fairly short time improvements and initiatives have been started i.e. solvent compound space organisation, and our waste management process.



Chemistry Assess Permit

Requested By: Mansoor D'lavani

Property: [Dropdown]

Space: [Dropdown]

Purpose of Visit: [Dropdown]

Start date: [Calendar]

End date: [Calendar]

Name of company: [Text]

Number of Visitors: [Text]

Names (of contractors): [Text]

Car details (including Reg. no.): [Text]

Contractor email: [Text]

Contractor mobile number: [Text]

Additional Comments: [Text]

Documents Attached:

- Method Statement
- Risk Assessment
- Other Information

Submit Cancel

I am currently finalising our newly developed PlanOn system for engineer's visit requests to improve the efficiency and better archiving of related information. Hopefully, making the process smoother for everyone.

With the new Chem Eng project and migration of the Chemistry Store comes new opportunities to improve on our current processes. Constantly looking to enhance our health and safety practices provides us with several opportunities to better utilise solvent compound and courtyard space. I will be delighted to share with you all these activities in due course.

Sustainability activities are already taking shape i.e. recovering precious metal from solid filtrates, and projects looking to reduce power consumption and our carbon footprint.

Watch this space, together we are unstoppable!

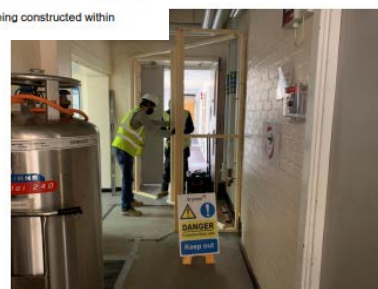
Chemical Engineering Phase 2a Building 27 Level 1 progress



Building 27 Level 1 | Old CLS rooms stripped out



Building 27 Level 1 | Internal site hoarding being constructed within corridor 1705

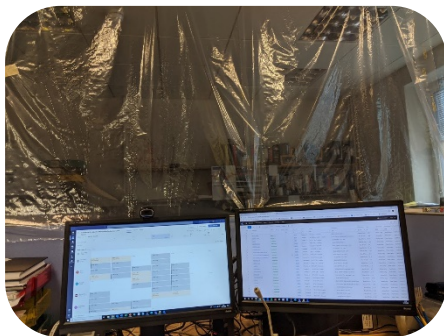


Building 27 Level 1 | Internal site hoarding being constructed within corridor 1705

Return to Labs: Julie Herniman

The initial nationwide lockdown due to the Covid-19 pandemic way back on March 24th 2020 seems so long ago now but from that date, senior managers in Chemistry were making plans for the safe re-opening of the laboratories and other parts of the School. Bruno Linclau was assigned as the School of Chemistry Overall Designated Lead as required by the University. He took on this role as part of his duties as Deputy Head of School for Research and was supported by Richard Brown, the Heads of Section, and Mark Pickett (the Chemical Health and Safety Advisor), in what turned out to be an enormous and time-consuming task.

The initial aim was to allow people back to work in a Covid safe environment with limited occupancy and minimal movement and traffic throughout



the Chemistry complex. The first phase involved ensuring that the in-house companies (ATDBio, Curve), essential facility staff (MS, NMR, X-Ray) and those working on Covid-19 projects could return safely. A traffic group co-ordinated by John Langley (Matt Baud, Steve Goldup, Roz Mizen, Giuseppe Pileio, Graham Tizzard and Nikolai Zhelev) worked specifically to redesign traffic flows with one-way systems with separate IN and OUT entrances for each building and minimal passing on corridors and staircases.

The space and configuration of each laboratory module had to be reviewed and reconfigured if necessary, to allow safe working.

Appropriate occupancy levels were set according to the size of each laboratory. The task involved the acquisition of building and floor maps for all areas within the Chemistry complex. Although new signs were printed and placed at strategic locations, the team were aware



that the provision of too many signs would be a hindrance and therefore the number of signs was kept to a minimum. Every sign had to be approved by the University along with the risk assessments and method statements at each phase of the re-opening.

Sally Dady and Janice Sumner worked on the administration side to ensure that engineers could safely enter the building, card access for entry was changed and the Teams Shifts app was utilised so that laboratory and office occupancy could be recorded easily.

Once the initial staff were allowed back and working, the next phase was to work out the safest ways to return Chemistry to near normal operation with the provision of the stores and workshops. The re-instatement of stores was a major task since the normal traffic flows needed to be significantly reduced. Richard Brown worked with members of the technical staff who were reallocated to help and deliver items to the labs (Rob Dalley, Alan Glass and Lee Mulholland) so that the stores remained open for deliveries and solvent disposal. Chemistry also required a member of academic staff to be a Monitoring Designated Lead each day to check Covid compliance and report any incidents. Fire warden cover, first aid cover and lone working policies all needed to be re-assessed and new documentation written and approved by the central Safety Office and senior managers. At each phase of re-opening, documentation



was assessed and amended where necessary and laboratory occupancy slowly increased in stages from 25% to the current 75%. MSc students were allocated some

laboratory time although new ways of working remotely were identified in some areas. The start of term meant further changes had to be made to separate undergraduate access and staff access to teaching spaces and teaching labs (with Faculty help from Amy Glen).

After the summer, Steve Goldup took over the Overall Designated Lead role from Bruno Linclau, and Mansoor D'Lavari's (Chemistry Facilities Manager) appointment in November allowed him to assume some of the tasks previously undertaken by Richard Brown.



Huge thanks go to all those involved in getting us back into the Chemistry complex and please continue to support them at every stage.

UG: The First Year Experience through COVID-19

Moving away from home for the first time and starting university is never easy for anyone but this year the experience has brought a whole new set of challenges. A group of our first year undergraduates have kindly agreed to give us insight into how their first year at university has been so far during this unusual pandemic year.

In general, how has this year been for you?

“The year has been enjoyable; some things have been more difficult than others but the school made sure to help us in any way they could. In the beginning it was stressful because most of us went from not studying in months, due to the 2020 spring lockdown, to online lectures. However, it has been exciting to meet a range of people who share common interests.”



What things have you enjoyed the most?

“We’ve enjoyed being part of student life and the social events (e.g. pub quizzes, coffee meet ups, societies) when restrictions allowed. The Chemsoc events even if limited by lockdown were enjoyable allowing us to talk to different people and discuss the course and other things. In person meetings with tutorial groups have been good and allowed us to meet people in real life and also made it easier to have discussions (since not through a screen).”

What things have you struggled with the most?

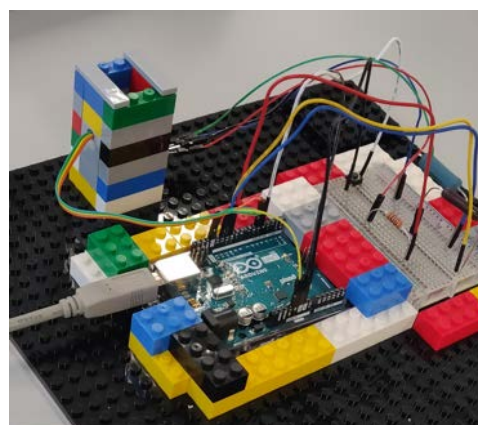
“Finding the motivation to get out of bed, watching lectures etc. and also the isolation in periods when people weren’t allowed out. Online learning made it harder for us to interact with discussions and just adjusting to working again after a period without study whilst having to be a lot more independent in choosing when and how to work.”

What has your experience been of online learning?

“The ability to pause and rewind lectures has certainly been a great help when studying more complicated topics but it’s hard work keeping up with lectures across multiple modules. Having less personal interaction is challenging although the technology side of learning did improve this.”

Has the fact that you have had face to face teaching opportunities like labs/tutorials provided you a better experience?

“Yes. Tutorials providing face to face teaching was definitely helpful in going over and consolidating what was covered in online lectures, meaning that the most important topics that may have not been absorbed properly due to the nature of the online learning, was quickly picked up. Laboratories provided an interesting application of knowledge, with some additional skills such as python coding being required. Unfortunately, the social distancing restrictions hindered the experience a little especially to those who have spent little time in labs in the past. The laboratory managers however did provide help and resources for us in the best way they could have given the circumstances.”



How do you feel Southampton Chemistry has managed this year?

“Everyone has done their best under very difficult circumstances; any issues and delays were to be expected but got handled efficiently. The lack of certainty was slightly stressful for the students, however the fluctuating circumstances would have made this difficult for anyone to have managed.”

Mature Student Champions

Mature Student Champions will play a central role in disseminating good practice in support of our mature students across the University, whilst also supporting the development of initiatives to create an inclusive culture.

We welcome members of staff from both academic schools and support services to the Mature Student Champions Network (MSCN); as a minimum we would anticipate at least one Mature Student Champion, per school/service, with the support of their line manager.

Requirements of the role are:

- To act as an advocate for positive change in support of our mature students, both prospective and current.
- To disseminate and share good practice within their own work area, and to support the access, progression and success of mature students.
- To collaborate with all members of the University Community, including our mature students and other colleagues.
- To ensure mature students are considered and represented in every aspect of the services provided by the University.
- To be the point of contact in your school/service area for mature students, providing relevant information and guidance, as well as signposting accordingly, where appropriate.
- To encourage and support the discussion of specific mature student issues at the University.
- To keep up-to-date with mature student focussed initiatives, at the University and ensure all colleagues are aware of the initiatives.
- To be involved in the implementation and review of relevant mature student policies, processes and activities.
- To be part of a communication network, between all parties, ensuring an open dialogue on relevant matters is maintained.
- To promote and, where appropriate, participate (or encourage participation) in mature student events and disseminate relevant information.
- To identify and feedback on any support needed, with regards to mature students, within their school/service area.
- To attend 4 online MSCN meetings per year and contribute to agenda items; feeding into ideas and suggestions for the advancement of our mature student objectives

Chemistry Publications: UG contributions to research papers

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

Troup, R. I.; Jeffries, B.; Saudain, R. E.; Georgiou, E.; **Fish, J.**; Scott, J. S.; Chiarparin, E.; Fallan, C.; Linclau, B. *Skipped Fluorination Motifs: Synthesis of Building Blocks and Comparison of Lipophilicity Trends with Vicinal and Isolated Fluorination Motifs.*

J. Org. Chem. 2021, 86, 1882-1900.

DOI: 10.1021/acs.joc.0c02810

Malecka, Kamila, Kaur, Balwinder, Cristaldi, D. Andrea, **Chay, Clarissa S.**, Mames, Iwona, Radecka, Hanna, Radecki, Jerzy and Stulz, Eugen *Silver or gold? A comparison of nanoparticle modified electrochemical genosensors based on cobalt porphyrin-DNA.*

Bioelectrochemistry, 2020, 138, [107723]

DOI:10.1016/j.bioelechem.2020.107723

Giulia Melchiorre, **Ciara Nelder**, Lynda J Brown, Jean-Nicolas Dumez, Giuseppe Pileio *Single-scan measurements of nuclear spin singlet order decay rates.*

Phys. Chem. Chem. Phys., 2021, 23, 9851.

DOI: 10.1039/d1cp00807b

Aliki Moysiadi, Francesco Giustiniano, Andrew M R Hall, **Topaz A Cartlidge**, Lynda J Brown, Giuseppe Pileio

Nuclear Spin Relaxation of Longitudinal and Singlet Order in Liquid-CO₂ Solutions.

Frontiers in Chemistry, 2021, 9, 243.

DOI:10.3389/fchem.2021.668044

Andrew M R Hall, **Topaz A Cartlidge**, Giuseppe Pileio *A temperature-controlled sample shuttle for field-cycling NMR.*

J. Magn. Reson., 2020, 317, 106778.

DOI: 10.1016/j.jmr.2020.106778

Danielle E. Smith, William Levason, **James Powell** and Gillian Reid.

Synthesis, properties and structural features of molybdenum(V) oxide trichloride complexes with neutral chalcogenoether ligands

Dalton Transactions, 2021, 50, 4380.

DOI: 10.1039/D1DT00038A

Outreach activities

Delivering outreach activity during a pandemic wasn't something that we'd given any thought to previously. However, the fact that A level students have had a rather torrid time of things since Covid-19 struck last Spring means that it has never been more important to reach out to them.

Back in the first lockdown, I ran a few pilot online talks titled 'Chemistry: Solving the World's Problems' with schools and colleges and quickly discovered that it was possible to get good interaction with students by using Vevox for quiz questions and getting them to share their thoughts via the chat.

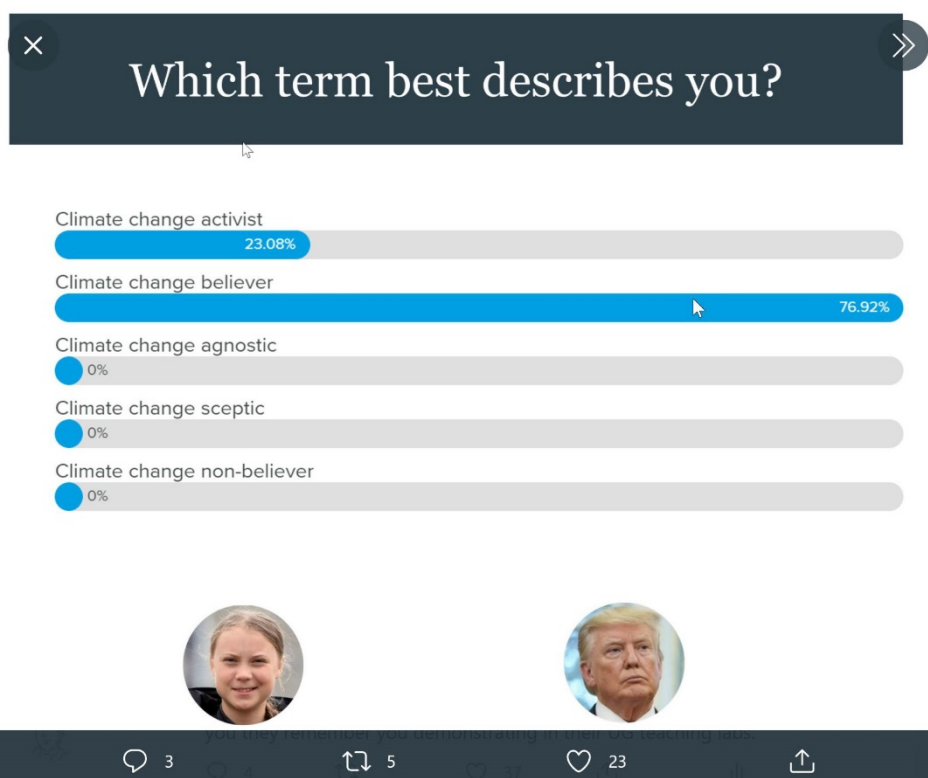
This year we've expanded the program and have so far engaged with >1100 Y12 students in nearly 30 online talks, helping us to reach ~2% of all students studying A level Chemistry, with further presentations planned for the summer term. A particular benefit of the move online is that we can reach students we would not normally be able to engage with – on one occasion I gave 3 separate talks on the same day to students in Newcastle, Kingston-on-Thames and Rugby, which simply wouldn't be possible in-person without a helicopter!

Our discussions with students and teachers have helped us to identify that climate change and sustainability are at the forefront of young people's thinking, and the role of chemistry in medicine and healthcare is as important now as it has ever been. Bearing in mind our research strengths here in Chemistry at Southampton, it has been relatively straightforward to embed inspirational messages about our work that relate both to the content of the A level chemistry curriculum and the challenges that face society as we move into a crucial period for humanity. The talk showcases and celebrates the diversity that is evident in our School and promotes Chemistry as a discipline that develops a range of employability skills that opens doors to a range of careers.

Looking forward, we are keen to expand our suite of resources to reach ever-increasing numbers of young people, to open their eyes to the benefits of studying chemistry and inspire them to consider joining us here in Southampton to pursue a degree in the subject. We are keen to encourage colleagues to come forward to share stories of how they came to be chemists, and how their research can help to transform the world in the future. One key project will involve creating resources that will help teachers to teach difficult topics at GCSE and A level, which will include messages about research at Southampton that demonstrate the central role of chemistry in solving the world's problems. We'd love to hear from you if you have any ideas for how you could contribute to the effort and help to inspire the next generation of budding chemists!

I'm typically finding that 20-25% of Y12 chemistry students classify themselves as climate change activists. This is a big increase on what I used to see!

David Read

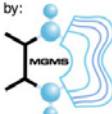


Diversity

Syma Khalid gave a talk as part of this series on diversity on 4th June 2021.


Being #CompChemURG:
How Diversity Enriches Us

Friday, 4th June 2021

Hosted by: 


SPEAKER BIOS

SYMA KHALID



Syma Khalid is a British biophysicist who is a Professor of Computational Biophysics in Chemistry at the University of Southampton. She was awarded the Suffrage Science award for engineering and physical sciences in 2021. Syma grew up in Wolverhampton, England. Her parents are from Pakistan and were first-generation immigrants to the United Kingdom. Her father worked as a bus driver and her mother as a seamstress. She has ~15 years of experience in the development and application of molecular dynamics simulations to the study of biological molecules. Starting her own group, she noticed the molecular models of bacterial membranes were usually missing key biochemical details (e.g. lipid type, macromolecular crowding) and has worked to address this ever since.

Talk Title: The Working Class Scientist



Wellbeing

In the March “Staff Matters” we were introduced to First Aiders who have trained on being a first aider for mental health. Each year approximately one in four people in the UK will experience a mental health condition and at least one in six employees experience common mental health problems in the workplace. Often these conditions are kept hidden for fear of stigma associated with them.

The University has recently trained all our security colleagues and aim to train more staff as First Aiders for Mental Health to support the University community, their aim is to have 300 in the next couple of years.

John Langley on being a First Aider for Mental Health

Why did you want to become a mental health first aider?

I wanted to augment my First Aider skills. I’ve been a University First Aider for 30 years. This new skill will allow me to help students and staff – the latter I feel are somewhat marginalised in the bigger discussion of mental health across the sector. These new skills will also help with my own research group, where over the years we have dealt with different mental health concerns. Also, personal reasons, including having benefitted from University Counselling many years ago.

What did you gain/learn from the training that you weren’t previously aware of?

The fact that all security staff at First Aid in Mental Health trained is fantastic. This is great but I fear, as often is the case, we at (UoS) don’t publicise the great things we do.

What further actions could the University take to support your role as a First Aider for Mental Health?

I feel first we need to find a way of highlighting who is trained to be a First Aider in Mental Health, so that those who need to talk with someone can identify this resource but do so in a way such that it is safe for them. This is a real challenge, particularly in open plan spaces for visibility issues but also in the remote working world where it isn’t so obvious to friends and colleagues that any individual might be struggling....maybe the first step is for all line managers to know who are First Aiders in Mental Health trained.



If you are interested in being a First Aider for Mental Health please visit the [Health and Wellbeing SharePoint page](https://sotonac.sharepoint.com/teams/HealthWellbeing/SitePages/Mental-Health-First-Aid.aspx).
<https://sotonac.sharepoint.com/teams/HealthWellbeing/SitePages/Mental-Health-First-Aid.aspx>

Wellbeing & Mental Health Support

We recognise that this is a challenging time for all staff in our School and sometimes might we may need help and support with our wellbeing and mental health. There are many resources and places to either help you or for you to help your colleagues are described below.

For any further help, please contact Lynda Brown (L.J.Brown@soton.ac.uk) or Sally Dady (sjd1@soton.ac.uk)
University Information/Guidance: <https://www.southampton.ac.uk/news/statements/coronavirus.page>



The Student Support Hub is your first point of contact when it comes to seeking support

Telephone: +44(0)23 8059 9599 and select option 2 for wellbeing related queries or option 3 for Enabling Services.

Our advisors are available to talk to 24/7 through our [online chat service](#).

Students can contact Enabling Services in the usual way via enable@soton.ac.uk

Students facing significant difficulties or dealing with a crisis, should email firstsupport@soton.ac.uk



Student Life:

University Halls-based support service for all students.

Available 24 hours a day, 7 days a week.

Email: studentlife@soton.ac.uk

Tel: 02380 598 180

Students

University Harassment Contacts Network

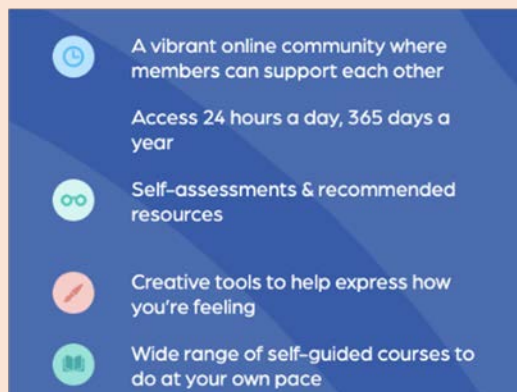
The University has a committed team of volunteer Harassment Contacts. They are trained to provide confidential support to students who feel bullied or harassed. They also support those who have been accused of harassment.

<https://www.southampton.ac.uk/diversity/let-us-know/report-support.page#students>

Staff

togetherall

From 2020 University employees can access a safe place to talk about wellbeing and mental health which is run by professional counsellors and available 24/7 free of charge.



Southampton Health & Wellbeing

Health & Wellbeing Home

[University SharePoint Pages](#)

These pages have a wealth of information and resources on many topics including mental and physical health, stress and occupational health services offered by the University to staff.

Health and Wellbeing during COVID-19

There are also specific pages for

[Wellbeing during COVID-19](#)

health assured

Employee Assistance Programme

This is provided by Legal & General and Health Assured offering staff support online or by telephone.

Online Log in: User Name = worklife; Password = worklife

Telephone

A confidential telephone service with a qualified counsellor for support and advice. This is offered 24 hours a day, 365 days a year. This is completely separate from University services and is confidential. Freephone number **0800 316 9337**



Solent Mind is providing training to UoS staff who work closely with students, including senior tutors, personal academic tutors, professional, operational and technical staff. This training not only helps you to support students with mental health concerns but to know how to set your own boundaries to maintain your own positive wellbeing. It will also help you signpost to resources within the University and local and national resources.

For more information and to register click on links below. (Multiple dates are offered through to June)

Part 1 [Register on Eventbrite](#)

Part 2 [Register on Eventbrite](#)

2021 #RSCPoster Twitter Conference (2nd-3rd March)

Four Chemistry PhD students recently took part in the RSC annual Twitter conference. This is an annual online event held entirely over Twitter to bring members of the scientific research community together to share their research, network and engage in scientific debate. It is held online over 24 hours and the unique format removes the environmental and financial costs of attending a traditional conference, and helps scientific researchers share their work and network across disciplines, wherever they are in the world. There were 12 subject areas from analytical chemistry to engineering and prizes were awarded in each category.

Here they talk about the experience:

Sergio Cancho Gonzalez (Supervisor: Professor John Langley)

<https://twitter.com/SCancho/status/1366728739095207941>

"This different style of event has allowed me to interact with other researchers working with similar materials and topics, as well as expanding my knowledge and understanding of my PhD program. For me, the open approach of all researchers in interacting with other members of the community, which somehow could be challenging in the more traditional style of conference for introverted people. I received over 500 engagements and over 13,000 impressions with my twitter poster."

Julian Holland (Supervisor: Professor Chris Skylaris)

https://twitter.com/Julian_Q_Chem/status/1366719406953357314

"I posted a poster of my recent work on simulating Li intercalation into graphite nanoparticles from my twitter account with the hashtags #RSCPhys and #RSCNano, I also made a 60 second video explaining my poster. It gave me an opportunity to exhibit my work to a wider audience and was an excellent excuse to practice some science communication."

Daniel Irving (Supervisor: Dr Mark Light)

<https://twitter.com/danirvingchem/status/1366720143322198017?s=20>

"The RSC poster event is likely the closest to an in-person conference poster event that I have attended during my PhD. When I signed up, I thought it would be a bit of fun and wasn't expecting much interest in my poster with it being a bit more niche than a standard chemistry poster, but I couldn't have been more wrong! To date it's received 130 likes, 33 retweets, 6 questions and a few direct messages, all adding up to nearly 1000 interactions. However, the most fun response had to be the cartoon made about my work."

<https://twitter.com/ErrantScience/status/1366796645627797517>



Molly Wilson (Supervisor: Professor John Langley)

<https://twitter.com/wollymilson/status/1366719966154792967>

"It was a really easy way to connect with lots of people and talk about my research. Just under 39,000 people saw my poster on twitter and I had lots of engagement too with 70 retweets and 254 likes. The biggest challenge was making a poster suitable for viewing on someone's phone, I tried to ensure the text wasn't too small and I played around with animations – in the end I think I ended up with an easy to read, informative and engaging poster! I had a really good time all round and I would recommend it to anyone in the chemistry department."



Beyond Chemistry

Garden Discovery: Sam Munday

We've recently bought a house with a garden that hadn't been tended to in several years. It was quite obviously once a very well-kept garden with built in beds and paths everywhere but has now become quite overgrown. One of the benefits of this is that it is now a sea of different types of wildlife, and with my girlfriend being a zoologist we're quite good at spotting and identifying different things.

A couple of months ago we were digging out around the shed and had to stop as we came across a young great crested newt. These are declining in number due to habitat destruction across Europe. We were worried that as we'd unearthed it the overnight frost might kill it, so we spent some time rehoming him across the other side of the garden under a nice pile soil and leaves.



(Photo credit: Wildlife Trust)

Given the diversity in our garden we won't be going for a 'perfect' garden. The plan is to have wildflower beds as well as 'untended' patches which will be great for all sorts of insects and other wildlife.

Crafting through lockdown(s) and a Chemistry inspired crocheted blanket: Dawn Dunlop

Some of you may already know that I indulge in lots of crafts involving wool and other fibres. I learnt to knit as a child but then it wasn't really my thing in my late teens and twenties which were mostly spent going to gigs and music festivals. I still do now, well I would if could and can't wait for the return of live music.

But I digress. I returned to knitting when my daughter was small, knitting small animals and a farm play mat. I knitted a small allotment garden for a show, as a keen gardener too, and won 1st prize!

I'd come across wool spinning and as if by fate was at a Green Fayre where a lady was selling a spinning wheel. Without knowing what I was doing, that wheel came home with me that day. Fast forward to today and I have (coughs) 4 wooden spinning wheels, they all have different uses and advantages. I also now have 3 electric spinning wheels (2 are mini size), a larger one arrived just recently (in picture below). When at home and not working or gardening, I'll probably be found spinning

wool, knitting, crocheting, etc

Since the days of knitting those animals, I've progressed to many other things; hats, scarfs, jumpers, etc. I can often be found making decorative things like bunting, and still enjoy making small toys like Star Wars & Harry Potter characters, etc. I've also made several blankets which are great now for socialising outside on cool evenings, and when camping. I have another one in progress now, and others will no doubt follow.

So, there's a link between this and Chemistry. No, really there is.

5 years ago I had one of my "mad project" ideas to make a crochet blanket of the Periodic Table. It took approx. 6 months to make it, my target being the Summer festival/camping season. I'd even crocheted the 4 new elements before they were officially named later in 2016 – didn't want the blanket to be out of date!

It's my favourite of my handmade blankets and so cosy.



RSC Chemist's Community Fund

A Royal Society of Chemistry membership means support when life gets challenging for you and your family. The Chemists' Community Fund is here to help ease the pressure when things get tough.

If you need support, our knowledgeable team and network of dedicated member volunteers will help guide you to the right advice, resources, services or financial assistance. More info on the Community Fund can be found here:

<https://www.rsc.org/membership-and-community/chemists-community-fund/>

Important notice to all of our members on the potential impact of Coronavirus (COVID-19)

If current events are having a negative financial impact on you, your partner or dependants – especially if they have led to changes in your regular income – please speak to the Chemists' Community Fund, the benevolent fund for RSC members.

While we recognise that the support we can offer will be limited, we may be able to offer financial support to you and your family as a Royal Society of Chemistry member.

The Fund offers a completely confidential service. Please get in touch by phoning +44 (0)1223 432227, or by emailing ccfund@rsc.org

More info on the Covid-19 support can be found here:

<https://www.rsc.org/covid-19-response/find-support/>

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 [Athena SWAN charter](#) 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, the first department at the University of Southampton to achieve this status twice.



If you would like to know more about our work there is lots of useful information on our website <https://www.southampton.ac.uk/chemistry/about/Equality/index.page> which also includes our Early Career Support Hub.

For more information about the ED&I or to raise any issues or concerns please contact Dr Lynda Brown (L.J.Brown@soton.ac.uk)

Do you have an article you wish to contribute to a future edition? We also welcome your feedback on the newsletter. Please email Lynda Brown L.J.Brown@soton.ac.uk or Dawn Dunlop D.Dunlop@soton.ac.uk