

26th BZA Meeting, University of Nottingham Conference Centre April 2003



The meeting is scheduled from Wednesday 9th to Friday 11th of April 2003. It will start Wednesday afternoon and will end Friday lunchtime. As in previous years, the meeting will have a strong emphasis on student and young scientist contributions. Established experts in the field will present plenary lectures. Thematically, the meeting covers all aspects of zeolites and other porous materials, including mesoporous and layered compounds, their science and applications.

Further details can be obtained from Dr. M. Stockenhuber, Department of Chemistry and Physics, Catalysis Research Laboratory, Nottingham Trent University, Nottingham NG11 8NS (Email: michael.stockenhuber@ntu.ac.uk). Tel/Fax: 0115 8486694.

Myth-ing the Point

Did Newton actually witness a falling apple? Did Watt spend hours watching his mother's kettle? Was Archimedes involved in some pre-test match streaking? After a recent experience I tend to think not.

The saga dates back to 1993, when, as a post-graduate student, I gave a talk at the BZA meeting at Chislehurst in Kent. This particular meeting was named in honour of my late supervisor Dr Barrie Lowe, whom many of you will remember, who had only recently passed away. Barrie was well known for his entertaining lectures, and with this in mind I decided to make my talk a little out of the ordinary.

[First, a small reminder...

"Zeolites are aluminosilicate molecular sieves and were discovered in 1756 by a Swedish chap called Cronstedt. The word "zeolite" comes from the Greek for boiling stone, because when zeolites are heated, the water trapped within their structure is released and steam is given off. The first zeolite to be discovered was called stilbite."

You will find this passage (or something very much like it) in the first paragraph of just about every paper, book, and thesis on zeolites.]

OK, back now to my talk at the meeting. I thought I would brighten up proceedings by starting my presentation with a spoof story about the discovery of zeolites. I described how Cronstedt had in fact discovered zeolites when he was out walking his dog. I then went on to explain that zeolite was actually the Swedish word for dog, and that the mineral was named stilbite because the dog was *still biting* it when he got home.....(groan). Ha ha ha, how they laughed, what a jolly jape. The talk then went downhill from there, as this story was far more interesting than my research.

After the conference, this version of the discovery of zeolites was posted on the BZA website of the time, along with a comment indicating it was just a bit of a spoof and for the proper information please click here...

Moving now to last month, when a friend of mine pointed me in the direction of the Royal Society of Chemistry publication, "The Age of the Molecule". He knew of my Cronstedt spoof and suggested I read the chapter on catalysis, paying particular attention to the caption accompanying a photo of stilbite on p79... "The natural mineral stilbite, discovered by Axel Fredric Cronstedt while walking his dog. The story that Cronstedt named the mineral after his dog is probably wrong."

Arrgghh!!! What have I done!!! Not only has Cronstedt now been given credit for owning a dog no-one knew about, but the chance that he actually named it after the animal is now only "probably" untrue. It will only take a couple more (or even just one) publications down the line for this notion to enter the realms of "fact" (if it has not already done so), and not long after that for visiting scientists to start pointing at dogs in the streets of Stockholm saying "Aha, a zeolite!"

So there you are, we have witnessed at first hand the beginning of a scientific myth. No skulduggery or planning went into its creation, just a very bad in-joke, and word of mouth did the rest. I say word of mouth, because I contacted the author to ask where he heard the story. He couldn't remember exactly, but was pretty sure it wasn't from the web, although I suspect that the net was involved at some point in the chain of events.

All I can say is "Sorry, it was me, I won't do it again (maybe)."

I'm now off to tell my mate about the story I heard about Napier, did you know he discovered logs when chopping wood for his fire...

[Keith C Franklin, ex University of Edinburgh]



TEMPLATE 2002

The Official Newsletter of the British Zeolite Association

A Message from the Chairman

This is the year of the conferences - one after another. In zeolites, first the excellent Gordon Conference in New England in June followed shortly thereafter by the Gordon-Style British Zeolite Conference of our own in Edinburgh in August and then finally the FEZA meeting in Sicily in September. In mesoporous materials, first there's NANO-3 conference in Ottawa in June followed shortly thereafter by the ISMM2002 conference in South Korea in July. What are we to do? Which conference do we attend? How do we spend our hard earned research money to make sure that we go to a conference where all the major players will be represented so that we can keep up-to-date with the field? The answer is that we cannot. There is an overload of mis-timed conferences which splits the field and dilutes the impact of each individual conference, and at a time when research money is at a premium. It is important that as a community we present a united front to promote our subject. At the BZA we are taking an initiative to change the scheduling of our conferences to alleviate the problem. The three zeolite meetings run on a three-yearly cycle as does the International Zeolite meeting (2004 in South Africa). We have decided to displace our planned 2005 Gordon-Style Edinburgh meeting to 2006 which will then be out of step with all the aforementioned zeolite meetings. In

order to keep our annual meetings exciting during this four year break, we will organise an interim meeting and workshop in 2004. The venue is likely to be St. Andrews and the workshop will be on Mesophase Materials. We hope that the other zeolite conferences will take note of our changes and keep the other conferences at suitable intervals. Also I would urge the organisers of the Mesoporous Materials meetings to come to some better arrangement which is not so damaging to the subject area. That said I hope that this years Gordon-Style BZA meeting in Edinburgh will live up to the high standards of all the previous Chislehurst and Edinburgh meetings.

It was very sad to here about the recent death of Larry Kevan, Cullen Distinguished Professor of Chemistry at the University of Houston. I was a post-doctoral fellow in Larry's group from 1984 to 1986. It was one of the most enjoyable times I have had during my scientific career. The group was dynamic and friendly, a tone set by Larry himself who would always work as hard as he would play. Also, the times spent on his beloved yacht were a delight and a privilege. I know he will be missed greatly by all those who knew him in the scientific community. He was a very kind scientist.

..... continued on p.3

Myth-ing the Point



No Bull! See back page

BZA 2001 Ambleside



The 24th Annual Meeting of the BZA in Ambleside was a highly informative and enjoyable event. Not only was it my initial attendance at a BZA meeting, but it was also the first time I had made an oral presentation of my research outside of my university. I was immensely nervous but the friendly demeanour of the committee and fellow attendants put me at ease, and I felt pleased and honoured to be given the opportunity of speaking on this occasion. It was also beneficial to my studies, since fellow scientists in this field were able to ask questions relevant to future work. These gave me ideas and new directions for further research. It was also a welcome change to encounter people who understood my work, something that does not occur often within the diversity of my chemistry department! More importantly, it was refreshing to understand for myself the scientific content of the posters and lectures given!

The venue for BZA 2001 had good facilities and catering, and I am glad the despite the foot-and-mouth crisis the meeting remained in Ambleside. It was a great opportunity to see such a beautiful part of Britain, and I'm sure we gave the area a much needed tourist boost.

I was impressed with the range of lectures and posters presented. I learnt a great deal from this year's meeting, in terms of both the zeolite science as well as the diversity of presentation styles and skills. It was especially nice to hear speakers and see posters of research by other postgraduate students. The meeting was also a good chance to meet people from other countries, many of whom I met again later in the year at 13th IZC in Montpellier. I look forward to the Gordon Style meeting in 2002! [Samantha Tang, Keele University]

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Montpellier - 13th International Zeolite Conference

July saw the gathering of the 13th IZC in Montpellier, which I was fortunate enough to participate in as a representative of Keele University. Having attended two previous conferences this, my third, was the first one of international standing and I was astounded by its sheer size, with 1200 people attending from 57 different countries. Over 150 oral presentations and 600 poster presentations were all crammed into four and a half special days.

The conference centre, Le Corum, was very

of people whose research I had become familiar with through their published work.

Each day commenced with a plenary speaker in the grand opera theatre. These lectures covered a broad range of areas; from natural zeolites to ordered mesoporous and extra-large pore materials, and their uses in refining and petrochemicals and in electron microscopy. The oral presentations were split into 32 topics which were well organised into four

of silver incorporated zeolites”, on the Wednesday afternoon. With so many topics being represented in both the oral and poster presentations there was a diverse range of information available.

As well as the scientific content, the organised social events were excellent. On the Wednesday afternoon there was an excursion to a typical French bull farm ‘Manade du mas Saint Gabriel’ and on the Thursday evening the conference banquet was held at ‘La Maison des Vins’.



impressive, situated at the end of a tree-lined promenade between the old town and the main pedestrianised area of the town.

A welcome evening followed registration, enabling me to reacquaint myself with scientists from the UK whom I had met at the previous BZA conferences. It also afforded me the opportunity to network and put faces to the names

parallel sessions. These generally ran to time, so it was possible to change rooms and move between subjects of particular interest with relative ease. The poster sessions ran throughout the afternoon, with the range of research displayed changing every day. I presented my poster, entitled “Redox properties

I can categorically say that I thoroughly enjoyed this conference, both in terms of what I gained scientifically, and in the renewal of old acquaintances and the making of new ones. [Amanda Evans, Keele University]

Gordon Conference on Zeolitic and Layered Materials in June 2002

One-hundred-and-six “conferees” gathered at Mount Holyoke College in Massachusetts for the Gordon Research Conference on Zeolitic and Layered Materials in June. The program followed the usual Gordon format: talks in the morning and evening with the afternoons free for discussion or relaxation. Presentations were made on a wide range of porous materials including microporous silicates and phosphates, mesoporous silica and carbon, inorganic-organic hybrids and clays. Sessions ran non-concurrently with each talk lasting half-an-hour and 15 minutes allotted for discussion. Posters were presented also with 12 being selected for “highlight” talks during the final session of the meeting. Of those who attended a little over half came from American organisations with the rest originating mainly in Europe and Japan. Industrial and government labs were especially well represented with twenty-four delegates that made for a refreshing mix of academics and industrialists.

The first session, entitled Optical and Electronic Properties, began with a talk from Jim MacDougall of Air Products on “MesoELK”, a porous material with a low dielectric constant. Other talks discussed materials for optical switching and solid state refrigeration applications,

The next morning started with a session, on Novel Framework Structures, that was chiefly concerned with theoretical work on constructing hypothetical, but chemically and energetically plausible, zeolite frameworks.

Structures and Their Properties was the next session topic with notable talks from Bob Bedard (UOP) and Paul Wright (St Andrews) principally discussing various non-tetrahedral metal silicates,

The following day began with a talk from Osamu Terasaki (Tohoku, Japan) in the Multi-scale Porosity session that included some elegant structural work and beautiful electron micrographs of the mesoporous solids MCM-48 and SBA-6. Mesoporous carbon was discussed later by Professor Ryoo (KAIST, South Korea) before two interesting talks on membrane technology.

The evening session (Nucleation and Growth) was chaired by Edith Flanigen of UOP, co-discoverer of the aluminophosphate family of microporous materials. This session provoked much discussion with talks from Francis Taulelle (CNRS, Strasbourg) and Michael Deem and Mike Anderson (of UCLA and UMIST, respectively) on their studies.

Another interesting session followed on Synthesis and Catalysis with Stacey Zones of ChevronTexaco focussing on the template and gel conditions used in his group’s well recognised work with large-pore zeolites. A talk that provoked a lot of discussion on catalysis came from David Vaughan of Penn State University. “New developments in shape-selective catalysis at ExxonMobil” was the subject of James Vartuli’s informative talk.

Layered Materials was the topic of the next session with a three speakers talking about clay-derived materials.

Two poster sessions took place during the conference and on the last morning a dozen were chosen for 8 minute “highlight” talks (no one knew whether they had been selected until the night before!). The posters selected followed the same broad span of the other sessions. Two highlights were Hyunjoo Lee of Mark Davis’ Caltech group who described her synthesis work while Neeraj Sharma of Tony Cheetham’s Santa Barbara group described the structures of the many open metal phosphate materials he had been making recently.

The meeting ended that evening after an excellent conference dinner with the keynote lecture by Lovat Rees (Edinburgh), the IZA Ambassador, entitled “Frequency response studies of diffusion, adsorption and catalysis”. Altogether this was a very well organised and attended conference (thanks to Mike Treacy of NEC et al.) and I should certainly look forward to the next one.

[Martin J Maple, University of St. Andrews]

Bursaries Awarded So Far in 2002

Vijay Jakkula (student of Craig Williams, Wolverhampton) awarded £200. Presentation of poster at 6th International Conference on “Occurrence, Properties and Utilisation of Natural Zeolites” at University of Thessaloniki 3rd-7th June 2002.

Lina Al-Attar (student of Alan Dyer, Salford) awarded £150 for travelling expenses for 2 months collaborative research at University of Helsinki, Finland.

Martin J Maple (student of Paul Wright, St Andrews) awarded £200. Presentation of a poster at the Gordon Conference on “Zeolitic and Layered Materials” 16th-21st June 2002.

Salmiaton Ali (student of Arthur Garforth, UMIST) awarded £250. Oral presentation on “Polymer recycling over used FCC catalysts” at the 2nd World Engineering Congress in Kuchiong, Sarawak, Malaysia on 22nd - 25th July 2002.

Chairmans Statement (continued from p.1)

More sad news, this time in the UK. You will be saddened to hear of the death of Frank Leach whilst on holiday in May this year. Frank was a greatly respected long-serving member of departmental staff at Edinburgh, most notably as Director of UG studies for Chemistry. Frank was also a much loved teacher, known for his positive and helpful approach to UG and PG students alike. In research, Frank was well known for his work in zeolite catalysis, he will be sadly missed.

Committee News

The committee wish to extend thanks to Paul Wright (St Andrews) who steps down as Treasurer at Edinburgh. Special thanks are also due to Craig Williams (Wolverhampton) for his many years served as both BZA committee member and more recently as Secretary. This years conference is his swan-song!