

# Chemistry Newsletter

Autumn 2018

## Inside your Newsletter:

- 1 Chemistry Building News:  
Refurbishment  
Important dates
- 2 Mandy Pervin  
Open Days
- 3 Athena Swan
- 4 Staff Engagement Survey 2018  
Celebrations & Congratulations
- 5 More Celebrations &  
Congratulations
- 6 Awards & Graduation  
PhD Awards
- 7 More PhD Awards (*cont. on pg8*)
- 8 Chemistry Publications:  
UG contributions to research  
papers  
Chemistry World
- 9 Chemistry Staff News  
New Technician Team.  
Prof Jim Emsley and  
Prof Geoffrey Luckhurst
- 10 Q&A with The Stores Team  
Beyond Chemistry
- 11 Retirement: John Fosbraey

## Important Dates

### University Open Days

Sat 13<sup>th</sup> Oct 2018

### Postgraduate Open Day:

Wed 5<sup>th</sup> December 2018

### Freshers:

Sat 22 Sept 2018 – Mon 1 Oct 2018

### Semester 1:

Mon 1<sup>st</sup> Oct 2018 to Sat 26<sup>th</sup> Jan 2019

### Christmas vacation:

Tues 18 Dec 2018 - Fri 4 Jan 2019

### Semester 1 exams:

Mon 14<sup>th</sup> Jan to Fri 25<sup>th</sup> Jan 2019

### Semester 2:

Mon 28<sup>th</sup> Jan 2018 to Sat 15<sup>th</sup> June 2019

### Easter Vacation:

Mon 1<sup>st</sup> to Fri 26<sup>th</sup> April 2019

## Chemistry Refurbishment Gets Go-Ahead

The Building 29 refurbishment project is gathering pace following University approval for >£12m investment. This exciting project includes the complete re-enveloping of the existing building in a solid aluminium cladding. Key to the success of the project will be the choice of finishes and colour, an example of one of the possible cladding colour schemes is shown in the computerised images. The newly clad building will provide modern



aesthetics whilst respecting the original design. There will be significantly improved thermal properties thanks to new insulation and modern doors and windows. Solar gain from the large number of windows has also been considered with solar control glass incorporated into the scheme.

The existing entrances also fall within the project scope, with the entrance nearest Hartley Avenue being extended and re-opened, providing student access to the levels 4 and 5 teaching laboratories. The lower level access to the link building between B29 and B30 will be improved to provide the principal entrance to B29. The entrances and lower levels of the building are being developed to provide more dynamic and interesting options.

Internally, improvements will be made to signage and staircases, but the major internal refurbishment works will be to the level 4 and 5



teaching labs. They will be completely stripped out and replaced with modern state of the art facilities incorporating the latest technologies and enabling further energy savings.

The project will be happening during 2019 with the major internal refurbishment of teaching laboratories being undertaken in the summer months.

Any questions or comments please email Mr Gary Pook ([G.R.Pook@soton.ac.uk](mailto:G.R.Pook@soton.ac.uk)).

## Chemistry celebrates the life of a valued friend and colleague

On Friday the 21<sup>st</sup> September 2018, we lost a valued colleague and a dear friend. Mandy, as she was known to most of us, was passionate about the University of Southampton: the education we provide, the research we carry out, but most importantly she cared about the people that work here and the students we support. Mandy started at the UoS in 1996 and worked in many different Departments, Schools and Faculties across the University over the years, including supporting Chemistry for several years in her role as Head of Faculty



Operations in the Faculty of Natural and Environmental Sciences. Her intense dedication, commitment and passion have driven the continued development and success of the University right through to these last weeks.

Mandy's passion was infectious and her selflessness had no limits. She brought life and character into the hardest tasks and the most difficult of times. She cared for everyone she came into contact with, took time to consider them and always had their best interests at heart. Full of quick wit, optimism, a wonderfully distinctive laugh, a great sense of humour and an infectious smile. This rare combination meant that everyone who came into contact with her could not help but warm to her.

We will all miss her dearly, she was an extraordinary person who celebrated life fully and loved her friends, colleagues and the University of Southampton. Our thoughts and best wishes go out to her family and friends.

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## Open Days

On the 6<sup>th</sup> and 7<sup>th</sup> of July in glorious summer weather the University held the first of the 2018 Open Days, with over 17,000 visitors to the campus, despite competition from the World Cup! In Chemistry Geoff Hyett orchestrated a team of 9 staff members and 20 student volunteers who helped to welcome 385 guests over the two days.

We held a number of events for the visitors, with highlights including the chemistry subject talk, where a rotation of staff including Gill Reid, Phil Bartlett and Brian Hayden gave an overview of the department and the benefits of taking a degree in Chemistry. The potential applicants were also taken on a tour of the department, ending in the Level 5 teaching lab with the *Research Showcase*. This proved very popular, with many visitors spending half an hour taking part in the demos and talking to the research students.

Admissions tutor Geoff Hyett commented on the event, "Both days were a great success, and I want to extend my thanks to all the staff and students who

put in so much effort and enthusiasm, and also to the marketing team who did a tremendous job preparing the building".



*PhD student Greg Limburn demonstrating the Meissner effect for visitors*

## Athena Swan

### Equality and Diversity Recognised with a Second Athena SWAN Silver award

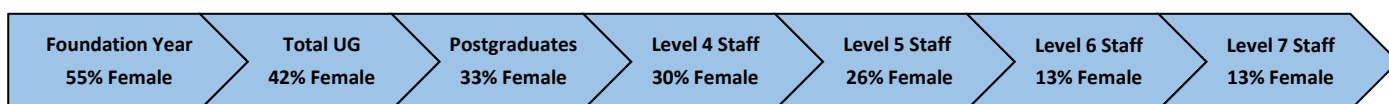


Chemistry has been awarded its second Athena SWAN (Scientific Women's Academic Network) Silver Award, becoming the **first department at the University of Southampton to achieve this status twice**.

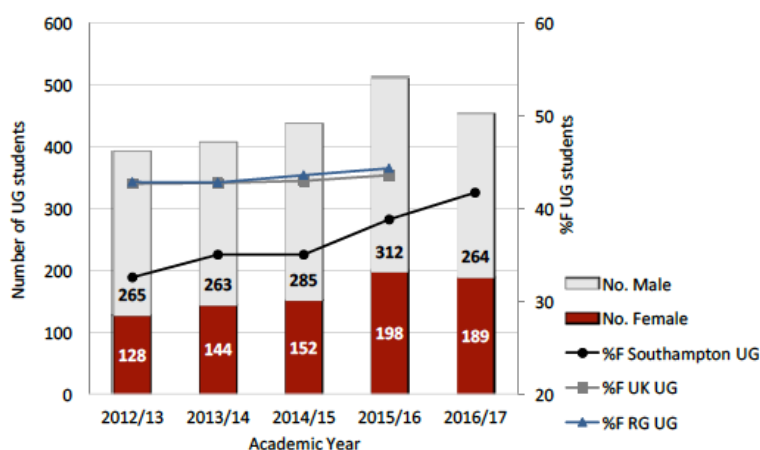
Since our first Silver award in 2015, Chemistry has strived to embed a progressive and equality-driven environment in which all members of the department can thrive, whether staff or student. Receiving this award for the second-time highlights Chemistry's continuing efforts to support the career aspirations of female chemists, whilst eliminating gender bias and promoting opportunities for all.

**Professor Gill Reid, Head of Chemistry** comments: "I am both delighted and proud that Chemistry at Southampton has been successful in receiving an Athena SWAN Silver Award for the second time. This really testifies to the values around equality, diversity and inclusion that we hold in Chemistry."

Examples of data included in our Athena SWAN submission:



The schematic above depicts our 'leaky pipeline' (2017 data); showing a gradual decline in percentage female throughout the career stages and highlighting the need for action.



Chemistry's percentage female total undergraduate shows a significant and steady rise from 33% to 42%, to just below the national and RG average (2012/13 to 2016/17). This directly correlates with the percentage total female entrants, which has increased over the same period (30% to 47%), predominantly Masters (28% to 48%).

If you are interested in getting involved or would like more information about Athena SWAN or the ED&I committee contact Dr Lynda Brown, [ljb2@soton.ac.uk](mailto:ljb2@soton.ac.uk)

## Staff Engagement Survey 2018

The Staff Engagement Survey 2018 will be launched this October. This survey is important as it gives staff an opportunity to have a say in how they view working in the University, so that the major issues can be identified and things can be improved. The survey will follow a similar format to that run in 2016, but some questions have changed to make the survey clearer and the results more useful.

Since the 2016 survey, Chemistry has been working on the key areas that were identified both through talking to all our staff and examining and understanding our survey results.

In response to staff feedback that more should be done to increase a sense of community, value and recognition, we have created this departmental newsletter. Published twice a year, the newsletter is intended to enable all members of the department to share their own individual successes, as well as team achievements, whether personal or professional. It is also an opportunity to share our stories and inform members on departmental updates.

Comments from staff identified that improving the work-life balance is an area of concern for all, in part due to email overload leading to a long hours culture. To begin to address this we set out guidelines around the use of email for both emails from students and staff to staff emails, especially concerning expectations for responding to emails sent/received outside of core hours. These guidelines have now been adopted by many departments across the University.

Scores and feedback from across the faculty raised concerns about communication, therefore we have worked together to design a workshop entitled 'Honest Conversations' which focuses on improving professional behaviour and communication. This workshop was trialled in April 2018 and a subsequent iteration was run in July. Work is continuing to refine and roll out this workshop to all staff.

## Celebrations and Congratulations

**We are pleased to announce** that Professor Ali Tavassoli has been awarded the Royal Society of Chemistry's 2017 Medimmune Protein and Peptide Science Award.

Ali, a professor of Chemical Biology, received the [RSC's award in recognition](#) of his work with genetically-encoded cyclic peptide libraries called SICLOPPS and their use for identifying inhibitors of a variety of protein-protein interactions.



*Professor Ali Tavassoli*

**On 24 May 2018, David Wheatley** won the Doctoral College Director's Award 2018 in the category Education: Recognising an exceptional contribution to teaching and learning for his dedication in the education of our undergraduate students in the teaching lab as well as when providing feedback to them.



*David Wheatley*

Like some other very good teaching assistants over the past few years, David has provided exceptional demonstrating support to undergraduates in years 1, 2 and 3 and provided extensive constructive feedback to students on their submissions.

This is best highlighted by two student comments from 2018:

*"Hi Thomas,*

*I was just wondering if you could thank the person that marked my report as the feedback was really helpful. The summary of feedback was very thorough with comments throughout."*  
*2nd year chemistry undergraduate.*

*"Hey Thomas,*

*I've just got back my feedback from the last [...] and thought I should let you know that it had the most detailed and helpful feedback I've ever received, by about a mile."*  
*2nd year chemistry undergraduate.*

David works on his PhD project with Richard Brown and both deserve praise for their support to chemistry education. It is very encouraging to see supervisors who recognise that the teaching assistant role both as project student supervisors or laboratory demonstrators, provides valuable transferable skills and promotes their candidates' confidence and standing in future jobs.

## More Celebrations and Congratulations

**Congratulations to** Sam Thompson who has been awarded Senior Fellowship of the Higher Education Academy (HEA); and to Steve Barnes, PhD student with David Read, was awarded Associate Fellowship of the HEA.

These successes follow on from Matt Potter's AFHEA and Peter Wells' FHEA awards earlier in the year and is really good news, positioning Chemistry as a leader in this area - thanks also to those staff who have provided mentoring and support. This is real evidence of the value of working as a team!

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### SUSU awards this year:

#### Best Academic Support:

##### Dr Mark Light – X-Ray Diffraction Manager

Mark has been described as “extremely patient and understanding” and will answer any question in detail, regardless of whether it is required knowledge for the course. He encourages his students to read more about the topic and is always happy to suggest books. One nominator wrote: “Although it is their job to teach and support us, I feel that the level of support and help given has exceeded the remit”.

#### Best PG/UG Demonstrator or Teaching Assistant:

##### Steve Barnes – Postgraduate Research Student in Chemical Education.

Steve has been selected as the winner for this award for being “friendly and approachable at all times”. He has set up extra support sessions for his students and always takes time out of his own day to help them.

#### Neil Wells was Highly Commended in the Most Engaging Lecturer category.

#### Academic Representatives:

##### James Pearce - Year 4 Course Representative for Chemistry.

James has done a great job in collecting opinions and feedback from the chemistry cohort, making sure ideas were discussed at SSLCs and passing on any feedback. James also worked hard to get more reasonable printing credit for chemistry students.

##### Nathaniel Davey - Year 4 Course Representative for Chemistry.

Nathaniel has been excellent at listening to students' opinions and working with lecturers to improve their university experience. He has been described as “very friendly, open and proactive”. He has also worked hard to allow chemistry students more flexibility on when they could work on their research projects during the exam period.

## Doctoral college Education award 2018

The Festival of Doctoral Research is about celebrating and showcasing the University's excellent doctoral research, but it also recognises the exceptional achievements of our researchers beyond their particular research projects.

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### Chemistry Research Fellow receives funding for cancer research in Brazil

Chemistry Research Fellow, Dr Frank Longford, has been awarded funding by the University of Southampton's Global Research Initiator Scheme. Frank completed his PhD in 2017, and now carries out research based around computationally modelling emergent behaviour in the natural world. On completion of his PhD, Frank was awarded funding for a 1 year fellowship at the University through the Engineering and Physical Sciences Research Council (EPSRC) Doctoral Prize scheme, under the mentorship of Professor Jeremy Frey.

Frank applied for funding to visit the Universidade Federal de Minas Gerais (UFMG) in Brazil through the University of Southampton's Global Partnership Award Series, which has multiple scholarships and awards available for early career researchers looking to develop projects with international partners. While there he will work within the UFMG's Biophotonics Laboratory alongside physicists and clinicians to develop method of cancer diagnosis using collagen imaging.

Dr Longford said: “I'm thrilled to have been awarded funding to visit Brazil during August 2018, and to be able to apply my simulation work to help develop new methods to diagnose prostate cancer.”

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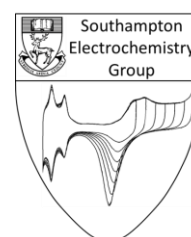
**Congratulations to Zhong Wang** who won the poster prize at the 22<sup>nd</sup> International Symposium on Fluorine Chemistry, Oxford (UK). This is the most prestigious fluorine meeting worldwide, and there were over 150 posters.

*Zhong Wang, Hannah Felstead, Neil Wells, Bruno Linclau\*, “Lipophilicity of Fluorinated Monosaccharides and Derivatives”*

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### Another successful Electrochemistry Summer School at Southampton

The Southampton Electrochemistry Group has just completed its 50th Summer School in *Instrumental Methods in Electrochemistry*. This year the event involved just over forty participants, including some from mainland Europe, India, South Africa and Australia.



**Chemistry was pleased to award** Early Career Researcher Dr Smaragda Lympelopoulou, working in the group of Dr Darren Bradshaw, a place at the 7<sup>th</sup> EUChEMS Chemistry Congress and the Early Career Symposium that took place this August.

“I am very glad that I was chosen by the RSC and the Chemistry Department to participate in these symposium. It was a nice experience and a great opportunity for me to attend these two very interesting events.”



Dr Smaragda Lympelopoulou

## Awards and Graduation

**Congratulations** to all our graduating undergraduate prize winners; these included:

William Browne: John Mellor Prize  
Georgia Cooke: Alan Carrington  
Karen Burstow: Judith Corker Prize  
Charles Turner: Progression Award  
Charlotte Bevan: A E Clarence Smith  
Karen Burstow: David Runciman Boyd  
George Chambers: MChem Poster Day Prize  
James Genders: MChem Poster Day Prize  
Peter Latchem: MChem Poster Day Prize  
John-Joseph Marie: MChem Poster Day Prize  
David Salazar-Marcano: Outstanding Research Placement Project  
Charlotte Bevan: R E Parker Project  
Alice Wreford: R E Parker Project  
David Salazar-Marcano: Roger Parsons Prize  
Angharad Jenkins: Ishbel Campbell Prize

### Faculty Merit Award winners:

David Salazar-Marcano, Karen Burstow, Robert Troup, Georgina Jeerh, James Craswell, Thomas Horgan, Charles Robertson, Matheus Rossetto, John-Joseph Marie, Charlotte Bevan, Charles Turner, Jamie D’Cruz, Zoe Guest, and Luke Webster



## PhD awards 2017/18

### Masters of Philosophy:

**Rebecca Ruth Mangham** – *Electrophoretic deposition of binder-free electrodes for lithium ion batteries.*

### PhD:

**Jolyon Aarons** - *Density Functional Theory Applied to Metallic Nanoparticles;*

**Faisal Ateeq Almalki** - *New Syntheses of the Macrocyclic Bisbibenzyl Natural Products, Riccardin D, Riccardin C, Polymorphatin A and an Unnatural Analogue: Formal Total Syntheses of Cavicularin and Asterelin A.*

**Yao-Pang Chang** - *Complexes of Group V and VI metals with soft donor ligand - towards reagents for early metal chalcogenide thin films.*

**Harriet Jane Clarke** - *Transmembrane Anion Transport: Investigating Mechanism and Selectivity.*

**James William Dibden** - *Lithium-Sulfur Batteries: an Investigation into the Electrolyte and the Intermediate Polysulfide Species Within.*

**Stuart James Elliott** - *Hyperpolarized Long-Lived States in Monodeuterated Methyl Groups and Singlet Scalar Relaxation in the Regime of Slow Quadrupolar Relaxation.*

**Andrew Foster** - *Development of a Novel Two-Hybrid System for the Identification of Cyclic Peptide Induced Protein-Protein Association.*

**Mariacarmela Giurrandino** - *Polyphosphate kinase from intracellular pathogens as a novel antibacterial target.*

**David Inwood** - *X-ray and electrochemical studies of bimetallic Pt-based oxygen reduction electrocatalysts.*

**Michael Matthew Jolly** - *Method Development in Biological Solid State NMR.*

**Eilidh Kathryn Leitch** - *Identification and Development of Novel Cyclic Peptide Inhibitors of IDOL Mediated LDLR Degradation.*

**Katherine Lennard** - *Evolution of cyclic peptide inhibitors of the Gag-TSG101 Protein-Protein Interaction involved in HIV budding.*

**Francis George James Longford** - *Modelling Surface Thermodynamics and Intrinsic Optical Properties of the Air-Water Interface.*

- Lucy Mapp** - *Novel Multicomponent Systems of Propyphenazone and Lonidamine: Characterisation, Physicochemical Properties and Quantum Crystallography Studies.*
- Nawel Mele** - *Exploring the conformational space of human fatty acid synthase inhibitors using replica exchange molecular dynamics.*
- Danai Panagoulia** - *Surface Enhanced Raman Spectroscopy of the Ionic Liquid - Metal Interface.*
- Joanna Patricia Pursey** - *Chemically tagged DNA probes for sensing of DNA biomarkers using lab-on-a-chip technology.*
- Jaffar Saleh Subaie** - *High-Throughput Synthesis and Screening of Chalcogenide Thin Films for Phase-Change Memory.*
- Michael Spooner** - *Anions & the Bilayer. Structural & Mechanistic Studies Towards Synthetic Anion Carriers for Therapeutic Applications.*
- Valerio Vitale** - *Computational methods for first-principles molecular dynamics with linear-scaling density functional theory.*
- Dharyl Charles Wilson** - *Development of New Cyclobutenone Rearrangements and their Application in Target Syntheses.*
- Thomas Wilson** - *The Development, Implementation, and Evaluation of Labdog - A novel Web-Based Laboratory Response System for Practical Work in Science Education.*
- Stuart Berry** - *The exploitation of fluorescence in the development of novel membrane transporters and chemical sensors.*
- Yung-Chun Lin** - *Electrochemical Surface Enhanced Raman Spectroscopy of A Beacon Probe Immobilized on Au Electrodes*
- Michael Moazami** - *Synthesis, biodistribution and efficacy of monomeric and multimeric antisense oligonucleotides in visceral tissue and the central nervous system.*
- Alexandre Debacker** - *Improving gene silencing oligonucleotides by incorporation of Peptide Nucleic Acids.*
- Arran Gill** - *The Extrusion of Noble Metal Nanoparticle Catalysts for Sustainable Oxidation Reactions*
- David Goodwin** - *Advanced Optimal Control Methods for Spin Systems.*
- Samantha Louise Hawken** - *Synthesis and Evaluation of New Molecular Precursors for the Chemical Vapour Deposition of Electronic Materials.*
- James David Ingram** - *The Identification of Inhibitors of Nerve Growth Factor and Brain-Derived Neurotrophic factor.*
- Nicola Knight** - *The Connected Lab: Digital Synergies from Data to Models.*
- Rebecca Frances Matters** - *Total synthesis of chrysopaentin F and approaches to related natural products.*
- Marta Meneghello** - *A modular approach for a controlled immobilization of enzymes.*
- Marija Miljak** - *Conformational sampling of intrinsically disordered peptides by enhanced sampling methods.*
- Mathieu Denis** - *Active-template synthesis of small functionalised rotaxanes for sensing applications.*
- Mahboba Hasan** - *Electrodeposition and characterisation of nickel, germanium and tin thin films.*
- Pin-Chia Hsu** - *Focussing the computational microscope on the E. coli cell envelope: model development and simulation studies.*
- Malaz Elhoussein** - *Molecular dynamic studies of the antimicrobial peptide Dermaseptin B2 and its derivative Dermaseptin DS01*
- Matthew Burton** - *Soft-Templating of Nanostructured Materials for Thermoelectric Power Harvesting and Catalysis.*
- Joshua Campbell** - *Crystal Structure Prediction of Organic Semiconductors.*
- Thomas Gee** - *Incorporating Molecular Flexibility and Conformational Variability into Crystal Structure Prediction.*
- Hairul Hamzah** - *A Study on the Estimating DPV Surface Coverages for Chemically Modified Electrodes.*
- Hugo Jungius** - *Model Inverse Electro-catalyst Investigations of Metal Support Interactions.*
- Ammar Nasif** - *Hyphenated Mass Spectrometry Methods for the Direct Characterisation and Quantification of Polar Molecules in Crude Oil or Modified Crude Oils.*
- Jonas Nyman** - *Computational predictions of structures, inclusion behaviour and properties of organic molecular crystals.*
- William Richardson** - *Quinones as Redox Mediators for the Lithium-Oxygen Battery.*
- Wei Sun** - *Studies on aminocyclobutenone rearrangements and a new CH-activation annulation reaction leading to N-heterocycles.*
- Francesco Matteo Monzittu** - *Main group and transition metal-based chelates for PET applications.*
- Catarina da Costa Moura** - *Multimodal label-free imaging to study skeletal stem cells and skeletal regeneration.*

**Duncan Parker** - *Uncovering features of chemical reaction networks in complex system.*

**Matthew Parsons** - *Optical and Mechanical Studies of the Air/Water Interface and Crystallisation Processes.*

**Stephanie Louise Powley** - *The quantitation of therapeutic oligonucleotides and their impurities analysed using hyphenated liquid chromatography and mass spectrometry.*

**Luke David Shirley** - *Visible light assisted introduction of fluorinated building blocks to amine scaffolds: via cross-dehydrogenative couplings.*

**Adam David Smith** - *High Energy and High Intensity Probes of Chemical Dynamics.*

**India Jane Willimott** - *Biological Molecules for the Formation and Assembly of Metal Organic Frameworks.*

**Edward Michael John Wilmot** - *Application of Chromatography and Mass Spectrometry to the Analysis of Gasoli.*

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## UG contributions to research papers

The Education section in Chemistry investigates improvements to techniques and valorisation of departmental research next to classical pedagogical research. Some outcomes are the result of work in collaboration with project students and summer placements for undergraduates. Recent examples include:

Meazza, M., **Kowalczyk, A.**, **Watkins, S.**, **Holland, S.**, Logothetis, T.A. and Rios, R. J. *Organocatalytic Cyclopropanation of (E)-Dec-2-enal: Synthesis, Spectral Analysis and Mechanistic Understanding.*, J. Chem. Educ., 2018, doi:10.1021/acs.jchemed.7b00566

**Curnock, E.**, Levason, W., Light, M. E., Luthra, S. K., McRobbie, G., Monzittu, F. M., Reid, G. and **Williams, R. N.** *Group 3 metal trihalide complexes with neutral N-donor ligands - exploring their affinity towards fluoride*, Dalton Trans., 2018, 47, 6059-6068. doi:10.1039/c8dt00480c

Gurnani, C., Hawken, S. L., Hector, A. L., Huang, R., Jura, M., Levason, W., **Perkins, J.**, Reid, G. and Stenning, G. B. G. *Tin(IV) chalcogenoether complexes as single source precursors for the chemical vapour deposition of SnE<sub>2</sub> and SnE (E = S, Se) thin films*, Dalton Trans., 2018, 47, 2628-2637. doi:10.1039/c7dt03848h

**Beddoe, S. V. F.**, Cosham S. D., Kulak, A. N., Jupp, A. R., Goicoechea, J. M. and Hyett, G. *Phosphinecarboxamide as an unexpected phosphorus precursor in the chemical vapour deposition of zinc phosphide thin films*, Dalton Trans., 2018, 47, 9221-9225. doi:10.1039/C8DT00544C

Eills, J., Alonso-Valdesueiro, J., **Salazar Marcano, D. E.**, **Ferreira da Silva, J.**, Alom, S., Rees, G. J., Hanna, J. V., Carravetta, M. and Levitt, M. H. *Preservation of Nuclear Spin Order by Precipitation*, Chem. Phys. Chem., 2018, 19, 40-44. doi:10.1002/cphc.201701189.

Lupica-Spagnolo, L., **Ward, D. J.**, **Marie, J. J.**, Lympelopoulou, S. and Bradshaw, D. *Pollen-like ZIF-8 colloidosomes via emulsion templating and etching*, Chem. Commun., 2018, 54, 8506-8509. doi:10.1039/C8CC03511C

Meier, B., Kouřil, K., Bengs, C., Kouřilová, H., **Barker, T. C.**, Elliott, S. J., Alom, S. Whitby, R. J. and Levitt, M. H., *Spin-Isomer Conversion of Water at Room Temperature and Quantum-Rotor-Induced Nuclear Polarization in the Water-Endofullerene H<sub>2</sub>O@C<sub>60</sub>*, Phys. Rev. Lett., 2018, 120, 266001. doi:10.1103/PhysRevLett.120.266001.

Kaur, B., Malecka, K., Cristaldi, D. A., **Chay, C. S.**, Mames, I., Radecka, H., Radecki, J. and Stulz, E. *Approaching single DNA molecule detection with an ultrasensitive electrochemical genosensor based on gold nanoparticles and cobalt-porphyrin DNA conjugates*, Chem. Commun., 2018, doi:10.1039/C8CC05362F

Ishutkina, M. V., **Berry, A. R.**, Hussain, R., Khelevina, O. G., Siligardi, G. and Stulz, E. *Self-Assembled Porphyrazine Nucleosides on DNA Templates: Highly Fluorescent Chromophore Arrays and Sizing Forensic Tandem Repeat Sequences*. Eur. J. Org. Chem. 2018, doi:10.1002/ejoc.201800683

Haynes, T., **Smith, I. P. S.**, Wallace E. J., Trick, J. L., Sansom M. S. P. and Khalid, S. *Electric-Field-Driven Translocation of ssDNA through Hydrophobic Nanopores*, ACS Nano, 2018, 12, 8208-8213. doi:10.1021/acsnano.8b03365

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## Dr Sally Bloodworth writes for Chemistry World

Dr Sally Bloodworth has been uncovering the stories behind some of the most important discoveries in organic chemistry, including some famous 'named' reactions, reagents and rearrangements. Her first article in the Named Reactions series features the Michael Addition and can be read in this month's Chemistry Word, her articles will be published every two months.

<https://www.chemistryworld.com/opinion/michael-addition/3009404.article>



## Chemistry Staff News

### New technician team

The teaching lab technician teams have undergone significant changes since Niamh Dougan and Nadine Hill moved into the private sector last year.

We welcomed Diana Dias Fernandes and Lizeth Avendaño Cecena back, returned from maternity leave earlier this year, whilst John Fosbraey, a decorated and well-established member of the School, retires at the end of September.

Two new laboratory technicians, Deeptee Horil Roy and Thomas Ogden, have now joined an enthusiastic team that is looking forward to serving both teaching laboratories after the keenly anticipated refurbishment in the summer of 2019.



*Deeptee Horil Roy*



*Thomas Ogden*

Deeptee obtained a BSc in Pharmaceutical Chemistry followed by an MSc by Research in Organic Chemistry, from the University of East Anglia. She then worked as a Research Assistant at the Laboratory of Molecular Biology in Cambridge, focusing on synthetic chemistry and drug discovery. Deeptee then joined the University of Southampton for a Science PGCE course before moving to the School of Chemistry as teaching laboratory technician. In her short period at Southampton, she has already earned a reputation for being fun to work with and for her enthusiastic approach.

Thomas gained an MA in Natural Sciences at Christ's College, Cambridge, specialising in Plant and Microbial Sciences and later worked for PwC in Public Sector Audit. He enjoys long distance walking and gardening. He also spent over a year volunteering with the National Trust as a nature reserve warden. Since 2010, Thomas has worked as a lab technician in a variety of roles at the University of Warwick (biohydrometallurgy, media preparation) and as a School Science Technician.

The teaching laboratory managers, Colin Flowers and Thomas Logothetis, welcome the new team and are delighted about their education-focussed and diverse cultural backgrounds, describing them as "A dream team!" and commenting, "Once we have the newly refurbished labs, we will be in a very good place to deliver practical undergraduate education in chemistry, whatever the course of study might be."

## Prof Jim Emsley and Prof Geoffrey Luckhurst

Chemistry celebrated a Combined Century of World Class Research. On the 25<sup>th</sup> June 2018 Chemistry marked 50 years of achievements and contributions to world-leading research in Magnetic Resonance and Liquid Crystals at Southampton by Emeritus Professors Jim Emsley and Geoffrey Luckhurst.



*Emeritus Professors Jim Emsley and Geoffrey Luckhurst.*

A brief summary of their contributions and a warm thank you from the School of Chemistry were delivered by Prof George Attard, former student of Geoffrey, Prof Malcolm Levitt, who has known Jim personally and professionally for many years, and Head of School, Prof Gill Reid. Jim and Geoffrey were presented with beautiful gifts, carefully crafted by our glassblowers, from the School of Chemistry, as well as a joint certificate from the magnetic resonance groups within the Royal Society of Chemistry and Institute of Physics.

The celebration took place in conjunction of the Annual General Meeting of the BRSG, the Institute of Physics Magnetic Resonance Group. The celebration was followed by a number of presentations from early career researchers spanning many aspects of NMR, EPR and computational methods in magnetic resonance. We thank both Geoffrey and Jim for 50 years of inspiring generations of chemists.

## Q & A with The Stores Team



Mark Broomfield



Keith Cowley

Keith joined Chemistry in 2011 after spending time working in printing and is now in charge of the stores. Mark started in 2013 following some time spent working in an electrical warehouse.

### What attracted you to the University?

Mark and Keith had been laid off from their jobs so both were looking for re-employment opportunities in the Southampton area when the jobs in stores were advertised.

Despite living locally, neither had visited the University prior to starting work here. It was a change of environment for both of them and was a bit different to their expectations.

### What is the daily routine?

Stores stocks approximately 3000 different items and receives hundreds of deliveries every day, including bottled gases, dry ice and chemicals. Mark and Keith also deal with all waste solvents; currently there are 16 drums (each holding 250 L) in the compound; these are emptied on a monthly basis. They both say that they have to be adaptable as they never know what is going to come through the door each day. One of the best things about the job is meeting people and enjoying talking to everyone from senior management to the newest student.

### What is the strangest thing you have received in stores?

Amongst many of items received in stores, one of the strangest deliveries was a selection of dinosaur bones and also an array of smelly cheese and wine (they wouldn't say who these were destined for!)

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

People not sticking to the stores opening times!

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

Mark enjoys collecting gadgets, archery and spending time with his family.

Keith likes socialising and an occasional flutter on the horse racing; he also enjoys a bit of bird watching.

## Beyond Chemistry

### Art by Daisy Hunter

Alongside her MChem studies, Daisy Hunter spends her time creating original pieces of art or artwork. "I've always done arts and crafty things since I was little, I just remember always doing it. My school did lots of arty things, we had a sculptor come in and we made woodland animals, I made a deer with a flower".

Daisy's main inspiration is colour "I've always had a massive fascination with colour, the tones and variety. How the use of colour can completely change the mood and atmosphere of the painting." The artist Agnes Cecile has been a key inspiration for Daisy through her use of colour to "create pieces that are pleasing to look at while actually portraying some deep subjects".

Nature, particularly the sky and also people are favourite subjects for Daisy, and she particularly enjoys using watercolour "something about the flow and buildability I find really enjoyable".

If you're looking to get started, Daisy's advice is "don't get so hung up on drawing, if you can get the shapes and proportions right, tracing is not cheating. Also practice and just do what you enjoy, don't get hung up on perfectionism".

If you'd like to look at more of Daisy's art you can follow her on Facebook (IridescentFaerie) or Instagram (Iridescentfaerie and \_artbydaisy\_)



Mixed Media  
(fluid acrylic, oil and glitter)

## Retirement: John Fosbraey



*John Fosbraey*

Chemistry laboratory technician John Fosbraey retired at the end of September after many years supporting teaching and outreach in the teaching laboratory on level 4.

John was named the 2016 Higher Education Technician of the Year by the Royal Society of Chemistry for his 'unstinting support and encouragement of his students'. He has worked at the University of Southampton for 16 years and says he loves his job: "It's all about the students, I enjoy every minute of helping them complete their practical sessions in the lab, and it's just not the same during vacation time when they are not there."

John was born in the harsh winter of 1947, Chatham, Kent. After leaving Sheerness Technical High School for Boys he worked at Abbott Laboratories, a pharmaceutical company in Queenborough, Kent. After six years he joined Shell Research, Sittingbourne, Kent as a Formulation Technician; and whilst there, "after a titanic struggle", he passed HNC in Chemistry at the Medway College of Technology. After twenty two years in Formulation, he transferred to the Analytical Section and for the last three years at Shell was working on Brake Fluids at the Koninklijke Shell Laboratorium Amsterdam (KSLA).

John then moved back with his family and joined the University of Southampton as a Technician in the Chemistry Department, "absolutely loving working and communicating with the students.". He has evolved his role into that of a dedicated teacher, taking every opportunity to assist students in developing their practical skills in a safe and welcoming environment. He goes far beyond what would be expected of someone in his role, helping to inspire students to excel in their laboratory work.

"As a Marshall at Graduation, I get a great thrill from seeing students receiving their awards, especially those who struggled with their lab work earlier at University," adds John, a keen gardener whose hobby ultimately brought him not only some TV fame, but also to chemistry. He recalls: "I was fascinated by the chemistry of manures and composts that were dug in extensively all over our allotment."

John will be missed by many a student. The Education team and the whole School wishes him a relaxing yet fulfilled retirement.

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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 on [D.Dunlop@soton.ac.uk](mailto:D.Dunlop@soton.ac.uk)