



School of Chemistry News September 2023

Welcome to....

A very warm welcome back to our undergraduate students and welcome to our students on the Taught Masters programmes in Chemistry by Negotiated Learning & Chemistry for the Pharmaceutical and Fine Chemicals Industry!

We are delighted to welcome the Stage 4 students who started their projects this September. They are pictured below with some of the academics who will host them in their labs.



A warm welcome to all PhD students and Postdocs who have recently joined the School.

The Baumann group welcomes back Diarmuid O'Hanlon who is starting his PhD studies in the area of flow photocatalysis, supported by an IRC PhD scholarship and by APC as the employment partner. The group also welcome two visiting students to the lab: Pol Martinez (PhD student from the University of Santiago de Compostela) and Maddie Boger who will take part in the SCI30010 program. We hope you enjoy your time with us.

The Quinn group welcomes Dr Simon Smith to the group as a post doc on the SFI funded PhotoGene project and also welcomes Hend Shayoub, Amelia Auville and Meave Lopez (co-supervised with Prof. Jeremy Simpson) who join as PhD students.

A warm welcome to Ronan Brennan, who is joining the Hooper and Baumann groups to start his PhD research on a Sir Walter Hartley Scholarship. Ronan joins us from Trinity College Dublin.

The Elghobashi-Meinhardt group welcomes Ram and Smit, who have just started their PhD studies.

Furthermore, the Gilheany Group welcomes Gawain who recently completed his BSc in Maynooth University.

The Achilleos Group welcomes back Caoimhe and Orla, both of whom completed their undergraduate with us and particularly welcomes Patrick who completed his BSc back in 2008.

Ines Martinez Chauvin has been awarded her MSc by Research completed with the Brougham Group and has stayed with the group to take on a PhD.

The McGarrigle Group welcomes back Aisling and Max both of whom also completed their BSc degrees with us.

The Byrne Group welcomes back Sophie.

The Guiry Group welcomes back Liam who completed his BSc the year before last and Eoghan and Jordan who completed their BSc degrees with us last year and Ava who completed her BSc in UL last year.

The Evans Group welcomes back Kacper who completed his BSc last year with us.

Ghadeer Almohammadi is returning to the Sullivan Group for a PhD. Ghadeer finished a MSc by Research in the Group in 2019.

The Buckin & Brougham Groups welcome back Niall in a joint project, he completed his BSc last year with us.

The Zhu Group welcomes Gavin (Haode) who completed his BSc last year with us.

And we also welcome Dara, Rachel, Marie Clara, Ashwini and Marcin who have transferred from UCC to join their supervisor Peter Byrne at UCD to finish their PhDs with us.

Welcome All.

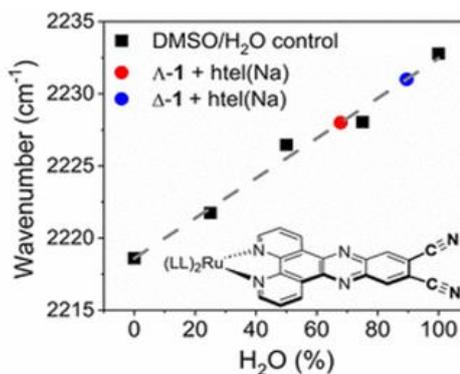
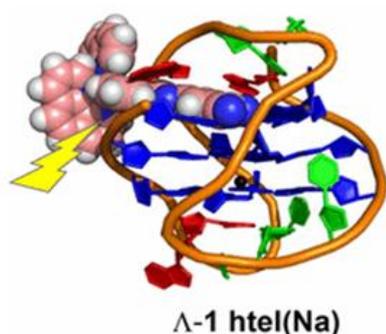
Farewell to...

The School says farewell to Dr Vivek Sundaravel. Vivek was a postdoc in the Guiry group before taking up a Teaching Fellow role in the School. We thank Vivek for his valuable contributions to teaching and research and wish him the very best for the future.

Recent publications...

Congratulations to Mark Stitch on his first author paper in JACS, which shows how excited states of IR probes can report on the binding environment in quadruplex DNA. Congratulations also to Daniel on contributing to his first paper. The work is in collaboration with Prof Leticia Gonzalez at the University of Vienna. Mark performed the synthesis, DNA studies, ultrafast measurements and computational work in a truly comprehensive study.

Good Vibrations Report on the DNA Quadruplex Binding of an Excited State Amplified Ruthenium Polypyridyl IR Probe, Mark Stitch, Davide Avagliano, Daniel Graczyk, Ian P. Clark, Leticia González, Michael Towrie, and Susan J Quinn, J. Am. Chem. Soc **DOI:** 10.1021/jacs.3c06099



Congratulations to Sulaiman, Kamalraj, Declan and Kirill on publishing their work 'Unexpected rapid P-stereomutation of phosphine oxides catalysed by chlorophosphonium salts' Sulaiman Al-Sulaimi, Kamalraj Rajendran, Kirill Nikitin* and Declan G. Gilheany*

Chem. Commun. 2023, DOI: <https://doi.org/10.1039/D3CC03719C>

P-Stereomutation of phosphine oxides is extremely slow. We show that it is catalysed by chlorophosphonium salts which can directly be formed in the system in situ. The process probably proceeds via the development of oxodiphosphonium P–O–P.

A new paper by Kian Donnelly was recently published in Chemistry – A European Journal. This study details the use of difluorocyclopropenes in dipolar cycloadditions as well as a new rearrangement process that was uncovered and evaluated by the Tuttle group as our computational collaborators from the University of Strathclyde. "[3+2]-Cycloaddition Reactions of gem-Difluorocyclopropenes with Azomethine Ylides – Access to Novel Fluorinated Scaffolds." Kian Donnelly, Amritpal Singh, Tell Tuttle, and Marcus Baumann *Chem. Eur. J.*, **2023**, e202301861 - DOI: 10.1002/chem.202301861.

Awards, Funding, & Recognition...

Many congratulations to all Students who were recently awarded IRC PhD Scholarships. These applications involve a lot of effort from both Student and Supervisor, and it's wonderful to see our School being so successful.

Congratulations to Aisling Byrne and Oana Popa were both awarded IRC postgraduate scholarships to pursue research projects in the McGarrigle group.

Congratulations to Aoife Martin who was awarded an IRC Postgraduate Scholarship to continue her work on developing biocatalytic intramolecular Mannich and Aza-Michael chemistry.

Congratulations to Dr Mark Stitch who was awarded RSC travel funds to carry out experiments in Prof Alison Roger's Lab at Macquarie University in Sydney in July.

The Baumann group congratulates their graduating students Mara Di Filippo PhD, and Aisling Loftus MSc (pictured below).



Congratulations to Aoibheann O'Connor on her award for Best 3rd Year Talk at the Dublin Chemistry event earlier in the summer. Aoibheann also won the Organic and Biomolecular Chemistry Award for her poster at the Royal Society of Chemistry's Organic Chemistry Meeting in May.



RSC Funding

The School is delighted to have been awarded funding (>£70K) from the Royal Society Chemistry's Missing Elements Grant Scheme, which aims to increase the number of Black People, and those from other minoritized ethnic backgrounds, who are taking up leading roles in the chemical sciences. The initiative brings together UCD, TCD, TUD and DCU and will focus on giving students from these minoritized groups valuable training and experience over a 3-year programme.

A huge well done to Dr Alex Horan, SSPC's Graduate of the Year, an award for exceptional PhD graduates based on their achievements and outputs. Alex's work focussed on Synthesis of Heteroarylsulfonium Salts and Their Applications in Organic Synthesis. She was based in the McGarrigle Group at University College Dublin and is now working as a Process Chemist with Thermo Fisher Scientific. Alex said "My PhD experience was greatly enhanced by the support of SSPC. I have worked on a range of exciting projects, each with their own challenges, which has allowed me to build a skillset of great value to the pharmaceutical sector in which I now work."

This year this award was in memory of Liam Tully, Pfizer.



Events & Activities

Class of 2023

A massive congratulations to all the Class of 2023 Graduates. They have come through some challenging years, and we are thrilled for their success. Wishing them every success in their future.



UCD Alumni Golden & Diamond Reunion 1963 – 1973, Friday 22 September 2023

The UCD Golden & Diamond reunion brought over 240 alumni from across the disciplines together in O'Reilly Hall for a lunch to celebrate 50 or 60 years since they graduated. The graduating years of 1963 and 1973 saw 30 science alumni in attendance with half of those coming from the School of Chemistry. Prof. Orla Feely and Prof. James Sullivan co-hosted one of the tables which comprised of chemistry alumni. This included Bat Masterson who graduated from UCD in 1963 and is Emeritus Professor of Pharmacology in the School of Biomolecular and Biomedical Science. The keynote speaker was Dr Sheila Willis, BSc Chemistry 1973 who is the former Director General of Forensic Science Ireland. Sheila pioneered the introduction of DNA profiling to the Irish legal system.

Following the lunch Prof. James Sullivan brought some alumni on a tour of the school laboratories and together they shared stories from their time spent as students at UCD. Many congratulations to all Alumni on this wonderful milestone.

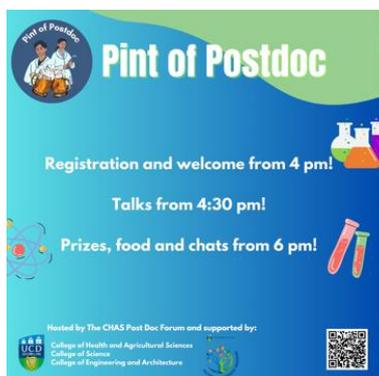


First photo - Prof. Mary Meegan, Hugh Ryan Memorial Medal winner (1972 – 1973) and Dr. Seamus Grant , Hugh Ryan Memorial Medal winner (1973 – 1974).

Second photo - From Left to Right: (photo by Cathy Brooks, UCD Alumni Office) Dr. John Fox, Lecturer School of Chemical and Pharmaceutical Science, TUD. Prof. Mary Meegan, Fellow Emeritus, Professor in Pharmaceutical Chemistry, TCD. Prof. James Sullivan. Dr. Sheila Willis, Former Director General of Forensic Science Ireland. She pioneered the introduction of DNS profiling to the Irish legal system. Dr. Seamus Grant, Research Consultant at 38techInsight, formerly Henkel.

Pint of Postdoc

Congrats to Marianne who won first prize in Pint of Postdoc with the talk “From Norway to Dublin and every Guinness I take in”. The event was organised by the ‘pint of postdoc’ committee consisting of postdocs from the College of Science, the College of Health and Agriculture, and the College of Engineering and Architecture, UCD. From the School of Chemistry Dr Zoi Lada from the Morgan group also gave a brilliant talk at this event, titled “Towards a research career: Is a journey worth to follow?”



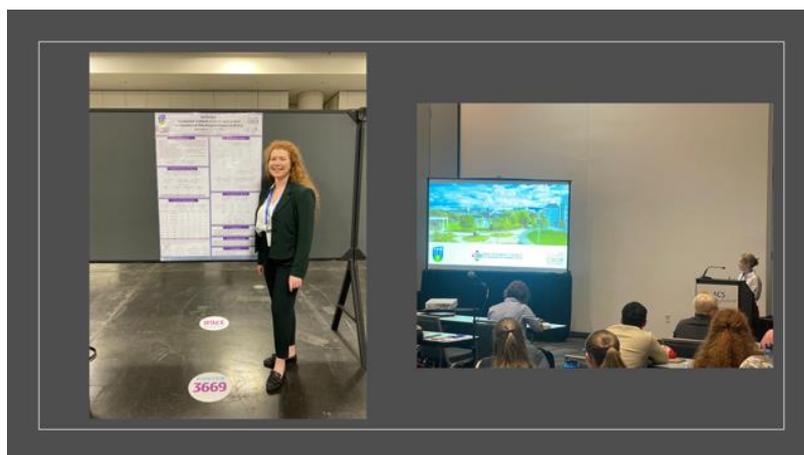
Postdoc Appreciation Week

In September, we celebrate Postdoc appreciation week and acknowledge all the wonderful postdocs in the School. The O’Reilly group acknowledged our wonderful postdoc, Marianne, with coffee and doughnuts :). We may have to make this a School event going forward!



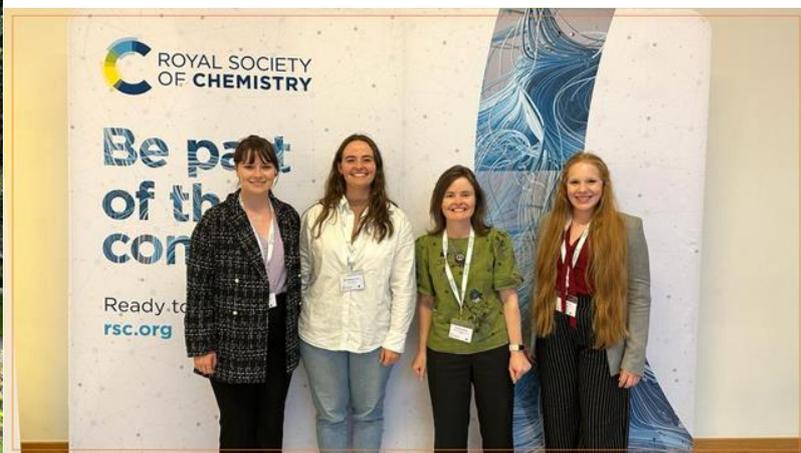
Research Talks & Presentations

Congratulations to James Sullivan and his Group members on their presentations at the 6th EuChemS Conference on Green and Sustainable Chemistry – Salerno from Sept 3rd-6th. James delivered a Keynote Lecture – “Sustainable Catalysis – some applications of Plasmas and Plasmons”. Eva presented her poster “Plasmon-Mediated Artificial Photosynthesis over RuO₂-Containing Composites”; Dan presented his poster “Plasma Assisted Catalysis as an Approach to Turquoise Hydrogen Generation - towards carbon negative fuels”; and Raphaël presented his poster “g-C₃N₄-based photocatalysts for the hydrogenolysis of lignin model compounds”.



Congratulations to Aoibheann O'Connor and Niamh Lehane who travelled to the ACS meeting in San Francisco at the end of August. Aoibheann delivered an oral presentation and Niamh presented a poster on her research (pictures below). The girls said it was a really great experience and they had the opportunity to see three Nobel Laureates speak - Prof Barry Sharpless, Prof Carolyn Bertozzi and Prof Dave MacMillan!

Congratulations to Clara Zehe who won best talk at the RSC Photophysics & Photochemistry Group young investigators meeting held in the University of Strathclyde on the 1st of September. Well done to Daniel and Elanor who presented their posters.



Congratulations to Clara Zehe who delivered a talk on luminescent carbon dots at the RSC MC16 conference held in July and to Maria Byrne who presented a poster on her luminescent silica nanoparticles.

NEW DOCTORS IN THE HOUSE!!!



Congratulations to Dorottya Krizsan who successfully passed her PhD viva in August. Many thanks to her external examiner Silvia Marchesan from the University of Trieste, and internal examiner Robert Johnson and chair Marina Rubini.

Congratulations to Dr Kian Donnelly for passing his PhD viva in late August. Special thanks go to Prof. Renzo Luisi for being the external examiner and to Prof. Pat Guiry who was the internal examiner.



Although likely responsible, Elaine accepts no responsibility for forgetting to include news items that you sent. If this happens, please resend and they will be included in the next issue.