

Foreword

XXVIII Colloquium Spectroscopicum Internationale: June 29–July 7, 1993, York, UK

The XXVIII Colloquium Spectroscopicum Internationale was the fourth CSI to be held in Great Britain and, like the last CSI in Cambridge in 1979, was organized by the Association of British Spectroscopists. This is a confederation of all the specialized spectroscopy groups in the UK, including groups of The Royal Society of Chemistry and the Institute of Physics. We acknowledge gratefully the support which we received from the RSC staff, particularly those associated with *JAAS* and the *Analyst* and from the Institute of Physics. However, we did not use a permanent conference organization and relied heavily on volunteers. For various reasons, we adopted a slightly different timing to previous conferences. Delegates arrived on Tuesday evening, June 29, and the working sessions began on Wednesday morning and ran until late Saturday afternoon; delegates then dispersed, or went on to the post-CSI Symposia on the Sunday morning. Although there were some doubts expressed before the CSI, the arrangement worked well in practice, and was particularly appreciated by those whose flight tickets required a Saturday night stay in the United Kingdom.

The recession and the plethora of conferences involving spectroscopy in 1993 took their toll, and there were rather fewer delegates than we had originally hoped for, though more than we at one time feared. Some 600 delegates were present, from about 45 countries; this included about 150 from the United Kingdom and 55 from Germany, the next largest group. We offered reduced registration fees to delegates from Eastern Europe and other less favoured areas and this increased their number; we also gratefully acknowledge funding from the Royal Society and from the International Science Foundation ('The Soros Fund') for 15 delegates from the former Soviet Union, and the support given to individual delegates from various firms. Those from Eastern Europe greatly appreciated the chance to attend and made a significant contribution to the conference, but the arrangements for them did involve a great deal of time and effort.

The Organizing Committee had adopted the policy endorsed by the National Delegates' meeting some years ago, and tried to include all branches of analytical spectroscopy. However, the

majority of the papers submitted were on atomic spectroscopy; at least two of the four parallel sessions were devoted to some aspect of atomic spectroscopy or ICP-MS and some of the lectures on molecular spectroscopy were poorly attended. As there are many conferences on molecular spectroscopy, on NMR and on organic mass spectrometry, it is open to debate whether this overall coverage should be maintained or whether the CSI should be a specialized atomic spectroscopy conference. However, about 60 papers have been submitted for the CSI issue of the *Analyst* and about 105 papers for the CSI issue of *JAAS* (40 and 60 accepted, respectively), so there is clearly a case for maintaining the wide coverage. We requested all the plenary and invited lecturers to submit manuscripts of their papers; unfortunately a significant number felt unable to do so, but those papers which have been published will be collected and sent as a single volume to all delegates.

Apart from the 5 plenary and 28 invited lectures, 92 contributed lectures were presented in the four parallel sessions, and there were about 300 posters. We had laid down a format for the abstracts, but the instructions were interpreted in so many ways that it was decided to use a scanner so that they could all be reproduced in a common style. We achieved the common style, thanks to a great deal of effort at Loughborough University of Technology by Barry Sharp and his team; the amount of work involved for the abstract book was very large, but indexing then became relatively easy.

The exhibition involved some 40 firms, both large and small. It had to be spread over three sites in the University, but we have helped to make future exhibitions better! We expressed our strong support for a new exhibition facility being planned at the University; it was decided to go ahead with the plan, but only as soon as the XXVIII CSI was over! Preliminary work in the Physics Department started during the CSI, and went into full gear as soon as we left. The new enlarged exhibition area has now been opened!

We had full cooperation from the weather—dry and sunny throughout, (typical English summer weather!) so we enjoyed the campus to the full, and the excursions for the accompanying persons

had excellent conditions. One of the main social events was an organ and choir concert in York Minster on the Wednesday evening. Thursday afternoon was free, with a choice of visits to various stately homes and gardens, to the North Yorkshire Moors steam railway, to Bampton Cliffs and Flamborough Head, and to the Drax power station. The final social event on the Saturday evening was a visit to the National Railway Museum and everyone was impressed with the museum display.

On the Thursday evening, a meeting was held under the aegis of the Association of British Spectroscopists to discuss closer collaboration between spectroscopists in Europe. The discussion, with about 50 participants, centred on three topics. (i) Formal collaboration, as arranged through IUPAC, national Chemical Societies *etc.*,—information should be published more widely. (ii) Informal collaboration—names and addresses would be circulated to assist the exchange of information about meetings and methods. (iii) Technical collaboration, including financial resources and multi-laboratory projects—outside the scope of the meeting, but would be encouraged by contacts made through (i) and (ii). The National Delegates' meeting took place on the Friday afternoon. The principal business was the choice of location for the XXX CSI in 1997; there were two bids—Australia and the United States, and it was decided by two votes to hold the 1997 CSI in Melbourne, Australia.

There were a number of pre- and post-symposia associated with the XXVIII CSI. One day tutorial meetings on vapour generation and chemometrics were held on Tuesday June 29. The 3rd Kingston Conference on Analytical Spectroscopy in the Earth Sciences took place immediately prior to CSI (papers will appear in a special issue of *Chemical Geology*.) After the CSI, the post-symposium on Graphite Atomizer Techniques in Analytical Spectroscopy took place at the University of Durham, followed by a one day meeting on Trace Elements in Clinical Chemistry; the 5th Surrey Conference on Plasma Source Mass Spectrometry took place at Lumley Castle Hotel near Durham, whilst the post-symposium on the Analytical Applications of Glow Discharges was at the University of York. (Forewords from

the organizers and papers from these meetings can be found in this issue of *JAAS*).

Personally, I managed to get to very few of the lectures, but I felt that it was a very friendly and happy conference, and I think that most of the delegates gained the same impression. I am conscious of things that we could, and should, have done better, but it is easy to see the problems afterwards. I would like to take this opportunity of thanking all my colleagues on the Organizing Committee, particularly the Scientific and Exhibition Committees, the Secretary, Barry Sharp, with his team at

Loughborough University of Technology who dealt with registrations, and the Treasurer, Terry Threlfall, at the University of York. Our thanks are also due to the York University Conference Office and to Neil James there, who always responded promptly to our requests, reasonable and unreasonable.

Some may recollect that the chairman-designate of the 1981 CSI died during the 1979 CSI in Cambridge; again a tragic event has befallen the chairman of the next CSI. His many friends and colleagues were shocked in December by the sudden death of Klaus Dittrich, chairman of the XXIX CSI Organizing

Committee. Our deepest sympathy goes to Frau Dittrich and to the German spectroscopic community. The XXIX CSI will go ahead in Leipzig on the planned dates (August 27–September 1, 1995). The position of chairman has been taken over by Professor Dr Hubertus Nickel, of the Forschungszentrum Jülich. We wish him and his colleagues every success, and look forward eagerly to the next CSI.

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XXVIII CSI Post-Symposium on Graphite Atomizer Techniques in Analytical Spectroscopy July 4–7 1993, Durham, UK

The papers in this issue from the XXVIII CSI Post-Symposium on Graphite Atomizer Techniques in Analytical Spectroscopy held from the 4th to 7th July, 1993 at the University of Durham, UK, represent a selection of the material presented at the meeting. A pre- or post-CSI symposium on electrothermal atomization has come to be a regular feature of the CSI meetings and the material presented and discussed covers a wide range of electrothermal atomization topics. This meeting was no exception in that the 98 participants enjoyed hearing and discussing topics ranging from fundamental considerations of atomization and interferences, modifications to atomizer design, calibration considerations and interesting applications, presented in 26 and 23 oral and poster presen-

tations, respectively. I am grateful to both the participants of the meeting and those who have managed to submit a manuscript within the time frame required for publication in this special issue as I know from personal experience just how difficult it can be to find the time to convert ones lecture or poster presentation into a finished manuscript. I would also like to acknowledge the honesty of a number of presenters who discussed their work at the post-symposium but declined to submit a paper on the grounds that they felt that they still had further experiments to complete before they would consider the investigations to be in a form suitable for publication. A number of last-minute papers from this symposium will follow in subsequent issues of *JAAS*, as a few

did not manage to make the final deadline.

In conclusion, I would like to take this opportunity to publicly thank my fellow co-organizers, Dr David Halls (Trace Element Unit, Glasgow, UK) and Dr John Dean (University of Northumbria at Newcastle upon Tyne, UK) for all their hard work and efforts in organizing the meeting. At times I felt a little embarrassed sitting in Germany making suggestions that I knew other people would have to implement.

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XXVIII CSI Post-Symposium, 5th Surrey Conference on Plasma Source Mass Spectrometry, July 4–6, 1993, Durham, UK

The 5th Surrey Conference on Plasma Source Mass Spectrometry, held in July, was attended by over 90 delegates from more than 20 countries. Due to the coincidence of timing and location with the XXVIII CSI, the conference was on this occasion organized as a post CSI symposium. The subject areas covered during the three days included several contributions on fundamental instrument studies, two papers concerned with sector ICP-MS instruments and a multitude of presentations using alternative sample introduction techniques. By far

the most comprehensively covered topic, was sample introduction using laser ablation both as a probe tool and for bulk analysis. However, the not insignificant calibration problems which exist with this technique are still a major factor in limiting the widespread application of laser ablation.

The conference paper published in this issue by Grégoire and Lee applied electrothermal vaporization (ETV) for introduction of blood and animal tissue before isotope ratio measurement. Cadmium and Zn from digested samples

were separated from the matrix and determined after introduction by ETV. The analysis of the small sample volumes is an obvious advantage with this method. The paper by Alves *et al.* discusses the removal of organic solvents by use of cryogenic desolvation and introduction of the resulting aerosol into an ICP mass spectrometer.

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XXVIII CSI Post-Symposium on the Applications of Glow Discharge Sources in Optical Spectroscopy and Mass Spectrometry, July 4–7, 1993, York, UK

Glow discharge sources (GDS) have been used for many years in optical spectroscopy, particularly since the pioneering work of Schuler on hollow cathode discharges. The development by Grimm of a convenient source using plane metallic samples as the cathode led to the increasing use of GDS in combination with optical emission spectroscopy (OES) for analytical purposes. Much of the early investigations on these sources were carried out in Germany, particularly at the Institute for Spectrochemistry and Applied Spectroscopy (ISAS) in Dortmund, and in many cases practitioners in other countries had their interest first aroused by working for a period at ISAS or attending short courses and user groups held there. A number of specialist meetings have been held in recent years—at Baden-Baden in 1986, Braunschweig in 1988 and in Jülich in 1990, but these were mainly German speaking meetings, with relatively few participants from outside Germany.

More recently, there have been a number of developments: extension of the technique to non-conducting samples by the use of r.f. discharges instead of d.c. discharges, increasing use of GDS for depth-profiling of corroded and

coated surfaces (including non-conductive coatings), renewed application of GDS as ion sources in mass spectrometry (MS), and development of boosted sources using auxiliary discharges. These have all encouraged the renewed interest in GDS shown by additional papers at conferences, particularly those on plasma spectrochemistry.

In March 1992, the First European Workshop on Surface Analysis by GD-OES was organized by GAMS and LECO in Paris. At this meeting, the European Working Group on Depth Profiling by GD-OES was set up. Dr Arne Bengtson of the Swedish Institute for Metals Research was elected as the first chairman, and Dr John Murphy of Leco UK became the secretary of the steering committee. When it was decided that a XXVIII CSI Post-symposium would be held at the University of York on the applications of GDS in OES and MS, it was agreed by the steering committee that the meeting would include the Second European GDS Workshop.

There were 65 participants from 13 countries, including Professor K. Laqua, formerly head of the Atomic Spectroscopy Group at ISAS, Professor R. K. Marcus who has carried out

pioneering work on r.f.-GDS for OES and MS, and Dr Bengtson; some 41 papers and were presented at the meeting, 21 as lectures and the rest as posters. All aspects of GDS were covered, fundamentals and applications, surface and bulk analysis, plane and hollow cathodes, d.c. and r.f. excitation. On the first afternoon (Monday), there were demonstrations, particularly of commercial software, and the main poster session. In the evening a very enjoyable conference dinner was held at the Merchant Adventurers Hall in the city of York.

The final session on Wednesday morning was devoted to a report on the progress made by the European Working Group and a discussion on its future activities. It was agreed that the Group be expanded to cover all aspects of glow discharge spectrometry, that the next workshop would be held in conjunction with the XXIX CSI in Leipzig (August 1995), if possible, and that a sub-group on theoretical aspects of GDS should be established, which I was asked to chair—so far, I have not found time to act on this!

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