

Outreach newsletter: April 2022

Welcome to the April 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 Item:

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 events:

Primary Science Days **[NEW]**

The Department of Chemistry is hosting two cross-departmental days of interactive workshops followed by a lecture-demonstration on chemical changes – on **Wednesday 25th May** and then **Wednesday 8th June** (both **09.15–14:50**). For Year 5 and 6 pupils, accompanied by a teacher. Attendance by invitation only, spaces are prioritised for local primary schools partnered with Trinity College through the Oxford Hub.



KS5 Chiral Chemistry Workshops **[REPEAT]**

Our Chiral Chemistry workshops will continue in the Spring term of the 2021–2022 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.

REQUEST A SPACE

The workshop will be delivered on the following dates/times:

Thursday 28th April 2022

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>

Ask a Chemist **[REPEAT]**

Our next two Ask a Chemist sessions will feature two Oxford Chemistry alums – **Brian Balmer** on **10th May**, and **Anthony Fletcher** on **7th June** (both sessions **13.00–14.00 BST**). Further details on the talks and speakers to follow.

SIGN UP

These sessions are **open to all** interested students of any age, teaching staff and parents, who are invited to submit questions in advance or during the session. Sign up to receive reminders and updates about this series.

Past Events:



Spring Chemistry Conference 2022 **[UPDATE]**

We held our inaugural Spring Chemistry Conference in March as part of our British Science Week 2022 celebrations – thank you to all who attended!. Two Oxford Chemistry researchers shared their innovative work, and responded to questions from attendees. You can catch up on each talk and Q&A from both of our speakers:



Small, yet Mighty! – Find out how our Glasstone Research Fellow, **Dr Patricia Rodriguez Macia** is exploring the use of enzymes in key reactions and how this sustainable approach could transform future energy generation.

Plastics for Our Future! – Hear from **DPhil Kam Poon** about his academic journey and his research into producing the next generation of sustainable plastics.

WATCH HERE!

Future Events:

Online Workshops **[UPDATE]**

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.

5th May – 1 class spot available
7th June – 3 class spots available

BOOK HERE!

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

We are now accepting bookings for CTL workshops from March 2022. Please note, that building works will continue to disrupt the availability of workshops in the CTL for the foreseeable future.

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.

May 11th – FULLY BOOKED

June 14th – FULLY BOOKED

June 15th – FULLY BOOKED

June 16th – FULLY BOOKED

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 14th – 40 spaces available

June 15th – FULLY BOOKED

June 16th – 40 spaces available

BOOK HERE!

Oxford College Workshops **[REPEAT]**

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.*



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).



Other Opportunities:

Work experience update **[NEW]**

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 and we are hopeful to be able to offer placements in the future, which will be have advertised via our website.

Year 10 National Scientific Thinking Challenge

[NEW]

Now running for the second year, this test for Year 10 students (compiled by academics from Warwick, Southampton, Bristol, Newcastle, Manchester and Oxford) sets challenges to encourage students to explore chemistry and give them something positive and enjoyable to try.



The challenge will run between 25–29th April and is open to Year 10 students from all schools in the UK. You'll receive marks and a rank for your students, along with printable certificates if they score within the top tiers.

You can find further information here:

<https://warwick.ac.uk/study/outreach/scientificthinking/>

Chemistry Taster Day – Balliol College **[REPEAT]**

A day of lectures, workshops and activities for Year 12 students from state schools who are interested in studying Chemistry, taking place at Balliol College, Oxford on **11th April 2022**. The day will include:

- Lectures by Dr Matthew Langton and Dr Rachel Quarrell
- A practical workshop
- A demonstration interview
- College tour and Q&A with current undergraduates



BOOK HERE!

To apply for a place at this event, please complete and submit the form linked here by **5pm on Thursday 7th April**

Learning Resources

Featured resource: Analytical Suite Tour: Infrared (IR) Spectroscopy **[REPEAT]**

The pandemic has clearly shown our dependence on plastics and their value in healthcare settings. The Williams Group in the Department of Chemistry at the University of Oxford researches novel ways to synthesise polymers using renewable sources, as well as carbon capture. This [short video](#) focuses on the use of IR spectroscopy in their work and may be of interest to colleagues teaching GCSE (or equivalent) polymers and analysis, as well as those teaching A level (or equivalent).

