

Outreach newsletter: June 2022

Welcome to the June edition of our Outreach newsletter!

Please do pass this on to anyone who may be interested in receiving this bulletin. They are very welcome to subscribe using this [link](#). If you wish to be removed, please email outreach@chem.ox.ac.uk.

With best wishes,

Dr Malcolm Stewart (Director of the Chemistry Teaching Laboratories), Saskia O'Sullivan (Educational Outreach Officer) and Matt Fifield (CTL Administrator)

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Featured event:

Secondary School Teachers' and Technicians' Conference – 7-8th July 2022

[REPEAT]

Join teaching and technical colleagues from across the UK at the Department of Chemistry's inaugural Teachers' and Technicians' conference in Oxford in July 2022. This two-day event is a chance to connect with other professionals, meet current researchers and University staff, as well as enjoy the beauty of the city, its colleges and the world-class facilities of the Chemistry Teaching Laboratory.

The programme features talks, panel events, hands-on practical workshops as well as a conference dinner on the Thursday night. Speakers include Dr Catherine Jackson, Associate Professor of the History of Science, Terri Adams, Glass Design & Fabrication Facility Manager, Associate Professor of Science Education, Ann Childs, as well as current DPhils working on cutting edge research. There will be an optional session focused on admissions.

The conference will take place jointly between the state-of-the-art Chemistry Teaching Laboratory and St Anne's College, one of Oxford largest and most welcoming colleges. You can now see view the timetable for the conference [here](#)

BOOK YOUR PLACE!



Upcoming event:

Primary Science Day **[UPDATE]**

We'll be hosting in a cross-departmental day of interactive workshops followed by a lecture-demonstration on chemical changes on **Wednesday 8th June (09.15–15:00)**. For Year 5 and 6 pupils, accompanied by a teacher. Attendance by invitation, spaces are prioritised for local primary schools partnered with Trinity College through Oxford Hub.



Ask a Chemist – Anthony Fletcher **[NEW]**

Our next Ask a Chemist session will feature Oxford Chemistry alum **Anthony Fletcher** on **Tuesday 7th June (13.00–14.00 BST)**

Anthony Fletcher is the founder of Believe in Science, a scientific R&D business. Before that, he was the CEO of graze, helping it to become the UK's number one healthy snack brand. Within this time Anthony has been responsible for taking the business to the US, achieving a \$32m run rate in the first year, launching the brand into retail securing distribution in over 40,000 stores, as well as leading the sale of the business first to private equity group Carlyle in 2012 and then to leading global consumer group Unilever in 2019.

Previously, Anthony held various roles at the smoothie business Innocent Drinks.



JOIN HERE!

Following on from Anthony's Q&A, our next Ask a Chemist sessions will feature **Lina Cox** (Tuesday 18th October) and **Brian Balmer** (Tuesday 15th November).

Chemical Changes **[NEW]**

A lecture-demonstration for Key Stage 2 (7-11 years) designed to inspire and interest pupils in chemistry and share the work of the Department of Chemistry. Pupils will find out more about chemical and physical changes and how chemistry is all around us.

We have around 100 spaces available for the lecture-demonstration on **Wednesday 22nd June, 14.00-15.00 BST**. If you are interested in booking this for your class, please email us at outreach@chem.ox.ac.uk.



School / Community Workshops **[REPEAT]**

Online Primary Workshop: Plastic Fantastic?

This new workshop is for a class of students in Years 5/6 (England and Wales), P5/6 (Scotland) and P6/7 (NI) in a UK primary school. Co-led with the class teacher, the students will interact with Oxford Chemistry ambassadors via MS Teams, whilst undertaking small-scale investigations using materials which have been sent to the school in advance.

7th June – Fully booked. 2022-23 dates will be released in due course.

Chemistry Teaching Laboratory (CTL) Workshops **[UPDATE]**

Due to some cancellations, we have some last minute availability for some of our CTL Workshops. Please note, that building works will continue to disrupt the availability of workshops in the CTL for the foreseeable future.

Career and Research Talk and CTL Identification of Unknowns Workshop

A talk (with Q&A) and laboratory workshop for 14-16 year old students taking GCSE Chemistry or equivalent. The maximum capacity across all school bookings is 40. A Thinking 3D (T3D) workshop can also be added. The maximum capacity is 24. This workshop will only run if there are sufficient numbers (16 or above) across all school bookings.

June 15th – Fully booked

June 16th – Fully booked

Fragrance Chemistry / Combinatorial Esters (plus optional talk, with Q&A)

Workshops for post-16 students taking A level Chemistry or equivalent.

There are two options available, depending on the extent of students' knowledge of analytical chemistry. 'Combinatorial Esters' for students who have covered IR and NMR, please select 'Combinatorial Esters', and 'Fragrance Chemistry' for those who have only covered IR, or have yet to cover analytical techniques. It is possible for a student to attend without a teacher.



June 14th – 29 Spaces

June 15th – 7 spaces

June 16th – Fully booked

If you would like to book a space on this workshop, please email us at outreach@chem.ox.ac.uk

Oxford College Workshops [UPDATE]

Visits to Oxford Colleges have re-started and you are warmly invited to request a **College Workshop** when arranging a group visit with a College. Find out about your link Colleges [here](#). *If you do not hear back from your link college within 14 days, do get in touch directly with us.*

Small, yet Mighty!

A brand-new workshop focused on fuel cells and linked to the GCSE curriculum. Students explore catalysis, hydrogen fuel cells, and create their own enzyme-fuel cell before tackling a puzzle which includes information about current research in the Department of Chemistry.



'I learnt a lot about hydrogen fuel cells which I didn't know before completing this workshop. Thank you so much!' Student

'I learnt new things that I can adapt into my school science lessons.' Student

'It was brilliant – a really high-quality session.' Teacher

Thinking 3D

A workshop is for KS4 (14–16 yrs) and is designed to showcase the importance of maths and geometry in chemistry through a circus of activities. Most suitable for students who are interested in maths. Minimum of 16 / maximum of 24 students.

"It helped me understand the topic and I learned new things about chemistry" – Student

Unlock the OxBox – Poison Puzzle

This is for KS4 (14–16 yrs) and is a series of practical and theoretical chemistry problems. Minimum of 12 students.

"It is fantastic for the students to have this opportunity to apply their knowledge to a problem-solving activity and so enjoyable for them." – Teacher

Unlock the OxBox – The Lab Lurker

A series of practical and theoretical chemistry problems for KS5 (16–19 yrs) students. Would suit a class where at least half of the students are studying A level (or equivalent) in Chemistry. Minimum 12 students (at least 6 studying Chemistry A level, or equivalent). You can mix and match puzzle boxes for groups including KS4 and KS5 students, as long as there is a minimum of 12 students in total (including 3 of each Key Stage).



UNIQ **[UPDATE]**

As part of the wider UNIQ programme, we're running an academic module between **Monday 11th** and **Wednesday 13th July** to provide an opportunity to experience life as a Chemistry undergraduate.

The course features a mixture of lectures, tutorials, and practical work to give you the full academic experience. Lectures will cover a range of subjects, showcasing the diversity and breadth of the Chemistry degree. Students will also participate in tutorials covering physical, inorganic and organic branches of chemistry. In addition, a range of practical activities take place in our world-class undergraduate teaching laboratory and provide a chance to explore aspects related to the taught course.



UNIQ is fully booked for 2022. Information on applying to the 2023 programme will be released in due course.

Future Events:

Autumn Chemistry Conference 2022 **[NEW]**

We'll be holding our third Virtual Autumn Chemistry Conference on Thursday 29th September 16.00–18.00 GMT. Open to all Year 12 and 13 students (or equiv., 16–19 yrs) and their teachers interested in finding out more about the cutting edge research happening in the field of chemistry, and hosted by the Department of Chemistry, University of Oxford. Students are welcome to attend unaccompanied by a teacher.

Information on speakers and registration to follow in due course.

KS5 Chiral Chemistry Workshops [UPDATE]

Our Chiral Chemistry workshops will continue in the 2022–2023 academic year. This is our online workshop for UK state school KS5 Chemistry students and teachers, which is delivered by our Department Ambassadors. Dates and times have been designed to avoid interruption of lessons. The session focuses on 3D shapes, chirality, the role of chirality in biological systems and the resources available to research chemists looking at proteins, such as the main protease in SARS-CoV-2, the latter being an active area of research in our Department. There is also an opportunity to ask our Ambassadors questions about their research and their academic careers to date.



Students may attend without a teacher, provided we have a teacher contact.

We have now announced dates for the next academic year. The workshop will be delivered on the following dates/times:

REQUEST A SPACE

Tuesday, 11 October 2022	16.00–17.00
Wednesday, 9 November 2022	16.00–17.00
Thursday, 01 December 2022	16.00–17.00
Tuesday, 10 January 2023	16.00–17.00
Wednesday, 08 February 2023	16.00–17.00
Monday, 13 March 2023	16.00–17.00
Thursday, 20 April 2023	16.00–17.00

Please note, places are limited to students from state schools in the UK, Isle of Man and Channel Islands, and where we are oversubscribed, we will prioritise places for students who meet our widening participation and access criteria. Further information about this can be found at <https://www.ox.ac.uk/about/increasing-access>

Other Opportunities:

Chemistry in the Garden at the Oxford Botanic Gardens and Arboretum [NEW]

Oxford Botanic Gardens and Arboretum (OBGA) is celebrating its 400th anniversary year, and we are joining in with a Chemistry in the Garden week of activities from 25th–30th July. Each day will focus on a different theme (History, Literature, Science, Art, Food and Wellbeing, Celebrations) and will be a chance to engage with our researchers and find out more about the chemistry of plants. Further details of how to join in with these events and the varied and many activities going on throughout the OBGA, when available, will be posted on the OBGA website (<https://www.obga.ox.ac.uk/>)



Quantum on the Clock Competition [NEW]

Submissions are now open for the Quantum on the Clock schools video competition, and the deadline has been extended to the 8th of July! The Institute of Physics QQQ group competition challenges you to create a three-minute video about any aspect of quantum science or technology, that a High School student can understand. Entries can be individual or in teams of up to four students, and there are loads of prizes up for grabs. Find out more on the competition webpage: [Quantum on the Clock](#) or watch our [video summary](#).



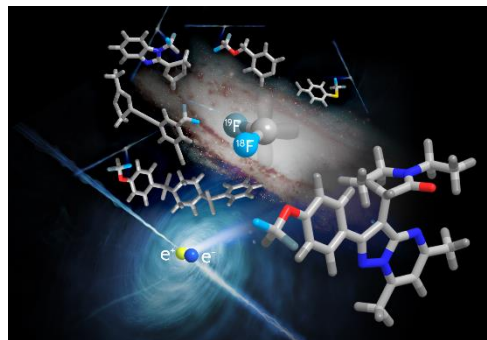
Work experience update [REPEAT]

It is with regret that we are unable to offer work experience placements this year. We do understand that many students are keen to undertake work experience having had these opportunities severely curtailed in the pandemic. We are hopeful to be able to offer placements in the future, which will be advertised via our website.

Learning Resources

Featured resource: New frontiers in radiochemistry with an unexplored ^{18}F -labelled carbene **[NEW]**

Researchers from Professor Véronique Gouverneur's group in Oxford Chemistry, working in collaboration with Cardiff University, Colorado State University, and industrial partners from Pfizer, Janssen and UCB, have developed a novel method to generate fluorine-based chemical tracers which will aid in disease diagnosis and drug discovery.



This article may be of interest to those studying or teaching Physics as well as Chemistry. You can read it [here](#)

If you are aware of resources that have been beneficial and would like us to include these in our future mailings, please do get in touch with us at outreach@chem.ox.ac.uk