

INTRODUCTORY ISSUE SUNDAY 20 JULY 2008



JOURNAL OF THE 41st INTERNATIONAL CHEMISTRY OLYMPIAD, CAMBRIDGE

UK welcomes the IChO



Prof Brian Johnson FRS, FRSC ident of the 41st IChO

I am delighted that the 41st International Chemistry Olympiad will be held in Cambridge, UK in 2009. This is the first time that the event has been convened in the UK and I am especially pleased that Cambridge is the chosen venue. Its reputation as a Scientific Centre is unsurpassed and I am very happy to have this opportunity to share the delights of my city with you.

Chemistry remains, as it must, at the very centre of scientific endeavour. It spans the Natural Sciences and provides a basis of so much of the progress in both the physical and life sciences. The International Chemistry Olympiad is second to none in its ability to communicate and explore chemistry with others and provides the ideal forum for a truly international occasion.

I look forward to seeing you all in 2009.

Brian Johnson





Dr Peter Wothers FRSC Chairman of the 41st IChO

My first visit to Hungary was as a competitor in the IChO. Little did I realise then that I would later come back to Hungary as Chairman of the 41st Olympiad to invite the IChO to the first competition to be held in the UK. I am particularly pleased that the event will be centred around the University of Cambridge during its 800th anniversary. Staying in some of the Colleges right in the heart of the city, students will have a chance to experience what life as an undergraduate is all about.

The mentors meanwhile will be spirited away to the great rival institution, the University of Oxford. They will be working long hours in the magnificent Examination Schools to prepare the examination papers. However, I am sure they too will find time to explore their beautiful surroundings, and perhaps even try their hand at punting on the river Cherwell.

As a previous competitor in the Olympiad, I look back on my experience with fond memories: it helped shape me into the chemist I am today. I would like to ensure that the 41st IChO has a similar impact on our young chemists of the future.

Peter Wothers



London

Capital of the World

Why, Sir, you find no man, at all intellectual, who is willing to leave London. No, Sir, when a man is tired of London, he is tired of life; for there is in London all that life can afford.

Samuel Johnson (1709-1784)

Although Dr Johnson's words date from the late 18th Century, his words are no less true today; although London can no longer claim to be the world's largest city, it's still huge with a population of 7,512,400 – rising to about 13 million if you include the whole metropolitan area. With a recorded history that stretches back over 2,000 years, it's impossible to see everything in a short visit but, as one of the financial and cultural centres of the world, there really is something for everyone.

The Royal Society of Chemistry

It is in London that the Royal Society of Chemistry, our joint host, is based. Since the mid-19th century the RSC headquarters have been at Burlington House, a stunningly beautiful building in Piccadilly which it shares with, amongst others, the Royal Academy of Arts.

The RSC is the largest organisation in Europe for advancing the chemical sciences, and is proud of having the longest continuous tradition of any chemical society in the world. Supported by a global network of over 44,000 members and an international publishing business, their activities include collaborating with schools and universities on matters of chemical education, conferences, science policy and the promotion of chemistry to the public.

Excursions

The mentors and students will have the chance to explore some of the attractions of London before meeting up for the Reunion Dinner which will take place in the Central Hall of the Natural History Museum. The museum holds world-class collections and mounts fantastic exhibitions in a landmark building in Kensington, just along the road from the famous department store, Harrods. With its cathedral-like structure, frescoes, sculptures and the fabulous *diplodocus* skeleton, the Hall will provide a truly unforgettable backdrop to our dinner.

RSC Advancing the Chemical Sciences



Tower Bridge



Trafalgar Square



Natural History Museum



The London Eye



The Palace of Westminister



Founded in 1209, the University of Cambridge is justifiably proud of its long history. Although it boasts a strong tradition in the humanities and arts, Cambridge is particularly famous for the long list of worldrenowned scientists and mathematicians it has produced – a fascinating group that includes Isaac Newton, Charles Darwin, Francis Crick and Stephen Hawking.

The University will celebrate its 800th anniversary in 2009, providing an opportunity to mark its amazing contribution to the world during this time: from the discovery of the mechanism of blood circulation to the structure of DNA; from the discovery of the electron to the first observation of a pulsar.

With 82 Nobel Prize winners having studied here, the University can claim more than any other institution. Of particular note is the chemist Fred Sanger, the only person to have been awarded the Nobel Prize in Chemistry twice – in 1958 and 1980.

Cambridge the City

Cambridge is a great place to enjoy yourself. Compact yet cosmopolitan, the city is easy to explore on foot and offers an amazing variety of museums and art galleries. In a single day you can take in the ancient Egyptian relics in the Fitzwilliam Museum, visit the North and South Poles at the Scott Polar Institute, see the original specimens Darwin collected on The Beagle, or admire paintings by Canaletto, Titian or Cezanne.

A truly green city, filled with parks, Cambridge is particularly beautiful in the summer. Famous for its annual Boat Race with Oxford (held on the neutral territory of the Thames in London!); you could sample the delights of the river for yourself by having a go at punting on the River Cam to Grantchester, or just relax with a picnic in the beautiful meadows alongside.

For England's the one land, I know, Where men with Splendid Hearts may go; And Cambridgeshire, of all England, The shire for Men who Understand; And of that district I prefer The lovely hamlet Grantchester.

Rupert Brooke (1887-1915)

Oxbridge

The Great British Universities



River Cam, Cambridge



Clare Bridge, Cambridge



Procession on the Streets



River Cherwell, Oxford



Christ Church, Oxford

Oxford University is a unique institution with a fascinating history. Teaching started in 1096, making it the first university in the UK, and a quick glance at some alumni reveals its far-reaching influence – 25 British Prime Ministers, 30 international leaders, 47 Nobel Prize winners, 6 kings and 12 saints! Included in Oxford's Nobel Laureates in Chemistry is Dorothy Hodgkin, the most recent of the three women who have won the prize in that subject.

The University's long history is illustrated in its many inspiring museums including the oldest in the UK, the Ashmolean Museum of Art and Archaeology. Established in 1683, this holds the University's extensive collections of art and antiquities, covering over four millennia. Of particular interest is the Museum of the History of Science: housed in the world's oldest surviving purpose-built museum, it contains an amazing collection of historic scientific instruments and chemical apparatus from around the world.

The Bodleian Library, founded by Sir Thomas Bodley in 1598, is the University's main research library and offers guided tours. The second largest library in the UK after the British Library, it owns over 8 million volumes housed on 120 miles of shelving. As one of the UK's six legal deposit libraries it is entitled to request a free copy of every book published in the UK, meaning its collection is growing at a rate of over three miles (five kilometres) of shelving every year.

Oxford the City

And that sweet city with her dreaming spires, She needs not June for beauty's heightening, Lovely all times she lies, lovely to-night!

Matthew Arnold (1822-1888)

The city itself is beautiful too; filled with stunning architecture, history and culture. You'll find ancient and modern colleges, fascinating museums and galleries, and plenty of parks, gardens and green spaces in which to wander. Like Cambridge, the city centre is small enough to cover on foot and is filled with tempting cafes in which to relax between the exertions of the Chemistry Olympiad.



Programme Outline

Date		Students	Mentors & Observers
18th July Saturday	Whole Day	Arrival & Registration	
	Evening	Welcome Dinner	
19th July Sunday	Morning	Opening Ceremony - Cambridge Corn Exchange Lunch - Cambridge Guildhalls	
	Afternoon	Safety Talk	Inspect Labs To Oxford 1 st Jury Meeting
20th July Monday	Whole Day	Excursion	In Oxford: Translation of Practical Paper
21 st July Tuesday	Morning	Practical Exam	In Oxford: 2 nd Jury Meeting
	Afternoon	Free Time	Excursion
22nd July Wednesday	Whole Day	Excursion	In Oxford: Translation of Theoretical Paper
23 rd July Thursday	Morning	Theoretical Exam	Return to Cambridge
	Afternoon	Free Time	
24th July Friday	Whole Day	Excursion to London	Receive Answers
	Evening	Reunion Dinner	
25th July Saturday	Whole Day	Excursion	Arbitration 3 rd Jury Meeting
26th July Sunday	Afternoon	Closing Ceremony - King's College Antechapel	
	Evening	Banquet - Marquee on King's College Backs Lawn	
27 th July Monday	Whole Day	Departure	

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Trinity	Magdalen Oxford			
Cambridge	Oxtora			
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UK Facts

Weather



Our climate is completely unpredictable - hence our obsession with weather forecasts, which invariably tell you the day will be cloudy with sunny intervals and some rain at times. Examining a piece of seaweed is probably as useful... It is therefore better to prepare for surprises; bring something warm and a waterproof even if you appear to have the promise of clear skies and hot sun. As a general rule though, the climate is mild and maritime with temperatures between 10° and $20^{\circ}\text{C},$ although the occasional heat-wave does sometimes occur if you are lucky.

We will have IChO 2009 umbrellas on stand-by!

Design & Layout Derek Chan & Montague Ring Photography

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- Page 1: Trinity Fountain, Punts Page 3: all Cambridge photos Matthew Greenlee - Page 1: Radcliffe Camera Page 2: all other London Photos Page 3: all Oxford Photos - Page 2: Big Ben, Tower Bridge, Natural History Museum

- Page 1: Red Post and Telephone Boxes