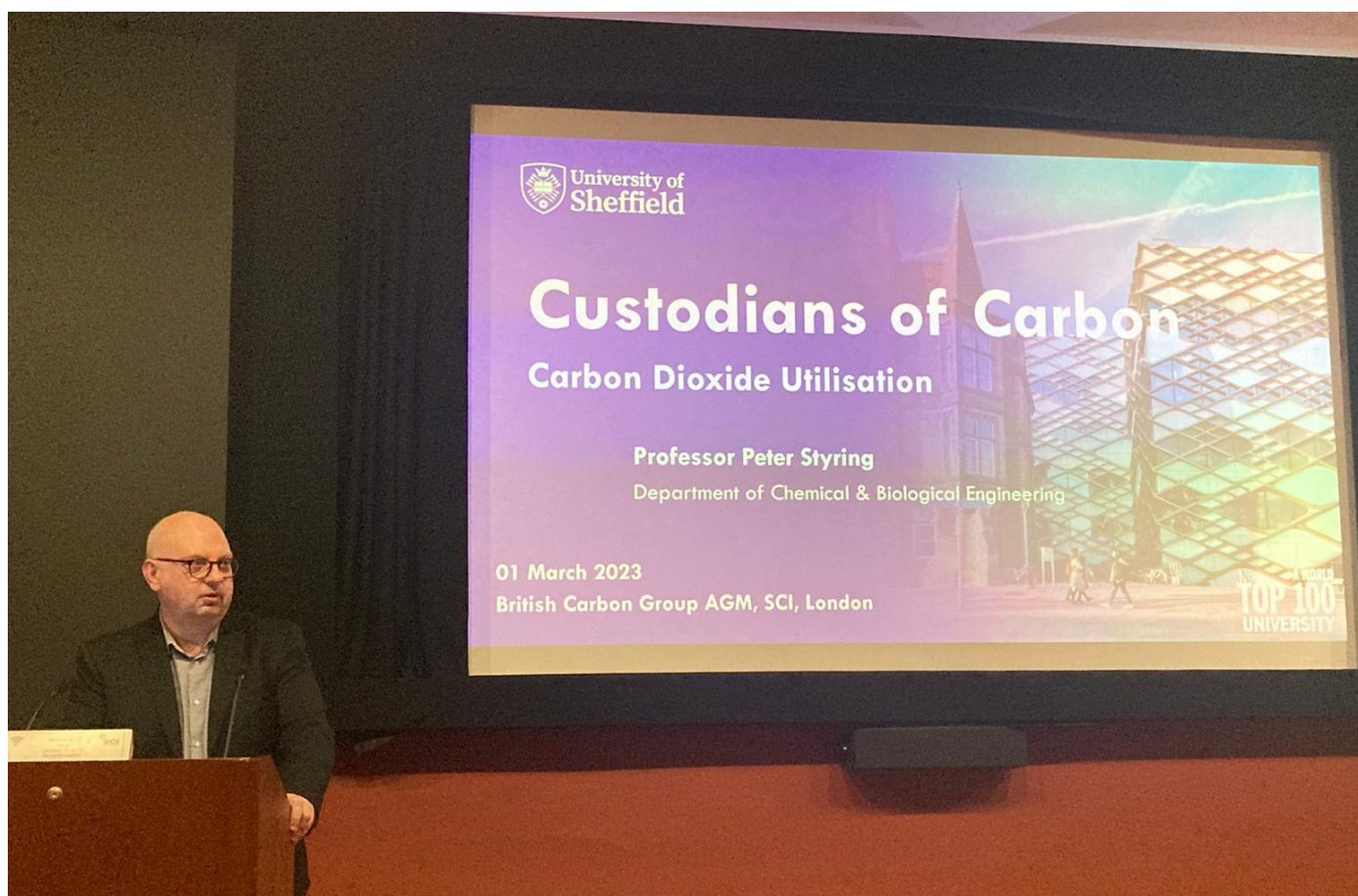


The British Carbon Group

NEWSLETTER

April 2023



Energy Futures event at SCI London, Peter Styring presenting



See www.britishcarbon.org for further details

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Editorial

Samantha Wilkinson, Secretary of the British Carbon Group

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I had the pleasure of organising and attending, with the BCG committee, the “Energy Futures: the Role of Carbon” event at the SCI headquarters in London in March this year. The event was well attended with a mixture of industry and academic talks, as well as the BCG annual general meeting (AGM).

There was also a poster competition, with the entrants sharing the prize in the end due to the high quality of the submissions. Peter Styring talked about conversion of CO₂ to chemical feedstocks, in particular his Flue2CHEM project on decarbonisation with organisations such as Unilever, P&G, BASF, Tata Steel, which aims to convert CO₂ to chemical feedstocks for consumer products, to cut around 15-20 million tonnes of carbon dioxide emissions a year and help the UK reach its net zero target. BCG chair, Geoff Fowler also spoke about the utilisation of human biological waste as a carbon resource which can be recovered and re-used in a variety of applications.

The Ubbelohde memorial lecture was held on the same day by Tony Wickham. He even bought show and tell items such as natural graphite, nuclear graphite and what was claimed to be the first even piece of nuclear waste (image to the left).



The BCG committee and I would like to thank the speakers for their time, and SCI for hosting our event – it was a very interesting meeting covering areas of Carbon science that were new to me.

BCG Committee News

Annual General Meeting 2023

The 2023 Annual General Meeting of the British Carbon Group was held during the meeting *Energy futures – the role of carbon* at the Society for Chemical Industry, Belgrave Square, London on 1st March 2023. Present at the meeting were Geoff Fowler (Chair), Peter Minshall (Honorary Secretary), committee members Samantha Wilkinson and Natalia Martsinovich, and 16 BCG members. In advance of the meeting apologies had been received from Chris Ewels (Vice Chair), Izabela Jurewicz (Honorary Treasurer), Gareth Neighbour, Norman Parkyns and Sergey Mikhailovsky. The minutes of the last AGM held at the University of Sussex, June 12th, 2019 were accepted - Subsequent AGMs were not held because of the pandemic. Geoff then gave the chair's report,

“2022 was dominated for the Group by organizing Carbon 2022. It was originally intended to hold this as Carbon 2021 in 2021, however the pandemic and subsequent lockdown made this impossible. The American Carbon Association was to follow the BCG by organizing the conference in 2022. They graciously rearranged their conference to 2023, allowing us to hold C2022 last year.

The conference was held at Imperial College, with about 300 delegates. This was smaller than previous world carbon conferences, as there was still a reluctance to travel because of the pandemic. The conference was very successful and returned a surplus. One highlight was the plenary lecture by the Nobel Laureate Sir Prof Kostya Novoselov, but the abiding memory will be, I think, the conference banquet. This was held on a paddle steamer travelling down the Thames. The return was under Tower Bridge, which was raised for the occasion. The committee has met regularly by Teams, sometimes once a week as C2022 approached. Once the conference was past, the committee continued to meet monthly by Teams.

As 2022 was dominated by Carbon 2022, no other meetings were organised in that year. In 2023, we have organised this meeting on Energy Futures and are proposing to assist in the organisation of NanoteC at the University of Surrey.

Finally, I would like to express my gratitude to the committee for their support and hard work over the past year. I would like to acknowledge Norman Parkyns who has been a stalwart of the committee in one role or another for more than 30 years. He also edited the Newsletter for over 20 years.

I would also like to thank Izabela Jurewicz and Peter Minshall who are standing down as Treasurer and Secretary respectively for their hard work in the past years.”

Geoff then also presented the Treasurer’s report on behalf of Izabela Jurewicz. The accounts have been examined by an independent individual and have been re-audited by the RSC.

“The financial year ran from 01/01/22 to 31/12/22. The balance on the bank account on 31/12/22 was £93,610.52. The balance brought forward from the previous year was £26,445.25, thus the surplus has increased by £68,165.27. The BCG awarded £1,750 in bursaries in 2022. The Brian Kelly fund currently holds £11,000 and it proposed to use part of the surplus to top up this fund. The remainder of the surplus will be used to subsidise future meetings and support the activities of the Group. The BCG is different from other groups in that it is affiliated to RSC, IOP and SCI. It therefore is not supported financially by the societies. The bank account is held by the RSC, to which the BCG is financially accountable.”

Also, at the AGM the sponsoring bodies representatives for 2023 were appointed: Sergey Mikhailovsky (RSC), Samantha Wilkinson (IOP) and Geoff Fowler (SCI). In addition, Nominations to re-elect Geoff Fowler as Chairman, Natalia Martsinovich to be Hon. Treasurer and Samantha Wilkinson to be Hon. Secretary had been received. There being no further nominations these were appointed to these positions without dissent. Nominations had been received for Izabela Jurewicz, Peter Minshall and Alex Theodosiou to become members of the committee. They were appointed without dissent.

Brian Kelly Award - Open for Applicants

This annual award was established in 1996 by the British Carbon Group in memory of Brian Kelly, a leading authority on graphite physics. The award is intended as a travel grant for students and early career researchers with up to ten years postdoctoral experience to attend the annual World Conference on Carbon – this **Carbon 2023 Mexico**. Anyone living or working, at the time of that conference, in the country where the conference is held is not eligible. As a consequence, applications will not be accepted from Mexico on this occasion.

The award is made upon the basis of an appraisal of:

- (1) an extended abstract of two A4 sides,
- (2) a short CV (with the date of the award of PhD if applicable) and
- (3) a commentary provided normally by the candidate’s supervisor or close colleague.

Self-nomination is permitted. The Award Committee of the British Carbon Group will determine the successful applicant. **The closing date for applications is 1st May 2023.**

The award has been increased this year to £750. It is a condition of the award that the winner attends the conference and presents their paper either orally or as a poster. Applications may be transferred electronically to the Chair of The Brian Kelly Award Committee, Ms. Nassia Tzelepi, at nassia.tzelepi@nnl.co.uk

Carbon and Norman Parkyns

Prof. Dr Tony Wickham, Nuclear Technology Consultancy

I am delighted to have been asked to provide a few words and anecdotes to mark the retirement from the BCG committee of Norman Parkyns, possibly to allow him to spend more time on motorcycle maintenance (see below!). This follows a successful heart implant operation in hospital where unfortunately they gave him Covid as an afterthought. Norman, definitely, is a survivor!

Norman tells me that he was destined to be a chemist from an early age, as his father was a gas engineer in Exeter and worked as a gasworks chemist while doing an external degree in chemistry. Norman feels that he was born with the smell of coal gas in his nostrils which led, eventually, to his own decision to join the gas industry.

He took a degree in chemistry at Imperial in 1956 – that's 12 years before me, and I thought that I was old! He then moved to Chemical Engineering under Ubbelohde, a period he has previously described in some detail in the Newsletter (November 2006, if anyone still has one). His research was not on graphite, but rather on working 'towards' graphite from anthracene, building nine-membered rings (violanthrene and isoviolanthrene) and looking how the electronic properties approached those of graphite as the structures were enlarged. During this work he learned a lot about dealing with materials which refused to dissolve in suitable solvents in order to purify them – a very useful experience when later, at the Fulham Research Laboratory and working on heterogeneous catalysts, he became once again familiar with 'carbonaceous crud'. Once in the gas industry, he spent quite a time working on the production of domestic gas from coal, driven by the 1970s oil crises. This led him, in due course, to work with well-known carbon scientists at The University of Newcastle, like Harry Marsh and then Mark Thomas who succeeded Harry as head of department there.

Then came the 'saviour' of natural gas, and work commenced to investigate making the equivalent of this from the large UK stocks of coal. A commercial process was developed, the splendidly named 'British Gas/Lurgi slagging gasifier' to produce clean 'synthesis gas' (carbon monoxide plus hydrogen) followed by methanation. In view of the current energy crisis, it seems a pity that this has not been followed up – but then, of course, we have global warming in the public consciousness, and current squabbles about a new coal mine in Cumbria.

One of Norman's final projects was the utilisation of high surface area carbons for storage of natural gas, which he has also written about recently in this newsletter.

As holder of all the officer positions in BCG at various times, I quickly learned how valuable support from Norman would always be. In particular, on rare occasions when there was a dispute, he could always be relied upon to deliver a well-thought-out argument which would successfully moderate the issue. His service on committee goes back longer than he can accurately recall, but one success in those early days was a conference in Bath on porosity of carbons organised with Brian MacEnaney. Following the amalgamation of the RSC/IOP Carbon Group with the SCI Industrial Carbon and Graphite Group, Norman spent a very long period as the formal 'RSC representative' – and, of course, a lengthy period as newsletter editor.

Norman also has the capacity to surprise us. I recall that during a visit to Aberdeen to check out the options for Carbon 2006, we shared a flat along with Brian MacEnaney. I had emerged scruffily from bed in my underwear to make tea when Norman swirled into the kitchen in an elegant silk dressing gown, sending me scurrying back to find more suitable garb to accompany this fine English gentleman! On the other hand, he sometimes attended committee meetings by motorcycle, starting with the LE Velocette which was revolutionary in its day, having a drive shaft rather than a chain and a water-cooled engine. Like the dressing gown, it was designed for comfort and good weather protection, and not speed. All maintenance on such ancient machines was down to the driver, and Norman became something of an expert, still riding successive models right up until Covid intervened. For some strange reason, I cannot get an image of an elegantly dressed Mr Toad driving his motor car rather chaotically out of my head at this point. I hope that Norman appreciates the analogy!

Now living in Hertfordshire with his wife Lyn, who was a student at The Royal College of Music (and therefore very convenient for visits to the IC Chemical Engineering Department!), they are heavily engaged with U3A and Norman runs a Science and Technology group to which our Hon. Secretary Peter Minshall recently gave a talk on nuclear power.

I am sure that Norman's contributions to committee meetings will be sadly missed. It has been an honour for me to know and work with him, and to be asked to provide these few reminiscences.

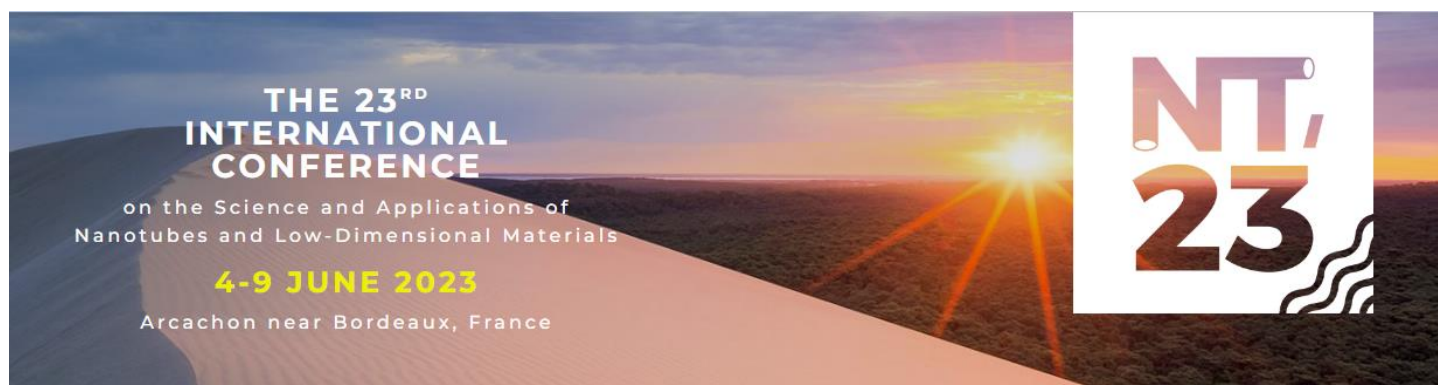
Future Events: Société Francophone d'Etude des Carbones (SFEC)

Nathalie Job, President of the SFEC

The SFEC's mission is to bring together all the actors of the carbon community in the French-speaking world, to promote their exchanges and the sharing of their knowledge.

<https://sfec-carbone.org/>

This site is our calling card that we hope will inspire you to learn more about this 60-year-old learned society and join us. We also have a number of future events planned:



Save the date !

The World Conference on Carbon – Carbon 2025

29th June – 4th July 2025

Saint-Malo, Brittany, France



It is with great pleasure that the Francophone Carbon Association will welcome all carbon scientists in Saint-Malo for the World Conference on Carbon 2025.

The conference will take place at the Saint-Malo Conference center, with direct view of the sea and the ramparts of the old town.

More information to come soon.

And keep in mind each year . . .



Young Scientist SFEC Award 2023

On the occasion of the 2009 World Conference on Carbon, the **Francophone Carbon Society (SFEC)** has created an award to recognise a **significant contribution to carbon science or carbon technology** brought by a young, non-tenured, scientist or engineer, **regardless of their country of origin and citizenship**. This prize is now awarded every year at the ongoing World Conference on Carbon.

The SFEC Award 2023 is open to **any French-speaking researcher** wherever they work, and to **any researcher working in a laboratory located in a French-speaking country/region**. The laboratory may be academic and public, or from a company and private. The applicant **must not have defended their thesis for more than four years**, at the closing date of the applications.

The SFEC Award 2023 includes a one-time money prize of 1000 EUR (one thousand Euros).

Future Event: Nanotec23



NanoteC23

Carbon Nanoscience and Nanotechnology
28 August – 1 September 2023
Brighton, UK

www.nanotec23.com






Professor Jonathan Coleman
Trinity College Dublin



Professor M M Shajumon
Indian Institute of Science
Education and Research
Thiruvananthapuram



Professor Claudia Backes
Kassel University



Professor Rahul Raveendran Nair
The University of Manchester



Professor Wolfgang Maser
Instituto de Carboquímica (ICB-CSIC)



Professor Pulickel Ajayan
Rice University



Professor Paola Ayala
University of Vienna

NanoteC is a friendly student-centred conference covering all aspects of carbon and related nanomaterials. This year it is returning to its roots, to be hosted at Sussex University. We have made a big effort to keep attendance costs low, notably with the reduced rate accommodation on site. We are even hoping to organise a NanoteC cricket match this year! **There will also be a £500 poster prize sponsored by Attonuclei.**







Future Event: International Nuclear Graphite Specialists Meeting 2023



The first face-to-face International Nuclear Graphite Specialists Meeting since Covid will be held in Aachen, Germany, 10th-14th September 2023.

For further information please contact Tony Wickham
(confer@globalnet.co.uk) or email
ingsm2023@gmail.com.

Key Dates

-  Last day for submission of Abstracts: **30th June 2023**
-  Notification of Acceptance of Abstracts: **31st July 2023**
-  Early Bird Registration Rate closes: **11th August 2023**
-  Registration closes: **25th August 2023**

Future Event: “The World Conference on Carbon 2023” in Mexico



<https://www.carbon2023.org>

Don't forget to register for the next global carbon conference hosted by Latin American Carbon Federation (FLC) and the American Carbon Society (AmCS) in Cancun, “Carbon 2023: Renewing the World Through Carbon”. Professor Sir Andre Geim, Nobel Prize in Physics 2010 will be the speaker in the opening plenary lecture and topic areas cover:



- Carbon in environment applications
- Carbon in electrochemical processes & technologies
- Innovative carbons
- Graphene & graphite
- Carbon fibers and composites
- Coal, coke & carbon black
- Diamond

There is also a satellite symposium the day before the start of the conference:

SATELLITE SYMPOSIUM TO CARBON 2023

Beyond Adsorption III:

new perspectives and challenges for nanoporous carbons

15th July 2023

Riviera Maya
Cancun
Mexico

sponsored by:



The American Carbon Society







Future Event: 2nd FERIA – The European Conference on Fuel and Energy Research and its Applications

Monday 4th to Wednesday 6th September 2023
The Edge Conference Centre
University of Sheffield
Sheffield
United Kingdom



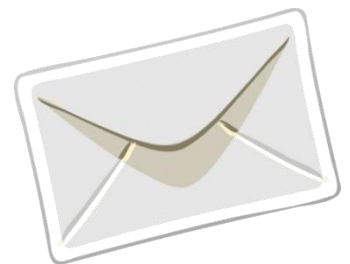
Organised by the Fuel and Energy Research Forum

www.tferf.org/2ndFERIA

Contact to the Group

The BCG welcomes feedback from its members, so please get in touch with us if you attended one of our events and it sparked an idea, you have been involved in a particularly interesting project or have any other thoughts which might be of interest to the rest of the group!

Please submit any thoughts to samantha.wilkinson@uknnl.com



Items for the next newsletter – Submit an Article

We'd like to hear what you're doing, what you think of the British Carbon Group, any ideas you may have for networking opportunities or anything else you think would be of interest to the rest of the Group. We plan to publish the next Newsletter in Spring 2023.