



The organisers of The Nigel Botting Meeting for Teachers of Chemistry thank the **RSC**, **SSERC** and the **University of St Andrews** for their continued support.

The main venue for this meeting is the Purdie Building, lecture theatre A, School of Chemistry at the University of St Andrews (KY16 9ST). The map overleaf shows its location. Registration will be at the main entrance.

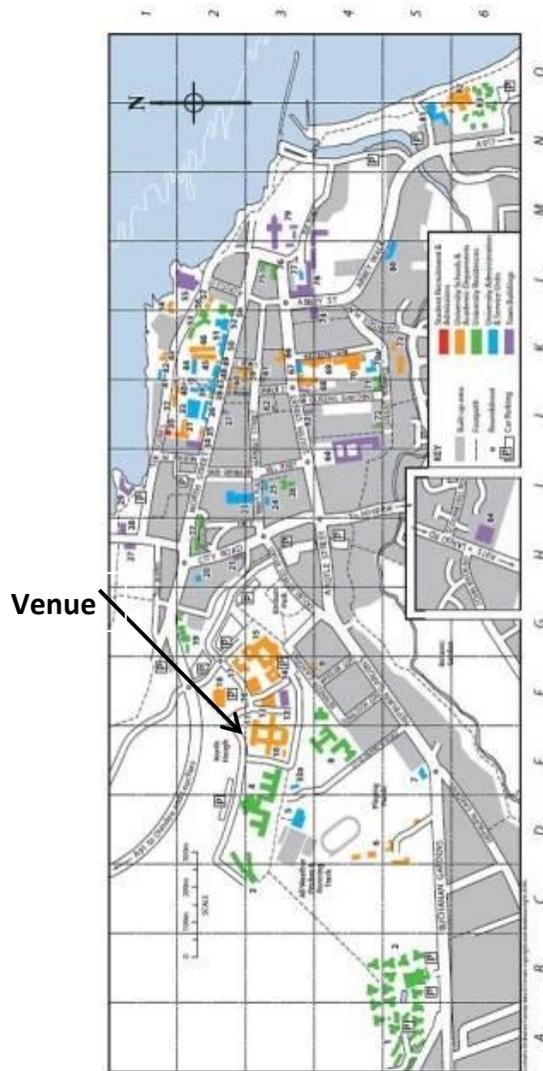
There are a number of parking spaces close to the building (free of charge).

### Registration Details

Due to generous sponsorship, **there is no conference fee**, however prior registration is required. To register for a place, please use the online form linked below (delegate numbers are limited by the size of the venue). A buffet lunch and refreshments will be provided.

[www.st-andrews.ac.uk/chemistry/outreach/schools/](http://www.st-andrews.ac.uk/chemistry/outreach/schools/)

Please address any enquiries to Dr I. A. Smellie  
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## The Nigel Botting Meeting for Teachers of Chemistry

20<sup>th</sup> National Scottish Meeting

## Chemistry: the sustainable element



University of  
St Andrews

FOUNDED  
1413

Tuesday 14<sup>th</sup> June 2016

# Chemistry: the sustainable element

## PROGRAMME

09.45-10.05 Registration and Refreshments

### MORNING SESSION

- 10.10 Welcome and introduction**  
Jim Naismith FRS (University of St Andrews)
- 10.15 Glowsticks and Antioxidants**  
Amber Cochrane (University of St Andrews)
- 10.35 CRITICAT: A Centre for Doctoral Training**  
Kevin Jones (University of St Andrews/CRITICAT)
- 10.55 When More Means Less – Multicourse Chemistry Classes in Scotland**  
Bill Beveridge (RSC Education Division Scotland)
- 11.15 Will this be on the exam?**  
Malcolm Stewart (University of Oxford)
- 11.35 From Plants to Paints**  
Eric Whale (CelluComp, Burntisland)
- 11.55 What is new for Scottish Schools?**  
RSC Education Coordinators
- 12.15 Lunch and Exhibitions**

### AFTERNOON SESSION

- 13.35 Drug Discovery in Dundee: From Neglected Disease to Innovative Targets**  
David Foley (Dundee Drug Discovery Unit)
- 14.00 Smells Like Teen Shampoo**  
Adrian Allan (Dornoch Academy)
- 14.25 Coffee Break**
- 14.55 Periodic Success: Bringing the Classroom Poster to Life Through Story Telling**  
Jamie Gallagher (University of Glasgow)
- 15.40 Departure**

All lectures will be held in the School of Chemistry, Purdie Building, Lecture Theatre A, University of St Andrews.

The Twentieth Meeting of "The Nigel Botting Meeting for Teachers of Chemistry" is delighted to offer delegates **FREE** registration for a second year, thanks to generous sponsorship from the University of St Andrews, The Royal Society for Chemistry and SSERC.

This year's programme celebrates the **20th anniversary** of this meeting by looking to the future. 'Chemistry: the sustainable element' presents innovative chemistry happening here in Scotland - both in a commercial context relevant to the school curriculum and in the classroom with plenty of inspirational activities. Important issues facing chemistry teachers and impacting the future of our chemistry students are also considered.

The meeting will begin with **Amber Cochrane** from **The University of St Andrews**. Amber has newly completed her degree and will start her PGDE studies later this year. As part of her undergraduate studies she has been working in a local secondary school and will share her experiences and findings from developing and delivering a classroom activity she has developed. **Kevin Jones** from the **CRITICAT CDT**, will provide insights into a modern approach to research in chemical catalysis, based in Scotland. Kevin will also discuss some relevant and simple classroom activities for us to try.

**Bill Beveridge** will share findings from the recent survey designed by the Royal Society of Chemistry Education Division (Scotland) to find out how wide-spread are **multicourse chemistry classes** and to attempt to gain a measure of the extent of the problems experienced by students in these classes. He will present other ways in which the Education Division committee has been working to support Scotland's teachers. **Malcolm Stewart** leads the teaching of practical organic chemistry at the **University of Oxford**. He will discuss recent work and developments and examine the school to university transition.

We are delighted to feature the innovative work of **CelluComp**, a dynamic materials science company based in Scotland. CelluComp develops high performance products based on **sustainable resources** – materials developed from the extraction of nano-cellulose fibres of **root vegetables**. Applications of their main product are numerous, and include **paints and coatings**, personal care, home care, cosmetics, concrete, drilling fluids, composites and other potential applications.

**The Royal Society of Chemistry** continues to provide excellent support for chemistry education in Scotland. **RSC Education**

**Coordinators, Heather Milton** and **Katy Mould** will present the latest details before the lunch break, giving us all a chance to visit them in person at the lunchtime exhibition to see what the RSC can provide.

**Lunch** will be served at the close of the first session. The exhibition area and tea/coffee will be available as usual and with time for delegates to explore the exhibitions and to chat with each other before resuming their seats in the lecture theatre for the **afternoon session**.

We are very pleased to introduce **David Foley** from the **Dundee Drug Discovery Unit**, who will provide insights into the activities and goals of a modern research institute based in Scotland, in moving from 'neglected disease to innovative target'.

**Adrian Allan** is a teacher at **Dornoch Academy** who recently completed a Royal Society partnership project with Whyte and Mackay. His presentation will show how his pupils extracted essential oils using steam distillation and analysed them using TLC and GC-MS. He will show how essential oils can be used to make shampoo and how this can be linked with the terpene and emulsifier components of the CfE Higher as well as the optical isomer and chromophore components of the CfE Advanced Higher.

The Meeting concludes with **Jamie Gallagher** from the **University of Glasgow** as he takes you on a whirlwind tour of the periodic table uncovering some of the little known tales of discovery, uses and histories of the elements. This interactive talk looks to connect pupils to science through storytelling and surprise!

There will be opportunities throughout the day to visit the exhibitors.