

**Report on the Royal Society of Chemistry Analytical Division's
30th Schools' Analyst Competition Final 2019**

The 30th Final of the Schools' Analyst Competition, in the International Year of the Periodic Table, was held on the 19 - 20 June 2019 at the University of Manchester. All attendees were welcomed to the Competition by Professor Nikolas Kaltsoyannis (Head of School of Chemistry), Professor Perdita Barran (Professor of Mass Spectrometry), Dr Philip Riby (Competition organiser) and Professor John R Dean (on behalf of the RSC Analytical Division and Analytical Chemistry Trust Fund (ACTF)). The University of Manchester offers a range of successful degree programmes in Chemistry (BSc(H) and MChem) as well as several 'with programmes' including industrial experience, international study and medicinal chemistry. For this year's final, Dr Frank Mair devised a programme of experiments around the International Year of the Period Table (IYPT). The teams had to carry out multiple experiments involving a complexometric titration, mass spectrometry, inductively coupled plasma atomic emission spectrometry and colorimetry to identify an unknown element, gallium. In addition, the accompanying teachers had the opportunity to engage in some lab-based CPD. Finally, when the competition had finished and judging was taking place, the teams and accompanying teachers, were entertained by Dr Frank Mair with a stimulating lecture /demonstration entitled "Quantum of Science".

The winning team of year 12 students came from King Ecgbert School, representing the North East Region of the Analytical Division. The photograph shows the winning team comprising Emily Hatchwell, Abby Shaw and Beth Fishwick accompanied by staff Sarah Hale and Kate Bedford with Dr Philip Riby (local organiser), Dr Frank Mair, Professor Perdita Barran and Professor John R. Dean (on behalf of the RSC Analytical Division and ACTF). The School received a prize of £3000 together with Amazon Vouchers of £75 to each of the three team members. The School was presented with an engraved glass trophy on behalf of the sponsors the Analytical Chemistry Trust Fund.

The runners-up were the team from Charters School, representing the South East Region. The school received £2000 with the team members (Edward Rivers, Oscar Brown and Kelsey English) receiving £50 vouchers each. In third place was Nelson and Colne College, representing the North West Region, and they received £1000 and £25 vouchers to each of the team members (Taiha Chowdhury, Waheeda Khatum and Beth Waterhouse). The judges for this year's competition were Dr Philip Riby, Professor Perdita Barran and Professor John R. Dean (on behalf of the RSC Analytical Division), who also chaired the judging panel and awarded the prizes.



(L-R): Dr Frank Mair, Prof. John R. Dean (RSC Analytical Division and ACTF), Sarah Hale ((Head of Chemistry, King Egbert School), the winning team of Emily Hatchwell, Abby Shaw and Beth Fishwick, Kate Bedford (King Egbert School), Professor Perdita Barran and Dr Philip Riby.

On behalf of the Royal Society of Chemistry Analytical Division, I would like to thank the University of Manchester for agreeing to host the Competition and for providing an excellent venue with facilities that show case analytical chemistry. Specifically, *Staff and student helpers*: Prof Nikolas Kaltsoyannis & Dr. Jonathan Agger, *members of the Technical Support Team*: Abbas Askari, Delroy Flemmings, Ian Goodbody, Michael Hughes, Ludmila Timco & Greg Woodhead; *Student Helpers*: Rachelle Black, Chisom Egedezu, Olivia Holmes, Emily Kempa, Christopher Marsh, Abeer Muneer, Emma Norgate, Katayune Presland, Caitlin Walton-Doyle, Nicholas Weise & Terence Wu. The *judges*: Dr Philip Riby and Professor Perdita Barran; the *RSC Education Coordinator*: Dr Kat Presland; and, *The Speaker for the Demonstration Lecture*: Dr Frank Mair. *Our Sponsors*: Analytical Chemistry Trust Fund, Royal Society of Chemistry Analytical Division, and Shimadzu Ltd. *Our host*: Dr Philip Riby and for the *design of the experiment*: Dr Frank Mair. And finally, *for all the local organisation and liaison*: Meriel Maddocks, for making the whole event memorable for each of the 26 teams who attended (see SAC Group Final photograph).



(SAC Group Final): All the Finalists at the 2019 Schools' Analyst Competition at the University of Manchester.

The Competition is sponsored by the Analytical Chemistry Trust Fund, however during the 26 heats in which 339 Schools' participated throughout the UK and Republic of Ireland, many other organisations also provided financial sponsorship to support this national event. Without their help, the costs involved would be too prohibitive and some heats may not have been feasible. To all the sponsors, the Analytical Division expresses its gratitude. The regional organisers consistently receive a range of complementary comments from schools who participated, saying how much their teams enjoyed the experience. So, if you would like to get involved please contact your [Regional Analytical Division Committee](#) to find out more about where the heats are held in your region or contact me directly.

I would like to thank all the Analytical Division Regions for participating in this year's competition. The Competition would not exist without the agreement of: the Universities to allow us to use their premises, the enthusiasm of the staff, both academic and technical, to develop and validate experiments and the additional help provided by the administrative staff in these Universities.

Thank you for making the 2019 competition the most successful ever with 339 schools' participating. Thank you to the 1017 year 12 students for their enthusiasm in actively engaging in analytical chemistry, and the teachers who have supported their students in attending the competition. I hope that some of the first year sixth form students, aged 16-17 years old, studying Advanced level Chemistry or equivalent (e.g. Year 12 / S5) who participated in the competition, either during the heats and the final, will have been enthused by their experiences to go on to study Chemistry at University, and maybe choose Analytical Science as a future career.

Finally, heats of the 31st annual competition start again in early 2020 throughout each of the Analytical Division Regions and culminate in the final which will be held at Kingston University on Wednesday 17 & Thursday 18 June 2020.

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