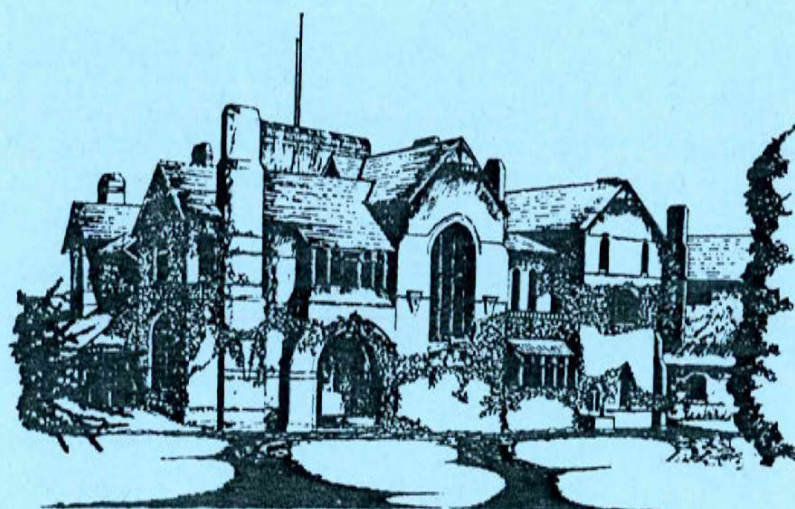


SOCIETY OF CRYSTALLOGRAPHERS IN AUSTRALIA

NEWSLETTER No.21



Booloominbah, University of New England, N.S.W.

CRYSTAL XVII
3-5 APRIL 1991

JANUARY 1991

SOCIETY OF CRYSTALLOGRAPHERS IN AUSTRALIA

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Newsletter Editor:	Geoff Williams Australian Radiation Laboratory Lower Plenty Road Yallambie, Vic. 3085 [tel. (03) 433-2211; FAX (03) 432-1835]

IMPORTANT MESSAGES

Crystal XVII will be held at the University of New England, Armidale, N.S.W. between April 3 and 5, 1991. Members are reminded that the DEADLINE FOR REGISTRATIONS AND ABSTRACTS is 1 February 1991. Those having difficulties with this deadline due to the holiday season should register by that date and forward abstracts as soon as possible thereafter.

A SCA Business Meeting will be held during the Crystal XVII National Meeting of the Society at 1630 on Thursday 4th April 1991.

Council has received a number of applications for '1987 Studentships' from postgraduate student members of the SCA wishing to attend Crystal XVII and will be advising applicants of the outcome shortly. In the meantime, applicants should submit an abstract for a proposed poster or talk to the conference organiser.

Annual membership subscriptions for 1991 are now due. Please use the form at the back of this Newsletter to accompany your payment.

The first AsCA Conference (AsCA'92) will be held in Singapore from Saturday November 14 to Monday November 16, 1992. It is planned that the AsCA'92 Conference will include the National Meeting of the SCA, and hence the next Crystal meeting (XVIII) will be deferred.

COUNCIL NEWS

Council Elections and Business Meeting

Members are reminded that a SCA Business Meeting will be held during the Crystal XVII National Meeting of the Society in Armidale, NSW in April 1991. At present, it is anticipated that the Business Meeting will be held at 1630 on Thursday 4th April 1991.

This National Meeting brings with it the end of the current terms of election of Professor John White (President), Dr. Peter Colman (Past President) and Dr. Jim Graham (Council). To fill the vacancies thus created the Nominations Committee, in accordance with Article IV and Rules III and IV of the SCA Constitution, has nominated Dr. Dudley Creagh (ADFA, Duntroon) for Vice President and Dr. Ward Robinson (Univ. of Canterbury) for Council.

As no further nominations were received by the Secretary by the 14th December 1990, the candidates nominated by the Nominations Committee are deemed to have been elected and will take office at the Business Meeting in April 1991.

Thus, taking account of pre-determined positions, officers standing for re-election, and new nominations, the composition of Council and Standing Committees for the term beginning April 1991 is:

President:	A.H. White (University of W.A.) *
Vice President:	D.C. Creagh (ADFA, Duntroon, A.C.T.) †
Secretary:	G.A. Williams (Aust. Radiation Lab., Vic.) ‡
Treasurer:	C.H.L. Kennard (Univ. of Qld.) ‡
Council:	M.F. Mackay (La Trobe University, Vic.) * C.J. Howard (ANSTO, N.S.W.) * W.T. Robinson (Univ. of Canterbury, N.Z.) †
ANCCr representative: (ex officio)	H.C. Freeman (University of Sydney) *
Past President:	J.W. White (Research School Chem., ANU) *
Nominations	S.W. Wilkins (CSIRO Materials, Vic.) *
Standing Committee:	M. Sterns (ANU, Canberra) * B.M.K. Gatehouse (Monash University, Vic.) ‡

* pre-determined position

† new nomination

‡ officer standing for re-election

Barry Fields: Impressions of the IUCr meeting in Bordeaux: The meeting was, of course, quite large with about 1600 participants. With so many people and the weather as it was (very hot), there was often confusion, but the inconveniences caused by this were easily forgotten when the variety and quality of talks/posters was considered.

Some of the interesting lectures include Richard Henderson's talk on the structure of Bacteriorhodopsin by electron crystallography. This is a protein that functions as a light driven proton pump and is found in cells as two-dimensional crystals. His group at Cambridge have obtained electron diffraction data which represents half of the full three-dimensional transform to 3.5 Å. An atomic model for almost the entire polypeptide chain has been built. The main density consists of seven roughly parallel alpha-helices with the retinal chromophore as the biggest peak in the map.

Wayne Hendrickson talked about the newly solved structure of the protein CD4, which is a target site for the AIDS virus. The structure was solved using a combination of MAD phasing (using $\text{CuK}\alpha$, $\text{AuL}\alpha$, $\text{AuL}\beta$ radiation) and MIR phasing (two heavy atom derivatives). The R-factor was 26% for data in the range 5.0-2.5 Å. The structure solved is in fact only a fragment of CD4, but it includes the immunoglobulin-like domain which is the site of gp120 (the envelope glycoprotein of HIV) binding.

Michael Rossmann presented some new results on the structure of a parvovirus. Canine parvovirus causes heat failure in dogs and this work represents the first time that DNA has been found as ordered structure in a virus. The virus supposedly didn't exist before 1978 and there is a new strain today. The eleven amino-acid differences between canine and feline parvovirus occur at recognition sites.

Pushing macromolecular crystallography to even greater limits, Yonath from the Weizmann Institute summarised their work on ribosomal particles. Ribosomes are the protein factories in cells and are themselves made up of proteins and RNA. In the bacterial system studied one ribosomal particle consists of 55 proteins and 3 RNA chains. The best crystals of ribosomal particles come from halophilic and thermophilic bacteria, with the highest resolution so far being 4.5 Å (10-20 Å more common). The heavy atom derivatives are made from undecagold and tetrairidium clusters. Models have been constructed for the subunits of the ribosomal 'monomer' at 30 Å and 47 Å respectively. Yonath proposes that a void between the two subunits could be the site of protein synthesis. A tunnel observed in the model is the possible route of exit for the newly formed protein chain.

These are only a few of the many impressive talks I heard. A particularly interesting session which focused on the teaching of crystallography was a pleasant break from the scientific presentations. The poster sessions were very well attended. Apart from being an effective way of communicating a lot of information they were also the best way to meet people working in a particular area. I had the good fortune to meet and discuss our poster with Elinor Adman and Ted Baker, both of whom work on crystal structures of copper-proteins. Wayne Hendrickson, the author of the protein refinement program PROLSQ, showed particular interest in our poster since it concerned a comparison of the results obtained using his program and another program (EREF). I also met for the first time a co-author of our poster - Hans-Hagen Bartsch from Hamburg who did the data collection at DESY and the EREF refinement.

Not to be out-done by the lectures and posters were the more social and cultural events. The opening ceremony included a rendition of Beethoven's 9th symphony in Bordeaux's Palais des Sports. The following reception in Parc Peixotta was a highlight with local food, wine and music (and hundreds of not-so-local crystallographers) overflowing the park.

Once again I would like to thank the SCA for the travel scholarship. I made full use of the return air-ticket by travelling through parts of Europe before and after the meeting in Bordeaux - the first time I've seen this part of the world.

Jacqui Gulbis: As one of the '1987 Scholars' attending the Bordeaux meeting in July 1990, I was requested to write a short article for the SCA newsletter detailing the highlights of the trip; this topic being relatively open to interpretation. To date, the merest passing thought of this task has been enough to stir up a flurry of activity on all other fronts, effectively precluding the necessity of putting pen to paper (or mouse to Macintosh). Unfortunately, despite moving 800 km away from Melbourne, the pangs of guilt have insidiously crept in. In an attempt to allay these, I now relate a little of the local colour of the trip.

The four-hour train trip between Paris and Bordeaux revealed breathtakingly pretty French countryside. Although I was at first a little apprehensive about reaching my destination, these feelings dissipated on arrival as I melted in the heat on the platform of the central railway station.

Surely by now every crystallographer in Australia is aware that Bordeaux was HOT. The facts are at this stage a little hazy, but I believe that the series of 40+°C days represented the biggest heatwave in the region since the 1940's. Although nobody could possibly have anticipated the extreme weather conditions, a lack of adequate forethought on the part of the host organisation turned an obviously otherwise well thought-out event into a rather uncomfortable one.

Certainly no expense was spared in the catering of meals and entertainment (although little provision was made for vegetarian delegates). However, significant shortcomings were evident in the area of creature comfort. Lack of air-conditioning or fans in lecture theatres (as well as hotel and college rooms) made it difficult to maintain a concentration span, and was reflected in low attendances (relative to the 1987 Perth Congress). Probably worst of all was the building chosen to display the posters each afternoon, in which temperatures were a few degrees higher than outside. As some of the most interesting chemistry is often on show in the poster sessions, it seemed a shame that a lot of hard work went unnoticed as most people afforded only a brief visit before being driven out of the sweltering heat.

Despite the physical discomfort, the conference provided much food for thought, in that it both revealed unfamiliar aspects of the field of crystallography and supplemented information about other, more familiar, areas. One of the more interesting microsymbiosia was about the teaching of crystallography, chaired by Jenny Glusker. As well as introducing some novel teaching methods, the essence of the session was that as well as the advantages, there are some inherent problems in learning crystallography by routine black-box procedures.

I was also pleased to meet students from other institutes around the world, and to put some of the names seen on texts and scientific papers to faces. Overall, a very full program of events was well worth the visit. I would like to extend my thanks to the committee for their generous sponsorship.

Kate Hawkins: The XV IUCr Congress in Bordeaux, July 1990, was a diverse, intensive and delightfully gastronomic realisation of much of the field of crystallography (and of southern France). As hitherto mainly an electron microscopist and materials scientist, I found it challenging to be presented with so many ideas and techniques in crystallography which can be applied, in conjunction with other techniques, to problems of practical and engineering importance.

Familiarisation with the more established crystallographic techniques in the physical sciences was very useful. Sessions on advances in structure determination by powder methods, and on instrumentation for diffraction using conventional and synchrotron sources, provided background as well as pointing to trends and new ideas in these fundamental aspects of practical crystallographic data collection, and structure determination and refinement.

Advances in the understanding of crystallographic structures of high-temperature superconductors and some perovskite analogues were interesting to 'catch up' on, not having worked in this area for some time. Impressive high resolution electron microscopy of defect structures, leading to polytypism in Th-Cu type superconductors was presented by M. Hervieu (MS-08.06.02). This system allows polytypism by altering both the rocksalt layer and perovskite block sequences, in contrast with only the perovskite sequence variation which was found to occur in Ca-Sr-Ti perovskites (Hawkins, MS-08.06.04).

High pressure and high temperature crystallography are already increasing the understanding of such phases as mantle minerals. With developments in single crystal pressure cells, which were presented in a session entitled 'High Pressure Crystallography', structure factor data sets from sizeable amounts of reciprocal space are soon to be possible. The use of synchrotron radiation, because of its intensity and high λ tuneability, will allow short collection times (Schiferl, MS-08.09.02). An anvil designed using creep-resistant Re-based alloys, and Cr alloy gaskets which will weld onto the diamond anvils, are to be heated by laser. Temperatures of up to 1200 K held at 50 GPa, are possible for durations of several hours. Concurrent neutron data sets will also be possible (Nelmes, MS-08.09.03), although much more restricted in reciprocal space. Useful pressures obtainable at the ILL in Grenoble are around 3 GPa; however, an opposed anvil cell permits 6 GPa with tungsten carbide anvils, and 10-20 GPa is expected to be possible with diamond anvils.

The opportunities to meet and talk with many other crystallographers (and from this develop many new ideas for my current work), and to jog along an Atlantic beach and eat lots of mussels, were provided by attendance at the Congress. Three months after the Congress were spent at L'Institut de Cristallographie, Lausanne, Switzerland, in the very valuable pursuit of data for my Ph.D. For allowing all this, I was rather chuffed to be fortunate enough to receive a '1987 Scholarship' from the Society of Crystallographers in Australia.

James Hester: One is reminded of paddocks of dry yellow grass in the middle of an Australian summer upon mention of the Bordeaux meeting. I had expected that part of Europe in summer was like Australia in spring, sort of warm with an evening breeze. It was, however, extremely hot and extremely still, being inland from the sea. The unseasonably hot weather took the (un-airconditioned) French by surprise as well, and it was several days before bottles of water began to appear around the conference site. So unless otherwise stated, in everything that follows take for granted one 2 litre bottle of water in each person's hand, dress appropriate to the Australian

desert and heat so chunky you could carve it (imagine 1000 people in an aluminium hall at 2 pm).

This was the first time that I had attended an international conference. I had heard that the meaty bits of conferences actually occurred outside the poster sessions and in the corridors around the lecture halls, and began to understand why, after witnessing the spectacle of non-native English speakers giving talks with extreme accents that could be understood only by the most native of English speakers, thereby rendering their lecture incomprehensible to at least half of the delegates including their own countrymen. In a few other cases the speaker spoke wonderfully clearly into the laser pointer while waving the microphone at the overhead screen!

One of the more memorable social functions took place by the river in a disused warehouse. Two thousand people attended a sit-down dinner looking over the Gironde river and a bevy of tall ships that happened to be passing through Bordeaux (along with the Tour de France) while we were there. At least, we would have been looking over the river and the bevy of tall ships if all the warehouse doors had not been closed, with 'Do Not Open' signs all over them. It looked like we were going to have two saunas in one day (instead of the complementary once daily sauna) until the military were called in and after some consultation on walkie talkies succeeded in opening the doors (hereafter stop imagining chunky heat). Some time later, after numerous bottles of wine and a delicious meal, I felt that it was time to make some International Contacts. Quietly removing a serviette that had somehow found itself in the shape of a sailor hat on my head, I made my way over to a couple of Russians that I had met once or twice before. Now, I should point out that Bordeaux itself was 12 km from our accommodation at Bordeaux university, so buses were always provided by the conference organisers for functions in Bordeaux. Bordeaux wine is something else, for I found myself agreeing to go back with these Russians at 1 am on foot. On the way I discovered that this was a nightly form of relaxation, and that they knew the precise location of every coke machine on the road (a good thing). From these International Contacts I learnt that Russians walk a lot, Coke is universal and you don't have to be carrying 30 kg of luggage to get sore feet overseas. The French, by the way, don't walk much and were genuinely concerned to learn one day that we planned to walk to the local supermarket, a whole 3 km down the road.

Perhaps the most worthwhile part of the congress for me turned out simply to be meeting other researchers. A real awareness of the larger worldwide community of researchers is difficult to obtain in Australia, and consequently the benefits of such a community feeling are lost. Now the names on the papers mean a great deal more to me; for instance, when I see x's name, I will think 'Ah yes, that was the person who started the dancing on the tables' etc. Also, being able to see 'good' science next to, shall we say, 'not so good' science made the slow process of the accumulation of scientific knowledge much more tangible, and increased my enthusiasm for doing some 'good' research. Attending such a large and diverse congress was an immensely worthwhile experience (for experience read also: test of endurance, education, wine and cheese course), both from my point of view and I think from the SCA's, and the SCA is to be congratulated (and thanked profusely!) for its wisdom in instituting the '1987 Scholarships'.

Louise Cunane (Vilkins): Three years ago, the prospect of travelling to Perth for the 1987 IUCr Congress seemed pretty exciting. Little did I expect then, that I would be going to the next meeting in France! But there I was, along with eight other crystallography students, some of us probably somewhat overawed at the prospect of seeing so many crystallographers gathered in one place.

I am now a veteran of two IUCr Congresses, and am pleased to say that Perth did a brilliant job of organisation. Bordeaux had a hard act to follow, and the fact that the weather surprised everyone by being about as good as the worst Australia can offer in summer didn't make their job easier.

The sweltering conditions caused one to select very carefully which sessions to attend - how to see the most interesting talks and actually survive to the end without suffering heat exhaustion. By far the most gruelling time, but probably the most useful, was the poster presentation. My poster seemed to have been placed in not quite the right category, but this turned out to have the unexpected benefits of getting more discussion going about my own work, and also on the day when the other posters relevant to me were up, I was free to browse at my leisure.

In Bordeaux, being warmly greeted by people that I had met in Perth and the Computing School in Adelaide, it struck me that crystallographers the world over are quite a friendly bunch. And sociable too - those long European summer evenings gave us all a chance to cool off and recover from hectic days of lectures, symposia and posters. Thanks SCA for an all-round rewarding experience, although it sometimes was endured rather than enjoyed!

Vilma Zubak: Bordeaux was an ideal setting for a conference, although the university campus was a little remote from the activities going on in town. Certain areas of the conference proceedings could have been better organised, although I suppose that the Organising Committee found it difficult to cope with the large number of conference delegates, and to accommodate them because of the heat.

Nevertheless, the main lectures and the microsymposia were inspiring to a young novice in crystallography. Quite a number of the sessions were devoted to Protein Crystallography, and therefore quite relevant to my current interests. Advances in the field of Electron Crystallography with the structure determination of Bacteriorhodopsin (a main lecture given by Richard Henderson) and of the light-harvesting chlorophyll-a/b protein complex (a session in the Macromolecular Assemblies microsymposium given by Kuhlbrandt) gives inspiration to others with two-dimensional crystals. It was a pity that there had been no miracles in the crystallisation of three-dimensional crystals of proteins, although another variable has entered the list: microgravity, which does appear promising. All of the sessions in the 'Hot Structures' (New Macromolecular Structures) microsymposium were interesting and it was amazing to observe the number of advances and insights that have been made since the XIVth International Congress of Crystallography in Perth, 1987.

It was an honoured experience to meet some of the 'big names' of crystallography, whom I had only read about, or whose programs and methods I was utilising for my own research. It was pleasing to be able to converse with them, exchange ideas and find out that they are as human as the next person and not gods that should be placed on a pedestal.

AsCA CONFERENCE, SINGAPORE 1992

The Asian Crystallographic Association (AsCA) is to hold an inaugural AsCA meeting in Singapore in 1992. This will be organised jointly by the SCA and the Crystallographic Society of Japan (CSJ) and it is proposed that it incorporate the next SCA National Meeting and an SCA Business Meeting. Hence the next Crystal meeting (XVIII) will be deferred (as will the CSJ meeting for that year).

The conference, to be called the AsCA Conference (AsCA'92) for the time being (a name change may be necessary in the coming months), will be held at the Regional Language Centre (RELC) in Singapore from Saturday November 14 to Monday November 16, 1992. The opening reception will be held on the evening of Friday November 13, and the closing banquet on the evening of Monday November 16. The costs of these functions should be part of the registration fee, but with possible direct commercial sponsorship.

Conference Committees have been proposed, with Prof. Kasai, as AsCA President, Chairman of the International AsCA'92 Organising Committee and Dr. Ted Maslen the Chairman of the International AsCA'92 Program Committee. Contact details are as follows:

Prof. Nobutami Kasai
Department of Applied Chemistry
Osaka University
2-1 Yamadoka Suita
Osaka 565, JAPAN
Ph: 81 6 877 5111 ext. 4321
Fx: 81 6 876 4754

Dr. E.N. (Ted) Maslen
Crystallography Centre
University of Western Australia
Nedlands 6009
AUSTRALIA
Ph: 619 380 2727
Fx: 619 380 1014

The Australian Organising Committee is:

S.R. Hall (Chairman)
H.C. Freeman
E.N. Maslen
M.R. Taylor (Co-Treasurer responsible to the SCA)
J.W. White
G.A. Williams

Prof. Michiyoshi Tanaka of the CSJ will be in charge of the abstract compilation and printing.

Participants will be required to arrange their own accommodation for the meeting. Syd Hall has recently been to Singapore to gather information relating to the AsCA Conference arrangements and venue, and will distribute some information about suitable accommodation in the conference circular to be distributed in October/November 1991.

The RELC conference venue is an attractive 14-storey building located in a quiet suburban part of Singapore. It is adjacent to the Shangri-La Hotel and only 5 minutes walk from the Orchard Road shopping district. The RELC is government-run and the facilities are well maintained. The entrance is like that of a hotel with a large lobby (which could serve as a poster area if needed) which leads into the conference auditorium. The first two floors are occupied by conference and restaurant facilities; the remaining floors contain 120 rooms (all with twin beds and bathroom).

The importance of encouraging the participation of young scientists is recognised, and it is proposed that both Australia and Japan offer travel scholarships to young crystallographers from their own countries.

CRYSTAL XVII

Crystal XVII will be held at the University of New England, Armidale, N.S.W. between April 3 and 5, 1991 (i.e. a few days after Easter). Members are reminded that the DEADLINE FOR REGISTRATIONS AND ABSTRACTS is 1 February 1991. Those having difficulties with this deadline due to the holiday season should register by that date and forward abstracts as soon as possible thereafter.

A demonstration of the new PC-version of the SHELX structure-analysis package is being planned, and a presentation made of what is available at the Photon Factory synchrotron radiation source in Japan, and how to get access.

For those of us who have never been to Armidale, or who know very little about it, Mark Spackman has provided the following enticement:

Armidale is a city of some 22,000 people, situated on the New England plateau. The city is 980 metres above sea level, 560 km by road from Sydney and 440 km from Brisbane. The Armidale campus of the University of New England is 5 km north-west of the city centre, amid attractive rural surroundings. Early April is a beautiful time of the year; the weather is usually cool to mild, with average maximum daily temperatures of 22°C and overnight minima of 9°C.

The countryside around Armidale is largely sheep and cattle properties, but nearby are magnificent gorges, waterfalls (Wollomombi, Dangars, Ebor) and National Parks (New England, Cathedral Rock, Oxley Wild Rivers, Guy Fawkes, Dorrigo). A couple of hours drive due east of Armidale is the beautiful sub-tropical New South Wales north coast and the delights of Coffs Harbour, Nambucca Heads, South West Rocks and the spectacular beaches in between. Armidale is serviced by frequent flights from Sydney and Brisbane on Eastern Australian Airlines (a regional affiliate of Australian Airlines) and State Rail XPT train service to Tamworth with a bus connection to Armidale.

WORLD DIRECTORY

Bulk Order for the Eighth Edition of World Directory of Crystallographers

The IUCr advise that work on this new edition of the Directory is now complete. Dr. E.N. Maslen, Assistant Editor of the Eighth Edition of the Directory, assembled a very comprehensive team of sub-editors throughout the world. These sub-editors have supplied new entries and updates which have been added to the database for the Seventh Edition which was published in 1986.

The SCA has placed a bulk order for 70 copies of the new World Directory, and these will be made available to members at a considerable saving on the single-copy price. It is expected that copies will be available for sale at Crystal XVII.

PEOPLE

The SCA Treasurer, Colin Kennard, is presently spending six weeks at the Physics Department, University of Peradeniya, Sri Lanka as an IUCr visiting professor. On his way home, he is spending four weeks at the university in Kuala Lumpur helping with software for a new Nonius CAD-4 diffractometer. This follows the successful commissioning of a similar diffractometer in Colin's own department.

We remind readers that Syd Hall has been appointed as Co-Editor of Acta Crystallographica, and hence Australian crystallographers should now consider submitting papers to Syd for publication in Acta Cryst.

Also Chris Howard (ANSTO) is now a co-editor of the Journal of Applied Crystallography and Australians with papers for publication in this journal can now submit them through Chris.

And while on the subject of Journals, Rod Hill as Australian editor of Zeitschrift fur Kristallographie points out that this journal is now offering electronic-mail submission of crystal structure data. This new feature allows rapid publication and transferral to data bases. Data for new crystal structures in the form of the output of the structure solution package should be submitted via electronic mail to UNC412 at DBNRHRZ1.BITNET. Data will be checked, printed in Zeit. Kristallogr. (including a structure diagram), and transferred to data bases within three months. In order to use this service the program CASTOR has to be used to check the completeness of the data. The program CASTOR can be ordered from Professor G. Bergerhoff of the Institute for Inorganic Chemistry, University Bonn at the above e-mail address.

Congratulations to Jacqui Gulbis whose Ph.D. thesis has recently been passed. Jacqui, who was a postgraduate student with Dr. Maureen Mackay, now has a position at the Department of Physical and Inorganic Chemistry at the University of Adelaide.

And Louise Vilkins of the School of Physical Sciences, Flinders University, has advised a change of name to Louise Cunane.

New Members. We welcome four new members:

Miss Dianne Michail, a Ph.D. student in Chemistry at the University of Melbourne, is working on the synthesis and structure of new materials constructed by linking together slab-like building blocks.

Mr. Stuart Batten of the School of Chemistry, University of Melbourne, is pursuing Ph.D. studies in infinite polymeric frameworks.

Mr. Martin Grannas of the School of Chemistry, University of Melbourne, is studying complexes of tetranucleating macrocyclic ligands for his Ph.D.

Dr. Brendan Abrahams, also of the School of Chemistry, University of Melbourne, has special interests in the structure of coordination complexes.

LETTERS TO THE EDITOR

An occasional page which will appear whenever there is anything to go on it. In the last Newsletter, Rod Hill argued for taking ourselves more seriously. Professor Sandy Mathieson now responds.

Dear Editor,

With reference to Rod Hill's letter in Newsletter No. 20, I would like to make several points.

Should we dump the past every time we feel like it? One recollects that, in George Orwell's '1984', the big powers maintained departments to remove records of the past which were inappropriate to the current political alliances, so that they could re-write history.

In a historical sense, the term 'Bush Crystallographer' goes back to the earlier (albeit informal) organisation of crystallography in Australia begun in the early 1960s. If my memory serves me, it was no less a crystallographer than Dave Wadsley, of what was then the Mineral Chemistry Division of CSIRO (the precursor of Mineral Products), who coined the term. Dave had a capability for apt phrases. Occasionally it melded with a sardonic wit as when he named the National Committee for Crystallography the Kneeling Committee. (I was on it at the time).

We should be serious about science, in particular its fine flowering in crystallography, but perhaps more light-hearted about ourselves and an alternative colloquial name for the SCA.

Sandy Mathieson
La Trobe University Chemistry Department
25 September 1990

Sandy Mathieson also writes with news of an Italian connection.

Dear Editor,

In relation to the preparation of 'A History of Crystallography in Australia', I recently wrote to Dr. M. Bentivoglio-Baldeschi who now lives in San Remo in Italy.

Dr. Marie Bentivoglio, born 1898, is a graduate of Sydney University (B.Sc. 1919) who, in Sydney, made crystallographic measurements in the early 1920's for Professor John Read and Dr. H.G. Smith on natural product materials which they were studying. She received an 1851 Scholarship and went to Oxford University in 1922 to work with Dr. T.V. Barker (of the Barker Index). She graduated D.Phil. in crystallography in 1925, apparently being the second woman to receive a doctorate from Oxford University and the first woman from Australia.

In her reply, Dr. Bentivoglio-Baldeschi said that she was delighted to know of the existence of the Society of Crystallographers in Australia and wished to extend her best wishes to its members.

Sandy Mathieson
La Trobe University Chemistry Department
6 November 1990

MISCELLANEA

Professor Struther Arnott, Principal of St. Andrews University, Scotland, has been invited to be a Distinguished Visiting Fellow at La Trobe University for six weeks in March/April 1991. Professor Arnott is well known for his many contributions to the structures of fibrous polymers of allomorphs of DNA, of RNA and of gel-forming polysaccharides. Professor Arnott is planning to attend Crystal XVII in Armidale in April.

Anyone interested in using the Inorganic Data Base is invited to contact Colin Kennard at the University of Queensland on (07) 377-3296.

Small Molecule Crystallographers

Maureen Mackay will be holding an informal meeting for those interested in small molecule crystallography during the Crystal XVII meeting. Suggestions for topics and speakers for the next IUCr Congress to be held in Beijing, China in September 1993, and for a satellite meeting to be organised by the Small Molecule Commission in Fuzhou, China, before or after the IUCr Congress, would be welcome.

Publication of Mawson's Papers

The Mawson Institute for Antarctic Research, The University of Adelaide, announce the publication of 'Mawson's Papers'. These papers, comprising 302 pages, 31 plates, and 9 maps, are a guide to the scientific, personal and business papers of Sir Douglas Mawson, OBE, BE, DSc, FRS, FAA (1882-1958). Sir Douglas Mawson was Professor of Geology and Mineralogy as well as a distinguished Antarctic scientist and explorer.

The book 'Mawson's Papers' is available from The Librarian, The University of Adelaide, GPO Box 498, Adelaide, South Australia 5001 for a cost of \$45 plus postage of \$4 per copy.

Synchrotron Research Opportunities

It was widely reported in newspapers during October 1990 that agreement had been reached during the recent visit to Japan by the Prime Minister, Mr. Hawke, for Australian access to the synchrotron radiation facility at The Photon Factory, Tsukuba, Japan.

Professor Dudley Creagh reports that the Japanese offer 'is a highly generous one. We have been allocated access to radiation from one of the bending magnets of the positron storage ring. We will build a beamline and experimental station at that location and for two years we will have 100 per cent access to the experimental station. Thereafter we will have 50 per cent access to the station and the other 50 per cent will be available to the Photon Factory.'

Professor Creagh said 'access to the facilities we are going to build will be given to any scientist making an appropriate proposal. Australian scientists can also have access to most of the other experimental stations at the Photon Factory by submitting a research proposal.' The Australian instrument is expected to be completed in 1992 and research should be possible from 1993.

FORTHCOMING MEETINGS

March 18-24, 1991. Third Intensive Course in X-Ray Structural Analysis of Small and Medium Sized Molecules; Chemical Crystallography Group of the BCA; Birmingham. Contact Dr. D. Watkin, Chemical Crystallography Laboratory, 9 Parks Road, Oxford OX1 3PD, U.K.

April 3-5, 1991. Crystal 17, Seventeenth Meeting of the Society of Crystallographers in Australia; Armidale, N.S.W., Australia. Contact Dr. M. A. Spackman, Department of Chemistry, University of New England, Armidale, N.S.W. 2351, Australia.

July 21-26, 1991. 1991 American Crystallographic Association Meeting; Toledo, Ohio. Contact Dr. A. Pinkerton, Dept. of Chemistry, University of Toledo, Toledo, OH 43606, USA.

August 12-16, 1991. PICXAM Pacific-International Congress on X-ray Analytical Methods; Honolulu. Contact Dr. E.B. Kho, Department of Chemistry, University of Hawaii-Hilo, 523 W. Lanikaula Street, Hilo, Hawaii 96720-4091.

August 25-30, 1991. Thirteenth European Crystallographic Meeting ECM 13; Ljubljana, Yugoslavia. Contact Prof. L. Golic, Department of Chemistry and Chemical Technology, E. Kardelj University, 61001 Ljubljana, P.O. Box 537, Yugoslavia.

August 31-September 2, 1991. Biomolecular Structures and Dynamics; Otocec, Yugoslavia. Contact B. Kojic-Prodic, Institute Ruder Boskovic, 41001 Zagreb, P.O. Box 1016, Yugoslavia.

September 1-7, 1991. Sagamore X Conference on Charge, Spin and Momentum Densities; Konstanz, F.R.G. Contact Prof. W. Weyrich, Fakultät für Chemie, Universität Konstanz, Postfach 7733, D-7750 Konstanz 1, F.R.G.

September 2-3, 1991. Synchrotron Radiation in Crystallography; Trieste, Italy. Contact L. Randaccio, Dipartimento di Scienze Chimiche, Università di Trieste, Piazzale Europa 1, I-34127 Trieste, Italy.

August 2-8, 1992. European Crystallographic Meeting ECM 14; Twente, The Netherlands.

November 14-16, 1992. Asian Crystallographic Association Conference 'AsCA'92; Singapore. Contact Prof. N. Kasai, Department of Applied Chemistry, Osaka University, 2-1 Yamadoka Suita, Osaka 565, Japan.

September 1-8, 1993. Sixteenth General Assembly and International Congress of Crystallography; Beijing. Contact Prof. M.-c. Shao, Institute of Physical Chemistry, Department of Chemistry, Peking University, Beijing 100871, China.

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