

Summer 2024 School News

Welcome to...

The School welcomes the Stage 4 Class of 2024/2025, and wish you a wonderful year. They are pictured below with some of the academic staff.



The School is delighted to Welome Dr Charles Loh, who joins the School as an Assistant Professor. Charles completed his undergraduate studies at the National University of Singapore and attained his masters degree in Industrial Chemistry in a joint masters programme by the Technische Universität München and the National University of Singapore in 2010. He then completed his doctoral research under the supervision of Prof. Dieter Enders at the RWTH Aachen University (Germany) in 2013. Subsequently, Charles pursued postdoctoral research under the supervision of Prof. Mark Lautens at the University of Toronto (Canada) in the field of rhodium catalyzed asymmetric ring opening reactions between 2014-2016. Charles started his independent research as a Research Group Leader at the Max Planck Institute of Molecular Physiology between 2016-2024. Lately, Charles joined UCD School of Chemistry as an Assistant Professor. Charles's research group is interested in developing new catalytic methods to tackle fundamental selectivity problems in the synthesis of difficult-to-access carbohydrates. To achieve this, a suite of experimental and computational techniques are employed to elucidate the mechanism of the newly developed strategies.



In September the Quinn group was delighted to welcome Jordan Mulvaney (SFI funded) and Searena Carroll (IRC) to the group as incoming 1st year PhD students.

Leila's research group warmly welcomes postdoc Ahmed Alanazi, PhD students Rocco Villano and Adrian Dowling, as well as stage 4 students Emilia Kazek and Saman Mutahir.

The Elghobashi-Meinhardt group welcomes 4th year students Dana Orozobekova and Laura Allen, and 2nd-year guest student Artem Filatov to the group!



The Henthorn group gives a big welcome to Akanksha who is beginning her PhD studies working on the RS-SFI funded Metal Carbide project.

In September, the McGarrigle group welcomed Aaron O'Brien who joined the group as a PhD student funded by a Science Foundation Ireland (now Research Ireland) grant to Eoghan. We also welcomed four stage 4 project students: Tara, Meng-J., Finn, and Cian.

The (Joe) Byrne group would like to extend a warm welcome to the group's newest PhD student, Wanyujin Wang, who won a China Scholarship Council award to support her research. Wanyujin completed her MSc research project in the Byrne group in summer 2023 and has since worked as a research assistant within the group. We are delighted that she will continue to work alongside us!

The O'Reilly group are delighted to welcome Adam Fanning, who has just started his PhD following a degree in TUD. The group would also like to welcome Faith, Ieva and Alanna, who joined the group as Stage 4 students. We are delighted to have you working with us!

Farewell to ...

In August, the McGarrigle group said farewell to Dr Bhargava Reddy, whose IRC postdoctoral fellowship was completed in August. We wish him well in his next postdoc in New York!

The O'Reilly group say farewell to Dr Adam O'Connell, who completed his PhD and has moved to the University of Helsinki to Professor Jan Deska's group. We wish Adam all the best in his new role.

New Doctors in the house...

Congratulations to Emer Farrell from the Johnson group, who passed her PhD viva in June.



Congratulations to Clara Zehe who successfully defended her PhD thesis in August. We wish Clara the best as she begins the next stage of her journey as a post doc in the group of Prof. Luisa de Cola in Milano.



Congratulations to Dr Aoibheann O' Connor for completing her viva recently! Aoibheann worked on the development of the asymmetric Diels-Alder reaction during her 4 years here. Many thanks to Dr Will Unsworth for acting as external examiner, along with Prof Gilheany for acting as internal examiner and Dr Rubini for acting as chair. Pictures below of Aoibheann with her research group and examination committee.



Many congratulations to Dr Adam O'Connell, who successfully defended his PhD thesis in September. Many thanks to Adam's wonderful exam committee, Prof. Dominic Campopiano (external examiner, from Uni Edinburgh), Prof. Paul Evans (internal examiner) and Dr Robert Johnson (Chair), for doing such a great job.



A warm congratulations to Pallavi Dutta from the Johnson group, who just passed her viva. Pictured with her exam committee, Nadia, Gareth, and Professor Paola Actis from the University of Leeds.



Congratulations to

A warm congratulations to the BSc Honours Class of 2023/2024. We wish you every success in the future.



A huge congratulations also to the 2023/2024 UG Medallists and Stage 4 Project Prize winner (pictured below with some of the academic staff). Well done to Hugh Ryan Memorial Medal recipient Aoife Allen; Dervilla Donnelly Medal recipients Searena Carroll and Emilija Stankeviciute; and Howard Sidebottom Medal recipients Arno Bannerjee and Vanessa Nobis. The prize for the best Stage 4

Project of 2023/2024 (an engraved conical flask) went to Searena Carroll. Many congratulations to you all on your fantastic achievements.

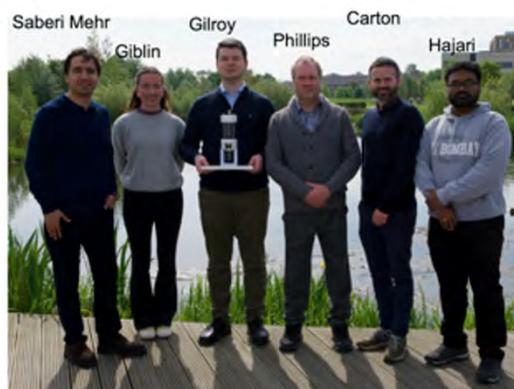


Congratulations to the 7 graduates who were conferred with their PhDs in Chemistry in June. The very best in the future to Dr Cáimhe Niland from the McGarrigle group, Dr Declan Galvin, Dr Dáiríne Morgan, and Dr Sandra Bulawa from the Guiry group, Dr Kristy Stanley from the Sullivan group and Dr Krutika Singh from the Brougham group.





Congratulations to the Phillips group, who were recently awarded advancement in the next "growth" stage of SFI-funded 2050 Challenge. This joint project with the School of Mechanical Engineering (UCD and DCU) has successfully demonstrated the clean production of H₂ for PEM-based fuel cells from the catalytic dehydrogenation of ammonia borane. Moreover, we have, for the first time demonstrated the full regeneration of AB through the work of the post-doctoral fellow Dr. Amiesh Hajari (from IT Mumbai). In November, we'll be demonstrating an advanced prototype H₂ generator at the National Ireland Conference on Hydrogen, Fota, Cork.



Congratulations to Leila and Kristy on their involvement in the Royal Society of Chemistry's research project on Disability-Inclusive Laboratories (DIL) in the chemical sciences.

Congratulations to all the speakers at the 75th Irish Universities Chemistry Research Colloquium that took place in June. Well done to the winning speakers, including Maria Byrne and Kathryn Yeow.



Congrats to Bodhayan for winning the ChemSoc fresher's week prize for guessing the number of atoms in the jar (pictured with ChemSoc president Gawain).



Summer outings

Colleagues in the School took some time out from research to go on some team-building outings.

There was a lab day out for A3.01 to Glendalough (McGarrigle, Gilheany, Palma, Nikitin groups).



Some of the Guiry group pictured below at Dún Aonghasa while on a team bonding trip on Inis Mór



The O'Reilly group had a great day out at Kylemore Karting, followed by lunch. They were celebrating Kathryn and Adam, who have both completed their PhD research. It turns out we have a very competitive group and there was a lot of dirty driving out there (we won't mention any names, Amber Barry!). Well done to Adam, who managed to scrape the lead.



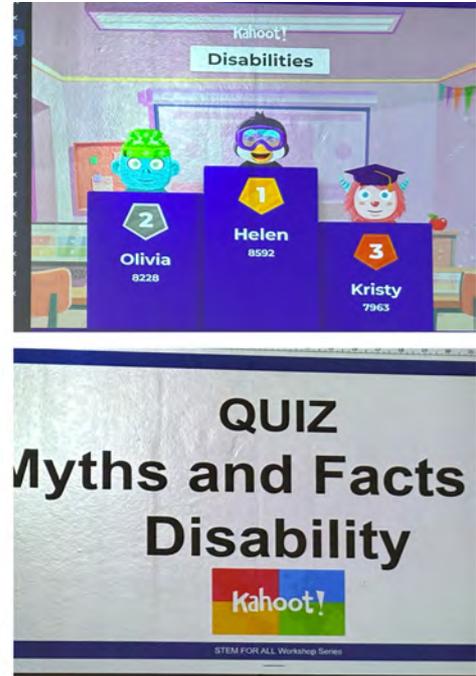
EDI Events

In June, the School of Chemistry celebrated Pride, along with colleagues in the CoS.



Celine, Marianne, Julia and Francesca, all members of the School's wonderful EDI committee, organised and ran two separate workshops in the last few months. These workshops were the next two instalments in the 'Let's Talk About...' series. In June, they organised 'Let's Talk about Sexual Orientation' and in September 'Let's Talk About Disability'. Both workshops were a wonderful opportunity to start

conversations about these important topics, and get the views of staff and students. Many thanks to Colin for giving us an overview of the support process from an undergraduate perspective. Congratulations to all involved on organising these excellent workshops.





Research visits, talks and conferences

UCD was the venue for the 15th EuChemS Organic Division Young Investigator Workshop. Eoghan McGarrigle (chair), Marcus Baumann, Aniello Palma and Peter Byrne hosted the rising stars of Organic Chemistry from Europe, USA & Canada for a very enjoyable 2-day meeting in the UCD Village (Prof. Guiry participated in his capacity as President of the EuChemS Division of Organic Chemistry).



The Quinn group enjoyed the 9th EuChemS meeting, where Simon Smith, Daniel Graczyk, Eleanor Windle, Clara Zehe and Zengchun Xie presented poster presentations of their work and Susan delivered two invited talks on the group's

work in the area of DNA targeting photosensitisers at the IBICS special session and also on recent work from the HEA funded TRACER project.



The Quinn group also hosted a number of visitors including Carolina Miranda Vera on a two month Erasmus stay from Universidad de Salamanca (Spain), and Brandyn Zahs, University of Michigan, USA and Julia Foley, Wesleyan University, both visiting as undergraduates from the USA.



In September Susan delivered a plenary lecture at the 20th European Conference of Spectroscopy of Biological molecules held in Lodz in Poland (1st -5th Sep) and also delivered a keynote lecture at the STFC CLF Lasers for Science meeting held in St. Hilda's College University of Oxford, September 9-11th. The group was well represented in Oxford with posters from Eleanor Windle, Clara Zehe and special congratulations to Daniel Graczyk, who won the best student poster prize.



The McGarrigle group attended the 75th Irish Universities Chemistry Research Colloquium in May, where they presented several posters, Katie gave a talk, and Bhargava won the best poster award. Thanks to IRC and SFI for funding. Eoghan gave his talk at EuCheMs as part of a session honouring Prof. Oscarson where he was presented with his Royal Society of Chemistry Haworth Award (congratulations again Stefan!).





Bodhayan and Oana presented their work at the International Carbohydrate Symposium in Shanghai in July (pictured here with Zoe @ZhuGroup and Prof. Demchenko). Thanks to SFI and IRC for funding.



Also in July, Vanessa, Aisling and Eoghan participated in the International Symposium on the Organic Chemistry of Sulfur in the beautiful city of Florence, with Eoghan speaking and Vanessa presenting a poster. Thanks to IRC for funding.



Eoghan also gave a talk on some of the group's latest research at the Gregynog Organic Synthesis Workshop in Wales (in the photo you might also see Declan Gilheany who attended the meeting also).



Well done to Aoibheann, Rachel, Fionn, Dáiríne, and Niamh for presenting their research at the 9th EuChemS Chemistry Congress in July.





Professor Pat Guiry was in conversation with Professor David MacMillan and Professor Frances Arnold in the Royal Irish Academy. This event was co-hosted by the Royal Society of Chemistry and was part of the 9th EuChemS Chemistry Congress (ECC9) held in Dublin 7-11 July 2024, organised by Institute of Chemistry of Ireland. Watch the event on the RIA Youtube Channel: <https://www.youtube.com/watch?v=JLIJojRNLsS>

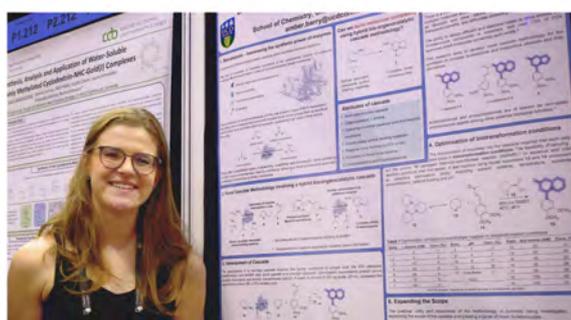


The McGarrigle group were also among the >1600 participants at the 9th EuChemS Congress held in the Convention Centre in Dublin, and made multiple presentations.

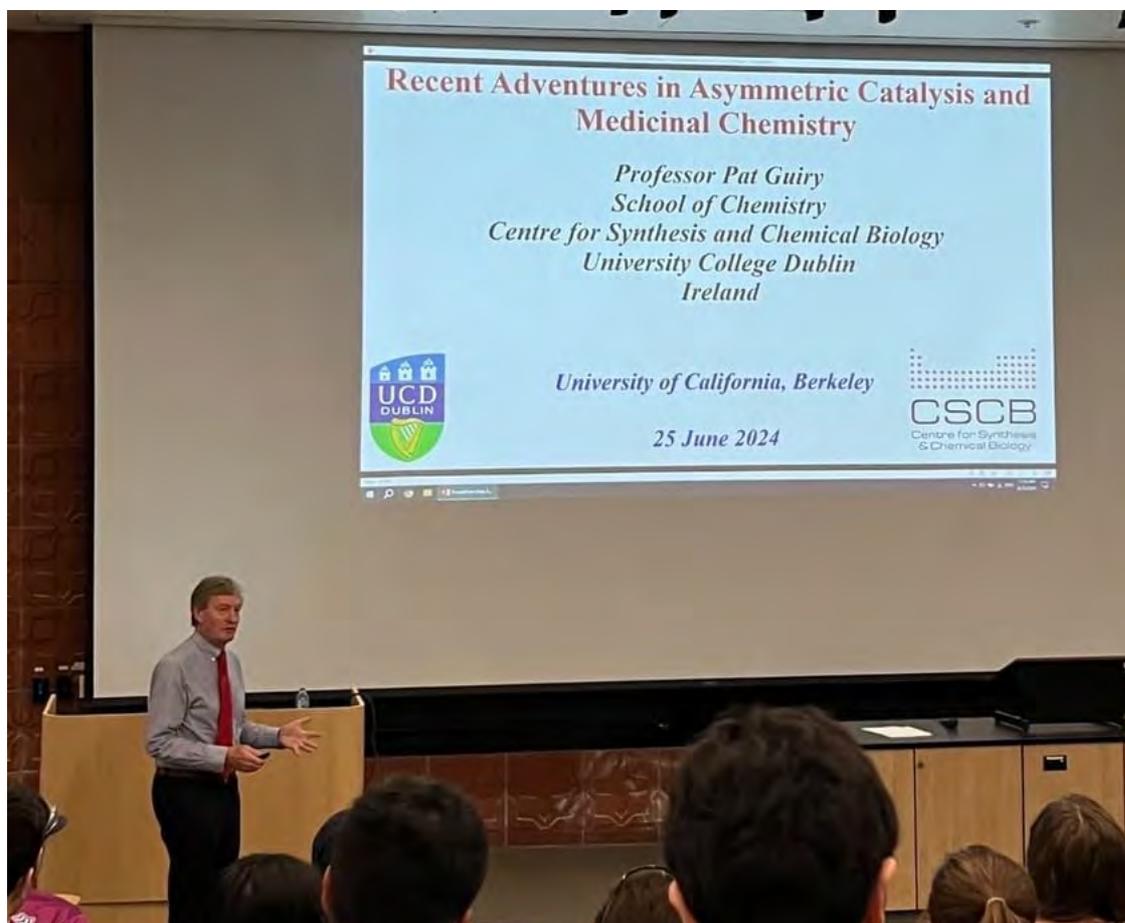
Eoghan and Bhargava even managed to have dinner with Nobel Prize winners Prof. Frances Arnold and David MacMillan. Eoghan gave his talk at EuChemS as part of a session honouring Prof. Oscarson where he was presented with his Royal Society of Chemistry Haworth Award (congratulations again Stefan!).



The O'Reilly group were well-represented at the 9th EUChemS, with Kathryn giving a wonderful talk and Amber presenting her work on biocatalytic cascades.



Pat Travelled to Stanford University to award Prof Barry Trost the 2020 Sir Derek Barton Gold Medal. He also gave a talk on Recent Advances in Asymmetric Catalysis and Medicinal Chemistry in University of California, Berkley.



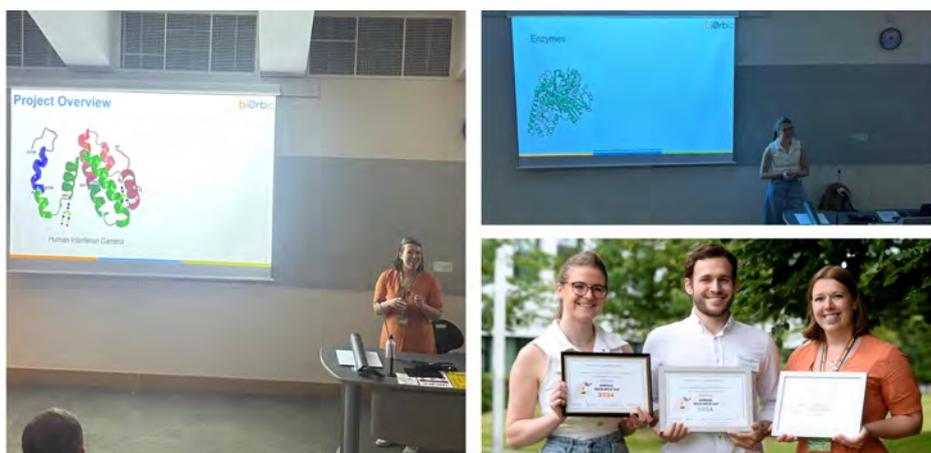
This Summer the Byrne group was delighted to play host to a variety of visitors who worked alongside current group members on various projects. This included two US undergraduates; Matt Yacoub (University of Michigan) and Emma Madsen (Yale). Also in the lab with the group this summer were Erasmus+ trainees Romain Neveu (Ecole Nationale Supérieure d'Ingénieurs de Caen) and Silvia Cima-Politi (Università di Parma) as well as Jiaqi Zuo (Zhejiang Normal University and Hubert Rebow (UCD internship Palma/Byrne groups), The group was also delighted to host Jasmine Ross a PhD student from the School of Pharmacy in Queens Univesrity Belfast to facilitate some knowledge transfer for a North South Research Project. Additionally, The Byrne group played host to Boluwatifemi Adereti, a Stage 1 UCD student.



The Byrne group were also active participants in the 9th European Chemistry Congress in Dublin. Oral presentations were given by Dr Joe Byrne on “Carbohydrate-functionalised metal complexes: targeting pathogens for therapeutic and sensing applications” and Thomas Rabbitte on “Self-templating mechanically interlocked systems as dual activity antimicrobial candidates”. Posters were presented by Dr Hannah Crory and Sophie Kavanagh, and Wanyujin Wang volunteered in the Chemistry Meets Biology for Health sessions. Joe also co-organised the successful EuChemS Division of Glycoscience/RSC Carbohydrate Group Mini-Symposia as part of the event.



Well done to Celine and Amber who gave a research talk at a BiOrbic Research Day in June and picked up a prize!!



The O'Reilly group hosted a number of summer placement students, who all got a wonderful flavour for research. A special thanks to Marianne and Amber for supervising them and to the whole group for welcoming them in and giving them such a great experience.



Thanks to....

Thanks to all those who hosted a **RISE student** in their laboratory over the summer months. The RISE programme is funded by the RSC, and aims to support the development of Black students, and those from minoritised ethnic backgrounds. The RISE hosts in 2024 were: Marianne Haarr, Amber Barry, Simon Smith, Susan Quinn, Robert Johnson, Tom Hooper, Leila Negahdar, Joe Byrne, Yannick Ortin, Patricia Fleming, Jimmy Muldoon, Julia Bruno, Gareth Redmond, Elaine O'Reilly. The School also thanks the many other PhD students and postdocs within the research groups who acted as mentors for these students. The feedback was all extremely positive and we hope that more host laboratories will come on-board for next year.

Many thanks to those who helped out at the **Higher Options** recruitment event in September. Thanks to Tom, James, Eoghan, Demetra, Wilhelm and Susan for their time and efforts are this hugely important event.

Thank you to all who helped organize our new, expanded seminar series, "**Lessons in Chemistry**", in which PhDs and postdocs have the opportunity to present their own work in an informal setting. The first session is Wednesday, 2nd of October. Sign up for a slot using the [sign-up sheet](#). *A special thanks in advance to those who volunteer to be the first speakers and chair!!*

Publications from staff and students in the School

Prof. Declan Gilheany and Assoc. Prof. Eoghan McGarrigle's review on Chromium and Manganese(salen)-promoted Asymmetric Epoxidation of Alkenes in *Chemical Reviews* 2005, passed the citation milestone of 1000 citations this summer. *Chem Rev* **2005**, *105*, 1563–1602. E M McGarrigle, D G Gilheany* — 'Chromium- and Manganese-Salen Promoted Epoxidation of Alkenes.' DOI: [10.1021/cr0306945](https://doi.org/10.1021/cr0306945)

Congratulations to former group member Mark Stitch on the publication of his study on "Contrasting Photosensitized Processes of Ru(II) Polypyridyl Structural Isomers Containing Linear and Hooked Intercalating Ligands Bound to Guanine-Rich DNA" *J. Phys. Chem. B* **2024**, *128*, 32, 7803. M. Stitch, R. Sanders, I. V. Sazanovich, M. Towrie, S. W. Botchway, S. J. Quinn.

Congratulations to Leila's research group on their recent publication in the 2024 Emerging Investigators series of the Journal of Materials Chemistry A: *J. Mater. Chem. A*, 2024, *12*, 21758-21771: : <https://doi.org/10.1039/D4TA03268C>
Journal cover: <https://doi.org/10.1039/D4TA90160F>

Congratulations to Jimmy, Marina and colleagues in the College on the recent publication of their work Ciprofloxacin as a tryptophan mimic within an antimicrobial peptide, John R. F. B. Connolly; Deirdre Fitzgerald-Hughes; Marc Maresca; Jimmy Muldoon; Marc Devocelle, *New Journal of Chemistry*, 2024, DOI:<https://doi.org/10.1039/D4NJ01445F>

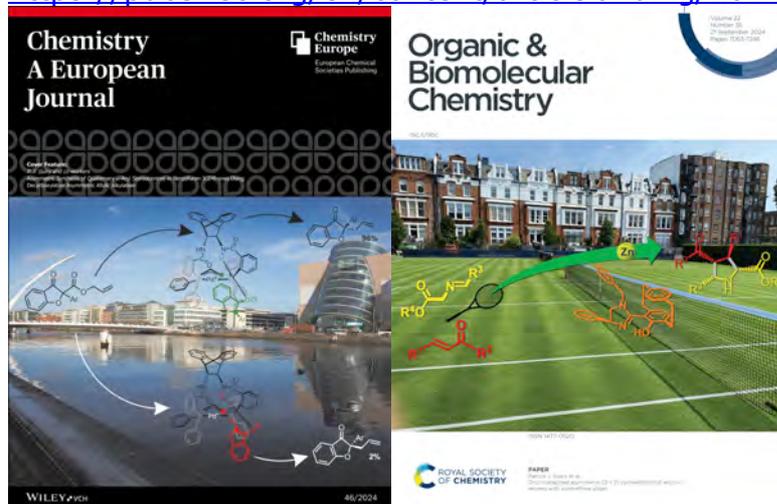
Total synthesis of antifungal lipopeptide iturin A analogues and evaluation of their bioactivity against *F. graminearum*, Karamanis P, Muldoon J, Murphy CD, Rubini M, *Journal of Peptide Science*, 30, (6), 2024,
<https://dx.doi.org/10.1002/psc.3569>

Congratulations to Bhargava and Vanessa who celebrated their latest publication (funded by IRC) on the synthesis of sulfones using catalytic photochemistry in the American Chemical Society journal *Organic Letters*:
Org Lett **2024**, asap. M B Reddy, V E Becker, E M McGarrigle*— Carbosulfonylation of Alkynes: A Direct Conversion of sp-C to sp³-C through Visible Light-Mediated 3-Component Reaction.
DOI: [10.1021/acs.orglett.4c02700](https://doi.org/10.1021/acs.orglett.4c02700)

Congratulations to Hans on another paper with an on-going collaboration from the School of Biosystems and Food Engineering/Conway Institute looking at waste water from the brewing and fermenting industry. Freshwater microalgae *Nannochloropsis limnetica* for the production of β -galactosidase from whey powder. Yuchen Li, Svitlana Miros, Hans-Georg Eckhardt, Alfonso Blanco, Shane Mulcahy, Brijesh Kumar Tiwari & Ronald Halim.
Scientific Reports volume 14, Article number: 14346 (**2024**)
<https://doi.org/10.1038/s41598-024-65146-6>

Congratulations to a number of colleagues on their recent publication relating to catalytic conversion of CO₂ adsorption, which includes researchers from within the school, visiting students, Spanish, Germany and Egypt institutes, led by Leila Negahdar.
Multifunctionalized zirconium-based MOF as a novel support for dispersed copper: application in CO₂ adsorption and catalytic conversion. Albert Rosado, Ioana-Maria Popa, Ahmad Abo Markeb, Javier Moral-Vico, Eva Maria Naughton, Hans-Georg Eckhardt, Jose A. Ayllon, Ana M. Lopez-Periago, Concepcion Domingo and Leila Negahdar.
<https://doi.org/10.1039/D4TA03268C>

Well done to Fionn and Vivek for their recent publications and cover images on *Chem. Eur. J.* and *Org. Biomol. Chem.* respectively:
<https://chemistry-europe.onlinelibrary.wiley.com/doi/10.1002/chem.202401738>
<https://pubs.rsc.org/en/content/articlelanding/2024/ob/d4ob00854e>



Opportunities

Celine Erkey is running a wonderful course with BiOrbic that you should consider registering for. Free places can be reserved on Eventbrite through BiOrbic's portal.



interested in playing please email shane.oneil4@ucdconnect.ie



The Chemistry tag rugby team is looking for new recruits. Tag rugby is a mixed social non-contact sport for all levels. It's a great way of meeting people in the department in a less formal setting while also keeping fit! We will be starting a new league in Alexandra College soon. Anyone

FYI EDI ...

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

The School of Chemistry supports staff and students to work as flexibly as possible, to allow them to manage family/personal commitments. These arrangements are made between the staff member and their line-manager, or the graduate student and their supervisor. Please talk to Elaine (Chair of EDI) or James Sullivan (HoS) if you would like to find out more.

****END****

