

## **School of Chemistry News December 2022**



**Welcome to...**.Chukwudi Vgwu (Chuks), who joined the Rubini Research group as a Research Assistant.

## **Christmas Celebrations**





On December 2<sup>nd</sup>, we held our Christmas celebration for all Stage 3 & 4 undergraduates, MSc students, postgraduates and staff. Our HoS, James Sullivan, thanked staff and students for their hard work and resilience and acknowledged the many successes and new appointments in the School in 2022. A special thanks to Elaine Mackey and Susan Wilson for organising both this event and the festive drinks with staff and retired TO's in the University Club on Monday Dec. 19<sup>th</sup>.





#### **Inaugural Lectures**

On December 6<sup>th</sup>, Professor Dermot Brougham and Professor James Sullivan delivered their Inaugural Lectures, having been recently promoted from Associate Professor to Professor. This is a fantastic achievement and recognises their many research, teaching and administrative contributions to the School. The lectures gave an overview of their research and paid tribute to the students, postdocs, collaborators and family members who were involved at each step of the journey. It was wonderful to see this event attended by so many (retired) academics, students, technical officers and administrative staff. A drinks reception followed, with a few festive nibbles (and thanks to Susan and Elaine for organizing this also).







### Awards and Recognition

Congratulations to Grace Donald on receiving the ESAI Undergraduate of the Year Award. The awards recognise students who have excelled in the area of Environmental Research at Undergraduate level. Grace carried out her final year research project on photocatalysis for PFAS destruction in Professor James Sullivan's laboratory also winning the school's project prize. Well done Grace!



Well done to Emer Farrell, who won best oral presentation at the ISE regional Electrochemistry Conference.



Congratulations to Peter McDermott (McGarrigle group) for winning a poster prize at the CSCB symposium.

Congratulations to our Senior Technical Office, Hans Eckhard, who has just been recognised as a Registered Science Technician (RSciTech) by the Science Council. Congratulations to all our recent graduates:

- Meera, Anju & Philipe, who were conferred with an MSc degree in Nanomaterials Chemistry;
- Shane, Ciaran, Francesca, Sean, Elsie James, Meret, Chukwudi & Ana, who were conferred with MSc degrees in Synthetic Chemistry for the Pharmaceutical and Fine Chemicals Industry;
- Adam, Ewelina, Daniel, Raymond, Kate, Henry, Kanyarat, Joshua, Carmen and David, who were conferred with MSc degrees in Chemistry through Negotiated Learning;
- Sadbh Byrne, Gaffney Kapito, Conor Kelly, Georgios Papoutsidakis and Xiaoliang Yang, who were conferred with the degree of PhD.
- Congratulations also to Elaine Mackey from our School Office, who was conferred with the degree of Master of Arts in Global History.



## **Grant and Funding Success**

Many congratulations to Tom Hooper, who has been awarded funding from SFI's National Challenge Fund - 2050 Challenge. The Challenge seeks transformative, forward-looking solutions to the climate issues facing Ireland. Funding for the 2050 Challenge comprises four phases: Concept (€50K), Seed (€200K), Grow (€500K) and Prize Award (€1M). The aim of Tom's project is to use reactive main group species to activate and functionalise fluorinated compounds with high global warming potential.

In the long term, the group hope to catalytically upgrade these harmful chemicals to form new fluorinated building blocks for use in industry, pharmaceuticals, agrochemicals etc. The group anticipate that demonstrating the synthetic potential and value of these fluorinated compounds will create a market for them and incentivise their recovery, limiting their contribution to climate change.

#### UCD Equality, Diversity and Inclusion



The School is delighted to have been successful in our application to the Gender Equality and Equality, Diversity & Inclusion (EDI) Accelerator Fund with our proposal 'Supporting the career progression of the next generation of academics: rebalancing gender in STEM'. €3000, supported jointly by this Accelerator Fund and by the Schools of Chemistry and Mathematics & Statistics, will enable PostDocs in both Schools to organise workshops and events to mark International Women's Day and UN Day of Women and Girls in Science, among other events.

### **ChemSoc News**

#### Movember

A huge congratulations to the students who raised almost €1700 for Movember. They have helped raise much-needed funds and awareness for men's health. Well done all!



Back row left to right; Shane O'Neill, Conor Kelly, Niall Quinn, Eoin McGee Pasquetti, Parth Naik, Cian Reid. Front frow left to right Declan Galvin, Aizuddin Sultan, David Mc Laughlin, Adam O'Connell.



December 2<sup>nd</sup>. To protect the reputation of all involved, we have decided not to show pictures of the event :)

### New Doctor in the House

Congratulations to Dr Mara Di Filippo, who successfully defended her PhD viva in December. A special thanks to Prof. Timothy Noël from the University of Amsterdam for acting as external examiner.



### **Recent Publications from the School**

- Congratulations to postdoc Dr Jorge Garcia-Lacuna from the Baumann Group, on his first corresponding author publication, which was just published as a perspective article in Beilstein Journal of Organic Chemistry: Jorge García-Lacuna and Marcus Baumann, 'Inline purification in continuous flow synthesis – opportunities and challenges' <u>Beilstein Journal of Organic</u> <u>Chemistry</u>, 2022,18, 1720-1740.
- Congratulations to Adam cruise, a PhD student in the Baumann group, for publishing the first paper of his PhD on continuous photochemical hydroacylation reactions: Adam Cruise and Marcus Baumann, 'TBADT-Mediated C-C Bond Formation Exploiting Aryl Aldehydes in a Photochemical Flow Reactor', <u>ChemCatChem</u>, 2022 (Accepted Article).
- Congratulations to Mark Stitch from the Quinn group and co-workers on publication of their recent work in Chemistry a European Journal. K.
  Peterková, M. Stitch, R. Boota, P. A. Scattergood, P. I. P. Elliott, M. Towrie, P.
  Podbevšek, J. Plavec, S. J. Quinn, '*G-Quadruplex Binding of a NIR Emitting*

Osmium Polypyridyl Probe Revealed by Solution NMR and Time-Resolved Infrared Studies', <u>Chem. Eur. J. 10.1002/chem.202203250 (Accepted Article)</u>.

- "Design and synthesis of a ferrocene-based diol library and application in the hetero-Diels-Alder reaction" Cunningham, L.; Guiry, P. J. <u>Chem. Eur. J. 2022,</u> DOI: 10.1002/chem.202203006.
- "The Synthesis of Novel P,N-Ferrocenylpyrrolidine-Containing Ligands and Their Application in Pd-Catalyzed Allylic Alkylation – A Synthetic and Mechanistic Investigation" Brennan, T.; Müller-Bunz, H.; Guiry, P.J. <u>Synlett</u> 2022, 33, 1841-1846. DOI: 10.1055/s-0042-1752342.
- "Design and Synthesis of Pyrrolidinyl Ferrocene-Containing Ligands and Their Application in Highly Enantioselective Rhodium-Catalyzed Olefin Hydrogenation" Li, X., Brennan, T.; Kingston, C.; Ortin, Y.; Guiry, P.J. <u>Molecules</u>, 2022, 27, 6078. DOI: 10.3390/molecules27198078.
- "Synthesis and Biological Evaluation of Bicyclo[1.1.1]pentane-Containing Aromatic Lipoxin A4 Analogues" Owen, B.; de Gaetano, M.; Gaffney, A.; Godson, C.; Guiry, P. <u>J. Org. Lett</u>, 2022, 24, 6049-6053.
- "Zinc-Catalyzed Enantioselective [3+2] Cycloaddition of Azomethine Ylides Using Planar Chiral [2.2]Paracyclophane-Imidazoline N,O-ligands" Kumar, V. S.; Guiry, P. J. <u>Angew. Chem. Int. Ed., 2022, e202205516</u>.
- Congratulations to Cian Reid who published a paper in JACS based on his research internship with Professor Mark Lautens at the University of Toronto: Pd(0)/Blue Light Promoted Carboiodination Reaction Evidence for Reversible C–I Bond Formation via a Radical Pathway Austin D. Marchese, Andrew G. Durant, Cian M. Reid, Clara Jans, Ramon Arora, Mark Lautens. <a href="https://doi.org/10.1021/jacs.2c09716">https://doi.org/10.1021/jacs.2c09716</a>.

## **Other School Events and Activities**

 Congratulations to Pat Guiry on another successful CSCB symposium, with speakers including Professor David Spring, Professor Jens Müller, Professor Franziska Schoenebeck, Professor Andrew Laurence and Professor Bill Mornadi. Some pictures below, featuring the invited speakers and prize winners. Many congratulations to the prize winners, Peter McDermott (UCD), Dara Curran (UCC), Rachel Lynch (UCC), Brad Baker (QUB) and Glenna Swinand (TCD), some of whom are pictured below with Professor Guiry.



Bottom row, middle picture, Left to Right: Peter McDermott (UCD), Dara Curran (UCC), Rachel Lynch (UCC).

 In collaboration with Junior Achievement Ireland, Marina Rubini delivered a STEAM Pathway 3<sup>rd</sup> Level workshop to the Transition Year boys of the St Paul's CBS Secondary School. Marina says it was a great experience to talk about her career pathway in Science to the new generation. Picture below (permission granted).



 Susan Quinn delivered a keynote lecture at the 6th IBICS (Irish Biological Inorganic Chemistry Society) symposium held in DCU on the 8th of December. Title: Resolving Light-Activated Processes of DNA Bound Transition Metal Polypyridyl Complexes, Insights for Diagnostics and Therapeutics.

- Pat Guiry recently delivered a lecture at the University of Cambridge and at the University of Nottingham on "Recent Highlights in Medicinal Chemistry and Asymmetric Catalysis".
- James Sullivan delivered a virtual lecture to the Trends in Photocatalysis conference in Oulu Finland on "Semiconductor and Plasmonic materials for Artificial Photosynthesis".
- Lucy Byrne was selected to present at the RSC Organic Chemistry poster symposium in Burlington House in December -"Asymmetric Synthesis of Aromatic Lipoxin A4 Analogues with Biological Evaluation".
- Benjamin Owen was recently selected to present at the Charles River PhD Poster Competition in Cambridge -"The Synthesis and Biological Evaluation of Bicyclo[1.1.1]pentane-containing Lipoxin A4 Analogues".
- Pat Guiry was recently elected as UCD representative on the NUI Senate (2022-2027).

# Merry Christmas and Happy New Year!