ANALYTICAL MATTERS



ANALYTICAL DIVISION

ISSUE 16 – SUMMER EDITION 2020

ONLINE EVENTS

Due to the current crisis, many events have been moved online:

Chemical Science Symposium 2020: How can machine learning and autonomy accelerate chemistry? – more info here 29-30th September 2020, online

RSC Molecular Spectroscopy Group Online Seminar Series - October 2020 – more info here 22nd October 2020, online

The Forge - Characterisation of Pharmaceutical Formulations – more info <u>here</u> 4-5th November 2020, online

JPAG pharmaceutical analysis research awards 2020 – more info <u>here</u> 17th November 2020, online

CPD RESOURCES

Analytical Methods Committee Technical Briefs Technical information on a wide range of analytical techniques,

range of analytical techniques found <u>here</u>

RSC online CPD Log your continuing professional development Welcome to the sixteenth 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.

In the advent of COVID-19 we are seeing the movement of conferences and symposia to online events – the Analytical Division is no different. We will be running several virtual symposia (7th October and 2nd December), as part of a larger RSC event, to highlight the latest analytical research, showcase early career researchers, and enable our community to share, connect and network. We hope to see you there.

In this issue, we welcome new Analytical Division Council members, as well as celebrate the 2020 Analytical Division Award Winners, whose research ranges from ingestible sensors to surface science.

We also highlight the range of RSC support available to help our community. From financial support through the Chemists' Community Fund, to funding for projects for improving diversity through the RSC Inclusion and Diversity Fund.

I also encourage you to take advantage of the range of different Continued Professional Development (CPD) opportunities available to you through the RSC, including working towards Chartered Status, all from the safety of your own home.

Please send your feedback and any content for the next issue by October 31st by emailing the Editor <u>here</u>.

With my very best wishes - stay safe!

Diane Turner FRSC

President, RSC Analytical Division



Welcome to new Analytical Division Council members

As Diane Turner (Anthias Consulting Ltd), starts her three year term as Analytical Division President, we also welcome the following new appointments to Council:

- Zoë Ayres MRSC (Hach Company) Honorary Secretary
- Melanie Bailey MRSC (University of Surrey)
- Philip Dunn MRSC (LGC)
- Karen Faulds FRSC FRSE (University of Strathclyde)
- Ruchi Gupta MRSC (University of Birmingham)

Derek Stevenson has started a three-year term as Chair of the Analytical Methods Committee.

Further details about our Council Members can be found on the webpage.

The Division Council would like to thank outgoing Members Perdita Barran (University of Manchester) and David Perrett (Barts Medical School) for their commitment and dedication during their time on AD Council and as trustees of the Analytical Chemistry Trust Fund.

Analytical Division Opportunities

Analytical Division Eurachem Representative

We are currently seeking to appoint an AD <u>Eurachem</u> representative. If you are interested in this role and would like further information then please contact the Analytical Division Programme Manager <u>Leanne Marle</u>.

Celebrating the Analytical Division Award Winners

The 2020 Royal Society of Chemistry Prizes and Award winners were announced on 24 June through a <u>digital celebration</u> to highlight all of this year's winners and their achievements. Congratulations to the following 2020 Analytical Division Award Winners:



Anne Bennett Memorial Award for Distinguished Service: <u>Dr Mike Foulkes</u> (University of Plymouth) for long-standing service to the RSC Analytical Division and the sustained promotion of analytical chemistry, particularly atomic spectroscopy.

Industrial Analytical Science Award: <u>Dr Alex Shard</u> (National Physical Laboratory) for pioneering accurate chemical measurements of surfaces and interfaces.

Joseph Black Award: <u>Dr Anna Regoutz</u> (University College London) for outstanding contributions to the development and application of X-ray photoelectron spectroscopy in the area of electronic materials and devices.



Robert Boyle Prize for Analytical Science: <u>Professor Kourosh Kalanter-Zadeh</u> (University of New South Wales) for the development of commercialised ingestible sensors for gut disorders, gas sensors for pollutants and point-of-care biosensors.



Ronald Belcher Award: <u>Ms Hayley Simon</u> (University College London) for outstanding and innovative research on the conservation of Mary Rose iron cannonballs, which has produced unique insights to the field of conservation.



Theophilus Redwood Award: <u>Professor Richard Brown</u> (National Physical Laboratory) for excellence in theoretical and practical aspects of chemical measurement leading to the recent redefinition of the mole, and communication of these changes.

The Analytical Division Council would also like to congratulate the Royal Society of Chemistry Inspirational Member Award winners:

<u>Professor John Dean</u> (Northumbria University and RSC Analytical Division North East Region) for dedication to the planning, coordination and ongoing development of the Schools Analyst Competition.

<u>Dr Steve Lancaster</u> (Domino Printing Sciences and RSC Pan Africa Chemistry Network) for dedication to the development of an analytical chemistry training programme in Africa.

ANALYTICAL DIVISION EVENTS

Analytical Division Online Symposia – register now!

The Royal Society of Chemistry Science Divisions are hosting a series of free fortnightly online symposium for our communities to hear about the latest research and network with colleagues.

Join us to hear from keynote speakers, including RSC Prize & Award winners, alongside short talks from early career researchers. Each symposium includes an online networking session, open to all, providing an opportunity to discuss the latest research and make new connections

The Analytical Division Symposia will take place on:

Wednesday 7th October 10.00 – 12.00

Keynote speaker: 2020 Robert Boyle Prize for Analytical Science Winner Professor Kourosh Kalantar-Zadeh (University of New South Wales, Australia)

Wednesday 2nd December 10.00 – 12.00

Keynote speaker: 2020 Theophilius Redwood Award Winner Professor Richard Brown (National Physical Laboratory, United Kingdom)

For further information and to register visit the webpage: <u>https://www.rsc.org/events/detail/45242/rsc-science-divisions-online-symposia</u>

COVID-19 – find support

You can find detailed support for individuals, researchers, educators and businesses from the Royal Society of Chemistry and other organisations, including the UK Government on their <u>webpage</u>.

Chemists' Community Fund

If current events are having a negative financial impact on you, your partner or dependants – especially if they have led to changes in your regular income – please speak to the Chemists' Community Fund, the benevolent fund for RSC members.

While we recognise that the support we can offer will be limited, we may be able to offer financial support to you and your family as a Royal Society of Chemistry member.

The Fund offers a completely confidential service. Please get in touch by phoning +44 (0)1223 432227, or by ccfund@rsc.org

Please see the <u>Chemists' Community Fund</u> website for more details and feel free to share this with others in your networks.

Grants for Carers and Assistance Grants

In response to the COVID-19 pandemic, the RSC have extended the purpose of our Grants for Carers and Assistance Grants schemes. Further information is available <u>here</u>.

RSC Outreach Fund

The Outreach Fund remains open and welcome to applications. For further details on applying at this time please visit the <u>webpage</u>.

Inclusion and Diversity Fund

The Inclusion and Diversity Fund provides financial support for innovative products, activities and research projects that will help make the chemical sciences community more inclusive and diverse, including a specific open call to support community-driven project that looks at the needs, challenges and opportunities in support of the Black chemistry community.

Find out more about the Inclusion and Diversity fund and make an application here.

Chemistry against COVID-19

The RSC have started sharing #ChemVSCovid hero stories to celebrate the vital contributions the chemical science community is playing in the global response to COVID-19.

You can help us celebrate the chemists across the world who are making a difference by sharing your stories with us - either by e-mail (<u>communications@rsc.org</u>), or using the hashtag #ChemVSCovid on social media.

Building a better chemistry culture webinar series

In response to the COVID-19 pandemic and with an aim to support the chemical sciences community beyond the current situation, Chemistry World and the Inclusion and Diversity Team at the Royal Society of Chemistry are offering a series of monthly webinars titled <u>Building a better chemistry culture</u>. The series will focus on the science behind some of the issues being experienced during this time and provide support such as sharing coping strategies and reducing stigma around mental health and wellbeing. The themes that will be explored include kindness, working from home, isolation and loneliness, impact on professional and personal relationships, coping with loss, managing uncertainty and lack of control.

Missed the previous webinars? You can find the series on-demand here.

Annual PACN Congress

The <u>Pan Africa Chemistry Network</u> Annual PACN Congress, planned to have taken place in Lagos, Nigeria this year has been cancelled. In its place, PACN will be running a series of 3 webinars over 2 days covering the issue of counterfeiting medicine in Africa, on **30th November and 1st December 2020.**

Webinar 1: The reality of combatting counterfeiting in Africa - Current market trends/Industry response

Webinar 2: Detecting & distinguishing counterfeit medicines/ analytical approaches

Webinar 3: Future anti-counterfeiting technologies

If you are an expert in any of these areas, the organising committee are looking for speakers for the event. Please contact Francesca Porcu at <u>africa@rsc.org</u> for inquiries.

FUNDING OPPORTUNITIES

CAMS Fellowships

The CAMS Fellowships provide funding to assist early career analytical chemists within 5 years of their first full-time junior academic appointment at a UK or Irish HEI to establish their own independent analytical science research identity.

Applications are currently open and will close at 17:00 (UK time) on Friday 18 September 2020.

For more information about this fellowship and details of how to apply visit the <u>webpage</u>.

CRUK Pancreatic Cancer Sandpit - online

Cancer Research UK, Pancreatic Cancer UK and The Engineering and Physical Sciences Research Council are teaming up to run an <u>Early Detection of Cancer sandpit workshop</u>. The theme of the workshop will be exploring novel technological approaches for the early detection of pancreatic cancer. The sandpit will be directed by Professor Eithne Costello at the University of Liverpool and Professor Stephen Pereira at University College London.

Sandpits are a unique approach to funding research – participants will explore a research challenge, build new collaborations and think creatively to develop a pitch for innovative research ideas.

Applications close on <u>15 September</u>.

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 latest technical brief.

Thermal desorption part 1: introduction and instrumentation

Analytical Methods Committee, AMCTB No 97

The past 30 years have seen increasing availability of methods and equipment using thermal desorption for the measurement of airborne pollutants. These methods: offer greater sensitivity than methods using solvent desorption; are more amenable to automation; and, are better suited to mass spectrometry (MS)-based detection. The greater sensitivity offered by thermal desorption means it is well suited to the analysis of samples collected through diffusive sampling with the additional benefits that this offers. This Technical Brief informs both analysts and less technically aware users of the capabilities and limitations of thermal desorption equipment and measurement methods.

For more free technical briefs on this topic and more topics of interest to the analytical chemistry community, please visit the link <u>here</u>.



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 <u>www.rsc.org/AMC</u> or follow us @RSC_AMC



Continuing professional development (CPD) resources

The Royal Society of Chemistry encourages all members to undertake suitable professional development. One of the ways in which RSC support this is through their approval of training courses, where they approve training courses offered by 3rd party training providers.

A training course has to go through a rigorous peer-review process in order to meet certain criteria and become approved. Each training course is assessed by members that are expert in their field. Our members can be assured that these approved courses have met our high standards. We currently approve over 160 courses across a wide variety of subject areas. These include courses that look to develop technical skills in analytical chemistry, pharmaceutical chemistry, coatings, water treatment, quality assurance as well as many other areas. There is also a range of courses that look to develop professional skills such as leadership skills, project management skills and effective communication.

All RSC approved courses can be found at <u>www.rsc.org/cpd/training</u>, where you can easily browse and search for courses that are of interest.

Chartered Status

Why not work towards <u>chartered status</u>? The award of chartered status recognises the well-developed skills, knowledge and professionalism of those working within the chemical sciences. They are part of a broader recognition and development framework that includes the professional registers: Registered Science Technician (RSciTech) and Registered Scientist (RSci).

Gaining Chartered Chemist (CChem), Chartered Scientist (CSci), Chartered Environmentalist (CEnv) or Chartered Manager (CMgr) status demonstrates that you have:

- built on your academic achievements and developed professional skills in a work environment
- gained in-depth knowledge and critical awareness of your chosen area of the sciences
- developed strong scientific skills and are committed to improving them
- made a critical contribution to the success of your organisation, business or institution
- shown personal and professional integrity
- committed to developing your career, as well as advancing excellence in the sciences.

ACTF Logo Competition Winners

After the cancellation of the Schools Analysts Competition events earlier this year, trustees of the Analytical Chemistry Trust (ACTF) launched a competition for students to design a new logo for the trust fund.

Trustees reviewed 30 entries and were very impressed with the range of logo's submitted and the quality of the designs. Finally, they selected two winners who will both receive a prize of £300. It is hoped that these can be used as inspiration for a new logo that will be completed by a professional designer:

And the winners are...

Katie Hartwright of Comberton Sixth Form in East Anglia



Sandali Narasinghe of Hymers College in the North East Region



Trustees also invited students to submit TikTok videos labelled #SchoolsAnalyst2020 that show them doing analytical or measurement science at home.

The three winners of this competition are:

@ktyson2 - Experiment to determine the refractive effect that concentrations of nail varnish have on water
@im_d.prest - Can I disprove Phlogiston in my garage? Of course.
@gjrocks17 - Combustion of cereals to get kJ energy
Visit the webpage to view the videos here.

Many congratulations to all the prize winners!

Community for Analytical Measurement Science (CAMS) Update



Website: https://cams-uk.co.uk Email: secretariat@cams-uk.co.uk Twitter: @CAMS UK LinkedIn: www.linkedin.com/company/cams-uk

CAMS Inaugural Conference - #CAMS-UK2020

The Community for Analytical Science invites you to be part of its inaugural virtual conference. Running over 16-17 Sep 2020 the free to attend event comprises of 4 live sessions and interactive Knowledge and Skills Exchange Workshops. Visit the CAMS website (<u>https://cams-uk.co.uk</u>) to register and keep up-to-date with conference news.

CAMS Virtual Poster Competition

Running in parallel to the CAMS Conference is the CAMS Virtual Poster Competition. Anyone attending the conference is invited to submit a poster and 60 second video outlining current research, good practice or novel idea in the field of analytical measurement. Upload your poster by 18:00HRS on 04 Sep 2020 and you'll be in with a chance of winning a cash prize. A shortlist of candidates will be invited to take part in a live Poster Q&A forum during the conference. Further details on the CAMS website (https://cams-uk.co.uk).

CAMS Fellowship Call 2020

This year's CAMS Fellowship Call is open to applications until 17:00HRS on Friday 18 September 2020. One-off Fellowship awards of up to £30K are to be used to advance the purpose and career of the Fellow, whilst being inkeeping with the objectives of both the ACTF and CAMS. Applicants should be within 5 years of their first, fulltime junior academic appointment at a UK or Irish higher education institute.

Further information about the call and the application process can be found here.

Community for Analytical Measurement Science VIRTUAL CONFERENCE 16-17 Sep Day 1 Free to attend 10:00-12:00 Join us at our inaugural 13:00-15:00 conference and help strengthen the field of analytical Day 2 measurement science CAMS - an industry-led community of world class 10:00-12:00 analytical measurement science training, research and innovation - invites you to be part of its live virtual

conference. Register now via the CAMS website to secure your place in any of the 4 live sessions and interactive Knowledge & Skill Workshops being held as part of the

CAMS Virtual Poster Competition

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Industry Challenges

Knowledge & Skills

UKRI Landscape & Future Calls

13:00-16:00 **CAMS** Awardee Updates and Poster Competition

Registration www.cams-uk.co.uk

Keep up to date with Conference news via the CAMS website and social media channels

Website: https://cams-uk.co.uk Email: secretariat@cams-uk.co.uk Twitter: @CAMS_UK LinkedIn: www.linkedin.com/ company/cams-uk

#CAMS-UK2020

two day event.