

# Analytical Matters

Issue 23 – Winter Edition 2022/23

Welcome to the twenty-third issue of Analytical Matters, the e-newsletter of the Analytical Science Community of the Royal Society of Chemistry (RSC). Analytical Matters aims to showcase the wide range of analytical science activities being run across the Royal Society of Chemistry Analytical Science Community as well as linking with parts of the UK analytical community beyond our membership.

Happy new year to one and all. This is a great time of year to look back on all of the changes and successes of 2022 and forward to our 2023 events. There were a lot of big changes within the RSC in 2022, most prominently for us was the transition to subject communities and the change in name from the Analytical Division to the Analytical Science Community. Of course, this didn't happen overnight, but involved a lot of meetings, discussions and hard work by RSC staff, AD council members and members of other committees, it was on every ADC agenda for several years! I would like to take the opportunity to thank all of those involved in developing our new, more inclusive community which already has started to take shape in the latter part of 2022. Working on collaborations, we have expanded engagement with interest groups and have representatives from associated interest groups joining an ASCC meeting a year; our first indoor air quality workshop was held in November jointly hosted by the Analytical Sciences, the Environment, Sustainability and Energy, and the Faraday Communities, bringing together experts from academia, industry, funding bodies and government departments to discuss this important topic – we hope to further these discussions in 2023. One of our big topics for 2022 was sustainability and I'm pleased to report on the progress that has been made in this area with the publication of the RSC report on Sustainable Laboratories and the launch of the resources hub. I would like to thank the RSC staff's work on this and also that of Dr Vicky Hilborne, who chaired the Analytical Science sustainability working group. 2022 has been a tough year, recovering from the COVID pandemic to be faced with the cost of living crisis. The RSC has a range of funding and support services, including the Chemists' Community Fund, a summary can be found in this newsletter.

Looking forward to 2023, please consider nominating a friend or colleague for an Analytical Sciences or RSC prize, the deadline is 18 January! Working on the success of the 2022 competition, registration for the 2023 School Analyst Competition is now open, with a closing date of the 24 February. Our annual Analytical Research Forum is to be held on the 8 June, with the oral abstract submission deadline of the 9 March. ASC is supporting the interest group Solutions in Science (SinS) conference, taking place on 4-6 July in Cardiff, abstract deadline is 31 January. Further details of all of these events and more can be found in this newsletter.

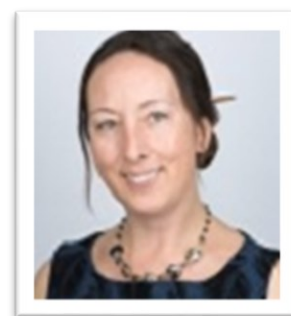
The start of the year is always a good time to think about continuing professional development (CPD). The RSC has a range of resources to help you with this and the Analytical Methods Committee Technical Briefs, of which there are more than 100, cover many different areas of analytical science and are also a great resource. Please take the time to visit the new web pages about the analytical science community and if you would like to become more involved, please consider standing for election to the council, further details in this newsletter.

Please send your feedback and any content for the next issue by [emailing the Editor](#)

With my very best wishes,

**Diane Turner FRSC**

President, RSC Analytical Science Community



## Highlights from the Community Analytical Research Forum 2023 08 June 2023 London, UK

[Join us in London in June 2023](#) for a showcase of cutting-edge analytical chemistry and applications to stimulate new research, collaboration and engagement between academia and industry.

### Get involved: abstract submission and registration are open

If you're a PhD student, postdoctoral researcher or early career scientist in industry or academia, take advantage of this opportunity to present your work and network with high-profile analytical scientists.

**Oral abstract submission closes 9 March 2023.**  
**Poster abstract submission closes 27 March 2023.**

[Submit your abstract](#)

Interested in sponsoring the event? Contact [analyticalmatters@rsc.org](mailto:analyticalmatters@rsc.org) for more information.

### The Change to subject communities

During the summer, RSC Divisions became [Subject Communities](#). This was one of the changes recommended by the Review of RSC Divisions initiated by the Members Communities Board.

Each Subject Community brings together members with similar scientific and professional interests, from across academia, education and industry, including from across our interest groups. Subject Communities enable members from different sectors, career stages, disciplines, and locations to:

- gain an overview of activities in the subject area including relevant activities run by our interest groups
- network and collaborate with other experts from across the subject area
- contribute their expertise to RSC programmes and policy work

Alongside the updates included in this newsletter, you can view the new online area for the [Analytical Science Community](#) to find out more about the Analytical Science Community Council and our activities as well as the interest groups in Analytical Science.

**Council Elections:** If you would like to get more involved in the work of the Analytical Science Community Council, nominations to stand in the [2023 elections](#) are currently open and will **close on 6 February 2023**.

You can find out more about your membership via the *My Communities* page within the online [member's area](#).

### Indoor Air Quality

In November 2022, the Analytical Science Community, the Environment, Sustainability and Energy Community and the Faraday Community for Physical Chemistry co-hosted a round table discussion on Indoor Air Quality. This meeting brought together experts from academia, industry, funding bodies, government departments and advisory groups. A workshop summary from this meeting is due in 2023.



## News and Opportunities

### RSC Prizes 2023

Making a nomination for the Royal Society of Chemistry's Prizes is a chance to share the outstanding work happening in your corner of the scientific community.

Prizes currently open for nominations are:

- **Inclusion & Diversity Prize:** now an annual prize, celebrating people improving access and progression for all in the chemical sciences
- **Horizon Prizes:** for teams and collaborations, celebrating discoveries and innovations that push the boundaries of science
- **Research & Innovation Prizes:** celebrating exceptional people advancing the chemical sciences across industry and academia
- **Volunteer Recognition Prizes:** celebrating people who go above and beyond to form communities and support and inspire others

[View all Prizes specific to the Analytical Science Community.](#)

Are you thinking about nominating for the first time? The [guidance for nominators](#) page has lots of information to help, or visit the new [frequently asked questions](#) page.

Visit [rsc.li/prizes](https://rsc.li/prizes) to find out more about this year's prizes and to make your nominations before **18 January 2023**.

### Share your views on the RSC's science culture vision for the chemical sciences

Building on RSC activities exploring the cultural conditions that will best enable quality science and taking inspiration from good practice examples in the science community, the RSC have started to develop a science culture vision for the chemical sciences. As we develop this vision, we are seeking your views through focus groups, where we will explore to what extent our draft vision resonates with you, what it means in practice and what opportunities and challenges you see in achieving it.

Express your interest to join one of the RSC focus groups on

- [Wednesday 1 February 10.30 - 12.30](#), or
- [Thursday 16 February 14.00 - 16.00](#)

by sending an email to [policy@rsc.org](mailto:policy@rsc.org).

### RSC commits to 100% Open Access

Open Access roadmap aims to see all RSC-owned journals become fully OA within five years, becoming first major chemistry publisher to commit to a fully Open Access future. The RSC is committed to working closely with partners and the community throughout 2023 to understand their priorities, requirements and goals for Open Access. [Find out more.](#)

### 2023 Emerging Technologies Competition

The 2023 Emerging Technologies Competition is seeking agile innovators, start-ups and spin-outs across Enabling Technologies, Health, Energy and Environment categories who are ready to catapult their novel ideas to the next level and win £25,000 and post-event publicity and exposure. Spread the word with your colleagues!

[Applications open on 20 February and close 17 April 2023.](#)

## RSC report on Sustainable Laboratories



The Analytical Science Community Council have been discussing how researchers can make their science more sustainable – from their day-to-day research activities to how research is designed and planned.

These discussions informed a global survey of the chemical sciences community to explore their views and experiences on this topic. Responses to the survey formed the basis of a new [RSC report on Sustainable Laboratories](#). It highlights what scientists are already doing to reduce the environmental footprint of research, and where they see barriers and opportunities. Alongside the report, we have also compiled a list of frameworks, resources and communities in a [resource hub](#).

We heard from survey respondents in academia and industry that 84% would like to do more to reduce the environmental impact of their day-to-day scientific work, and 63% have already made changes. You can read the report's key findings and our action plan [here](#).

Members of the Analytical Science Community Council will be discussing how they can best support the Analytical Science Community as well as to inform RSC cross-community efforts towards greener labs. We welcome ideas and feedback from members and organisations on this topic. For further information or to share your ideas please contact [science@rsc.org](mailto:science@rsc.org).

### [Opinion piece: LEAF Sustainability in Labs, Martin Farley and Vicky Hilborne at UCL](#)

“Science is extremely resource intensive. While the full carbon emissions of it are unknown, we know that laboratories consume 3-5 times more energy than typical academic spaces, though this can be much higher depending on the type of work. Laboratories also can produce large amounts of waste, much of it being sent for high-temperature incineration, which has financial and environmental costs. What we don't know is the full impact of the single-use consumables and chemicals we use are, though work has commenced to investigate this.

While we don't have the full set of answers in terms of environmental impacts, we know science is growing and fast – growth in science has been outpacing the growth in global GDP for at least a decade. We also know that our academic institutions are facing increasing numbers of students, and STEM subjects are not subsiding in popularity.

As the impacts of science grow, what resources are available and what actions can we take to mitigate the impacts on the environment? As hinted, the impacts of science operations can be far spread, and it's not clear where to start. That is why from UCL, we have developed LEAF (short for the Laboratory Efficiency Assessment Framework). LEAF brings together all the actions that a lab user can do, and makes the process simple. Hosted now online, nearly 80 institutions globally have signed up to LEAF since launching last year, making it the world's largest programme of its kind.

The best analogy for LEAF is health and safety, where labs work of a common standard. For sustainability though, scientists and teachers alike have been expected to develop their own actions and strategies. Why not produce a comparable standard to health and safety in sustainability?

Since launching LEAF, we have seen thousands of future and current scientists empowered to take actions. This results in both lower emissions, but also lower costs. An example of this is the Gold LEAF award for University College London Physical with Analytical Chemistry laboratories. An

example of achieving Gold LEAF award, together with other case studies can be found on the [RSC case study page](#).

Analytical chemistry laboratories in industry and academia have a particular role to play regarding sustainable energy consumption not least in running instrumentation. Solvent usage, hydrocarbon and overall water consumption, including cleaning of glassware are significant areas for consideration. There are arguments for and against single use plastics, preventing sample cross contamination, yet can introduce phthalate plasticiser contamination. Improving the use of data can reduce a need for repeat analysis.

Sustainability initiatives in analytical chemistry laboratories will have cost and safety benefits, fostering analytical method innovations in commercial and research laboratories. Why not become a sustainability champion for your analytical laboratory? For help and advice: <https://www.ucl.ac.uk/sustainable/leaf/take-part-leaf>; <https://youtu.be/mAtpjrydz00>

## Funding and support from the RSC

### Researcher Development Grants

PhD students and early career scientists [can apply](#) for up to £500 to undertake an activity that supports their research career. The scheme opens on the 18 January 2023.

### Chemists' Community Fund

For impartial, confidential help and advice on a range of issues, [contact the Chemists Community Fund](#).

### Outreach Fund

The Fund provides financial support to members, individuals and organisations to enable them to run chemistry-based engagement activities. Applications are now [open](#). You can apply for a small grant of up to £5,000 or a large grant of between £5,001 and £10,000.

### LGBT+ Inclusion in STEM grant

With over £600,000 in funding from the Department for Business, Energy and Industrial Strategy (BEIS), the Royal Society of Chemistry will offer between five and seven grants to pilot research studies, bringing together STEM and the social sciences to actively study attrition and retention of LGBT+ groups in STEM. The grant projects will run over 18 months, starting in May 2023. Click [here](#) for more information.

### Technician Skills Development Grant

Technicians working in all sectors (for example industry, academia, education or research) [can now apply](#) for funding to undertake short to mid-term visits to organisations overseas or within their current country of residence, with the aim of developing skills to support their career progression.

### Continuing Professional Development

As part of the RSC commitment to maintaining professional standards and supporting members throughout their working lives, an online Continuing Professional Development (CPD) framework has been developed to help you take the next step in your career. [Find available opportunities for students and RSC members](#).



## Analytical Methods Committee Update

The [Analytical Methods Committee](#) (AMC) continues to produce [Technical Briefs](#) (TBs), papers and reports through its Expert Working Groups (EWGs).

Recent outputs include:

- TB 111 - A periodic table for liquid chromatography separation modes. *Anal. Methods*, 2022, **14**, 3033.
- TB112 Comparing measurement uncertainty values. *Anal. Methods*, 2022, **14**, 4025.
- Part XXV of the Application of Gas-Liquid Chromatography to the Analysis of Essential Oils has been submitted to *Perfumer and Flavorist*.
- A tutorial review of hand-held XRF was published in *J. Anal. At. Spectrom*, 2022, **37**, 1928.

The work of the AMC is funded by the Analytical Methods Trust. The **Theobald Lecture** and Award is awarded to someone who has made significant contribution to analytical chemistry in an area of interest to the work of the Analytical Methods Committee and is funded by the Trust. The 2020 lecture was delivered by Prof Tom Fearn on 14 July 2022 at Burlington House and via a live stream. The winner of the 2022 Theobald Lectureship and Award is Prof Phil Potts (Open University) and delivery of the lecture will be announced shortly.

AMC also provides a representative on Eurachem. AMC members can get the Eurachem e-news mailings by subscribing at <https://eurachem.org/subscribe>.



## Education News

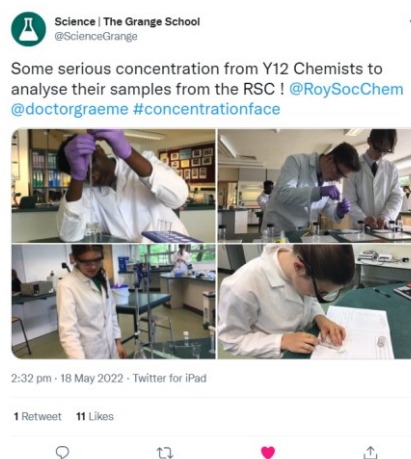
### Schools' Analyst Competition

*The Schools' Analyst Competition 2022 was very successful with over 240 schools taking part. Following the success of the Schools' Analyst Competition in 2022, the competition will be returning for 2023, with teams tasked with finding out who is sabotaging entries at The County Bake Off!*

Teachers across the UK and Ireland are invited to apply for the chance to receive one of 300 kits for their students to compete in this practical analytical competition in your own schools. Aimed at students in Year 12 in England and Wales, Y13 in Northern Ireland, S5 in Scotland or 5th Year in Republic of Ireland, the boxes will provide samples and equipment for up to twenty-five teams of three to participate in a flexible challenge that fits around your school timetable. Teams must work together to solve the problems, answer tough questions, and submit their answers for marking. Each school will be informed of their winning team after the closing date, but winners will also be entered into a second round against school winners in their region for the chance to be crowned regional champions!

[More details and a link to register.](#)

Registration closes on Friday 24 February 2023.



## Items of interest from other organisations

### Analytical Chemistry Trust Fund

The Analytical Chemistry Trust Fund (ACTF) is a charity established for the purposes of promoting, assisting and extending the science and study of Analytical Chemistry and of all questions relating to the analysis, nature and composition of natural and manufactured materials for the benefit of the public.

The ACTF supports strategic Analytical Science Community activities. ACTF also funds the Community for Analytical Measurement Science (CAMS) secretariat, lectureships and postdocs.

[View ACTF's grants, education and training opportunities.](#)

### Solutions in Science

4-6 July 2023 Cardiff, UK

The [Solutions in Science \(SinS\)](#) Conference and Exhibition will take place on the 4-6 July 2023 in Cardiff. SinS is organized by International Labmate and supported by the Royal Society of Chemistry, the BMSS and ChromSoc, and is designed to improve networking and collaboration between scientists from diverse industries. The SinS Scientific Committee is currently seeking papers and posters on a range of subjects. [Submit an abstract](#) by 31st January 2023.

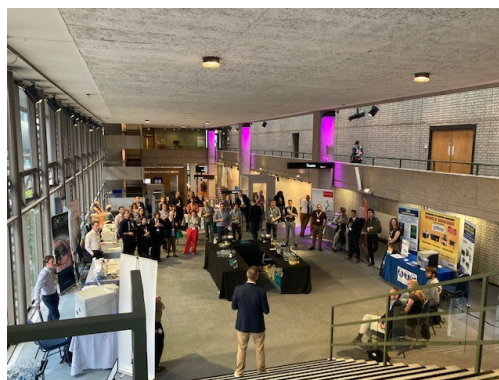
### A report from BNASS 2022: The 20th Biennial National Atomic Spectroscopy Symposium

Royal Northern College of Music, Manchester

28-29 June 2022

This year the [Atomic Spectroscopy Group](#) organised and hosted the [20th BNASS conference](#) in Manchester.

The event was a successful return to in person events whilst also supporting an online option, with keynote and invited talks as well as 14 exhibitors supporting the event. The conference opened with the Clinical, Biomedical and Health Applications session, followed by Speciation and Environmental, Advances in Measurement Applications and closed with Instrumental Advances. With 16 talks and 15 posters, the wide ranging agenda covered multiple atomic spectroscopy techniques, demonstrating the wide application of the field.



BNASS will return in 2024. In the interim, the [Atomic Spectroscopy Group](#) are continuing to run the webinar series of the "A-Z of Spectroscopy". More information can be found on the "forthcoming events" section on the [Atomic Spectroscopy Group](#) website.