

# Chemistry Newsletter

Autumn 2019

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## Important Dates

### Postgraduate Open Day:

Wed 4<sup>th</sup> November 2019

### Semester 1:

Mon 30<sup>th</sup> September 2019 to

Sat 25<sup>th</sup> January 2020

### Semester 2:

Mon 27<sup>th</sup> January 2020 to

Sat 13<sup>th</sup> June 2020

### Term dates:

Autumn: 30<sup>th</sup> Sept to 14<sup>th</sup> Dec 2019

Spring: 6<sup>th</sup> Jan to 21<sup>st</sup> March 2020

Summer: 20<sup>th</sup> April to 13<sup>th</sup> June 2020

### Christmas vacation:

Sat 14<sup>th</sup> Dec 2019 - Sun 5<sup>th</sup> Jan 2020

### Semester 1 exams:

Mon 13<sup>th</sup> Jan to Fri 24<sup>th</sup> Jan 2020

### Easter Vacation:

Sat 21<sup>st</sup> March to Sun 19<sup>th</sup> April 2020



2015 Silver Award Winners - Chemistry at Southampton

## Chemistry's Multi-Million Refurbishment nears Completion



Throughout the summer our contractors Wilmott Dixon have been refurbishing Chemistry's facilities. This £12 million investment includes a complete renovation of our teaching labs which will ensure we are able to deliver an even better student experience with modern state-of-the-art teaching space and more opportunities for experimental and analysis work.

Some key features will be:

- New facilities, including IR and Raman spectrometers, NMR spectrometers, X-ray diffraction equipment, chromatographic and flow equipment.
- Improved energy efficiency and sustainability (with new exterior cladding and windows and a new wind responsive extraction system).
- New AV facilities, student computers and electronic laboratory notebooks.
- Smart lockers to store belongings during lab sessions.
- New breakout rooms.
- Improved foyer with touchscreen information point and media screens.
- Landscaped Chemistry courtyard.

We are very grateful to all those who entered the Chemistry graphics competition for artwork that could be incorporated into the refurbishment. Congratulations to our three winners for their striking designs:

**Akil Jacobs Holden:** Akil's ideas were adapted for the cage design which is a key feature throughout, including the windows on the front of the building. His emission spectra is also being used on the mezzanine windows.

**Eleanor Dodd:** Eleanor's electron density maps are now on the windows by the round table breakout area.

**Malcom Levitt:** Malcolm's endohedral molecules will be used in the lobby outside the lecture theatre.

This is an exciting time for Chemistry as we approach the final stages of the refurbishment project. Thank you for your patience while we finish this fantastic new learning environment.

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

Please email Lynda Brown [L.J.Brown@soton.ac.uk](mailto:L.J.Brown@soton.ac.uk) or Dawn Dunlop [D.Dunlop@soton.ac.uk](mailto:D.Dunlop@soton.ac.uk)

## Awards and Graduation

**Congratulations to all our Undergraduates who Graduated in the Summer.**



**Further congratulations** to undergraduate prize winners; these included:

Kristina Kovacic: John Mellor Prize

Liam Lu: Alan Carrington Prize

James Crawley: Judith Corker Prize

Oryn Purewal Sidhu: Progression Award

Hiral Kotak: A E Clarence Smith

Lucy Fillbrook: David Runciman Boyd

Jasmine Hind: Outstanding Research Placement Project

Caroline Barclay: R E Parker Project

Kristina Kovacic: Roger Parsons Prize



**Congratulations to the following students on their awards:**

**PhD awards:**

**Lucas Quiquempoix** - *Synthesis of polyfluorinated carbohydrates*

**James Eills** - *Advances in Parahydrogen-Enhanced Nuclear Magnetic Resonance*

**Min Zhang** - *Applications of Metal Nitride Nanostructures in Stabilising High Energy and High Capacity Battery Systems*

**Stephanie Chapman** - *A spectroscopic investigation of the structure and interactions of hierarchical zeotype catalysts for the Beckmann rearrangement*

**Lucas Garcia Verga** - *Computational studies of metallic nanoparticles applicable to Heterogeneous Catalysis*

**Benjamin Jeffries** - *The Influence of Aliphatic Fluorination on Lipophilicity*

**Alexander Keeler** - *Molecular Orientation and Reactions Probed via SERS*

**Hamid Khan** - *Fabrication and Characterisation of Inorganic Monolayers for Semiconductors and Devices*

**Robert Laverick** - *Spin crossover based functional devices: Molecular switches and sensors*

**Andrew Leach** - *Oxygen Sensing and Oxide Formation: Optimisation and Novel X-ray Studies*

**Alexander Maryan-Instone** - *Novel Hybrid Reactivators of Acetylcholinesterases Inhibited by Organophosphorus Chemical Warfare Agents*

**Catrin Sohrabi** - *An ultra-high throughput droplet microfluidics platform for the generation and screening of SICLOPPS cyclic peptide libraries in vitro*

**David Wheatley** - *Syntheses of (+)- Beta-isosparteine and (+)-Sparteine from Syn and Anti Beta-amino Esters*

**William Hale** - *Applications of Microfluidics in Nuclear Magnetic Resonance*

**MPhil awards:**

**Matthew Jenner** - *Synthesis of organic chromophores for use in electro-optic polymers*

**Ting Shi** - *Modified oligonucleotides target the IRES in c-Myc to control gene expression*

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## Congratulations

Congratulations to Gabriela Hoffman (nee Sitinova) on your wedding, wishing you many happy years of married life.



## Celebrations and Congratulations Ali Tavassoli – Curve Therapeutics

Curve Therapeutics is a spin-out company started from Ali Tavassoli's lab and which began operating on the 1st of July this year.

The company will commercialise the molecules discovered in Ali's lab towards clinical trials, and use the high-throughput screening platforms developed in Ali's lab to discover inhibitors against some of the most challenging targets in cancer.



## UoS Three Minute Thesis Grand Final 2019

The 3MT Grand Final was held on Wednesday 15th May during the Festival of Doctoral Research.



Congratulations to Gabriela Sitinova from the School of Chemistry, who took the University of Southampton 2019 Three Minute Thesis Winner's title for her research exploring new methods of inserting and studying atoms within a spherical Buckminsterfullerene molecule, or 'bucky-ball'.

These endohedral fullerenes contain phenomenal quantum properties that are studied by Southampton's Magnetic Resonance Group. Gabriela also jointly won the People's Choice award.

You can watch her 3MT video for the National Semi-Final here:

<https://www.youtube.com/watch?v=TXX86v6PCok>

## Southampton marks 50 years of excellence in Electrochemistry research and education

Scientists from our University have celebrated the 50th anniversary of a summer school teaching modern electrochemical techniques to academics and industry professionals across the globe.



Our University has been undertaking teaching and research in electrochemistry since the early 1960s, hosting its inaugural summer school in 1969.

*Instrumental Methods in Electrochemistry* is run by Southampton's Electrochemistry Research Group and teaches the application of techniques to problems in chemistry, biology, sensors, materials science and industrial processing.

The popular one-week residential course has been attended by over 1,000 delegates in the past half century.

Dr Guy Denuault, Summer School organiser, said:

"Electrochemistry touches many areas of science and is attracting significant interest because of the need to develop advanced technologies for energy storage and conversion. I have been coordinating the course for over 20 years and am proud that we have maintained such a high standard that we no longer need to advertise the course. Many research collaborations have evolved from discussions during the course and the school's teaching will continue to shape excellence in our field over the coming decades."

The electrochemistry summer school is targeted at higher education learners with a masters in science or above and industry professionals seeking continuous personal development.

## Southampton chemist solves Nobel laureate's 120-year-old crystal mystery: Terry Threlfall

A retired chemist at the University of Southampton has unravelled the 120-year-old mystery of a crystal that appeared to defy the laws of thermodynamics. The curious compound, acetaldehyde phenylhydrazone (APH), had baffled scientists in the late 1800s when experiments found it would melt across a range of different temperatures. The puzzle was first published by German chemist Emil Fischer – who would go on to win the Nobel Prize.

When Causse, a French chemist, observed different results a public debate raged in the literature for a decade or so. The saga was then forgotten for over a century until it was dusted off by Terry Threlfall, a Visiting Scientist in the crystallography group here in the School of Chemistry for the past 20 years.

A repeat of the historic experiment confirmed that identical batches of the crystalline solid would melt at anywhere between 40°C - 101°C, prompting a decade-long international quest to solve the 19th century conundrum. The laws of thermodynamics state that solids must be structurally different to possess different melting points, however modern investigations through X-ray diffraction, nuclear magnetic resonance and IR spectroscopy all proved the crystalline samples to be identical.



Terry, along with Simon Coles and international colleagues, finally concluded that APH is the first recorded example of a solid that melts into two distinct liquids, with the process affected by a contamination so subtle that it is almost untraceable. The remarkable findings have been published in *Crystal Growth and Design* and come to the attention of the wider scientific community through a commentary in *Physics Today* and *Chemistry World*.

“It is just exceedingly satisfying to be able to understand such an ancient puzzle, especially one which baffled such an eminent scientist who became a Nobel Prize winner,” Terry

says. “The observation of such behaviour will be exceedingly rare because it depends on the molecules in the crystal and in the liquid having different geometries, which is unusual. Furthermore, it depends also on the conversion by acid being both possible and rapid.”

Terry first discovered the mystery in 2008 when looking through an 1896 edition of the German language scientific journal *Berichte der Deutschen Chemischen Gesellschaft*. The mystery piqued his interest and inspired a 10-year investigation that included consulting Dr Hugo Meekes of Radboud University in the Netherlands and Dr Manuel Minas da Piedade of the University of Lisbon in Portugal.

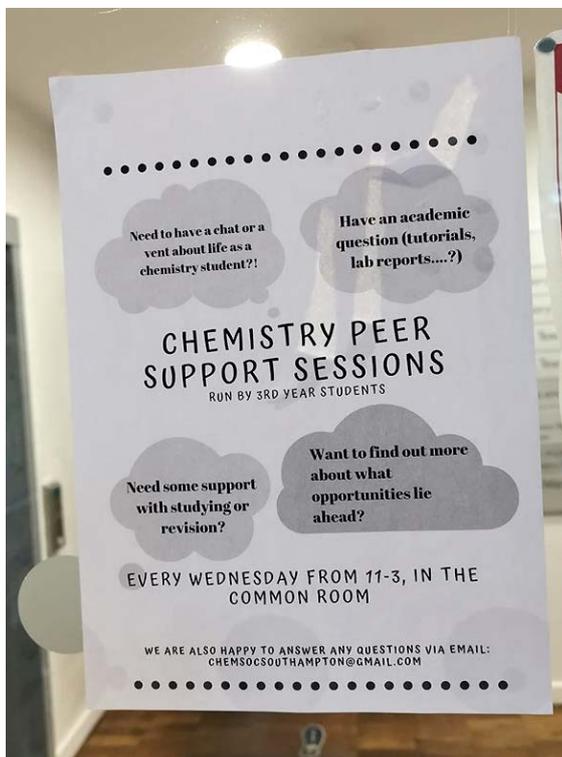
“If an element or compound can exist in two or more distinct crystalline forms, then each form will have different Gibbs energies and melt at its own distinct temperature,” Professor Simon Coles explains. “In this case, the molecules of the crystal are in the *cis* geometry and melt to an identical geometry in the absence of acid at around 100°C. However, in the presence of even a trace of acid, the molecules convert on melting to the *trans* geometry, with groups pointing away from each other. This liquid has a lower Gibbs energy and is more stable, so the melting point becomes about 65°C.

Simon comments further “I really must acknowledge the contribution and insights that our Emeritus Professors and retiree Visiting Scientists provide - they are enormous and invaluable, imparting wisdom and working tirelessly to support not only current academics, but their groups and the many project students that have worked within them. I have been at Southampton for over 20 years and during that whole time Terry has been working in his retirement as a visitor to the group. I estimate that Terry has supervised over 70 project and graduate students and visitors, many of whom have been authors on journal articles arising from this kind of work. This story also illustrates that there is fundamental, important science in the old literature that is not explained – Terry’s encyclopaedic knowledge of the literature, curiosity and tenacity are the sole reason this 120-year-old argument is finally resolved.”

## Undergraduates: ChemSoc

ChemSoc are the student-run society for Southampton University Chemistry students. You will find information on socials, sports teams, activities and useful contacts on the ChemSoc website <https://www.susu.org/groups/chemsoc>

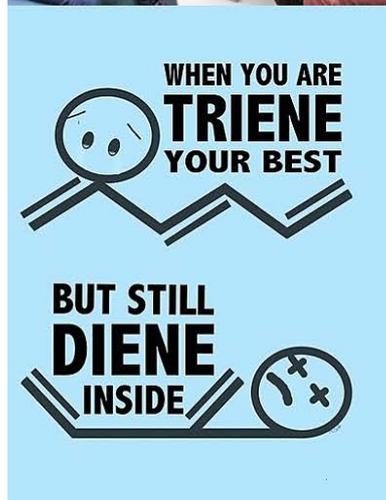
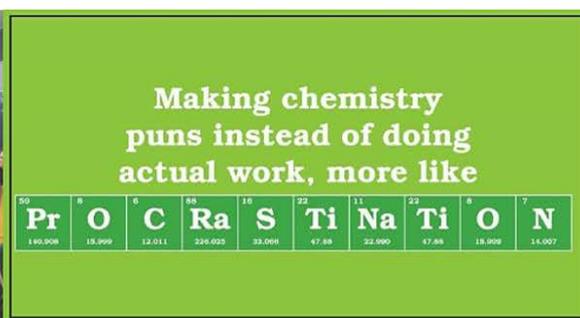
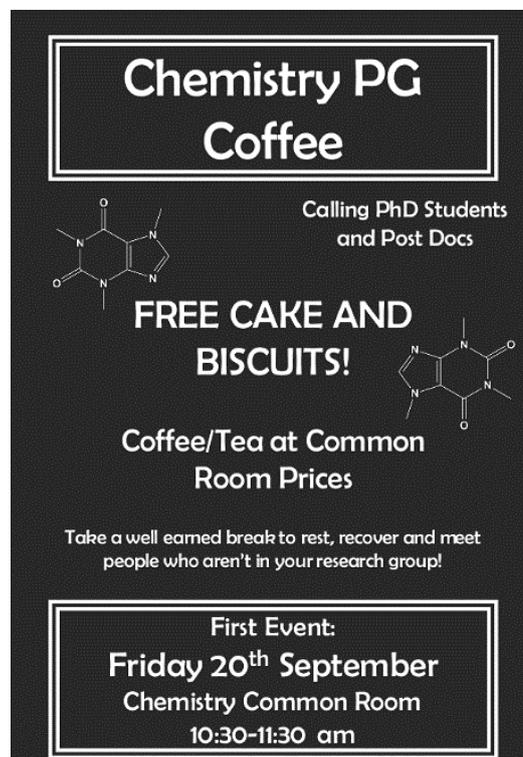
See poster below for Chemistry peer support sessions



## Chemistry Postgraduate Coffee Mornings

The Chemistry Postgraduates are organising coffee mornings with free cake and biscuits, an opportunity to take a break and get together with fellow students and staff.

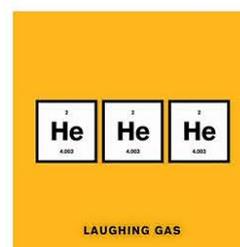
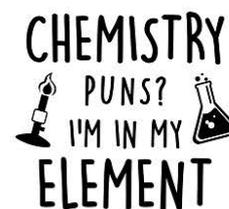
The first event was a huge success, keep a look out for the next one.



## The Postgraduate Committee Needs You!

Laura Powell [Laura.Powell@soton.ac.uk](mailto:Laura.Powell@soton.ac.uk) Cyrielle Doigneaux [Cyrielle.Doigneaux@soton.ac.uk](mailto:Cyrielle.Doigneaux@soton.ac.uk)

- Get to know other PhD students
- Represent your mates
- Build relationships across the University
- Help run events



## Calling all Post-Docs:

### The Concordat in FEPS and Chemistry

On **October 22<sup>nd</sup>** the Faculty will be running a Concordat launch event to officially start Faculty-wide sessions aimed at supporting our early career research and teaching staff. The sessions will be in 34/3001 and will start with an introduction from the Dean, followed by a 'myth-busting' session from HR covering aspects of promotion and your role within the University. The full draft programme is outlined below. We hope to see many of you there.

13:00	<b>Welcome and Introduction</b> Prof Bashir Al-Hashimi (Dean) Prof Mark Sullivan (Head of P&A and Faculty EDI Champion)
13:15	<b>What does it mean to be a Post-Doc? Myths and Realities</b> Karen Payso (HR)
13:40	<b>Training and Support in Southampton</b> Dr Julie Reeves (CHEP)
13:55	<b>Faculty Concordat Plans and your Thoughts</b> Dr Russell Minns (Chemistry Concordat Champion)
14:15	<b>Tea, Cake and Networking</b>

If you would like to attend, please register on the link below for catering purposes:

<https://www.eventbrite.co.uk/e/feeps-concordat-launch-tickets-74129387995>



#### The Concordat within Chemistry

As part of our efforts in Chemistry, we are continuing to build a training programme focussed on our post-doctoral staff. We now have three main events which we aim to run each year focussed on self-awareness, effective communication and understanding the grant funding process which are open to all. Details of the Grant Workshop Sessions from last month and the upcoming "Pitching Persuasively" sessions are outlined below. Details of the next "Develop from Within" sessions, which will start in February 2020, will be circulated towards the end of the year.

#### EPSRC Grant Workshop (September 17<sup>th</sup> 2019)

The grant workshop gave the participants chance to read and rate several grants chosen from a selection of both successful and unsuccessful applications from the School of Chemistry.

This full day experience contained an introduction to research and innovation services, some thoughts from experienced panel members in the morning session, followed by an afternoon where the proposals were discussed and ranked, with the final ranking order compared with the final funding decisions reached at actual panels.

The workshop gives a really valuable insight into the review and ranking process, as well as exposure to recently submitted proposals. Another workshop will run in Autumn 2020, so look out for opportunities to attend next year.

*"It was an excellent opportunity to have access to "real" proposals"*

*"It was really a great learning and knowledge sharing experience"*

#### Pitching persuasively (December 17<sup>th</sup>-18<sup>th</sup> 2019)

In December we will run an exercise-based workshop for Post-Docs aimed at selling your work and skills beyond academia. This could be as part of job application, public engagement or wider funding bodies than the traditional research councils. The sessions are limited to a maximum of 20 people and will run from early afternoon on the 17<sup>th</sup> December until lunch on the 18<sup>th</sup>.

If you would like to take part in this session please email Russell Minns to register your interest [r.s.minns@soton.ac.uk](mailto:r.s.minns@soton.ac.uk)

# Work Life Balance: An interview with Lynda Brown and Marina Carravetta

## Part 1: Pregnancy

**Q: Were there any the factors in your work that affected your decision to have a family?**

M: I married late and my partner and I wanted to start a family quite soon after. I had a fellowship at the time so was in a secure position, with aspirations of permanent employment after the fellowship.

L: After my first child I changed jobs. I was offered full time position in a company whilst pregnant, however after my child was born, I wanted to work part-time and they were unable to accommodate this. With my second child I was a PDRA between contracts, it can be very hard to find the right time in a career.

**Q: Did funding/stability in your role play a part?**

L: I guess for me the lack of permanency played a part in deciding to have a baby. After having my children, I secured a Royal Society Fellowship providing me with a long-term contract and more stability.

M: The independence of my position enabled me to manage my time around being pregnant and in my child's early months. I was able to come back to work full-time, after my maternity leave, the close proximity of the University nursery allowed me to see my child regularly and keep breast feeding throughout.

**Q: How long were you able to remain active in the lab once you were pregnant? What procedures do you have to go through?**

L: Working in organic labs carries many potential risks from solvents and chemicals. I left the laboratory pretty much straight after I found out I was pregnant. I wrote papers for most of my pregnancy, so it was still a productive period.

M: I worked up until one week before my due date because I wanted to have as much time as possible after giving birth. It was the first time someone in my section had been pregnant so there was uncertainty, but working together with David Kinnison (the Chemistry Safety Officer) we made sure that everything was safe. This knowledge was really valuable when the next person in my area became pregnant.

**Q: Did you feel any pressure to come back sooner or work from home during the maternity leave?**

L: As I was between contracts, I didn't feel any pressure apart from financially. I did work from home writing papers. I wasn't paid, but I knew I wanted to go back to research so I was happy to do this; it was purely voluntary.

M: I came back straight away but as I was sleep deprived, I noticed my health suffering. I got in touch with occupational health and they were able to help me manage the stress. Now the process is handled a lot better, I was interviewed about my experience and that helped to shape some of the new guidelines in place for women returning to work after pregnancy.

L: Whilst on leave your line manager should arrange 'keep in touch' days so that you discuss and plan your return and you should be in contact on a regular basis throughout your maternity leave.

**Q How did maternity pay work for you?**

M: I received 6 months of full salary and then the next 2 months were less. I took 8 months of maternity leave.

L: I only took statutory maternity pay, which at the time was not a lot. I took two one-year breaks, staying at home during the first year of both my children's lives.

M: HR can advise further, and future mothers should find out from the HR team what they would be entitled to.

<https://www.southampton.ac.uk/hr/index.page>

**Q: Do you have any advice for expectant mothers in research/supporting roles?**

L: Time away from the laboratory is not always negative, it can be an opportunity to think about career direction, to write papers or grant applications. I always thought I would go back to work full time, I never even questioned that I wouldn't. Then, when I had my child, I felt very differently about working full time; I wanted more time with them. Think about the role you are in, will your role allow you to work flexibly, and have conversations about your return whilst you are pregnant.

M: Plan ahead, if you want your child to go to nursery you need to apply for a place early. I applied for a place on the campus nursery for my child when I was 3 months pregnant, otherwise there would not have been a space for them. For me, it was important for my children to go to nursery because I wanted them to speak good English as we do not speak English at home.

For more information on pregnancy and maternity:  
[https://www.southampton.ac.uk/diversity/pregnancy\\_and\\_maternity/index.page](https://www.southampton.ac.uk/diversity/pregnancy_and_maternity/index.page)

## Equality, Diversity and Inclusion: Wellbeing

The Equality, Diversity and Inclusion (ED&I) committee in Chemistry is a thriving team of students, technicians, early career researchers, professional service members and academic staff. It was originally formed as part of the Athena SWAN charter that recognises the commitment to advancing women's careers in science, technology, engineering, maths and medicine (STEMM) employment in higher education and research. Founded in 2005, Chemistry has been involved with Athena SWAN since 2006 and received a Bronze award in 2013, Silver in 2014 (the first department in the University), and a second Silver in 2017. The committee has now expanded to improve and promote equal opportunities across all protected characteristics for staff and students in Chemistry.

We recognise the importance of wellbeing, especially as the new academic year begins. In 2017, Universities UK (the representative organisation for UK universities) published a framework for mental health, 'Step-Change' (<https://www.universitiesuk.ac.uk/stepchange>) which proposes a whole university approach to looking after students and staff. The framework makes mental health a 'strategic priority' and calls for early intervention, with campaigns against stigma and mental health literacy training for staff and students. At the UoS, Health & Wellbeing is led by the Health, Safety & Risk Directorate.

[https://www.southampton.ac.uk/edusupport/mental\\_health\\_and\\_wellbeing/index.page](https://www.southampton.ac.uk/edusupport/mental_health_and_wellbeing/index.page)

<https://sotonac.sharepoint.com/teams/HealthWellbeing/SitePages/Mental-Health---Support.aspx>

The ED&I committee has been working on a number of initiatives to promote wellbeing for all our staff and students, including wellbeing talks for first year undergraduates, a School code of conduct, new posters to raise awareness and more social events to increase our sense of community.

Chemistry also has its own Wellbeing Champion, Mrs Sally Dady. The role of Wellbeing Champion in the University is new, but ultimately it is to distribute information for campaigns regarding wellbeing, and be a point of contact for anyone who needs further help. Sally is centrally located in B29, 2069.

On the **22nd October**, the RSC is running a workshop event at Southampton to help individuals better understand the signs and symptoms of mental ill health and know how to communicate with people they are concerned about.

## RSC event for members

**Improve Your Understanding of Wellbeing and Resilience**

**22 October 2019 18:00-21:15, Southampton, UK**



To book:

<http://www.rsc.org/events/detail/40379/improve-your-understanding-of-wellbeing-and-resilience>

Could you spot the early warning signs of distress, anxiety or depression in yourself or your colleagues?

Would you feel able to talk and listen to someone experiencing these symptoms? If not, then help is on the way with this course.

Sessions are strictly limited to first come, first served so register today to guarantee your place. Please note the evening incorporates a buffet supper.

## Equality website

<https://www.southampton.ac.uk/chemistry/about/Equality/index.page>

or

Click through from front page of Chemistry website



For further information on all matters concerning ED&I please visit our ED&I webpages or contact Dr Lynda Brown [L.J.Brown@soton.ac.uk](mailto:L.J.Brown@soton.ac.uk)  
<https://www.southampton.ac.uk/chemistry/about/Equality/index.page>

## Q & A with Diana Dias Fernandes



### How did you come to work in Chemistry?

I completed my BSc degree in Biochemistry at the University of Porto in Portugal and had a couple of jobs in administration and as a pharmacy assistant until I found a post as a laboratory technician with a pharmaceutical company. Unfortunately, the poor economic situation in Portugal meant that only short-term contracts were available, and these were very difficult to find. I moved to the UK in February 2013 and started looking for jobs in the chemistry/biology field until I started working part-time in Chemistry in June. I eventually became a full-time technician in the organic teaching labs in B29 Level 5 and have worked there ever since.

### What is the best thing about working here?

There are many good things about my job. I am glad that I am using the skills gained in my degree and I think the University is a good place to further develop those skills. I am fortunate to have been promoted and also won several awards since I have been here, a VCs award in 2014, a volunteering award for Science Day in 2016 and more recently the FEPS Dean's Award for Technical and Experimental Staff earlier this year "In recognition of excellent service to UG students in the teaching laboratory and good citizenship, making a significant contribution to improved practices in the workplace including good ideas for the current laboratory refurbishment". I like interacting with people and particular enjoying watching students go through their degree and then move on to successful careers. I also found that the University was very supportive when I went on maternity leave and it has good policies to support parents when returning to work.

### What is the worst thing about working here?

The job can be stressful at times and the recent refurbishment of Building 29 has certainly been difficult! I also find that sometimes your input on important decisions is requested but then seemingly ignored, but I suppose that applies to all of us.

### What do you do when you are not working?

I have 2½ year-old twins Guilherme and Jorge and they certainly take up most of my free time. If I do get a chance for some "me" time, I enjoy reading fiction and going to the cinema, I also enjoy walking and travelling to new places.

## 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:

Salil Putatunda, Juan V. Alegre-Requena, Marta Meazza, Dominika Rohařová, **Pooja Vemuri**, Ivana Císařová, Raquel, P. Herrera, Ramon Rios, and Jan Veselý - Proline Bulky Substituents Consecutively Act as Steric Hindrances and Directing Groups in a Michael/Conia-Ene Cascade Reaction under Synergistic Catalysis *Chem. Sci.* **2019**, *10*, 4107-4115  
DOI: 10.1039/C8SC05258A

Marta Meazza, Gabriela Sitinova, Cecilia Poderi, Michele Mancinelli, **Kaiheng Zhang**, Andrea Mazzanti and Ramon Rios - Synergistic Catalysis: Highly Enantioselective Acetyl Azaarenes Addition to Enals  
*Chem. Eur. J.* **2018**, *24*, 13306-13310  
DOI: 10.1021/CL400578C

Xin Wu, **Jennifer R. Small**, Alessio Cataldo, Anne M. Withecombe, Peter Turner, Philip A. Gale - Voltage-Switchable HCl Transport Enabled by Lipid Headgroup-Transporter Interactions  
*Angew. Chem.* **2019**, *42*, 15142-15147  
DOI: 10.1002/anie.201907466

George Devitt, **William Rice**, Anna Crisford, Iris Nandhakumar, Amrit Mudher and Sumeet Mahajan - Conformational Evolution of Molecular Signatures during Amyloidogenic Protein Aggregation, *ACS Chemical Neuroscience* **2019** (Accepted)  
DOI: 10.1021/acschemneuro.9b00451

Matthew E. Potter, **Lauren N. Riley**, Alice E. Oakley, Panashe M. Mhembere, June Callison and Robert Raja - The influence of porosity on nanoparticle formation in hierarchical aluminophosphates  
*Beilstein J. Nanotechnol.* **2019**, *10*, 1952-1957  
DOI: 10.3762/bjnano.10.191

## Beyond Chemistry

### Mastermind: Evan Lynch

I'm a PhD student in Dr Peter Wells' group, just starting third year, researching tailored nanoparticle catalysts produced via the controlled reduction of metal-organic frameworks.

I applied to Mastermind after getting some recommendations from friends who had also been on the show before, and after seeing it on TV for years decided it would be fun to have a go for myself.



My specialist subject was The Novels and Novellas of Gabriel García Márquez - he's a Colombian Nobel Prize-winning author probably most famous for One Hundred Years of Solitude, but my favourites are Chronicle of a Death Foretold and No One Writes to the Colonel. He's one of the best examples of the magical realism genre - incorporating supernatural elements into his stories to use as allegories for real-life events.

The whole experience of the show was brilliant - it's really quite intimidating when you sit down in the chair for the first time and all the studio lights go down, but you end up with a massive adrenaline rush when the two minutes are up.

I feel I was fortunate enough to have a few lucky guesses during my general knowledge round and win the episode, so I'm looking forward to being back on TV in a few months for the semi-finals.

(These should be aired in March/April but I don't have confirmation yet - there are many weeks of first-round games to show before then).

### University Challenge: Steve Barnes

Since I started studying chemistry at the University of Southampton back in 2012, one thing that was always on my to-do list was to appear on University Challenge. I've always enjoyed quizzes and have watched the show almost religiously since I was at secondary school. Seven years later, two degrees down and now approaching the end of my PhD in chemical education, I can finally say that I've achieved that goal!



Having been selected for the team and then getting through the auditions to the televised rounds, I definitely felt that I had big shoes to fill. The last three Southampton teams to appear on the TV have all advanced to at least the second round, and have all featured a chemist or natural scientist.

The experience itself was unlike anything I have done before. Entering the studio, seeing Jeremy Paxman himself wandering around and chatting with the production crew, seeing our names on the desk...it was all very surreal. Once the cameras start rolling and the lights are up, you just have to get on with it and hope that you know some of the answers. That being said, part of you really hopes that your own subject doesn't come up. There's nothing worse than not knowing answers to questions you should know the answer to, it can almost feel like an exam!

Our first-round match against Goldsmiths started off the worst way imaginable, with our opponents seemingly knowing every answer and us just staring at each other blankly for the first ten minutes. Thoughts started running through my head of being the worst team to ever compete on the show! But once we got our first answer in, we settled into a rhythm and became more comfortable, allowing the nerves to subside a bit. In what felt like the blink of an eye, the show was over, and we were incredibly surprised to have clawed our way back into a winning position.

Being given the opportunity to represent the University on the show alongside a fantastic team was an extremely positive experience, and despite the high stress and high pressure I would do it again in a heartbeat. Josh, Rory, James, and our reserve player Ryan, are delightful people, and numerous pub quizzes beforehand evidently paid off. I am very grateful to have competed alongside them and to have made some terrific friends.

I'm looking forward to the next round of the competition, and I hope you'll be there supporting us again.