



# Newsletter

of the ASIAN CRYSTALLOGRAPHIC ASSOCIATION.

Volume II No 3

October 1992

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## President's Message

Dear Colleague,

This is the third Newsletter of AsCA for the 1990-1993 term. I hope all of you doing well in your University, Institution, or elsewhere.

Thanks to the AsCA International Program Committee in this issue. I can show you the Programs and Timetable of the Inaugural Conference of the Asian Crystallographic Association Singapore, November 13-16, 1992 (AsCA'92).

I am happy to announce to all of you that Professor A. Authier, the President of the International Union of Crystallography, kindly accepted our invitation to attend the AsCA'92 and to participate in the Opening Ceremony.

I am looking forward to having a great plea-

sure to meeting you in Singapore.

With best wishes and warmest friendship,

Nobutami KASAI

## NEWS from Taiwan

### Japan-ROC joint seminar

The 1992 annual crystallographic meeting will be held in Academia Sinica on November 9-10. This will also be the joint seminar between Japan and ROC following the one held in Tokyo two years ago. The topics will be in all the related area in crystallography. We expect to have a total of 70 participants. Anybody who is interested in attending the meeting is welcome. The deadline

for the submission of the abstract is September 30. The format is the same as that of AsCA '92. The abstract should send to Dr. K. H. Lii, Institute of Chemistry, Academia Sinica, Nan-Kang, Taipei, Taiwan. We plan to publish a proceeding afterwards.

### New Personnel and facilities

Two crystallographers are moving back from the United States: Dr. Michael Chiang is taking a position in the chemistry department of National Sun Yat-Shin University this fall. Dr. Huana Yuan has joined the macromolecular crystallographic group of Institute of Molecular Biology, Academia Sinica. There are a few new installations of single crystal diffractometer among the local universities: three CAD4's, two Siemens and two Rigaku diffractometers. In addition, there are Huber 6-circle & 8-circle diffractometers setting up in SRRC. Two imaging plate systems are in order. Numerous powder diffractometers are also installed in the recent years.

### SRRC—Synchrotron Radiation Research Center

The 1.3 GeV dedicated synchrotron source is expected to be completed at the beginning of next year (1993). The booster part is commissioning now. The storage ring will be commissioning in a year time. There will be three beamlines with experimental stations available by the time of commissioning. All three are out of bending magnet with the wavelength scanning

range from 10-2000 Å, the accessible experiments include gas-phase spectroscopy, photoabsorption, photoemission spectroscopy, microscopy etc. The SRRC will eventually provide 18 photon beam extraction ports out of bending magnet. In addition, there are four straight sections for insertion devices. The first one will be a 1.8T, 25 poles wiggler, aiming at energy range up to 10KeV. The wiggler beam line is, at present, in the conceptual design stage and is expected to be completed and in operation in 1995. And only then we will have hard X-ray for crystallographic studies. The director of SRRC is Professor Edward Yen; and the deputy director is Professor Y.C. Liu. The user's division is headed by Professor Shih-Lin Chang. Whoever is interested in the experimental facilities should contact Professor S.L.Chang.

### NEWS from Korea

The 1991 Fall Meeting of the Korean Crystallographic Association was held at Seoul City University, October 5. There were about 70 participants. At the General Assembly during the meeting, Ung-Up Ji was elected to the president and Ro-Hak Park, Hoon-Sup Kim, Soo-Jin Jung, and Young-Ja Park to vice-presidents to serve the Society for the next two years. And an amendment for the Constitution was passed to change the Society name to the Korean Society of Crystallography and Crystal Growth.

Se Won Suh  
Secretary General

## NEWS from Australia

### Society of crystallographers in Australia council elections and business meeting

Members are advised that a SCA Business Meeting will be held during the AsCA'92 Conference in Singapore. This Meeting will be held in Room C of the poster area at 18:00 on Monday 16th November 1992 preceding the Farewell Banquet at 19:30. The annual meeting of the Crystallographic Society of Japan will be held at AsCA'92 at the same time.

This Meeting brings with it the end of the current terms of election of Professor Allan White (President), Professor John White (Past President), Dr Geoff Williams (Secretary), Dr Colin Kennard (Treasurer) and Dr Maureen Mackay (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 Ian Grey (CSIRO) for Vice President, Dr Max Taylor (Flinders Univ.) for Secretary, Dr Graham Smith (QUT) for Treasurer, and Dr Mark Spackman (Univ. of New England) for Council.

As no further nominations were received, the new composition of Council and Standing Committees for the term beginning November 1992 is:

**President:**

D.C. Creagh (University College, ACT)

**Vice President:**

I.E. Grey (CSIRO, Port Melbourne)

**Secretary:**

M.R. Taylor (Flinders Univ.)

**Treasurer:**

G. Smith (QUT)

**Council:**

C.J. Howard (ANSTO, NSW)

W.T. Robinson

(Univ. of Canterbury, NZ)

M.A. Spackman

(Univ. of New England)

**ANCCr representative:**

J.W. White

(Research School Chem., ANU)

(ex officio)

**Past President:**

A.H. White (University of WA)

**Nominations**

M. Sterns (ANU, Canberra)

**Standing Committee:**

B.M.K. Gatehouse

(Monash University, Vic.)

S.W. Wilkins (CSIRO Materials, Vic.)

### Photon Factory Management

The installation of the Australian beam-line at the Photon Factory in Tsukuba is approximately on schedule. A number of research groups have started to make use of other facilities at the Photon Factory. Funds are available to support travel by Australian investigators for this purpose. The current memberships of the various committees involved in managing our activities at the Photon Factory are as follows:

**Photon Factory Management Committee:**

Dr David Cook, Chairman (ANSTO)

Ms Pauline Barratt (DITAC)  
 Dr Peter Colman (CSIRO)  
 Associate Professor Dudley Creagh  
 (University College, UNSW)  
 Professor Hans Freeman (AAS)  
 Professor Graham Rigby (ARC)  
 Professor John White (ANU)

Institutions:  
 University 62  
 CSIRO 17  
 Industry 4  
 Other Tertiary 2  
 Government 7  
 Other 1

Technical Committee:  
 (responsible for getting the Australian  
 beam-line running)  
 Associate Professor Dudley Creagh,  
 Chairman  
 Dr Richard Garrett, Secretary  
 (Project Scientist)  
 Dr John Boldeman (ANSTO)  
 Professor John White  
 Dr Stephen Wilkins (CSIRO)

Age:  
 21-30 21  
 31-40 20  
 41-50 26  
 51-60 18  
 61-65 6  
 66- 2

Program Committee:  
 (responsible for assessing proposals to use  
 the Australian beam-line and applications  
 for funds to support travel to Photon  
 Factory)  
 Professor John White, Chairman  
 Dr Peter Colman  
 Associate Professor Dudley Creagh  
 Professor Hans Freeman

Position:  
 Honours student 3  
 Postgraduate student 14  
 Postdoctoral 6  
 Tenured professional 53  
 Contract professional 10  
 Free-lance 5  
 Salaried professional 2

## Summary of Profile of Australian Crystallography, November 1991

Of 100 responses received by 31 December  
 1991, seven were from SCA members over-  
 seas (incl. New Zealand). The following  
 summary is of the remaining 93 responses  
 from crystallographers currently practising  
 in Australia.

Techniques/Instrumentation:  
 Sealed-tube X-ray generator 76  
 Rotating-anode generator 26  
 Synchrotron X-ray source 23  
 Neutron source (HIFAR) 29  
 Neutron source (O/S) 16  
 Powder diffractometer/camera 59  
 Single-xl diffractometer/camera 59  
 Low-angle diffraction 6  
 Small-angle scattering 11  
 X-ray absorption spectroscopy 5  
 Electron diffraction 30

Professional Bodies:

IUCR Commissions	8
Committees	14
Advisory bodies	4

tact person, Prof. P.N.Kotru) between 20-22 October 1992. There will be a microsposium on the crystallography of superconducting materials at this meeting. Jammu is in north India about 500 km north of Delhi.

## NEWS from India

1. The 23rd National Seminar on crystallography was held between 23rd March to 25th March 1992 at the picturesque pink city of Jaipur, the capital of Rajasthan state, India. The seminar was hosted by the Regional Engineering college, Jaipur and was attended by over 250 delegates. Jaipur is one of the important centers for precious and semi-precious stones. A special session on characterization and improvement of gemstones was addressed by both scientists and industry-persons. It was evident from the interesting discussions that there is a large interest in gemstones in the country. The seminar also brought to the fore the varied research activities in crystallography in India. Papers were presented on protein and virus crystallography carried out in the country along with papers on organic, inorganic structures, organometallics, compound of medicinal importance, drug-protein interaction, computer programs, database usage and theoretical crystallography. Special sessions were also devoted to material science research and crystal growth and characterization.

2. 24th National Seminar on Crystallography will be held in Department of Physics, University of Jammu, Jammu 180 001 (con-

## AsCA'92 Program Chairman's Report

It is too early to forecast an accurate total number of abstracts submitted, but the number received so far is already higher than the expected total. Some distinct trends are emerging. The boundaries between contributions on inorganic structures, mineral structures and materials science are increasingly fuzzy, and the combined total for these three areas is high. The structural chemistry of coordination complexes remains popular. An increasing proportion of the effort in this field is directed to polymeric structures.

Submissions on organic/biological structures are strongly represented, with the research effort shifting inexorably towards large structures, and to crystallographic modeling of biological reactions. There is lively interest in the sub-fields of maximum entropy methods and the measurement of electron distributions. Electron diffraction and powder diffraction continue to flourish, and an increasing proportion of the x-ray studies are based on synchrotron radiation. Innovators are well represented by papers that, being distinctly different, are not readily classified.

The bulk of the contributions are from Japan, India, China and Australia as expected, but some authors are from as far away as England and South America. The general picture is that the health of Asian crystallography is growing with the rapid economic development in the Asian region. The popularity of the meeting has surprised the organizers. While it is probable that all who wish to attend can be accommodated it is not possible to guarantee absolutely that this will be so. It will be advisable to register early for AsCA'92.

Ted Maslen

## **Ninth Edition of the World Directory of Crystallographers**

The International Union of Crystallography has decided to install a database of crystallographers. This will allow to find specialists in a given field or the full address of a person. The paper edition of the world directory will be a by-product of this database. The interrogation will be made by e-mail messages or, later, by telnet sessions and security tools will be installed to avoid non-authorized uses of the database. To make this database usable it has been necessary to establish a list of keywords which will be published in the September issue of Acta Crystallographica A. It contains more than 1500 entries.

The schedule is approximately the following:

- November 1992: distribution of the instructions to the national co-editors with all explanations to be given to the scientists.

- First demonstration of the database: Beijing congress.

We expect to organize an open meeting on this database and the exchange of information by electronic means.

- Installation of the database at Chester (UK): end 1993

- Paper edition of the World Directory: beginning 1994 if all sub-editors have sent back their data!

The intention of the Union is to promote all electronic means for exchange between scientists and this is the beginning of this policy.

I would like to mention that, following this policy, I will establish a exchange list for the persons interested in the field "High Precision Diffraction and Topography". Everybody interested is welcomed and should send an e-mail message to me: [epelboin@lmcp.jussieu.fr](mailto:epelboin@lmcp.jussieu.fr) For more information, please do not hesitate to contact me.

Professor Y. Epelboin

General Editor 9th World Directory of Crystallography LMCP, Université P.M. Curie, Case 115, 75252 Paris Cedex 05, France

## AsCA Council Meeting

During the AsCA '92, the AsCA Council will hold its third meeting at 7:00 pm(19:00) on Saturday, November 14, 1992 in the "Room C" at the "Regional Language Centre (RELC)", the same building of the AsCA '92.

### Agenda

1. Minutes of the Second Council Meeting, Bordeaux, France, 21 July 1990
2. Report of the Executives  
AsCA '92  
    Organizing Committee  
    Program Committee  
    Singapore Committee  
    Budget
3. Financial Report
4. Sixteenth Congress and General Assembly of the International Union of Crystallography  
    Beijing 1993
5. Other Businesses

# AsCA'92 — Arrangement of Program

Date Nov 14	Nov 15	Nov 16								
8:30-8:50 ←	9:00-10:30		→							
<table border="1" style="margin: auto;"> <tr><td style="text-align: center;">A Synchrotron radiation</td></tr> </table>	A Synchrotron radiation	<table border="1" style="margin: auto;"> <tr><td style="text-align: center;">A Electron scattering</td></tr> </table>	A Electron scattering	<table border="1" style="margin: auto;"> <tr><td style="text-align: center;">A Neutron diffraction</td></tr> <tr><td style="text-align: center;">X Phase transition</td></tr> </table>	A Neutron diffraction	X Phase transition				
A Synchrotron radiation										
A Electron scattering										
A Neutron diffraction										
X Phase transition										
←	10:30-11:00 11:00-12:30	Coffee →	11:00-15:15							
<table border="1" style="margin: auto;"> <tr><td style="text-align: center;">B Organic &amp; organometallic structure</td></tr> <tr><td style="text-align: center;">Y Powder diffraction</td></tr> </table>	B Organic & organometallic structure	Y Powder diffraction	<table border="1" style="margin: auto;"> <tr><td style="text-align: center;">B Biological structures</td></tr> <tr><td style="text-align: center;">Y Theory</td></tr> </table>	B Biological structures	Y Theory	<table border="1" style="margin: auto;"> <tr><td style="text-align: center;">B Interactions in biological structures</td></tr> <tr><td style="text-align: center;">Y Extinction</td></tr> </table>	B Interactions in biological structures	Y Extinction	<table border="1" style="margin: auto;"> <tr><td style="text-align: center;">Posters sessions P to R (Restaurant foyer) and S to W (Main poster hall)</td></tr> </table>	Posters sessions P to R (Restaurant foyer) and S to W (Main poster hall)
B Organic & organometallic structure										
Y Powder diffraction										
B Biological structures										
Y Theory										
B Interactions in biological structures										
Y Extinction										
Posters sessions P to R (Restaurant foyer) and S to W (Main poster hall)										
←	12:30-13:45 13:45-15:15	lunch →								
<table border="1" style="margin: auto;"> <tr><td style="text-align: center;">C Maximum entropy method</td></tr> <tr><td style="text-align: center;">Z Films &amp; surfaces</td></tr> </table>	C Maximum entropy method	Z Films & surfaces	<table border="1" style="margin: auto;"> <tr><td style="text-align: center;">C Minerals and inorganic materials</td></tr> <tr><td style="text-align: center;">Z Crystal growth</td></tr> </table>	C Minerals and inorganic materials	Z Crystal growth	<table border="1" style="margin: auto;"> <tr><td style="text-align: center;">C Diffraction physics</td></tr> <tr><td style="text-align: center;">Z Crystallographic information</td></tr> </table>	C Diffraction physics	Z Crystallographic information		
C Maximum entropy method										
Z Films & surfaces										
C Minerals and inorganic materials										
Z Crystal growth										
C Diffraction physics										
Z Crystallographic information										
	15:15-15:45	Coffee	15:45-17:45 attended posters							



SATURDAY NOVEMBER 14

Session 14A	SYNCHROTRON RADIATION	(Auditorium)
Session 14B	CARBON AND ORGANIC STRUCTURES and ORGANOMETALLIC STRUCTURES	(Auditorium)
Session 14Y	POWDER DIFFRACTION	(Casuarina Theatre)
Session 14C	MAXIMUM ENTROPY METHODS	(Auditorium)
Session 14Z	INTERFACES, FILMS AND SURFACES	(Casuarina Theatre)
Section 14P	MACROMOLECULAR STRUCTURES I	(Foyer)
Section 14Q	MACROMOLECULAR STRUCTURES II	(Foyer)
Section 14R	INTERACTIONS IN BIOLOGICAL STRUCTURES	(Foyer)
Section 14S	ELECTRON SCATTERING, AND MICROSCOPE IMAGING OF STRUCTURE	(Main Hall)
Section 14T	MINERALS, INORGANICS & ALLOYS I	(Main Hall)
Section 14U	MINERALS, INORGANICS & ALLOYS II	(Main Hall)
Section 14V	PHASE TRANSITIONS and SOLID STATE REACTIONS	(Main Hall)
Section 14W	CRYSTAL GROWTH AND PREPARATION	(Main Hall)

SUNDAY NOVEMBER 15

Session 15A	ELECTRON SCATTERING, AND MICROSCOPE IMAGING OF STRUCTURE	(Auditorium)
Session 15B	BIOLOGICAL STRUCTURES	(Auditorium)
Session 15Y	THEORY	(Casuarina Theatre)
Session 15C	MINERALS, INORGANICS & ALLOY STRUCTURES	(Auditorium)
Session 15Z	CRYSTAL GROWTH AND PREPARATION	(Casuarina Theatre)
Section 15P	SYNCHROTRON RADIATION	(Foyer)
Section 15Q	DIFFRACTOMETRY and DATA ANALYSIS	(Foyer)
Section 15R	TECHNIQUES OTHER THAN DIFFRACTION	(Foyer)
Section 15S	NEUTRON DIFFRACTION	(Main Hall)
Section 15T	CARBON AND ORGANIC STRUCTURES I	(Main Hall)
Section 15U	ORGANOMETALLIC STRUCTURES I	(Main Hall)
Section 15V	ELECTRON DISTRIBUTIONS	(Main Hall)

MONDAY NOVEMBER 16

Session 16A	NEUTRON DIFFRACTION	(Auditorium)
Session 16X	SOLID STATE REACTIONS and PHASE TRANSITIONS	(Casuarina Theatre)
Session 16B	INTERACTIONS IN BIOLOGICAL STRUCTURES	(Auditorium)

Session 16Y	EXTINCTION and ELECTRON DISTRIBUTIONS	(Casuarina Theatre)
Session 16C	DIFFRACTOMETRY AND DIFFRACTION PHYSICS	(Auditorium)
Session 16Z	CRYSTALLOGRAPHIC INFORMATION	(Casuarina Theatre)
Section 16P	INTERFACES, FILMS & SURFACES I	(Foyer)
Section 16Q	INTERFACES, FILMS & SURFACES II	(Foyer)
Section 16R	ORGANIC STRUCTURES II	(Foyer)
Section 16S	ORGANOMETALLIC STRUCTURES II	(Main Hall)
Section 16T	ENZYME STRUCTURES	(Main Hall)
Section 16U	SMALL BIOLOGICAL MOLECULES AND FRAGMENTS	(Main Hall)
Section 16V	PHASE TRANSITIONS and SOLID STATE REACTIONS	(Main Hall)

Session 16Y	EXTINCTION and ELECTRON DISTRIBUTIONS	(Casuarina Theatre)
Session 16C	DIFFRACTOMETRY AND DIFFRACTION PHYSICS	(Auditorium)
Session 16Z	CRYSTALLOGRAPHIC INFORMATION	(Casuarina Theatre)
Section 16P	INTERFACES, FILMS & SURFACES I	(Foyer)
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Section 16S	ORGANOMETALLIC STRUCTURES II	(Main Hall)
Section 16T	ENZYME STRUCTURES	(Main Hall)
Section 16U	SMALL BIOLOGICAL MOLECULES AND FRAGMENTS	(Main Hall)
Section 16V	PHASE TRANSITIONS and SOLID STATE REACTIONS	(Main Hall)