

# NewsLetter

ISSUE 10  
August 2025



OUR MD DR CATHY DWYER AND DR JAKE BACKHOUSE ATTEND THE ICSC-NZ CONFERENCE; DROCHAID SPONSORS STUDENT ATTENDANCE & FLASH POSTER PRESENTATIONS



## EUROPACAT 2025 / TRONDHEIM, NORWAY

DR HENDRIK VAN RENSBURG  
AND DR DAVID SMITH ATTEND  
EUROPACAT 2025



DR SONENI NDLOVU  
GRADUATES



DR ALBERTO GONZALEZ-FERNANDEZ  
ATTENDS UK CATALYSIS HUB SUMMER  
CONFERENCE 2025



DROCHAID PROJECT CAPABILITIES



## Drochaid Capabilities: How can we help you?



*From our MD Cathy Dwyer:*

Previous newsletters have detailed specific equipment capabilities or case studies which exemplify the technical skillsets of the team. This time I wanted to remind our readers of our strong **industrial catalysis** and **process chemistry** heritage, and share a flavour of the wide variety of high impact projects we undertake for our customers.



Some of our work is typical exploratory chemistry looking to identify new catalysts or routes for the production of green/sustainable fuels and chemicals. This is rewarding and has enabled the team to publish and patent with our customers. However, some of the most exciting work we do is supporting commercialisation pathways or providing technical solutions to operating production units, where immediate impact can be seen.

Here are some of the value-adding projects undertaken in the past year:

- Optimisation of a viable work-up technology to convert a customer's pilot scale product to an on-spec final product; this involved scale-up of 2 catalytic steps and distillation to generate sufficient material for full characterisation required for market acceptance, thereby maintaining investor confidence. **WE ENABLE YOUR SCALE UP JOURNEY**
- Investigating catalyst pre-activation and stability of a homogeneous catalyst under real process conditions, using a combination of reactor and HP-IR studies; this identified improvements for the operating process which should limit catalyst losses; in addition, an on-site recycling procedure has been developed to treat catalyst waste and save significantly on external metal recovery time and costs with minimal capital outlay. **WE OPTIMISE YOUR WORKING CAPITAL**
- Generation of kinetic data for an old licensed technology to underpin development of an updated and improved technology package; this project included investigation of two catalytic steps and three other unit operations, requiring scale-up to generate sufficient feed for the sequential steps. **WE VALIDATE & IMPROVE YOUR TECHNOLOGY PACKAGE**
- Developing a complex, multi-step synthesis of a high-performance speciality chemical which the supplier no longer produces and is critical component of the customer's value chain; the work included rigorous process optimisation, pinpointing the impact of process parameters on product structure and performance, scale-up to generate samples for applications testing by the customer, as well as development of an SOP and technology transfer to a toll producer who can produce this at larger scale. **WE DE-RISK YOUR PRODUCTION**



The key message from this: We don't just screen catalysts — by blending strong science fundamentals with broad industry know-how and exceptional process chemistry skills:

**WE UNDERSTAND YOUR PRODUCT**  
**WE OPTIMISE YOUR PROCESS**  
**WE IMPROVE YOUR BOTTOM LINE**

## Drochaid Supports Future Chemists at Net Zero Conference

St Andrews, Scotland played host to the inaugural International Conference on Sustainable Chemistry for Net Zero (ICSC-NZ) from June 10–13, 2025, bringing together leading minds in chemistry to tackle one of the most pressing global challenges: achieving net zero emissions. Organised by ScotCHEM in partnership with the University of St Andrews, the conference focused on two central themes: Molecules and Materials for Net Zero. These themes framed discussions around innovative chemical solutions for energy storage, sustainable synthesis, and circular economy strategies.

Drochaid was represented at this conference by Cathy Dwyer and Jake Backhouse, who had the pleasure of listening to plenaries from eminent academics such as David Milstein, Regina Palkovits and Walter Leitner, as well as numerous other quality presentations from a range of academic and industrial researchers. Particular highlights of the latter were those from Christian Kruger of BASF and Thoa Nguyen from Topsoe. The excellent technical program was complemented by a fun and engaging social program, with a lively bagpipe-serenaded Welcome Mixer, a Whisky-tasting Masterclass and the Conference Dinner followed by a traditional Ceilidh. Pictured at the Welcome Mixer are Dr Cathy Dwyer with Prof. David Cole-Hamilton (University of St Andrews) and Prof Audrey Moores (McGill University).

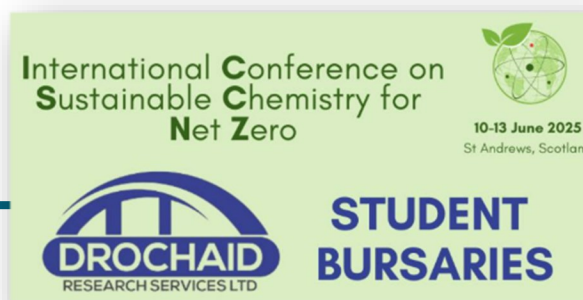


## INVESTING IN THE FUTURE

Drochaid was pleased to be a sponsor for this event, through the award of a number of Student Bursaries to support participation of UK students, as well as two Flash Poster Presentations.



Pictured is Dr Jake Backhouse representing Drochaid alongside the flash poster presentation winners in the Homogeneous Catalysis for Sustainable Solutions category — congratulations to **Sarah Lamorte** and **Mrunal Tamhankar** on their outstanding presentations!



## Dr Alberto Gonzalez-Fernandez attends UK Catalysis Hub Summer Conference



Dr Alberto Gonzalez Fernandez, our newly appointed research scientist, attended the UK Catalysis Hub Summer Conference 2025, held on 1–2 July at the Rutherford Appleton Laboratory, Harwell Campus. The conference marked the launch of Phase III of the UK Catalysis Hub, with over 120 delegates gathering to explore cutting-edge research across four key themes: Digital Chemistry, Sustainability, Advanced Characterization, and Catalysis for Net Zero.

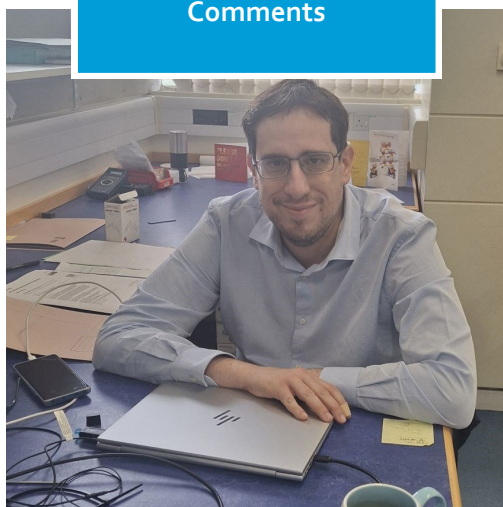
### HIGHLIGHTS INCLUDED:

- ◇ Keynotes from Prof. Donna Blackmond (Scripps), Prof. Annemie Bogaerts (Antwerp), and Prof. Ian Metcalfe (Newcastle).
- ◇ A vibrant poster session featuring 30 high-quality contributions from PhD and postdoctoral researchers.
- ◇ Talks on topics ranging from plasma catalysis and methane oxidation to microbial hydrogenation and renewable feedstock conversion.

Dr Gonzalez Fernandez had the opportunity to engage with leading researchers, share insights, and explore potential collaborations in the field of sustainable catalysis.



Alberto  
Comments



### DR GONZALEZ COMMENTS:

The UK Catalysis Hub conference was highly productive, featuring a diverse range of interdisciplinary talks covering homogeneous, heterogeneous, and biocatalysis. Notable examples included the impact of zeolite cage size and framework on methanol-to-olefins reactions (Inés Lezcano-González), kinetic-assisted mechanistic analysis (Donna Blackmond), and ab initio simulations of methane oxidation over palladium oxide (Carlos Fonte).

The event and the networking dinner were a great experience, providing a wonderful platform to meet researchers from all over the UK, people representing organisations such as the RSC, and gave me a chance to reconnect with former colleagues from Cardiff University.



## Soneni Ndlovu Graduation June 2025

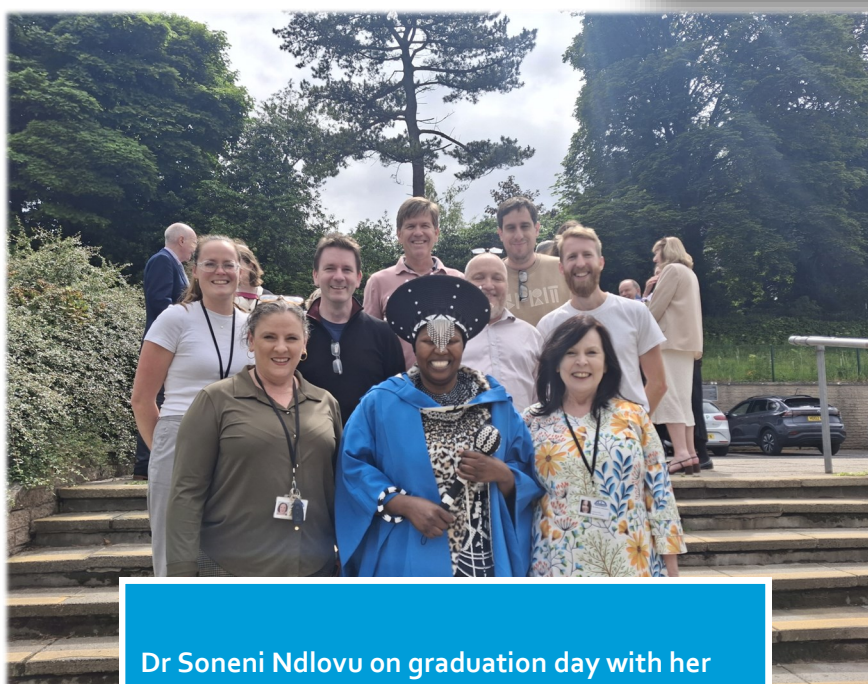


Our team member Soneni Ndlovu graduated in June 2025 with a Ph.D (Chemistry) for a thesis titled *“Functionalisation of a MOF-808 framework as a versatile catalyst for fine chemicals synthesis.”*

### SONENI COMMENTS

“ This was an exciting all round project encapsulating materials chemistry, ligand design, coordination chemistry, catalysis and fine chemicals”

The University of St Andrews proudly launched its summer graduation week on Monday 30 June 2025, welcoming over 2,200 students from 88 countries to the historic Younger Hall. The day marked the beginning of five days filled with tradition, joy, and personal triumph.



Dr Soneni Ndlovu on graduation day with her friends and colleagues at Drochaid Research

## EuropaCat 2025 in Norway: Catalysis Meets Collaboration Attended by Drochaid's Dr Hendrik van Rensburg and Dr David Smith



EuropaCat 2025 welcomed a wide mix of attendees—from PhD students and postdocs to senior researchers and industry leaders. From August 31 to September 5, the city of Trondheim, Norway, played host to EuropaCat 2025, one of Europe's biggest gatherings for catalysis researchers.

Hendrik and David had the pleasure of attending this 16th EuropaCat meeting in this beautiful setting on the Trondheim Fjord.

Dr David Smith: Reflecting on EuropaCat 2025:

"One of the highlights for me was simply chatting to new friends, sharing ideas and the challenges we face, and our vision for the future. If you were there, I hope you left feeling as infused as I did"



# EUROPACAT

2025 / TRONDHEIM, NORWAY



Dr Hendrik van Rensburg comments:

"The conference was exceptionally well organized and drew an impressive attendance of around 1,200 scientists from both academia and industry. It provided a great opportunity to reconnect with several current and former customers."

"We enjoyed a wide range of excellent talks delivered by seasoned academics, PhD students, and industry professionals. One of the highlights of the week was the conference dinner, proudly co-sponsored by Drochaid."

## The Drochaid Team



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**We are always pleased to hear from our customers,  
business enquiries, students and new friends.**

