



## School of Chemistry News April 2023



Welcome to....

Dr Zoi Lada joins the Morgan group for six months as a Visiting Scientist from the University of Patras in Greece. Dr Lada is expert in the use of variable temperature Raman spectroscopy and will be working with group members on characterisation of different types of molecular switch using the Raman technique.

Farewell to....

Michelle Doran leaves the School to take up a new role in Maynooth University. Thanks to Michelle for her hard work and dedication in UCD and we wish her every success in her new venture.

### School News, Events & Activities

UCD School of Chemistry and UCD Chemical Society had the honour to welcome Professor Tomislav Rovis (pictured below), from Columbia University, New York, to give the 77th Annual Inaugural Lecture. His talk entitled "Redshifting photoredox catalysis", provided an insight into his research developing photoredox catalysts, operating at low energy Deep Red

(DR) or Near Infrared (NIR) light for excitation. Catalyst discovery, reaction development, mechanistic interrogation and applications to chemical biology were discussed. The event was a great success and was followed by a reception in the third-floor atrium.



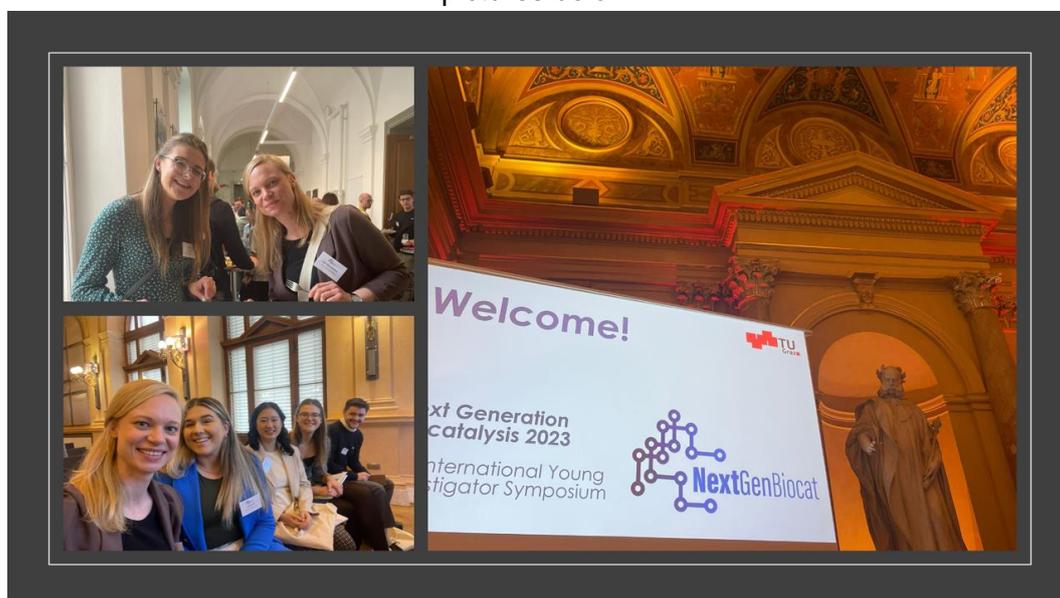
Declan Gilheany visited Groningen in April to give a seminar entitled “Culmination of the Development of Stoichiometric Asymmetric Grignard Synthesis of Tertiary Alcohols and Its First Catalytic Version”. The meeting was attended by several researchers with similar research interests to the Gilheany group, and so his talk was received very well (as always!).

Postdoctoral researcher Dr. Hannah Croy from the Byrne group travelled to Iași, Romania to speak at the International Meeting of Young Researchers, organised by INNOGLY & GLYCONanoPROBES COST Actions. This event gave an opportunity to early career researchers from across Europe to present their work on all aspects of glycoscience. Hannah presented her group's research on carbohydrate-functionalised hydrogels used for medical device coatings and their ability to target *Pseudomonas aeruginosa* bacteria.

Hannah is pictured presenting below.



The O'Reilly group visited Graz in April to attend the NextGenBiocat International Young Investigator Symposium. They returned from this wonderful meeting with lots of great ideas and advice from fellow attendees, and Amber having picked up a poster prize! Some pictures below.



The Chemistry Stage 4 students presented their project research in a fantastic poster session at the end of April. Academic staff were very impressed with the excellence in research and professionalism of all presenters. Well done all and thanks to all for taking the time to chat to all the students (some pics below).





## Let's Talk About Race: Bridging the Gap in Science

On the 19th of April a wonderful EDI event took place at the UCD Village. Let's Talk About Race: Bridging the Gap in Science, the second EDI symposium of the 'Behind the Position' series, was organised by the PhD student members of the UCD School of Chemistry EDI committee, Celine Erkey, Francesca Adami, Ioanna Bampouri, Parth Naik and Rosa Fernández Pisón.



Speakers from different occupational backgrounds, work and/or family situations, genders, and cultures were hosted with the objective of offering the whole university community a unique event, structured in two sessions of one hour each, interspersed with a coffee session in which the public and speakers were able to meet, talk and exchange ideas. Over the course of the morning, the speakers took to the stage and shared their work and life

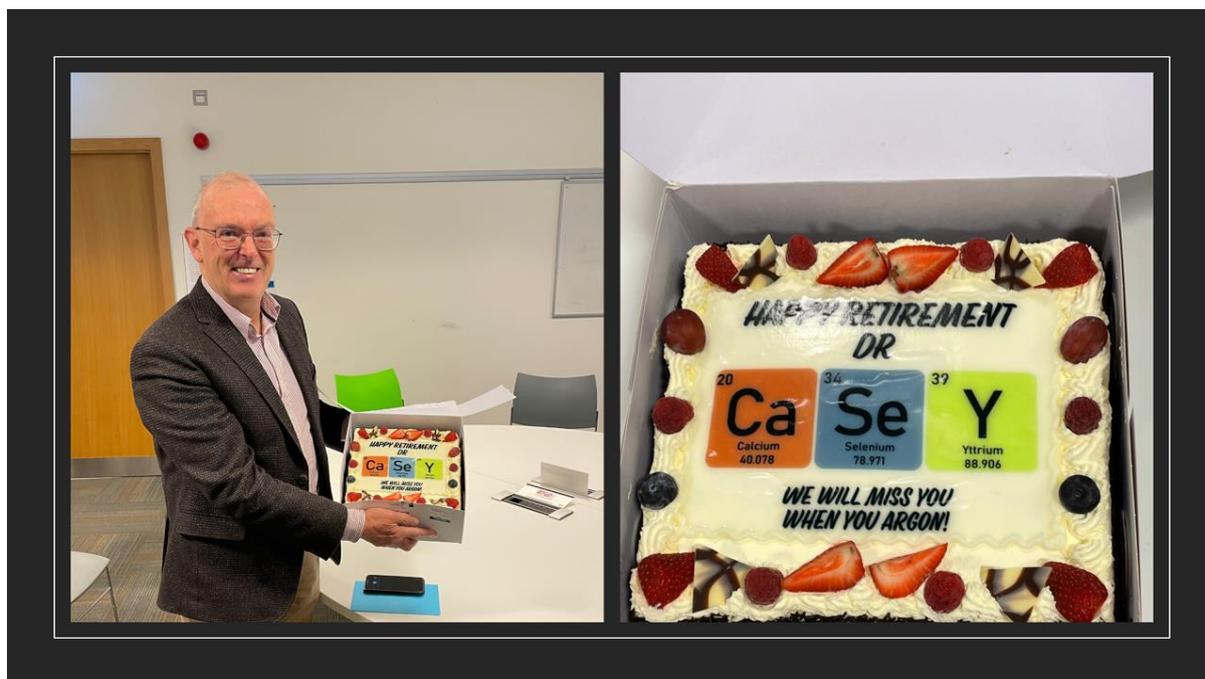
experiences and most importantly the obstacles they have faced as individuals from minority ethnic groups. With these speeches, the organisers wanted to promote and maintain an inclusive work and study environment, where there is mutual respect and dignity.

Delightfully, the event hosted more than one hundred attendees. We believe that the conference has acted as a catalyst to start a positive conversation that will continue and linger for a while. So, many thanks to Dr Julia Bruno Colmenarez, Dr Prosper Anaedu, Dr Leila Negahdar, Dr Soumya Dev, Emer. Prof. AP De Silva, Dr Weimu Xu and Shekemi Denuga for taking their time to share all these precious stories with us. A special thanks to Dr Elaine O'Reilly and Prof. Jeremy Simpson for their opening and closing remarks, and to the HoS Prof. James Sullivan and EDI Committee and Administrative team for their support. Thanks to Dr Rosana Lopez for capturing some wonderful photos of the event.

Congratulations to the innovative and enthusiastic organisers - this was a truly fantastic event!



Mike Casey delivered his final lecture at 9 am on Friday April 28th, to the Stage 4 chemists. Staff turned up to surprise him and congratulate him on all his years of excellence in teaching and contribution to the School. The Stage 4 students surprised Mike with a beautiful cake (absolute work of art!!).



### Recent Publications from the School

Congratulations to Conor Kelly from the Morgan group, who had his work on solution-based switching of spin state in  $\text{Fe}^{3+}$  complexes published in *Angewandte Chemie*, where he demonstrated reversible spin state switching by consecutive addition of acid and base to his compounds. Super work! Proton-Induced Spin State Switching in an Fe III Complex. Conor T. Kelly, Sean Dunne, Irina A. Kühne, Andrew Barker, Kane Esien, Solveig Felton, Helge Müller-Bunz, Yannick Ortin, and Grace G. Morgan. <https://doi.org/10.1002/anie.202217388>

Congratulations to James Sullivan and co-workers for their paper on 'Degradation of an antibiotic via a photo-Fenton process on block copolymer-nanopatterned iron oxide coated substrates', Aislan Esmeraldo Paiva, Jhimli Paul Guin, Jhonattan Frank Baez Vasquez, K. Ravindranathan Thampi, James A. Sullivan, Fernanda G.L. Medeiros Borsagli, Michael A. Morris, *Chemical Engineering Journal*, 466, 142925, <https://doi.org/10.1016/j.cej.2023.142925>.

This paper comes following a collaboration between Jhimli, a UCD PDRA and Aislan and Jhonattan, two TCD graduate students, who met while Jhimli was delivering a Dublin Chemistry graduate module on Advanced Oxidation Processes.

Congratulations to Mara Di Filippo on her 11th paper in the Baumann group reporting on regioselectively accessing complex scaffolds via a flow-based photo-cascade: "Carbene-controlled regioselectivity in photochemical cascades." Mara Di Filippo, Marcus Baumann *Org. Biomol. Chem.*, 2023, 21, 2930-2934. (Carbene-controlled regioselectivity in

photochemical cascades - Organic & Biomolecular Chemistry (RSC Publishing) DOI:10.1039/D3OB00122A). This work was also chosen as a journal cover in OBC and has been highlighted by Synfacts more recently (Thieme E-Journals - Synfacts / Abstract ([thieme-connect.de](https://thieme-connect.de)))."

## Awards and Recognition

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Aer Therapeutics, a joint UCD and University of California, San Francisco biopharmaceutical spin-out company, headquartered in Raleigh, North Carolina, announced the closing of a \$36 million Series A financing round. Proceeds from the financing will be used to advance the development of AER-01, which is a novel inhaled small molecule mucolytic drug.

Congratulations to Stefan Oscarson, who is a co-founder of Aer Therapeutics. For more information on this success story, please see [NovaUCD](#).



*Prof Stefan Oscarson, co-founder of Aer Therapeutics.*

### **Undergraduate Medallists**

*Congratulations to all the School Undergraduate award winners:*

- Ishita Solanki (Professor Eva Philbin Medal)
- Zoë Walsh (Professor Hugh Ryan Memorial Medal)
- Emilija Stankeviciute, Tara Joyce and Vanessa Nobis (Professor Rory More O'Farrall Medals)
- Kacper Kluza (Professor Frank Hegarty Medal)
- Lisa Kennedy (Professor Dervilla Donnelly Medal)
- Freya Martin (Professor Howard Sidebottom Medal)

Many congratulations to our HoS, James, for holding a smile for all those pictures!! A very special thanks to Alex Doran for the photography capturing moments from a very enjoyable day (pictures below).



Well done to Amber Barry from the O'Reilly group, who picked up a poster prize at NetGenBiocat for her wonderful poster on "Development of Convergent biocatalytic transformations for the synthesis of complex alkaloids".



Congratulations to Stage 4 BSc student Niamh Carey, who is a member of the UCD Women's Hockey Team who won the EY Hockey League in April!

Congratulations to all those who received the news that they had been successful in their IRC Postgraduate applications - a massive achievement! We hope to announce the names of all successful IRC awardees soon.

### **New Doctor in the House!!!**

Congratulations to Joe Ruddy from the McGarrigle group who passed his PhD viva on Friday 21st April! Thanks to Dr Damien Herault (AIX Marseille) who was the external examiner, Prof. Pat Guiry (internal examiner) and Prof. Mike Casey (chair of viva committee). Dr Herault also gave a very interesting seminar in the afternoon where he shared some exciting new research results. Joe's PhD was funded by a Government of Ireland Postgraduate

Scholarship from the Irish Research Council. Pictured are current and former group members.



## **Save the Date!**

**May 8th:** Seminar – S1.67, Professor Serena Cussen from the University of Sheffield, ‘Sustainability in transport: from the Mary Rose to electric vehicles’.

**May 16th:** School of Chemistry Research Day in S3.56 Science Hub. Including talks from new academic staff, BOC Gases Awards, and lunch. All staff in the School are welcome to attend. Please save the date.

**May 31<sup>st</sup>** – Dublin Chemistry stage 3 PhD talks (in UCD) and the first School Wheeler Lecture since 2013 – [Prof Paul Anastas](#) (Yale) - Rethinking Sustainable Molecular Design.