



## School of Chemistry News April 2024

### A Warm Welcome/Farewell to...

The Baumann group welcomes Elena Graziano, a visiting PhD student from the Luisi group at the University of Bari. Elena will be with us for 7 months working on lithiation reactions in flow mode. At the same time we bid farewell to our postdoc Ilenia who is leaving us to take up a new and exciting post at the University of Naples. Thanks for all your excellent work in the Baumann group and best of luck!

### A New Doctor in the house...

Congratulations to Dr Eoin O'Neill, who successfully defended his PhD thesis this month.



### Congratulations to ....

Congratulations to three of our graduate studies students who were awarded their PhDs on 19th of April 2024:

Krutika Singh, Brougham Research Group, for her thesis entitled '*3D Printed Hydrogels as Components in Magnetically Responsive Cell Supports for Tissue Engineering*'.

Dairine Morgan, Guiry Research Group, for her thesis entitled '*The Synthesis and Application of P,N Ligands in Asymmetric Catalysis*'.

Declan Galvin, Guiry Research Group, for his thesis entitled '*Enantioselective Synthesis of Sterically Hindered  $\alpha$ -Aryl Stereocentres in N-Heterocycles*'.

## BOC Gases Awards

Congratulations to the four deserving winners of this year's BOC Gases Awards. Arlene Bonner (Baumann Group), Emer Farrell (Johnson group), Adam O'Connell (O'Reilly group) and Rosa Fernández Pisón (Phillips Group) all received their awards and prize money at the awards ceremony on April 25<sup>th</sup>. Each gave a beautifully polished and really high-level talk on the highlights of their PhD research. Below are some pictures of the event and some comments from each of the awardee's supervisors.

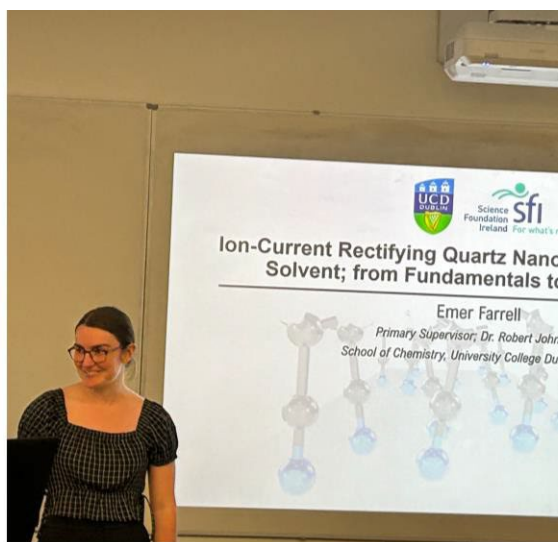
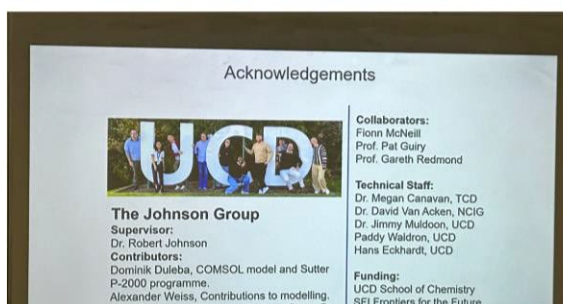
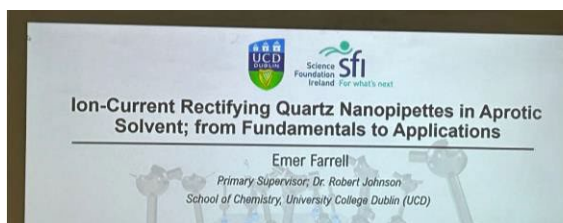


*The Baumann group is delighted for Arlene Bonner being amongst this year's BOC Gases PhD project awardees. Arlene is recognised for her excellent research results published in several impactful papers that highlight innovative flow methods to exploit strained ring systems under thermal and photochemical conditions. Arlene's PhD is funded through a prestigious IRC Postgraduate Scholarship award and addresses directly some of the key needs of the Irish chemical industries in view of generating drug-like entities under safer and more sustainable conditions. Marcus Baumann*





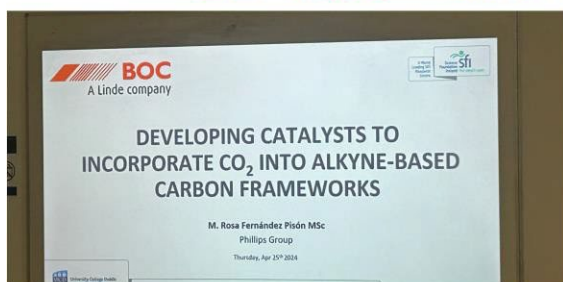
Over the past three years, Emer has played a leading role in the development of a new nanopore-based technology for the determination of contaminant metal ions in synthetic processes, as well as a methodology for the measurement of enantiomeric excess for chiral products for which a patent was filed earlier this year. This technology, which is fast, affordable, non-invasive, and doesn't require sample preparation, has the potential to revolutionise quality measurements across a range of industries. On behalf of the members of the electrochemistry group at UCD, I'd like to congratulate Emer on this well-deserved recognition of her outstanding contribution. **Robert Johnson**



Adam has spent the last three years developing biocatalytic cascade methodology to make extremely complex N-heterocycles. It's a project where everything that could go wrong, did go wrong at some point, but thanks to his hard work and perseverance, as well as the wonderful support from other group members, he has contributed to the development of some truly exciting methodology. When Adam applied for this SFI-funded PhD position in my group, he wrote that he would approach the research with 'dedication and passion', and he was certainly true to his words. He has been a pleasure to work with, and myself and the whole group are delighted that his efforts have been recognised with this award. **Elaine O'Reilly**

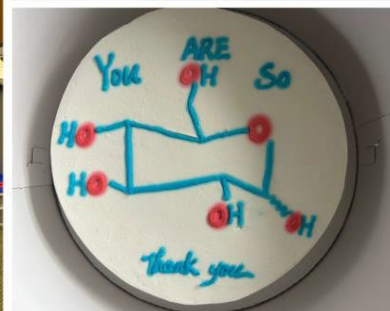


The thesis work represents a hot topic in organometallic research, i.e. the transformation of abundant  $\text{CO}_2$  into valued feedstocks. The initial synthesis/characterisation of the silver catalysts was extraordinarily challenging and, at times, despairing for Rosa, especially when the phase is only the bis complex (a decomposition product). However, due to Rosa's tenacity and persistence, a successful and exciting family of Cu, Ag and Au have isolated and demonstrated excellent catalytic activity. Rosa's EDI work with the school represents one of her great passions to encourage more younger women to enter the field of chemistry and science in general. Her BOC award is an inspiration to others that hard work, careful attention to experimental observations and not being afraid of trying new and crazy ideas are vital aspects of rewarding research. **Andrew Phillips**



## Other School events

Students and staff from the School took a break during the busy last week of term to mark Professor Stefan Oscarson's last lecture in UCD. Stefan joined UCD in 2006 and has made important contributions to teaching and research during his time here. The 3<sup>rd</sup> year class presented him with a very appropriate cake to make his contribution to the teaching of carbohydrate chemistry over the years.



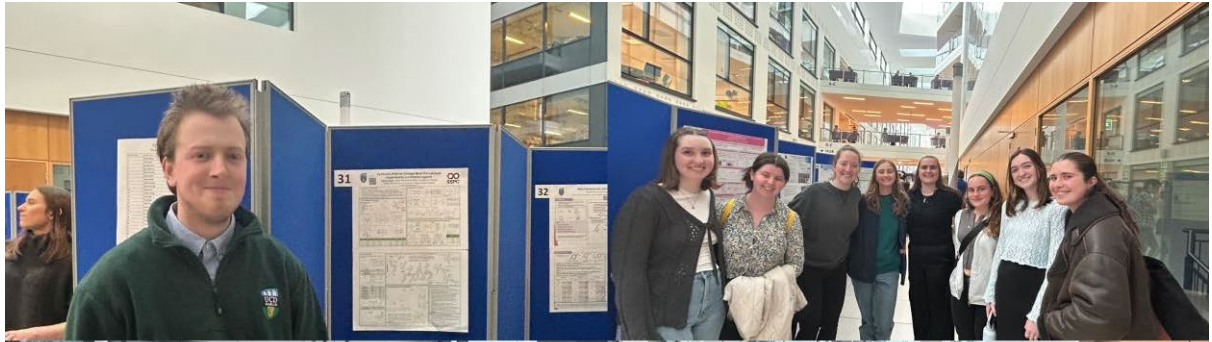


## Stage 4 Poster Display

The Stage 4 students had an opportunity to showcase their wonderful research projects during the poster display on April 25<sup>th</sup>. Congratulations to all students on their hard work and dedication.









## ChemSoc Inaugural Lecture and Prizes

Congratulations to the Stage 3 and Stage 4 Prize winners (pictured below) on their exceptional achievements.



ChemSoc hosted the 78th Inaugural lecture given by Professor Luisa de Cola from the University of Milan. The event was extremely well-attended and the audience was treated to a superb lecture. Some snaps of the event below!



## Research talks and Conferences



**UCD Earth Institute** **EARTH DAY** **FLASH TALKS · WEDNESDAY**

- Saule Akhmetkaliyeva** | School of Biology and Environmental Science | **Enzymes - Synthesising a greener future**
- Boris Morin** | School of Mathematics and Statistics | **Co**
- Ruodi Yang** | School of Geography | **Urban governance**
- Theresia Krausl** | Lund University | **All by myself - gr**
- Shivani Khatri** | School of Biology and Environmental Science | **barley genotypes**
- Amber Barry** | School of Chemistry & BiOrbic | **Synt**
- Mehran Alizadeh Pirbasti** | School of Computer Science | **hyacinth growth cycle**
- Gabrielle Young** | School of Agriculture and Food Science | **microcosms**
- Andrea Fuchs** | School of Biology and Environmental Science | **offset Ireland's greenhouse gas emissions**
- Pablo Vizcaino Garcia** | School of Mathematics and Statistics

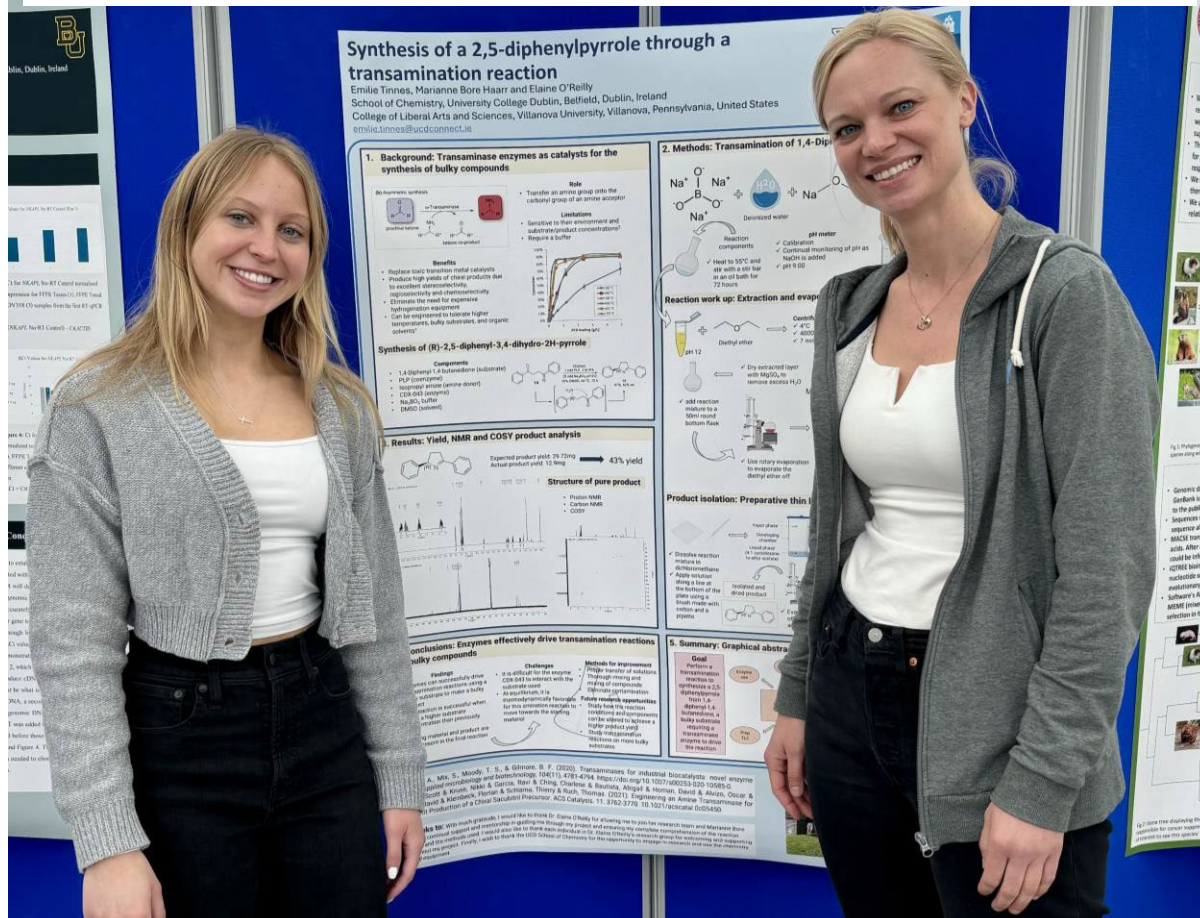
Congratulations to Amber Barry for giving a brilliant 2 minute flash talk titled "Enzymes - Synthesising a greener future" at the Earth Day flash talk competition hosted by the UCD Earth Institute.

UCD was well-represented at the Bristol Synthesis Meeting in early April. The Bristol Synthesis Meeting, the largest one-day chemistry meeting in Europe, had an exciting line-up of speakers, including Frances Arnold (pictured), Martin Burke, Veronique Gouverneur, Tehshik Yoon and Kimoon Kim. The event provided a space to share the latest research in the field and gave for some interesting discussions.





This semester the O'Reilly Group had the pleasure of hosting Emilie Tinnes, who is currently in her 3rd year of undergraduate studies, visiting from Villanova University, USA. During her time in our lab, Emilie has made valuable contributions to our work on transaminase-triggered reactions, and at the same time gained experience with a number of lab techniques. All of which she very beautifully collated into an informative and stunning poster. We wish her all the best in her future endeavours! Emilie is pictured below with Dr Marianne Haarr.



Dr Kirill Nikitin gave an oral presentation at 6th Nutrients in Europe Research Meeting (Brussels, 16-18 April 2024) on SFI funded phosphorus recovery project SINFERT "Soluble Phosphate Salts and Organophosphate Esters from Agricultural Biowaste".

Dr Demetra Achilleos co-organised with Dr Virgil Andrei and Prof. Robert Hoyer the Symposium "Advances in Material, Catalyst and Device Design for Scalable Solar Fuel Production", at the 2024 Materials Research Society (MRS) Spring Meeting, Seattle, Washington, USA. She also gave a talk on "Carbon-Based Photoabsorbers for Sustainable Energy Applications" at the same conference, and an invited talk on "Carbon-based Light Absorbers for Solar Fuel Production, Long-term Operation and Real-world Implementation" at MATSUS24, Barcelona, Spain. Caoimhe Maher received an award on her Stage 4 project entitled "Safer Water for All via Green Photocatalytic Avenues".

## Plaque for the NMR Centre

A commemorative plaque, in memory of Dr Ken Glass who was deeply involved in the founding and running of the NMR service in the Department of Chemistry (and who passed away last year), has been mounted on the wall of the current NMR suite.



## Publications from staff and students in the School

Congratulations to Kian Donnelly, a recent PhD student in the Baumann group, who co-authored an invited review entitled "Advances in the Continuous Flow Synthesis of 3-and 4-Membered Ring Systems". K. Donnelly,\* M. Baumann\* *Chem. Eur. J.* **2024**, e202400758; <https://doi.org/10.1002/chem.202400758>.



Save the date!



ROYAL SOCIETY  
OF CHEMISTRY



ICI YCN Presents

## Young Chemists for Change (YCFC) Advancing Equity in Chemistry

May 30th & 31st 2024  
University College Dublin (UCD)



Join us and present your chemical research!

We're looking for early career researchers to present their research in chemical sciences as a short talk or poster. Participants are encouraged to think of ways their research may impact an EDI subject, if possible. If your research already has an impact on EDI, please make that the focus, rather than getting deep in heavy data. At this conference, the research is chemical and the conversations are EDI!

For more information visit our social media pages



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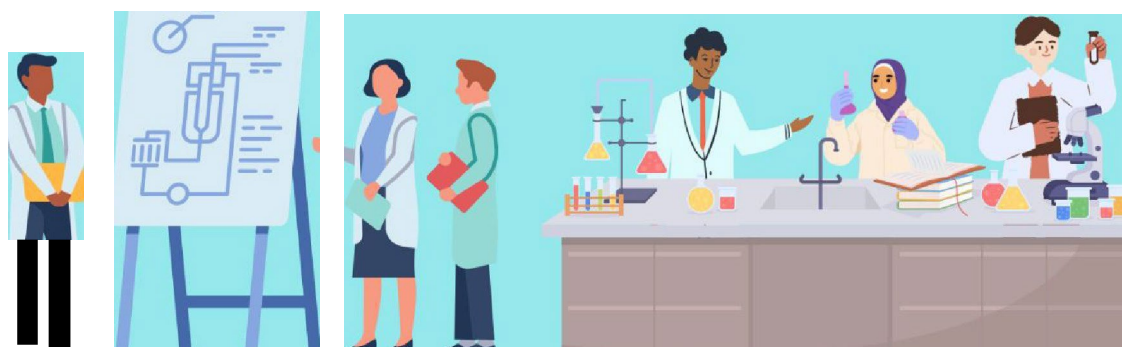
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ICI Young Chemists' Network (ICI YCN)

**FREE REGISTRATION  
& ABSTRACT SUBMISSION**

Abstract deadline April 20th  
Registration deadline May 1st



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