



School of Chemistry News May/June 2024

Welcome to...

The School is delighted to welcome Dr Rajan Choudhary, who joins Dr Kirill Nikitin's group as a postdoc supported by the SFI-funded National challenge Team, "SINFERT". He is working on a project focusing on generating soluble inorganic phosphate fertilizer from agricultural biowaste for sustainable agrifood systems. We wish him every success with his research in the School.



New Doctor in the house...

Congratulations to Dr Raphael Abolivier and Dr Eva Naughton who have successfully defended their PhD thesis. Pictured below with their supervisor, James Sullivan, and the exam committees.

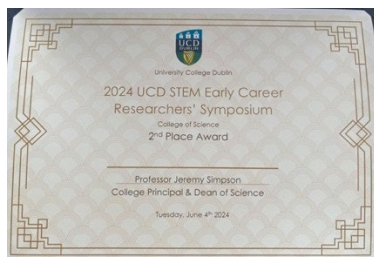


Congratulations to

Congratulations for Stefan Oscarson who has been awarded the [Haworth Medal](#) by the Royal Society of Chemistry. The Medal celebrates sustained, internationally recognised advances in the area of carbohydrate chemistry and it's wonderful to see Stefan get this well-deserved

honour and be named alongside other notable carbohydrate chemists. The award will be presented at the EuChemS meeting July.

Congratulations to Kathryn Yeow from the O'Reilly group, who was awarded the Best Student Speaker prize at the 15th May - Irish Mass Spectrometry Society (IMSS) Conference.



Well done to Dandan on her poster award at the UCD Early Career Researchers Symposium. She presented her poster 'An electrochemical oxidation prins-type cyclisation sequence for the construction of 1,3-oxazinan-2-ones via n-acyliminium ions.'

A Science Foundation Ireland Strategic Partnership Award of €1.4 million has been announced for researchers at University College Dublin. The Bio-PADT team will explore production of effective, inexpensive food supplements using seaweed-based materials. Pictured at UCD were (left-right): Shane O'Connell, Head of Innovation, Marigot Ltd, Dr Aisling McEvoy, Director of Enterprise Partnerships at SFI, and Prof. Kenneth Dawson, Project Co-Lead. Photo credit: Jason Clarke.



3rd Year Talks

Well done to all of the UCD and TCD Chemistry 3rd Year PhD students who gave talks on Wednesday 29th of May. The standard of presentation was truly excellent and the breath of research really exceptional. It was extremely difficult to pick winners!

Congratulations to Jonathan Devlin from the Baumann Research Group, Periklis Karamanis from the Rubini Research Group, and to Zoe Beato from the Zhu Research Group on their prizes.





40 students presented on the day, with 13 UCD School of Chemistry research groups represented. It was a wonderful day which demonstrated the wide breadth of chemistry research in both UCD and in TCD. Thanks to Eli Lilly for their sponsorship.





YCFC2024

On the 30th and 31st of May, the Young Chemists For Change (YCFC) Conference was hosted in the George Moore Auditorium. Many congratulations to the ICI-Young Chemist's Network for organizing the first conference that merged EDI topics and chemistry. The event was very well-attended by staff and students and was a fantastic opportunity to talk about EDI in the chemical sciences. We were very fortunate to hear from some fantastic speakers.





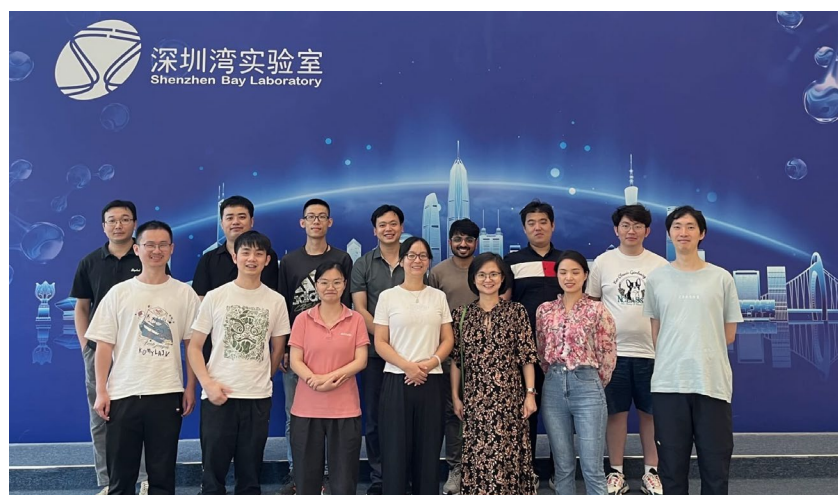
Three awards were given, two of them were awarded to UCD students. Please join us in congratulating **Celine Erkey** for winning as *Best Oral Presentation* and **Christine Coffey** for *Best Poster*.

The event was supported by the School of Chemistry and College of Science, as well as many sponsors. Thanks to **Bodhayan Biswas** from ChemSoc for arranging an amazing pub quiz! A really warm congratulations to all the UCD postgraduates involved in securing funding for this event and in coordinating it's organization - it was a truly excellent event.

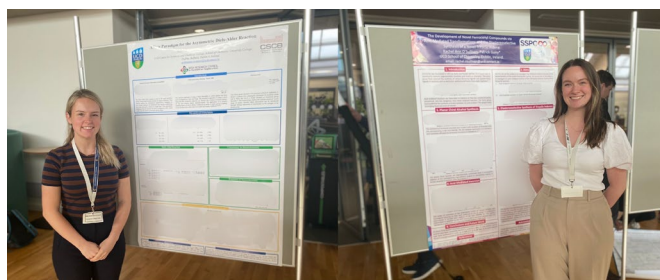


Research visits, talks and conferences

PhD student Smit Patel Elghobashi (Meinhardt group) is currently a guest scientist in the [Wang Group in the Institute of Systems and Physical Biology](#) at the Shenzhen Bay Institute in Shenzhen, China. Dr. Wang's group specializes in machine learning approaches to investigate protein function and accelerate intelligent design of precision therapeutics.



Rachel and Aoibheann travelled to AstraZeneca in Macclesfield last week for the RSC Heterocycle & Synthesis Postgraduate Symposium. Both presented posters and really enjoyed the day (pics below).



In May, PhD students Ashwini Mishra and Marcin Szydlo and Postdoc Dr Rajesh Jena visited a secondary school, Muckross Park College along with Peter Byrne to make a presentation to Leaving Cert Chemistry students about the SFI-funded research we are doing in UCD School of Chemistry, and to give them information about what life is like in university, what would be involved if they are interested in studying chemistry in university, and the types of careers they could expect to go into having done chemistry in college.



Marianne Haarr gave an oral presentation at the NextGenBiocat symposium in Heraklion, Crete, where she shared recent research results from the O'Reilly group. The symposium brings young researchers, PhD candidates, postdocs and early-career PIs together to feature their research in the field of biocatalysis. Marianne reports of a sunny and successful conference, including some intense networking and wonderfully Greek social events. Some pictures of this amazing event below.



Publications from staff and students in the School

Congratulations to Olivia Breen, a PhD student in the Keene group, who published her first paper recently on an unusual pentaaminecopper(II) complex. O. D. Breen and T. D. Keene, Crystal structure and Hirshfeld surface of a pentaaminecopper(II) complex with urea and chloride, 2024, *Acta Cryst. E*80, 596-600, <https://doi.org/10.1107/S2056989024004298>

Congratulations to Krutika Singh, Jacek W and collaborators for their paper on polymers structuring / printability.

Structure-dynamics correlations in composite PF127-PEG-based hydrogels; cohesive/hydrophobic interactions determine phase and rheology and identify the role of micelle concentration in controlling 3D extrusion printability. K. Singh, J. K. Wychowaniec, C. J. C. Edwards-Gayle, E. G. Reynaud, B. J. Rodriguez, D. F. Brougham. *Journal of Colloid and Interface Science*, 2024, 660, 302-313.

Also congratulations to Cara Moloney and Eoin McKiernan (PhD graduates from a couple of years back now) for their recent paper on MRI detectable carriers.

Enhancing the MRI contrast and hyperthermic properties of magnetic nanoflowers by modulating magnetisation dynamics using poly(butyl cyanoacrylate) shells; towards multi-functional clinical carriers. C. Moloney, E. McKiernan, D. F. Brougham, *Colloids and Surfaces A*, 2024, 695, 134208.

Congratulations to Ruairi Crawford for publishing the first research paper from his PhD in the Baumann group! Telescoped Flow Synthesis of Azacyclic Scaffolds Exploiting the Chromoselective Photolysis of Vinyl Azides and Azirines

R. Crawford, M. Baumann, *Chemistry—A European Journal*, **2024**, e202401491 -[Telescoped Flow Synthesis of Azacyclic Scaffolds Exploiting the Chromoselective Photolysis of Vinyl Azides and Azirines - Crawford - Chemistry – A European Journal - Wiley Online Library](https://doi.org/10.1002/chem.202401491).

Congratulations to recent and present group members on a number of publications:

B. Owen, P.J. Guiry. Synthesis of a Bicyclo[1.1.1]pentane-Containing Aromatic Lipoxin B4 Analogue and Heteroaromatic Congeners. *Eur. J. Org. Chem.* 2024, e202400256 <https://doi.org/10.1002/ejoc.202400256>

D. Galvin, P.J. Guiry. Enantioselective Synthesis of Sterically Hindered α -Allyl- α -Aryl Lactams via Palladium-Catalysed Decarboxylative Asymmetric Allylic Alkylation. *Eur. J. Org. Chem.* 2024, e202400314 <https://doi.org/10.1002/ejoc.202400314>

D.M. Morgan, Hon Wai Lam, P.J. Guiry. Nickel-Catalysed syn-Selective Arylnickelation and Cyclisation of Ketone/Imine-Tethered Terminal Alkynes with Arylboronic Acids. *Eur. J. Org. Chem.* 2024, e202400445 <https://doi.org/10.1002/ejoc.202400445>

L. Byrne, P.J. Guiry. Advances in the Chemistry and Biology of Specialised Pro-Resolving Mediators (SPMs). *Molecules* 2024, 29(10), 2233 <https://doi.org/10.3390/molecules29102233>

F. McNeill, B. Twamley, P.J. Guiry. Asymmetric Synthesis of Quaternary α -Aryl Stereocentres in Benzofuran-3(2H)-ones using Decarboxylative Asymmetric Allylic Alkylation. *Chem. Eur. J.* 2024, e202401738 <https://doi.org/10.1002/chem.202401738>

We were delighted to collaborate on a publication with Emer Farrell in the Johnson group: E.B. Farrell, F. McNeill, A. Weiss, D. Duleba, P.J. Guiry, R.P. Johnson. The Detection of Trace Metal Contaminants in Organic Products Using Ion Current Rectifying Quartz Nanopipettes. *Anal. Chem.* 2024, 96, 15, 6055 – 6064 <https://doi.org/10.1021/acs.analchem.4c00634>

FYI EDI ...

Each month, we will highlight a UCD EDI policy or initiative to make sure that staff and students are aware of all the supports available.

Family-related leave supports: Did you know that Academics returning from maternity, adoptive, or carers leave (24 weeks or more) are entitled to 50% teaching buy-out over two semesters to re-establish their research career. All UCD staff are also entitled to an upskilling grant on return from such leave. For more information on this policy and more details, please take a look [here](#).

The School in numbers...

At the end of the Spring trimester, it's good to look at the work of the School in the most recently completed academic year. In 22-23, the School hosted 374 Undergraduate FTE and 164 Postgraduate FTE, and in doing this delivered over 1450 Lectures, over 580 tutor-led sessions, and over undergraduate 650 laboratory sessions. We also graduated 54 BSc, 15 taught MSc, 5 MSc by research and 20 PhD students.

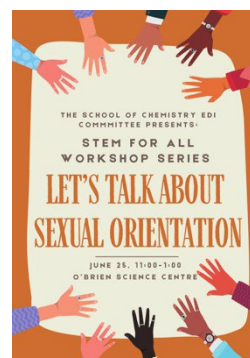
Furthermore, we published 74 articles in the peer-reviewed literature and generated > €3.5M in research income. This is a clear testament to the hard work and dedication of our Faculty, Technical Officers, Administrative team and our PhD and Post-doctoral researchers.

Save the date!

Please add June 25th to your diary and come along to the second in this year's workshop series - School of Chemistry EDI Series "Let's talk about Sexual Orientation".

17th & 18th June – 75th Irish Universities Chemistry Research Colloquium, TCD, June 25th

7 – 11th July 9th EuChemS Chemistry Congress (ECC9)



The School News will be back in September. Enjoy the summer!