Outreach newsletter: September 2022

Welcome to the September 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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Other Opportunities:

- Centre for Personalised Medicine Art Competition [NEW]
- Work Experience update [REPEAT]
Future Events:

**Autumn Chemistry Conference 2022 [UPDATE]**

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 online by the Department of Chemistry, University of Oxford. Students are welcome to attend unaccompanied by a teacher.

**About the speakers:**

**Ben Shennan** is a 3rd year DPhil student in the group of Prof. Darren Dixon, will discuss his forays into natural product synthesis, targeting molecules isolated from a sea sponge from Papua New Guinea and a Chinese mountain shrub.

**Hannah Asiki** is a DPhil student on the Wellcome Trust Chemistry in Cells programme. She is undertaking a collaborative project with Prof. Ed Anderson (Department of Chemistry) and Dr Richard Wheeler, synthesising anti-parasitic compounds and investigating their mechanism of action.

**Explore Chemistry – A super-curricular series [NEW]**

KS5 UK state school students and their teachers are invited to sign up for this series of talks and Q&As. There will be a week to watch a pre-recorded talk (posted online), reflect and note any questions before joining a 45-minute online live Q&A session with the researcher presenting the talk.

Our next talk and Q&A will feature **Denis Hartmann** (Booth Group) and will be on Using Light to Understand and Control Biology. The talk will be released on the 15th September 2022, with the Q&A following on the 22nd September, 16.30-17.15.

[REGISTER HERE]

[EXPLORE]

[SIGN UP TO THE SERIES]
KS5 Chiral Chemistry Workshops [REPEAT]

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:

- 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

Please note that for Chiral Chemistry and Explore Chemistry 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 – Lina Cox [REPEAT]

Our next Ask a Chemist session will feature Lina Cox on Tuesday 18th October (13.00–14.00 BST)

Lina is a trainee patent attorney with J A Kemp LLP. Originally from North Yorkshire, she made the journey down to attend the UNIQ chemistry summer school in the summer of 2015. She studied chemistry at Exeter College, Oxford from 2016 to 2020. For her final year project, she researched synthetic oligonucleotide backbone mimics (trying to overcome the barriers preventing wider adoption of DNA based therapeutics). In October 2020, she started at J A Kemp as a trainee patent attorney in their chemistry and pharmaceutical team.

Following on from Lina’s Q&A, our next Ask a Chemist session will feature Brian Balmer (Tuesday 15th November, 13.00–14.00 BST).

School / Community Workshops [REPEAT]

Online Primary Workshop: Plastic Fantastic?
We’ll be announcing dates for upcoming Plastic Fantastic? workshops on our website and in this newsletter shortly.

Chemistry Teaching Laboratory (CTL) Workshops [REPEAT]

Due to the continuing construction work associated with the Life and Mind Building, we are, as yet, unsure if CTL workshops will be able to run in 2022-2023. We will update you via this newsletter as soon as we have news.

Oxford College Workshops [REPEAT]

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 40 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 (a minimum of 3 from a Key Stage is required).
Other Opportunities:

Centre for Personalised Medicine Art Competition [NEW]

What can we measure about our health? Is it possible to measure too many things? Should researchers be allowed to use any measurements collected by the NHS? We want to see what you think!

The Oxford Centre for Personalised Medicine is asking pupils in Years 7-9 to create art about measuring things to do with health and disease. There are loads of different things your art could look at: what might be helpful to measure if someone is ill? Are measurements always right? Who should be able to look at a person’s healthcare measurements? We can’t wait to see your ideas!

You can make a drawing, a painting, a collage, a sculpture – anything goes as long as it’s something you can take a photo of. First prize is £100, and the best entries will form part of a display at a Centre for Personalised Medicine art exhibition in Oxford next year.

The deadline for entries is 20\textsuperscript{th} January 2023. More details can be found here: https://cpm.well.ox.ac.uk/art-competition

RSC Women in Chemistry: Survey [REPEAT]

We’d like your opinion! Please take part in our survey to help us plan future events which would be most beneficial to you.

In the meantime, you can catch up on our live panel events from spring 2022 here. Connect with us on Twitter and Instagram @women_in_chem. If you haven’t already, take a look at our PowerUP! Challenge which ties in nicely with the RSC’s recently launched Global Battery Experiment.
Work experience update [REPEAT]

It is with regret that we are unable to offer work experience placements in the 2022–23 academic 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 have advertised via our website. Please do not send us unsolicited requests for work experience opportunities in the meantime, thank you.

Learning Resources

Featured resource: Secondary Teachers’ and Technicians’ Conference resources [NEW]

We are delighted to share our Secondary Teachers' and Technicians' Conference resources more widely with our newsletter subscribers. Here you'll find resources to support the teaching and learning of theoretical and practical chemistry.

You can access the resources here: https://chem.web.ox.ac.uk/7-8-july-2022