

# ANALYTICAL MATTERS

ISSUE 14 – WINTER EDITION 2020

## UPCOMING EVENTS

*A selection of analytical events coming up in the next few months*

### **11th Scottish Symposium on Environmental Analytical Chemistry**

14<sup>th</sup> February 2020, Aberdeen  
[more information](#)

### **2020 #RSCPoster Twitter Conference**

3<sup>rd</sup>-4<sup>th</sup> March 2020, online  
[more information](#)

### **Technician Commitment launch event**

4<sup>th</sup> March, London  
[more information](#)

### **Greene King Brewery Tour**

3<sup>rd</sup> April 2020, Bury St Edmunds  
[more information](#)

Visit the [webpage](#) for more Analytical Events

## CPD RESOURCES

### **Analytical Methods Committee Technical Briefs**

Technical information on a wide range of analytical techniques, found [here](#)

### **RSC online CPD**

[Log](#) your continuing professional development

Welcome to the fourteenth issue of Analytical Matters, the e-newsletter of the Analytical Division 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 Division as well as linking with parts of the UK analytical community beyond our membership.

I want to start by stating how important our analytical community is - both nationally and internationally. Science knows no borders, and our community will always be strengthened by our ability to collaborate with colleagues across the globe. To this end, in this issue we highlight the range of scientific meeting grants and travel grants that we have supported throughout 2019, enabling our analytical membership to build relationships and disseminate their research.

We also wish to highlight the 2020 #RSCPoster Twitter Poster Conference, a conference like no other, where researchers around the world come together to celebrate and learn about exceptional research. Please join us on the 3<sup>rd</sup> March 2020, using the hashtags #RSCPoster and #RSCAnalytical. Registration for the event can be found [here](#).

Elections to join the Analytical Division Council (Honorary Secretary and two elected positions) are open until the 7<sup>th</sup> February. [Join us](#) and help make a difference in the analytical community.

Thank you to everyone that has nominated the exceptional analytical scientists that they know for RSC Analytical Awards. The selection committee now face a difficult task of selecting the winners of these prestigious awards. The winners will be announced in May.

Please send your feedback and any content for the next issue by April 30<sup>th</sup> by emailing the Editor [here](#).

With my very best wishes,

### **Duncan Graham FRSC**

President, RSC Analytical Division



## JOIN US!

---

### Opportunities to join Analytical Division Council

We are currently accepting nominations for an **Honorary Secretary** and **two Elected Members** of Analytical Division Council to take office from the AGM in July 2020, for a three-year term, until the AGM in July 2023.

Analytical Division Council Members provide oversight and leadership to the Division to ensure it is fulfilling its purpose of encouraging, assisting and extending the knowledge and study of analytical science.

Honorary Secretary and Elected Members of Analytical Division Council are also expected to act as a Trustee of the Analytical Chemistry Trust Fund, which includes attending trustee meetings three times a year.

Further Information about the nomination process, the electoral regulations and full role descriptors are available online at: <https://www.mi-nomination.com/rsc>.

**Nominations close at 5 pm on Friday 7th February**

If you have any questions about the roles or the work of the Analytical Division, please do not hesitate to contact [analyticalmatters@rsc.org](mailto:analyticalmatters@rsc.org)

---

## ANALYTICAL DIVISION EVENTS

---

### Analytical Research Forum 2020

16 June 2020, London, United Kingdom

This flagship event of the Analytical Division will showcase cutting-edge analytical chemistry and applications to stimulate new research, collaboration and engagement between academia and industry.

Don't miss out on your chance to showcase your latest research alongside our invited speakers: Amilra de Silva (Queen's University Belfast), Caroline Gauchotte-Lindsay (University of Glasgow) and Nick Stone (University of Exeter).

**Get involved and [submit your abstract today](#):**

Oral Abstract deadline is fast approaching – 24 February 2020

Poster abstract submission deadline - 13 April 2020

ACTF travel bursaries are available to students and members in the early stages of their career to attend the Analytical Research Forum.

**Further details available on the [event webpage](#).**

---

### Measuring Cancer Earlier:

#### ***Connecting Cancer Researchers and Analytical Scientists***

**Save the date – 12 June 2020, London**

This summer the Analytical Division and Cancer Research UK will be hosting a workshop and networking event to explore collaborations for early detection.

*Further details and an expression of interest call to follow.*



## OUTREACH OPPORTUNITIES

---

### Schools Analyst Competition 2020

Interested in outreach?

We are looking for people to get involved in coordinating our National [School's Analyst Competition](#).

Contact [analyticalmatters@rsc.org](mailto:analyticalmatters@rsc.org) for further information.

## CELEBRATING SUCCESS

---

Analytical Division President, Professor Duncan Graham, presented the **2018 Theophilus Redwood Award** to **Professor Christy Haynes (University of Minnesota)** at the SciX 2019 meeting in October in Palm Springs. Christy received the award for interdisciplinary work at the interface of analytical, biological, and materials chemistry and skills for passionately and effectively communicating science to broad audiences.

Christy gave an inspiring lecture on polymer-enabled plasmonic sensing as part of an Award Symposia which included a line-up of speakers she selected.



*Photo credits: Glen P. Jackson, WVU, USA*

***Duncan Graham presents Christy Haynes with the Theophilus Redwood 2018 Award at SciX 2019***

## FUNDING AVAILABLE FROM THE ANALYTICAL DIVISION

---

### Travel Grants for PhD Students and Early Career Scientists

Members can apply to the Analytical Division for a competitive travel grant to attend any scientific conference or workshop anywhere in the world. Grants are available to cover domestic (up to £200), continental (up to £400) and intercontinental (up to £800) travel to meetings where applicants give oral or poster presentations (we will also consider applicants not intending to present if their attendance will be a significant benefit to their career). Applications are assessed on a monthly basis – apply online [here](#).

In 2019, the Analytical Division enabled **50** PhD students and early career scientists (based in 9 different countries) to attend 17 different scientific meetings in 2019 (across 16 different countries) including:

- SciX 2019
- 22nd International Conference on Secondary Ion Mass Spectrometry
- MicroTAS 2019
- 20th European Meeting on Environmental Chemistry (EMEC20)
- 236th ECS Meeting
- American Association of Pharmaceutical Scientists Annual Meeting
- Biophotonics Australasia 2019
- BMSS Annual meeting
- Gordon Research Conference
- Herbicide Discovery and Development (HDD2020)
- HTC-16
- Materials Testing for Cultural Heritage Symposium
- MSACL 2019 EU - Mass Spectrometry: Applications to the Clinical Laboratory
- SETAC North America 40th Annual Meeting
- Society for American Archaeology Annual Meeting
- The 22nd International Conference on Secondary Ion Mass Spectrometry
- XV EUROPT(R)ODE 2020

## Scientific Meetings Grant

You can apply to the Analytical Division for up to £2000 to support your scientific meeting, including (but not limited to) scientifically enhancing your own existing meetings (international speaker expenses, for example) or fully supporting a "no frills" research meeting or workshop. Applications are judged every 3 months and the next closing date is **29 February 2020** – apply online [here](#).

In 2019, we supported 7 meetings including:

- 35th International Conference on Environmental Geochemistry & Health
- VI International Caparica Conference on Analytical Proteomics 2019
- Emerging Analytical Professionals
- University of Reading School of Chemistry, Food and Pharmacy Early-Career Researchers Network Meeting
- 9th European Oxysterol Research Network Meeting
- Journées de Chimie Analytique
- 16th International Symposium on Hyphenated Techniques in Chromatography and Separation technology

## OTHER RSC FUNDING OPPORTUNITIES

---

### Grants for Carers

With our Grants for Carers, you can apply for up to £1,000 per year to help you attend a chemistry-related meeting, conference or workshop or a professional development event. This money would be used to cover any additional costs you incur, paying for care that you usually provide. For further information and to apply visit the [Grants for Carers webpage](#).

### Assistance Grants

With our Assistance Grants, you can now apply for financial assistance of up to £1,000 per year to help chemists who require additional support to attend professional events such as a meeting, conference, workshop or professional development event. Find out more and apply to our [Assistance Grants](#).

## BULLYING AND HARASSMENT SUPPORT LINE

---

### Struggling to talk?

If you have encountered bullying or harassment in the chemical sciences, talking to someone you know about those experiences can feel impossible.

You might be the person targeted, a bystander, or the person accused of such behaviours – whatever your experience of bullying and harassment in the workplace, we are here to support you.

If you are not sure where to turn, our staff will listen and signpost you to resources that may help.

Call the new RSC confidential line on **0800 5200115** (UK Freephone), **+44 1223 624606** (International), from 8am–8pm (UK time) Monday–Friday, for impartial support.

## OTHER FUNDING OPPORTUNITIES

---

### ACTF Analytical Chemistry Summer Studentships

The purpose of the awards is to give experience of research to undergraduates with research potential and to encourage them to consider a career in Analytical Chemistry research on completion of their undergraduate degree.

Further details on how to apply can be found on the [webpage](#).

**Deadline for application: 17:00 14 February 2020**

---

### Association of British Spectroscopists Trust (ABS Trust) Bursaries

The ABS Trust offer a number of bursaries for students and early career scientists engaged in or utilising analytical spectroscopic techniques.

Further details can be found on their [website](#).

## COMMUNITY EVENTS OF INTEREST

---

### Spring SciX 2020

**April 6-9, 2020, Liverpool, United Kingdom**

This April (Monday 6th to Thursday 9th) the University of Liverpool is hosting Spring SciX 2020, a satellite meeting of the highly successful Federation of Analytical Chemistry and Spectroscopy Society (FACSS) SciX series, covering a wide range of analytical chemistry research.

Spring SciX will address the exciting interface of the physical sciences with the life sciences and covers developments and applications of many different analytical methods to health & disease, plant sciences and microbiology, as well as many other areas that require measurement - including materials science and chemistry.



There will be opportunities for oral and poster presentations - at all levels from established researchers to early career researchers - with an additional aim for ECRs to help to establish career mentors. We currently have over 30 bursaries for ECRs.

Join leaders in the analytical sciences as they present progress on emergent topics, meet with exhibitors, and network over four days in Liverpool.

We look forward to welcoming you to Liverpool in April 2020.

Registration and abstracts are available: <https://www.springscix.org/>

---

## COMMUNITY EVENTS OF INTEREST

**Emerging Analytical Professionals (EAP) 2020**  
May 15-17, 2020, Kettering (Midlands), United Kingdom

**CALL FOR EARLY CAREER ORAL AND POSTER SUBMISSIONS!**

**Oral abstract deadline – 28<sup>th</sup> February 2020**

**Poster abstract deadline – 31<sup>st</sup> March 2020**

**APPLY HERE:**

<https://www.analyticalsciencenetwork.co.uk/ourevents>

Bursaries are available!

The aim of the EAP weekend is to provide presentation, networking and continuing professional development (CPD) opportunities for early career researchers (ECRs) across all disciplines, open to both industry and academia.

**KEYNOTE SPEAKER**  
**Dr Angela Lamb**  
British Geological Survey  
A diet fit for a King:  
Isotope analysis of the skeleton  
of Richard III

**KEYNOTE SPEAKER**  
**Prof Chris Elliott OBE**  
Queens University Belfast  
Fighting organised crime  
in the global food system using  
innovations in analytical chemistry

**Emerging Analytical Professionals 2020**  
#EAP2020 #AnalyticalMatters

Each year we include general interest talks as well as specialist lectures, CPD and back-to-basics sessions, as well as our legendary fancy dress disco. This year we are excited to welcome Prof. Chris Elliott (Queen's University Belfast) and Dr. Angela Lamb (British Geological Survey) as our keynote speakers. Join us for our special 25th year of EAP!

## #RSCPoster Twitter Conference

The #RSCPoster Twitter Conference is an annual online event held entirely over Twitter to bring members of the scientific research community together to share their research, network and engage in scientific debate.

Held online over 24 hours, the unique format removes the environmental and financial costs of attending a traditional conference, and helps scientific researchers share their work and network across disciplines, wherever they are in the world.

Last year, more than 3,000 researchers took part, and posters and conversations were seen by over 2 million people around the world. This year you can submit a poster in one of 12 subject areas, from analytical chemistry to engineering. Posters win prizes if chosen by the subject chairs.

Register now to take part on 3 March at 12:00 UTC, and help us to spread the word. The analytical community will be tweeting with the hashtag #RSCAnalytical. See you there!

ROYAL SOCIETY OF CHEMISTRY

**2020 #RSCPoster  
Twitter Conference**

A conference with clear advantages  
**3 March 12:00 UTC**

Join in: [rsc.li/rsc-poster-2020](https://rsc.li/rsc-poster-2020)  
Fundamental questions  
Elemental answers

**For a full list of Analytical Events of Interest visit the [webpage](#).**

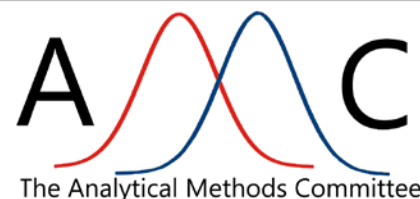
### Analytical Methods Committee Technical Briefs

Technical Briefs published by the AMC are prepared by experts in the field to highlight recent information on topics of interest to the analytical chemistry community. In this edition we would like to highlight our two latest technical briefs.

#### AMC Technical Briefs

are produced by the Analytical Methods Committee (AMC) - the branch of the Analytical Division that handles matters of technical importance to the analytical science community.

Find out more at: [www.rsc.org/amc](http://www.rsc.org/amc)



### The edge of reason: reporting and inference near the detection limit

*Analytical Methods Committee, AMCTB No 92*

This Technical Brief describes the principal internationally recognised approach to decision and detection limits. Find the full version [here](#). Abstract reads: Although the general concept of a detection limit as a lower practical operating limit for an analytical method is widely understood, the precise interpretation of results near the IUPAC limit of detection is rarely as well understood or implemented. It is important to distinguish between statements about the analytical result, which is known, and inferences about the true value, which are not known. It is also crucial to understand that there are at least two quite different limits involved and that the limit most commonly referred to as the 'limit of detection' is, surprisingly, not intended as the criterion for detection of an analyte. This Technical Brief describes the principal internationally recognised approach to decision and detection limits.

### Laser-induced breakdown spectroscopy (LIBS) in cultural heritage

*Analytical Methods Committee, AMCTB No 91*

This Technical Brief describes the basic concepts of laser-induced breakdown spectroscopy, presents relevant aspects of instrumentation and discusses how the technique is applied in of cultural heritage studies. Find the full version [here](#). Abstract reads: Laser-induced breakdown spectroscopy (LIBS) is a versatile technique that provides nearly instant elemental analysis of materials, both in the laboratory and in the field. This is done by focusing a short laser pulse on the surface of the sample, or object, studied and analysing the resulting spectrum from the laser-induced plasma. LIBS has been employed in the analysis of archaeological and historical objects, monuments and works of art for assessing the qualitative, semi-quantitative and quantitative elemental content of materials such as pigments, pottery, glass, stone, metals, minerals and fossils. It is also used in robotic planetary rovers. This Technical Brief describes the basic concepts of LIBS, presents relevant aspects of instrumentation and discusses how the technique is applied in the context of cultural heritage studies.

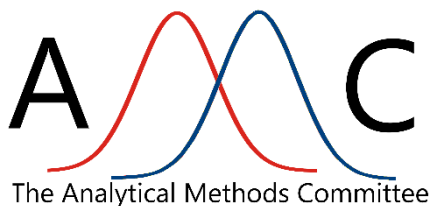
For more free technical briefs on this topic and more topics of interest to the analytical chemistry community, please visit <https://www.rsc.org/Membership/Networking/InterestGroups/Analytical/AMC/TechnicalBriefs.asp>

**Please note:**

Theobald Lecture  
Dr. Lucia Burgio, Senior Scientist, Victoria and Albert Museum  
and L S Theobald Lecturer 2020

*Join us and learn: What exactly does a Museum scientist do?*

**SOLD OUT**



**Looking to gain chartered status? The Analytical Methods Committee (AMC) provide Technical Briefs, ideal for supporting continuing professional development.**

The Analytical Methods Committee (AMC) is the Committee of the Analytical Division (AD) that handles matters of technical importance to the Analytical Science Community. Made up of expert Sub-Committees and designated representatives, the broad aim of the AMC is to participate in national and international efforts to establish a comprehensive framework for appropriate quality in chemical measurement, often working alongside numerous accreditation services and governing bodies, such as DEFRA and UKAS.

To do this, we assist in the development and establishment of suitable performance criteria for methods and instruments; advise on the use and development of appropriate statistical methods and are deeply involved in identification and promulgation of best analytical practice, including aspects relating to sampling, instrumentation and materials.

The AMC produces Reports and regular Technical Briefs (TBs) on a wide range of analytical topics, published in the RSC journal *Analytical Methods*. We are also proud to support the overall AD aim of supporting Continuing Professional Development (CPD) with our TBs which can be used towards CPD certification.

Find more information and our Technical briefs at [www.rsc.org/AMC](http://www.rsc.org/AMC)  
or follow us @RSC\_AMC



## COMMUNITY NEWS

### Community for Analytical Measurement Science (CAMS) Update

#### 2020 Building on Strong Foundations of 2019

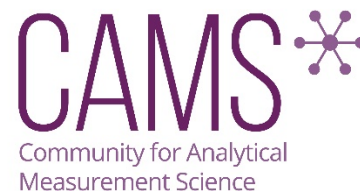
Whilst the idea of CAMS and the discussions for its inception have been long in the making, 2019 saw a number of significant milestones with the Community's official launch at the RSC's Burlington House in June and the establishment of the Executive Board, Industry Advisory Board, Measurement Science Institute and BEAM (training and skills) during the year. With the support of the Analytical Chemistry Trust Fund we bestowed our first set of industry selected awards (3 lectureships and 3 post doc grants), as well as our second set of CAMS fellowships. And to end the year with a bang, we finally resolved how to manage community funds by creating "CAMS Ltd". But for CAMS this is only the beginning, we have a busy schedule for 2020 and will keep you all updated throughout the year and hope to welcome as many of you as possible to our **first annual conference in September**.

Please visit our website: <https://cams-uk.co.uk> for the latest network information and become a Community Member. It is free to join and all you need to do is to register via the [website](#).

To promote relevant upcoming events on our website please send details to the [secretariat@cams-uk.co.uk](mailto:secretariat@cams-uk.co.uk).

We also welcome contributions in the form of training materials, best practice guides or webinars.

Please stay connected, share your views and follow us on Twitter [@CAMS\\_UK](#) and LinkedIn <https://www.linkedin.com/company/cams-uk>





### Atomic Spectroscopy Group – International Year of the Periodic Table Symposium

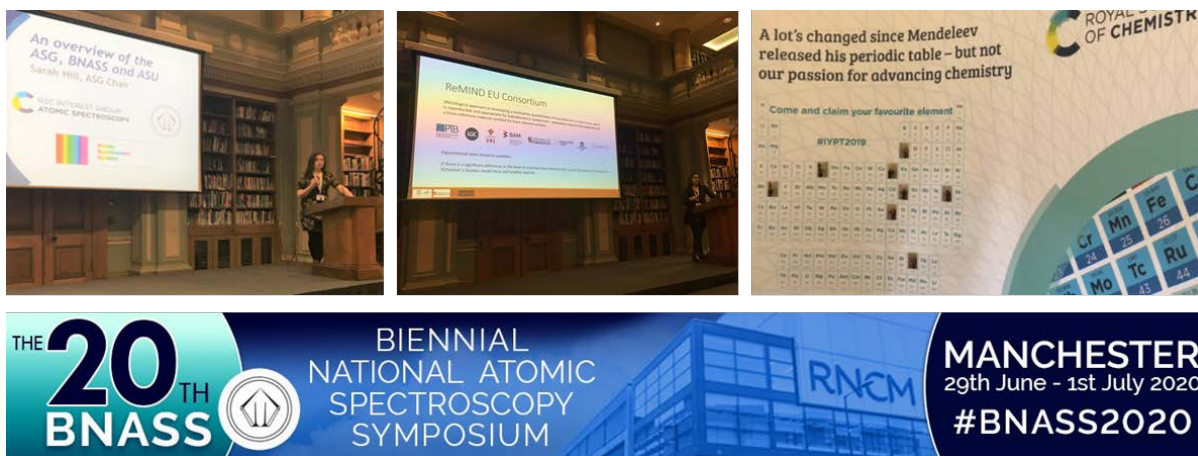
The designation of 2019 by UNESCO as the International Year of the Periodic Table was celebrated widely last year by chemists across a wide range of disciplines. In few fields, however, can Mendeleev's defining work be said to be more relevant than in that of Atomic Spectroscopy. For the Atomic Spectroscopy community, the periodic table represents our analytical world and understanding the fundamentals of the elements has allowed the development of this large and varied field. To that end, the Atomic Spectroscopy Group (ASG) held a celebratory symposium at Burlington House on 4<sup>th</sup> November 2019 to showcase recent works in the field and facilitate networking between researchers.

Following lunch, the meeting was opened by Dr Eduardo Bolea Fernandez from Ghent University who gave the keynote address on "Exploring the limits of tandem ICP-mass spectrometry (ICP-MS/MS): an overview". Other speakers came from both industry and academia and as well as established speakers, there was also a session giving PhD students working in the field a chance to present their research.

Dr Sarah Hill, ASG chair, closed the meeting by giving an overview of the work of the ASG and inviting all delegates to attend future ASG events.

Following the talks there was a networking session where attendees had chance to claim their favourite element on the RSC's periodic table photobooth as well as a chance to catch up with familiar faces and make new professional connections.

The next event hosted by the ASG will be the Biennial National Atomic Spectroscopy Symposium which will take place 29<sup>th</sup> June – 1<sup>st</sup> July 2020 at the Royal Northern College of Music in Manchester. Abstract submission is now open.



For more details on BNASS 2020 and future ASG events, follow us on Twitter and LinkedIn.

LinkedIn: BNASS: The Biennial National Atomic Spectroscopy Symposium <https://www.linkedin.com/groups/13743426/>

Twitter: @BNASS\_RSC [https://twitter.com/BNASS\\_RSC](https://twitter.com/BNASS_RSC)

*Report by Lizzie Griffin, University of Aberdeen, Atomic Spectroscopy Group Committee*

To view previous issues of Analytical Matters please use the link: <http://rsc.li/analytical-matters>

RSC Members can join the Analytical Division and receive Analytical Matters.

To join email: [Analyticalmatters@rsc.org](mailto:Analyticalmatters@rsc.org)