



CRYSTALLOGRAPHY NEWS

BRITISH CRYSTALLOGRAPHIC ASSOCIATION

No. 7 DECEMBER 1983

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BRITISH CRYSTALLOGRAPHIC ASSOCIATION

Spring Meeting

2-5 April 1984

UNIVERSITY OF NOTTINGHAM

UNIVERSITY PARK

NOTTINGHAM, NG7 2RD

Telephone 0602 56101

Telex 37346

Deadline for submission of papers : 1 February 1984

Deadline for registration : 1 March 1984

Programme Committee:

Dr. Michael Begley (Convenor) University of Nottingham

Dr. Paul Fewster (Physical Crystallography Group)

Dr. David Russell (Chemical Crystallography Group)

Dr. Guy Dodson (Biological Structures Group)

Mr. John Harding (Industrial Group)

Dr. Keith Bowen

Dr. Stephen Wallwork

Outline Programme:

Monday afternoon 2 April PHYSICAL CRYSTALLOGRAPHY

Synchrotron Radiation and EXAFS

Dr. A.M. Glazer (Oxford) The powder diffraction station at Daresbury.

Dr. G.N. Greaves (Daresbury) "Introduction to EXAFS and XANES and its application to metals and disordered materials".

Dr. C.D. Garner (Manchester) EXAFS and its Application to the study of Copper and Zinc in Chemical and Biological systems

Additional contributed papers on these themes.

Monday evening: RECEPTION

Tuesday morning: 3 April INDUSTRIAL CRYSTALLOGRAPHY

One session in the area of geology and another on Industrial single crystals.

Professor Dunham (Hull) A geological topic

Dr. G.R. Jones (RSRE Malvern) Electronic crystals: Preparation, purity, perfection and applications.

Contributed papers in these areas.

Tuesday afternoon POSTER SESSION

Physical Crystallography and Industrial Crystallography.

Tuesday evening PLENARY LECTURE

Dr. D. Sayre (President of American Crystallographic Association.)

CONFERENCE DINNER

Wednesday morning 4 April CHEMICAL CRYSTALLOGRAPHY

Practices and problems of crystal structure refinement

Dr. N.P. Walker (QMC) Physical factors affecting refinement

Dr. D.J. Watkin (Oxford) Structure Refinement

Dr. R. Taylor (Cambridge) Treatment of Results

A Discussion Panel session on structure refinement.

Wednesday afternoon POSTER SESSION

Chemical crystallography and Biological Structures.

Wednesday evening CONCERT by the Emanon Singers

Thursday morning 5th April BIOLOGICAL STRUCTURES

Gerard Bricogne (Columbia University USA) Maximum entropy and phasing in Protein Crystallography

Herman Watson (Bristol) Phosphoryl Transfer - how enzymes do it.

Tim Richmond (MRC Cambridge) The structure of the Nucleosome Core Particle.

Further contributed papers

Registration will take place before lunch on Monday 2 April, and the conference will end at lunch on Thursday 5 April.

Space may be found in the programme for additional ad-hoc meetings. Anyone wishing to organise such a meeting in advance is invited to communicate with the convenor. Several AGMs will also take place over the conference period.

Accommodation All of the scientific sessions, lectures, posters and commercial exhibition will take place in the Chemistry department of the University of Nottingham. Accommodation in the form of single study bedrooms and meals has been arranged at Lenton Hall of Residence, a few minutes walk away across the open parkland campus of the University.

Travel The University of Nottingham is situated two miles west of the city of Nottingham. The M1 motorway passes within four miles of the campus (exit 25). Nottingham station is on British Rails Inter-City network with a service of High Speed Trains (125) from London St.Pancras and Sheffield. Concessionary fares are available to conference visitors who book in advance. The East Midlands Airport is eight miles away. Maps of the University campus and surrounding neighbourhood, together with more detailed travel directions will be sent to participants.

Registration Please complete the accompanying form and return as soon as convenient to the Conference Secretary, Dr. M.J. Begley, Department of Chemistry, University of Nottingham, University Park, Nottingham, NG7 2RD. To keep accounting and costs to a minimum please make out two separate cheques as indicated (i) to the BCA for the conference fee and (ii) to the University of Nottingham for the accommodation and conference dinner. Most of these charges have been held to the same cost as last year. An early reply would be greatly appreciated, there is no need to wait for the deadline.

Contributed Papers Titles and abstracts of papers (together with authors names and affiliations) should be submitted to the appropriate member of the Programme Committee as soon as possible please (and in any case before 1 February).

Biological Structures: Dr. Guy Dodson, Department of Chemistry, University of York, Heslington, York, YO1 5DD.

Chemical Crystallography: Dr. David Russell, Department of Chemistry, University of Leicester, Leicester LE1 7RH

Industrial Crystallography: Mr. John Harding, British Rail, Derby.

Physical Crystallography: Dr. Paul Fewster, Philips Research Labs., Cross Oak Lane, Salfords, Redhill, Surrey.

Authors will be notified of acceptance early in February. There will be no abstract booklet, but an abstract is necessary so that the paper can be correctly placed in the programme. Most contributed papers will be in the form of poster presentations; but there will be some time available for oral papers in the Biological, Industrial and Physical Crystallography sessions.

Commercial Exhibition A Commercial Exhibition will be held in the Department of Chemistry during the period of the conference. Exhibitors may hire space in the exhibition to display these products. The exhibition is being organised this year by the Industrial Crystallography Group. Intending exhibitors are asked to communicate with Mr. John Harding (British Rail, Derby) with their requirements and for details of the fees payable, as soon as possible.

13th Congress and General Assembly of the
International Union of Crystallography.

The Hamburg Congress on 8-18 August 1984 will be the only international crystallography congress in Europe in this decade - the 1987 Congress is to be in Australia. Crystallography remains a small enough discipline that these triennial congresses are still the major international event. They are planned to have a broad appeal across the whole spectrum of crystallography, and one can be sure that all major fields of activity will be well represented.

As this will be the only easily accessible congress over a large period, the British National Committee for Crystallography has requested the Royal Society for a generous block grant to assist attendance. Crystallographers of Ph.D. status (except government employees and employees of the Research Councils) are eligible for support from this block grant. Individual grants may provide a proportion of the travel and subsistence costs of attending the Congress (and, if required, one of the five associated meetings): it is expected that applicants should also seek partial support from their University, employer or an appropriate foundation.

An official application form is included with this issue of Crystallography News. Please note that application has to be made early in January and act promptly. I am especially hoping for a good number of applications from younger crystallographers who have not previously had the opportunity to attend an international congress.

David Blow,
Chairman, British National Committee for Crystallography.

CRUICKSHANK SYMPOSIUM

UMIST, 11-13 SEPTEMBER 1984

Modern Experimental and Theoretical Studies of Crystal and
Molecular Structure

This Symposium, to mark the retirement of Professor D.W.J. Cruickshank, F.R.S., is being organised by UMIST in association with The British Crystallographic Association and with The Chemical Crystallography and Theoretical Chemistry Groups of the Royal Society of Chemistry. The programme will comprise authoritative accounts of the current status of structural science, emphasizing subjects where Professor Cruickshank has made important contributions.

Speakers will include Professor O. Bastiansen (University of Oslo), Professor J.E. Boggs (University of Texas), Professor J.D. Dunitz (ETH Zurich), Dr J.R. Helliwell (Daresbury Laboratory), Professor F.L. Hirshfeld (Weizmann Institute, Israel), Professor Dorothy Hodgkin, F.R.S. (Oxford), Professor G.A. Jeffrey (University of Pittsburgh), Dr G.S. Pawley (University of Edinburgh), Dr J.S. Rollett (University of Oxford), Professor G.M. Sheldrick (University of Göttingen), Professor K.N. Trueblood (University of California).

Anyone wishing to receive further details in due course should notify Dr B. Beagley or Dr R.W. Munn, Department of Chemistry, UMIST, P.O. Box 88, Manchester M60 1QD, U.K.

CRYSTALLOGRAPHIC STATISTICS

A small symposium on Crystallographic Statistics will be held during the Thirteenth International Congress of Crystallography (Hamburg, Germany, 8-18 August 1984). The oral session will contain about three invited semi-review papers and as many contributed papers as time permits. Additional contributed papers will be accepted for poster sessions, and an ad-hoc discussion meeting will be arranged if there is sufficient interest. As in the case of the symposium held in Ottawa in 1981, it is hoped to publish the papers of acceptable standard in book form. Papers for publication may include more detail than can be given in the oral or poster sessions.

Prospective authors should communicate as soon as possible with A.J.C. Wilson (Crystallographic Data Centre, University Chemical Laboratory, Lensfield Road, Cambridge CB2 1EW, England), without waiting to register for the Congress.

GRANTS IN AID

The JCPDS/International Centre for Diffraction Data invites proposals for grants to be awarded for the preparation of X-ray diffraction powder data. A limited number of grants will be available for a one-year period starting 1 April 1984. These grants are intended to be modest supplements to other projects to provide for the generation of diffraction data in accordance with the guidelines accepted by the International Union of Crystallography.

Proposals will be evaluated according to technical merit. Proposals addressing particular needs of the Powder Diffraction File, such as the preparation of diffraction data for organic compounds, will receive first consideration.

Proposals must be received by 10 February 1984.

Requests for guidelines for submitting proposals should be addressed to:

Secretary
JCPDS/International Centre for Diffraction Data
1601 Park Lane
SWARTHMORE PA 19081
United States of America

Preliminary enquiries may be addressed to A.J.C. Wilson, Crystallographic Data Centre, University Chemical Laboratory, Lensfield Road, CAMBRIDGE CB2 1EW.



CENTRE FOR THE HISTORY OF SCIENCE AND TECHNOLOGY

Royal Institution of Great Britain

21 ALBEMARLE STREET LONDON W1X 4BS

TELEPHONE 01-409 2992

A RICHST One Day Conference

THE LIVES AND WORKS OF WILLIAM AND LAWRENCE BRAGG

Friday 13 January 1984

The recent interest evinced in such subjects as nineteenth and twentieth century physical science, the development of science in the British Empire and the relationship of science and society make it an appropriate moment to hold a meeting on William Bragg and his son Lawrence. Both father and son played important roles in all these fields, jointly receiving the 1915 Nobel physics prize for their work on x-ray crystallography. William Bragg was one of the founders of Australian science. Both Braggs helped to develop equipment which enabled the two world wars to be waged more effectively by the allies. Both Braggs were distinguished Professors at the Royal Institution, Lawrence founding the successful Schools Lectures. It is appropriate therefore that this first meeting on the life and work of the Braggs should be held at the Royal Institution and organised by the recently founded Centre for the History of Science and Technology.

The papers at the meeting will cover the aspects of their careers outlined above and other events of their lives. The titles are as follows: Prof R.W.Home (University of Melbourne) "W.H.Bragg's Place in the Australian Scientific Community, 1896-1909"; Dr Harmke Kamminga and Dr Alan Mackay (RICHST & Birkbeck College) "Lawrence Bragg and Generalised Optics"; Dr John Jenkin (La Trobe University) "Not a chair but a sofa; W.H.Bragg's early years in Adelaide". In addition Margaret Gray will talk on the content of the Bragg Archives and Bill Coates will demonstrate some of Lawrence Bragg's experiments with the original apparatus. There will also be an exhibition of material from the Bragg Archive of the Royal Institution.

The cost of the meeting will be £8.50 (£7.50 for members of the Royal Institution). This will cover coffee, lunch and tea. Please make cheques payable in sterling to the Royal Institution. As there is limited accommodation please return the attached registration form as soon as possible to Dr Frank James, Bragg Conference, RICHST, The Royal Institution, 21 Albemarle Street, London, W1X 4BS, England.

To Dr Frank James, Bragg Conference, RICHST, The Royal Institution,
21 Albemarle Street, London, W1X 4BS, England.

I wish to attend the Bragg Conference. I enclose a cheque for £

Name: (Prof, Dr, etc)

(Block capitals please)

Address:

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The Eighth European Crystallographic Meeting, Liège;

8 - 12 August 1983.

Participants for ECM-8 arrived in Liège in glorious weather. The Sart Tilman campus was on the edge of a plateau about 3 miles distant, it looked enormous and was in fact about two square miles of natural forest intersected with roads and tracks and dotted with modern buildings. The notion of Belgium as a densely populated country was swiftly dispelled. In the time available only the fringes of the campus with its intriguing sculpture and natural amenities could be explored.

The scientific programme had a simple but most effective pattern. A plenary lecture followed by poster sessions in the morning, while the afternoons had another plenary lecture before the parallel sessions of contributed papers. The plenary lectures comprised a varied and well chosen collection of topics of current interest covering, proteins, high resolution electron microscopy, crystallography of surfaces and fast ionic conductors, a comparison of solid and gas phase structures, direct methods and finally, teaching. The poster sessions were lively and well attended throughout the period of the meeting, the contributors were well satisfied with the interest and attention their efforts received. The timing of the poster sessions between coffee and lunch-time has a great deal to commend it for maintaining interest. With the afternoon contributed sessions the usual, and inevitable, conflict of interest between parallel sessions was largely resolved by the convenient and close juxtaposition of the three lecture theatres which facilitated carefully timed transitions between sessions. The lecture theatre complex was ideally suited for a meeting of this size with a spacious hall for trade exhibitions and refreshments linking the three comfortable lecture theatres.

The mid-week break, to visit the vast limestone caves at Han followed by a boat excursion along the Meuse from the sparkling town of Dijon, was for many the high spot of the social activities. For gastronomes, there was later in the week, a fabulous repast, modestly described as a buffet supper, providing a taste of true Belgian cuisine and traditional entertainment.

The meeting was attended by almost four hundred participants from all five continents. Thirty countries in all were represented; despite the ease of access, the representation of British crystallography was disappointingly small (6%), a circumstance ascribed generally to the state of our economy rather than the state of our subject.

This well-organised conference will be remembered for its informality and the atmosphere of friendliness engendered by our Belgian hosts.

R.W.H. Small

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The first Autumn Meeting of the group was held at the Manchester University Medical School on the 22nd September 1983. A very broad and varied programme of topics were included so as to represent the wide catchment of interests which the group hopes to represent and act as a forum for in the coming years. Hence, the techniques of protein crystallography, fibre diffraction, solution scattering, electron microscopy and EXAFS spectroscopy featured in the programme.

Results on a diverse range of materials were presented, including tubulin, DNA, muscle, ribosomal proteins, 6-phosphogluconate dehydrogenase, haemoglobin and calcium pyrophosphate dihydrate. Mathematical approaches based on maximum entropy and graph theory as well as other methods of image reconstruction were discussed.

There were two main talks of 1 hour each and twelve short presentations of 20 minutes each. A total of 19 posters were presented as well as a commercial exhibition by Oxford Instruments. A total of 70 participants attended, mainly from the UK, but with guests from Sweden and Germany. All in all it was a cosmopolitan meeting in many ways, not only in the subject matter of the scientific programme but also in the diversity of restaurants and pubs available to participants nearby to the Medical School!

John R Helliwell
David W L Hukins

The first one-day meeting of the Industrial Group of the BCA was held at the BP Research Centre on 10th November. It was very well attended with over 50 delegates from a wide variety of industrial research laboratories and universities spread all over Britain. The Chairman, Brian Isherwood, said in his opening address that he hoped it would set a precedent for future meetings - first of all in being held at an industrial research centre, and secondly as an informal and friendly meeting.

Glen Smith gave the first paper in which he described the type of work done at BP. This covers a wide variety of samples, such as corrosion and engine deposits, hydrocarbons, catalysts, minerals and polymers, for identification, quantitative analysis and structure determination. The following discussion included questions on powder sample preparation. Then Brian Beagley spoke about the structure service at UMIST with reference to structure determination of zeolites in controlled atmospheres from powder data. This is a topic of growing interest to many people and evoked much discussion. Unfortunately, Terry Willis (Harwell) was not well so his paper was withdrawn. However, there was another contribution from Harwell by Mike Hutchings, about the use of neutrons for strain measurement. Paul Fewster (Philips) presented a clear description of how back reflection Laue photographs are solved using a program which runs on a microcomputer, giving possible solutions in about 12 minutes. Jean Holt (GEC) gave a brief description of Lang X-ray topography and then showed how it has been used to assess the quality of synthetically grown quartz crystals. Ian Ferguson (Springfield Nuclear Power) presented a paper based on Carl Bilby's work on the characterisation of thin oxide films on stainless steel using micro-diffraction and elemental analysis. This led into the workshop, chaired by Ed Metcalfe (CERN), on X-ray diffraction - its relationship to competing techniques, cost effectiveness and expediency versus rigour. It seems that over the years the technique has not lost but probably gained some ground from other techniques. The use of off-site facilities such as Daresbury was discussed. Sue Kipling (ICI) briefly described her thorough exercise to prove the cost effectiveness of automated equipment, and the importance of good communication between the customer and the crystallographer was repeatedly emphasised.

If the support and interest shown at this meeting is sustained, the future of the Industrial Group looks good.

MEV

On behalf of those who attended the Industrial Group meeting at Sunbury, I would like to thank the Staff of BP Research for arranging such a splendid meeting, and especially the members of the X-ray Diffraction Group: Rona Highcock, G. W. Smith, B. H. Stringer, Mary Vickers and D. Wood.

MM

Chemical Crystallography Group. Autumn Meeting 1983

The meeting was on 21, 22 September 1983 at University College, Swansea, being held during the Autumn Meeting of the Royal Society of Chemistry. The topic was "Chemical Processes in the Solid State"; a slightly different pattern from previous meetings was adopted with the first afternoon session devoted to contributed posters and a short film.

Three speakers were invited for the following morning session; which was designed to illustrate the relation between crystal structures and the fast-developing field of solid state chemistry. Dr. W. Jones (University of Cambridge) "The control and design of reactions within organic solids", described how dimerisation and polymerisation in crystals only proceeded if certain well defined spatial relations between the molecules were satisfied. The use of controlled structure related impurities could block the ordered progress of these reactions. Dr. C.R.A. Catlow (University College, London) on "Computer simulation and neutron diffraction studies of complex and disordered solids" described the models used for perfect, defect and dynamical lattice simulations and the types of results provided. The use of neutron powder diffraction to estimate defect and interstitial occupancy was outlined. "Organic - inorganic molecular complexes. Physical properties and chemical reactions" was the paper given by Dr. P. Day (University of Oxford) in which he described typical complexes involving perovskite layers and organic cations. Relations between the structures, physical properties and chemical effects including polymerisation were outlined. Two contributed papers by Dr. D.B. Sheen and Professor B.J. Hathaway ended the session. The meeting provided structural crystallographers with an insight into the way in which their studies could be integrated into the wider field of chemical processes in crystals.

R.W.H. Small

Chemical Crystallography Group

Annual General Meeting

Notice is given that the Annual General Meeting of the Group will be held on Wednesday 4 April 1984 at 17.00h in the Chemistry Department of the University, Nottingham. The business will include the election of members to fill vacancies arising from the retirement of the secretary and three committee members, Dr. B. Beagley, Dr. S. Neidle and Dr. C.H.W. Schwalbe. Any nominations for these offices (accompanied by the written assent of the nominee) should reach the secretary before 21 March 1984.

Subscriptions

Following the resolution of the last A.G.M., members will note that the Group subscription levied by the RSC will be two pounds per annum from January 1984. Until then approximately half of the cost of circulating Crystallography News is being drawn from the Group's reserves which are being severely depleted. It is hoped that the increased subscription will halt this process.

Crystallography News

Unfortunately, Group members will have received the September issue about three weeks late. We apologise for this which was due entirely to the failure of the RSC office concerned to provide address labels on time.

R.W.H. Small (Secretary),
Chemistry Department,
The University,
Lancaster LA1 4YA.

THE INSTITUTE OF PHYSICS/BRITISH CRYSTALLOGRAPHIC ASSOCIATION
PHYSICAL CRYSTALLOGRAPHY GROUP

Annual General Meeting 1984

The 41st Annual General Meeting of the Physical Crystallography Group will be held at 6.00 pm on Monday 2nd April 1984 in the Chemistry Department, University of Nottingham.

AGENDA

1. Apologies for absence.
2. Minutes of the 40th Annual General Meeting held on 29th March 1983.
3. Matters arising from these Minutes.
4. The Honorary Secretary's Report for the year 1983.
5. Group Accounts for the year 1983.
6. Elections:
 - a) Chairman,
 - b) Vice Chairman,
 - c) Committee Members.
7. Any other business.

Nominations for the Chairman, Vice Chairman, and two Ordinary Members of the Committee, which shall be proposed by not less than three members of the Group and shall be accompanied by the written consent of the nominee, shall be sent to reach the Honorary Secretary of the Group not later than seven days before the Annual General Meeting.

M. J. BUERGER AWARD

The American Crystallographic Association announces the establishment of a triennial award in honor of Martin J. Buerger, Institute Professor Emeritus of M.I.T. and University Professor Emeritus of the University of Connecticut. The award includes the following citation: "Martin J. Buerger is a mineralogist who has made major contributions to many areas of crystallography, including crystal growth, morphology, structure analysis, phase transformations, and instrumentation. His textbooks are classics in the field."

The award will recognize mature scientists who have made contributions of exceptional distinction in areas of interest to the American Crystallographic Association. Because of the broad nature of Buerger's own contributions, there is no restriction as to the area or areas of crystallography in which the recipient's contributions have been made. In recognition of the role of mineralogy in Buerger's work, at least one member of the selection committee will be a mineralogist. The award is not restricted as to nationality, race, sex, religion, or membership in the ACA. The first award will be made in 1985.

Leonid V. Azaroff, of the Institute of Materials Science, University of Connecticut, directed the drive to raise the necessary endowment for the award. Contributors include students, friends, and associates of Prof. Buerger, and also Amray, Inc., Blake Industries, E.I. DuPont de Nemours & Co., Philips Electronic Instruments, Inc., and Charles Supper Co. The ACA is extremely pleased at the creation of the Buerger Award, and expresses its appreciation of these contributions and of that made by Prof. Azaroff. The endowment is still open, and any persons who wish to contribute to it are cordially invited to do so. Tax-exempt contributions may be sent to the Treasurer of the ACA (Robert J. Sparks, Nicolet XRD Corporation, 255 Fourier Avenue, Fremont CA 94539).

EDUCATIONAL MODULES FOR MATERIALS SCIENCE AND ENGINEERING

EMMSE, initiated in the USA in 1976, has been active in Western Europe since 1978, and publishes the Journal of Materials Education. Over a hundred different teaching packages, or modules, have been produced on metallurgy, ceramics, powders, polymers, solid state science, thermodynamic and phase diagrams, as well as on crystallography. The series of nine crystallography modules takes the beginner from first principles of how a crystal is built up, to the point where he or she can interpret simple X-ray powder patterns. Over a thousand sets of these are sold per annum in North America by this non-profit making organization. An order form is enclosed with this issue of Crystallography News. Dr Alastair Nicol would be glad to hear from anyone interested in receiving further details: EMMSE/ANDE Scientific, 12 Greenhill Road, Moseley, Birmingham, B13 9SR.

BIRKBECK COLLEGE
University of London

Assistant Secretary (Personnel)
01-580 6622

Malet Street
London, WC1E 7HX

BIRKBECK COLLEGE
(University of London)

Post-doctorate Research Assistantship in
Computer Simulation of water in Industrial Minerals
with Dr. P. Barnes, Dept. of Crystallography

The general aims are to understand and characterize the dynamics of water molecules in various mineral systems such as clays (montmorillonite, mica, kaolinite) and certain zeolites. The immediate need would be to develop and extend existing water-ion potentials for application to Molecular Graphic/Monte Carlo and Energy minimisation programs. Results from such studies would be displayed on the departmental SERC interactive colour graphics workstation. In due course a grant application would be made to the SERC for a fuller period of study. Applicants should be of post-doctorate or advanced graduate standing with skills in computing and a physical sciences degree, though other cases might be considered. The appointment would be for two years commencing as soon as possible, and with a salary fixed by age and qualification within the 1A range (£8376-£10611 p.a., including London Weighting). Application, including appropriate c.v. and names of two referees, should be made to the Assistant Secretary (Personnel), Birkbeck College, Malet Street, London, WC1E 7HX, U.K. Closing date 23rd December 1983.

PURDUE UNIVERSITY

The Department of Biological Sciences has a number of openings in 1984 for research in the following fields.

- 1) The structure determination of rhino (common cold) virus.
- 2) Structural studies on alfalfa mosaic virus (bacillus-shaped virus particles).
- 3) Completion of the refinement of native southern bean mosaic virus.
- 4) Structure determination of a $T = 1$ southern bean mosaic virus assembly product.
- 5) Refinement of a number of dehydrogenase structures and their complexes with substrate and coenzyme.
- 6) Structure determination of *B. stearothermophilus* lactate dehydrogenase using isomorphous and molecular replacement.

Further information may be obtained from Professor Michael G. Rossmann, Hanley Professor of Biological Sciences, Purdue University, Lilly Hall of Life Sciences, West Lafayette, Indiana 47907.

SYMMETRY SOCIETY

Dr R. C. Pond (University of Liverpool) will give a talk on "Bicrystallography" on Tuesday 17 January at 6.30 pm at Birkbeck College. Further details from Mike Stanford, Department of Crystallography, Birkbeck College, Malet Street, London, WC1E 7HX. 01-580-6622 X 421.

CRYSTALLOGRAPHY NEWS

Camera-ready copy on A4 paper is welcome at any time. For inclusion in the March issue please send items by 15 February (Galileo's birthday) to the Editor: Dr Moreton Moore, Department of Physics, Royal Holloway College, Egham Hill, Egham, Surrey, TW20 0EX. (0784-35351 Ext. 36).

Next year the two main events for UK crystallographers may well be the Nottingham Spring Meeting of the BCA in April, and the XIII IUCr Congress in Hamburg to be held in August.

The organising committee for the Spring Meeting, led by Dr Michael Begley, has put together a good programme, and all looks set for another successful meeting. The registration forms and a call for contributions are included in this issue. I hope you will come to this meeting, and if you are an academic supervisor please try to bring as many students as possible.

Also included in this issue is an item from the Chairman of BNCC regarding travel funds for the Congress in Hamburg. Perhaps I could include here a few words about the differing roles of the BCA and the BNCC. With the creation of the BCA, the Association has taken over the leading role in crystallographic matters in the UK. The area which is, however, clearly in the province of the Royal Society are relations with international scientific unions, and with the IUCr in particular through the appropriate National Committee (the BNCC). Thus, at the triennial Congresses the UK is represented by a national delegation sent by the Royal Society, and the Royal Society also helps many other crystallographers with funds to enable them to attend. In intervening years, when ECM's are held, it is the BCA which is represented by a delegate. The Chairman of BNCC is ex officio a member of the BCA Council, and from January 1985 (the first convenient changeover point) the BCA will be represented on the BNCC by its President (ex officio) and two other representatives. Until then, the Chairmen of the Chemical Crystallography and the Physical Crystallography Groups are ex officio members, and several other members of the BCA Council sit on the BNCC in other capacities.

During autumn all four Groups held their individual meetings. Those of the two newly-formed Groups were the first solo meetings organised by these groups, and were arranged at relatively short notice. By all accounts both the new Groups had excellent meetings, both scientifically and in terms of attendances.

One of the major tasks still facing the two new groups is to push their membership above the three-figure mark. Apropos of this, I have noticed that a number of new BCA members have not yet elected to join any Group. BCA membership entitles you to join one Group without extra charge, and if you wish to join more Groups the annual charge is £1 per extra Group. The groups now in existence are 1) Biological Structure, 2) Chemical Crystallography, 3) Industrial, and 4) Physical Crystallography. So if you have not yet chosen a group, please do so - it will help to foster your particular interests, and will help the Groups. If, therefore, you decide to join a Group, please let me know at this address: Dept. of Chemistry, Imperial College, London SW7 2AY.



BRITISH CRYSTALLOGRAPHIC ASSOCIATION
INDUSTRIAL GROUP

Secretary/Treasurer:
Dr. J. I. Langford,

Department of Physics,
University of Birmingham,
Birmingham B15 2TT.
Tel. (021-) 472 1301
ext. 3498/3471

Call for Contributions

for the

Industrial Symposium: 3rd April 1984

to be held during the BCA Meeting, Nottingham Univ 2-5 April 1984. Contributions are requested on all aspects of Industrial/Applied Crystallography for:

- (a) verbal presentation (20 mins) in the morning session and/or
- (b) in a form suitable for poster display

The invited speakers in the morning session will be

Prof R Dunham: Hull University
X-rays and Minerals in Industry

Dr G Brown: Rothamsted Experimental Station, Harpenden,
X-ray identification procedures for clay minerals

Dr G R Jones: BSRE Malvern
Electronic crystals; preparation, purity, perfection and applications.

Provisional titles for both verbal and poster contributions are required by 14th January 1984 and abstracts by 10th February 1984. These should be sent to either:

Mr J W Harding
Technical Centre
British Rail
London Road
Derby

Dr B J Isherwood
GEC Research Laboratories
Hirst Research Centre
Wembley
Middlesex HA9 7PP

FORTHCOMING MEETINGS

ADDITIONAL TO THOSE LISTED IN THE PREVIOUS ISSUE (No. 6).

4 - 10 January 1984 Imaging and Microanalysis with High Spatial Resolution. (Course), Tempe, Arizona.
HREM Course, ASU Conference Services Office, Arizona State University, Tempe, AZ 85287, USA.

10 - 13 January 1984 Atomic Scale Structure and Properties of Interfaces.
Wickenburg Inn, Arizona.
Interfaces Conference, Conference Services Office, Arizona State University, Tempe, AZ 85287, USA

23 - 28 March 1984 Quantum molecular motion in crystals, intercalates and on surfaces
Nottingham
Prof. S. Clough, Department of Physics, Univ. of Nottingham, Nottingham, NG7 2RD

1 - 5 April 1984 6th Europ. Conf. on Surface Science (ECOSS-6) and Vacuum 84.
York
The Meetings Officer, The Institute of Physics, 47 Belgrave Square, London, SW1X 8QX.

15 - 20 April 1984 Scanning Electron Microscopy 1984, Philadelphia, Pennsylvania
Dr Om Johari, Director SEM Meetings, P O Box 66507, AMF O'Hare, IL60666, USA.

13 - 17 August 1984 6th International Conf. on Thin Films
Stockholm
ICTF-6, c/o Stockholm Convention Bureau, Jakobs Torg 3, S-111 52, Stockholm, Sweden.

19 - 21 September 1984 British Assoc. for Crystal Growth (BACG) Annual Meeting. Lancaster
Dr I J Saunders, Department of Physics, University of Lancaster, Lancaster, LA1 4YB.

1985

2 - 6 September 1985 9th European Crystallographic Meeting (ECM-9). Turin
Prof. G. Ferraris, Istituto di Mineralogia, Cristallografia e Geochimica, Università di Torino, via San Massimo 22, 10123 TORINO, Italy.

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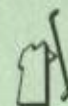
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