

NewsLetter

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Dr Hendrik van Rensburg and Dr Simon Anetts attend the 2025 CCI Annual Conference at Cardiff University



Dr Claire Brodie talks about some of Drochaid's new analytical capabilities



Our MD Cathy Dwyer attends Launch for National Materials Innovations Strategy at Houses of Parliament, London



Drochaid welcomes Soneni Ndnovu



Dr Jake Backhouse Graduation

Drochaid Team and Board Christmas Dinner 2024



Dr Hendrik van Rensburg and Dr Simon Anetts
attend the
CCI Annual Conference



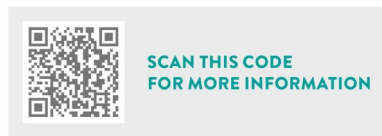
HENDRIK AND SIMON ATTEND

Hendrik and Simon, and board member David Prest had the pleasure of attending the annual Cardiff Catalysis Institute Conference, 14-15 January 25. The meeting was very well organized and well attended by academics and industry and we were treated with excellent talks from both long served academics and PhD students. One of the highlights of the meeting was an inspiring presentation by Prof Robert Schlogl. It was also a good opportunity to catch up with two of Drochaid's major customers of the last 5 years.

Simon was asked to help judge the poster competition at the conference. He and fellow judges had difficulty selecting the winners due to the number of excellent posters on display, which highlighted the quality research that is being carried out by PhD students at the CCI.



Our MD Cathy Dwyer
Attends
Henry Royce Institute

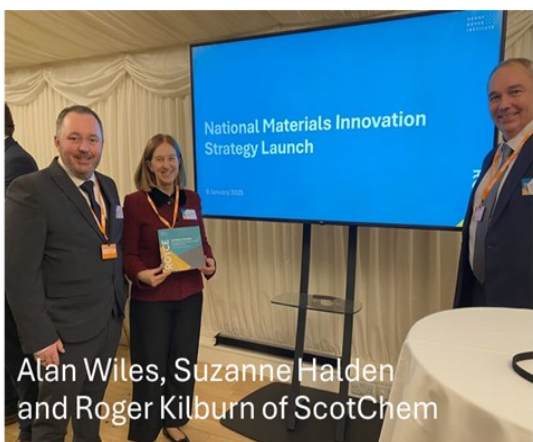


Our MD, Cathy Dwyer, had the privilege of attending the launch of the National Materials Innovation Strategy at the Houses of Parliament in Westminster, London, on January 9th. Key speakers included Lord Patrick Vallance, Minister of State for Science, Research and Innovation, and Professor Henry Knowles, CEO of the Henry Royce Institute.

The launch was the culmination of an intensive exercise involving industry leaders, key academics, and government experts. It included a detailed mapping of current materials-related activities across the country and extensive stakeholder engagement to pool considerable expertise and knowledge in this area. This ultimately led to the development of six key opportunity themes, which further unpack into several innovation priorities that will drive sustainable economic growth in the UK.

Congratulations to the Henry Royce Institute, supported by ScotChem, for initiating and driving the development of the strategy to its current point. Drochaid is proud to have been an industry participant in this process! However, a strategy is only meaningful if it is acted upon, and we look forward to seeing the outputs of the opportunity workstreams that will develop and execute more detailed plans. The full strategy can be accessed via the QR code above.

Materials innovation is
fundamental to creating
impactful solutions for:



Alan Wiles, Suzanne Halden
and Roger Kilburn of ScotChem

-  **Energy solutions**
Rising to the net zero challenge
-  **Future healthcare**
Delivering beyond biocompatibility for active medical solutions
-  **Structural innovations**
Strengthening our infrastructure, built environment and transport systems
-  **Advanced surface technologies**
Enhancing product functionality, performance and lifetime
-  **Next-generation electronics, telecommunications and sensors**
Driving the future of high-performance connectivity and computing
-  **Consumer products, packaging and specialist polymers**
Paving the way for a greener tomorrow



Soneni Ndlovu
Joins Drochaid Research as
Laboratory Assistant



SONENI NDLOVU COMMENTS

I recently passed my PhD in Chemistry under the supervision of Profs Paul Wright and Matt Clarke at the University of St Andrews. My thesis focused on the functionalization of metal organic frameworks (MOF's) for use as catalysts for fine chemical synthesis.

I am currently working at Drochaid Research Services as a Lab Assistant on a 3 month contract while I weigh my options on my next steps in my career.

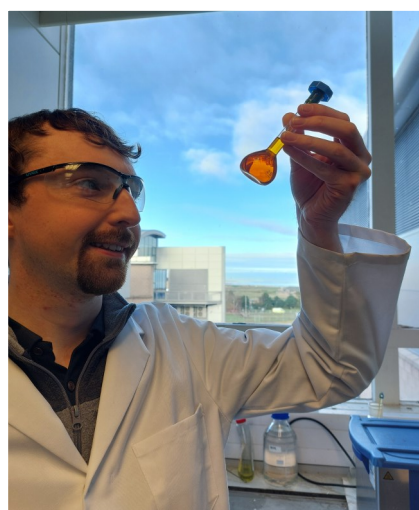
Jake Backhouse formally
receives his PhD at Durham University



JAKE BACKHOUSE

Jake Backhouse was thrilled to attend his university graduation ceremony on January 10th, where he received his PhD in Chemistry from Durham University.

The ceremony, held on a cold but sunny winter morning in the stunning Durham Cathedral, marked the culmination of over seven years of study at Durham, during which Jake completed both his MChem and PhD.



Expanding our Capabilities – New Specialist Analysis

Article by
Dr Claire Brodie

To complement our existing extensive GC, GC-MS and LC capabilities that we have established at Drochaid Research Services, we recently expanded our analytical capabilities for specialised testing of fuels and other samples. Select examples of these new additions are summarised below.

If you are interested to find out more or to see a full list of our technical and/or analytical capabilities, please request this from: info@drochaidresearch.com

Auto-titration

Our Metrohm eco titrator is universally compatible with almost all potentiometric titrations with little adaptation required. With multiple electrodes available to choose from and optional thermocouple and temperature control (via chiller) we have the capability to do complex measurements using the eco-titrator.



Example: Total Acid Number (TAN) determination

Titration of an e.g. fuel sample vs KOH base solution allows us to accurately determine the acid content of this sample. This information can be crucial with regards to corrosiveness or degradation processes.

Example: Bromine Number/Index determination

The degree of unsaturation (olefin content) can be determined by titration vs bromine. This requires careful control of the sample temperature (4.5 °C) which is obtained through a jacketed sample vessel coupled to recirculating cooler.

Viscometry

The ViscoQC300L rotational viscometer from Anton Parr has an array of spindles allowing a wide range of measurable viscosities (1 mPa.s – 6000000 mPa.s) in both single point or multi-point mode. Our small sample adapter allows us to measure viscosity on samples as small as 7 mL, and our temperature control device allows us to measure viscosity on samples up to 80 °C.

Example: *Shear thickening investigations*

Multi-point and real-time plotting allow the measurement of viscosity at various shear rates. This means fast and efficient investigation into e.g. shear-thickening processes can also be performed with ease.



Expanding our Capabilities – New Specialist Analysis

Article by
Dr Claire Brodie (continued)

Waste Water Analysis

Our benchtop photometer is a compact, multi-parameter photometer for measuring key water and wastewater quality parameters. Coupled with our digestion apparatus, key wastewater treatment parameters can be measured which are important for monitoring nutrient removal.

Examples: *Chemical Oxygen Demand (COD), Total Nitrogen Content and Total Phosphorus Content.*



Dr Claire Brodie

Drochaid Team and Board
at our
Christmas Dinner 2024



CHRISTMAS 2024

The team at Drochaid Research Services enjoyed a wonderful night out just before the much-needed festive break, to celebrate another successful year. This included the commissioning of an additional fixed bed reactor system which has high temperature capability (800°C) and the ability to run viscous feeds, as well as a number of exciting projects with customers old and new. We eagerly anticipate 2025, with a number of interesting new projects and customers lined up, and some further planned improvements to our reactor and analytical capabilities.



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Drochaid Research Services Ltd



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