



# Newsletter

of the ASIAN CRYSTALLOGRAPHIC ASSOCIATION.

Volume II No 1

May 1991

## Contents

<b>President's Message</b> .....	1	<b>News from Australia</b> .....	3
<b>1990-93 AsCA Council</b> .....	2	<b>News from Taiwan</b> .....	4
<b>Inaugural AsCA Conference</b> .....	3	<b>News from Korea</b> .....	5
<b>AsCA Program Submission</b> .....	3	<b>News from Japan</b> .....	5

## President's Message

Dear Colleagues,

This is the first Newsletter for the 1990-1993 term of the AsCA Executive which was elected last July in Bordeaux at the meeting of the new AsCA Council. On behalf of the new AsCA Executive and new AsCA Council, I would like to send our hearty greetings with warmest friendship to all the AsCA members, and also to the crystallographers in the Asian region. On this occasion I also cordially ask your help and cooperation to bring a flourish development of the AsCA.

First of all, I would like to express our deepest thanks to Prof. Sydney R. Hall, Prof. M.A. Viswamitra, and Prof. Jimpei Harada, the AsCA Executive for the 1978-1990. Our thanks are also due to the other AsCA Council members who helped the former Executive to establish the AsCA and have made its foundation very solid.

I am happy to announce that at the council meeting in Bordeaux, Bangladesh, Indonesia, Singapore, and Vietnam have been admitted to join the AsCA. I would like to express our hearty welcome to these new member countries on behalf of the AsCA.

The new Executive intends to act on the same policy as the former Executive to meet the prime objective of the AsCA, the promotion of crystallography in the region. As one of the main activities, we'll continue to issue the Newsletter. Any contributions for the Newsletter, especially those which are considered to be useful for the

promotion of crystallography in our region, will be welcomed.

It is planned to hold the *first Scientific Meeting of the AsCA* in Singapore on November 14-16, 1992. This meeting will be supported by the Society of Crystallographers in Australia, by the Crystallographic Society of Japan, and by the crystallographers in Singapore. A preliminary announcement of this meeting later in this Newsletter provides some detail. I do hope many of you come to Singapore to attend the meeting and cordially encourage you to make this event fruitful. Our aim is to excite and promote the scientific activities in the region as well as to improve our mutual understandings and friendship.

I expect that many of you already know that the 16th Congress and General Assembly of the International Union of Crystallography will be held in Beijing, China, in 1993 (probably in early September). After 21 years we shall again have the IUCr Congress in Asia! I would therefore like to draw this meeting to your special attention. I ask your understandings and cooperation by meeting in Beijing to help Chinese crystallographers hold the IUCr Congress successfully.

In concluding this message, I would like to say how much the AsCA Executive, Fang-Ming Miao, Yu Wang and I look forward to the challenge to steering this organization in its growing stages.

With best wishes and warmest friendship.

Nobutami KASAI

## 1990-93 AsCA Council

The council meeting was held in a meeting room, University of Bordeaux III on July 21, 1990 during the Bordeaux Congress of the IUCr. The AsCA council representatives for 1990-1993 are

### AUSTRALIA (Category III)

Sydney Hall  
U. of Western Australia, Crystallography Centre,  
Nedland, WA 6009

John W. White  
Australian National U., Research School of  
Chemistry, Canberra, Australian National Terri-  
tory 2601

### CHINA (Category II)

Fang-Ming Miao  
Tianjin Normal University, Dept. of Chemistry,  
Tianjin

### HONG KONG (Category I)

Thomas C. W. Mak  
Chinese U. of Hong Kong, Chemistry Dept.,  
Shatin, New Territories

### INDIA (Category III)

G.R. Desiraju  
U. of Hyderabad, School of Chemistry,  
Hyderabad  
S.P. Sen Gupta  
Indian Assn. for the Cultivation of Science, Dept.  
of Material Science, Jadavpur, Calcutta 700032

### JAPAN (Category III)

Nobutami Kasai  
Osaka U., Dept. of Applied chemistry, Suita,  
Osaka 565

Jimpei Harada

Nagoya U., Dept. of Applied Physics, Chikusa-  
ku, Nagoya 464

### KOREA (Category I)

Young Ja Park  
Sook Myong Women's U., Dept. of Chemistry,  
Young-san Ku, Seol 140

### MALAYSIA (Category I)

Abdul Hamid bin Othman  
U. of Malaya, Dept. of Chemistry, 3600 U. K. M.  
Bangi

### NEW ZEALAND (Category II)

Ward Thomas Robinson  
U. Of Canterbury, Chemistry Dept., Private  
Bag, Christ Church

### PAKISTAN (Category I)

Anwal ul Haq  
A. Q. Kahn Research Labs., PO Box 502,  
Rawalpindi

### PHILIPPINES (Category I)

Wyona Patalinghug  
De La Salle U., Dept. of Chemistry, Manila

### SRI LANKA (Category I)

Richard Gunawardane  
U. of Peradeniya, Dept. of Chemistry, Peradeniya

### TAIWAN (Category II)

Yu Wang  
National Taiwan U., Chemistry Dept., Taipei,  
Taiwan 10764

### THAILAND (Category I)

Phathana Phavanantha  
Chulalongkorn U., Physics Depts., Phya Thai  
Rd., Bangkok 10330

New Member Countries\* and Temporary Repre-  
sentatives

### BANGLADESH\* (Category I)

Astaf Hussain  
U. of Dahka, Dapt. of Chemistry, Dahka 1000

### INDONESIA\* (Category I)

Waloejo Loeksmanto  
Bandung Institute of Technology, Dept. of  
Physics, Jadan Ganesya, PO Box 273, Bandung

### SINGAPORE\* (Category I)

Lip Lin Koh  
National U. of Singapore, Chemistry Dept., Kent  
Ridge, Singapore 0511

### VIETNAM\* (Category I)

Lecong Dzuong  
Polytechnical Institute of Hanoi, Truong DHBK

The elected Executive is Nobutami Kasai (President), Fang-Ming Miao (Vice-President), Yu Wang (Secretary and Treasurer).

In the meeting it was agreed to invite Viet-nam, Bangladesh, Indonesia and Singapore to be the new member countries of the AsCA. It was reported that the Korean Crystallographic Association was formed September 23, 1989 and the Association consisted of about 100 crystallographers.

As one of the principal activities of the AsCA for the next triennium it was confirmed that the Association would continue publishing the Newsletters regularly. The Council representatives agreed an inaugural AsCA scientific meeting to be held in Singapore in 1992, in conjunc-

tion with a joint meeting of the Crystallographic Society of Japan and the Society of Crystallographers in Australia.

## Inaugural AsCA Conference

Singapore Nov. 14-16 1992

The inaugural meeting of the Asian Crystallographic Association will be held at Regional Language Centre (RELC International House) in Singapore, November 14 to 16, 1992. The three-day meeting will include oral and poster presentations. Accommodation will be at the RELC, the National University of Singapore and in nearby hotels. The First Conference Circular containing complete details of the meeting will be circulated throughout the Asian region in September 1991. In the meantime further details of the conference organization or scientific program may be obtained from:

Prof. N. Kasai  
Chairman  
International Organizing Committee  
Department of Applied Chemistry  
Faculty of Engineering  
Osaka University  
Suita, Osaka 565  
JAPAN  
Ph: 81 6 877 5111 Ext 4321  
Fx: 81 6 876 4754

Dr. E. N. Maslen  
Chairman  
International Program Committee  
Crystallography Centre  
University of Western Australia  
Nedlands 6009  
AUSTRALIA  
Ph: 61 9 380 2727  
Fx: 61 9 380 1014

Prof. Lip Lin Koh  
Chairman  
Local Organizing Committee  
Chemistry Department  
National University of Singapore  
Kent Ridge, Singapore 0511  
SINGAPORE  
Ph: 65 772 2847  
Fx: 65 779 1691

## AsCA Conference

### Submission on Conference Program

Comments on the content and format of the meeting are invited from crystallographers from the Asian Region. The venue includes one large lecture hall and an area for the display of posters and other exhibits.

All suggestions for invited speakers or topics to be emphasized at the meeting will be considered by the Program Committee. Comments are also invited on the type of format best suited to the needs of Asian crystallographers. Please forward these comments as soon as possible to *E N (Ted) Maslen*, Crystallography Centre, University of Western Australia, Nedlands, Western Australia 6009.

## News from Australia

### CRYSTAL XVII

The seventeenth Meeting of the Society of Crystallographers in Australia (SCA) was held at the University of New England, Armidale, New South Wales during 2-5 April 1991. There were 97 participants including crystallographers from England, France, Germany, Italy, Japan, New Zealand, Scotland, Switzerland and the USA.

The conference began with an evening barbecue on Thursday 2nd April. Other social occasions were provided during the poster session. On each occasion these were accompanied by some fine Australian wines and cheeses. The conference provided an important opportunity for Australian and overseas colleagues to renew friendships and discuss matters in person rather than by phone and mail.

The scientific content of the conference was of an exceptionally high standard with nine key lectures and twenty other papers presented in areas including protein crystallography, modulated structures, synchrotron radiation research, polarized neutron diffraction, electron diffraction, and small-molecule crystallography. Forty posters were also presented.

*Dr Alan Hewat* of the ILL, Grenoble, presented the opening lecture on the crystal chemistry of oxide superconductors and, in particular, described some neutron diffraction results which help in understanding the behaviour of the 90 K

superconductor  $\text{YBa}_2\text{Cu}_3\text{O}_7$ . *Professor Riccardo Destro* of the Università di Milano presented a fascinating story of the experimental difficulties (and how to overcome them) in obtaining X-ray diffraction data at very low temperatures. *Dr Bruce Forsyth* of the Rutherford Laboratory and *Professor Hiroo Hashizume* of Tokyo Institute of Technology described research using a pulsed neutron spallation source and synchrotron radiation, respectively. The conference concluded with presentations by *Professor Struther Arnott* of the University of St Andrews who described the structures of polysaccharides in gels, and by *Dr Jose Varghese* of CSIRO Division of Biomolecular Engineering who described studies of the tertiary structure of the influenza virus and the use of molecular modelling in the design of anti-influenza drugs.

The next meeting of the SCA will be held in 1994, with the SCA joining with the CSJ to jointly organize the inaugural AsCA Conference to be held in Singapore in November 1992.

## Australian national synchrotron beamline

An Australian National Beamline is to be established at the Photon Factory, Tsukuba, Japan. Funding for the project was provided by a consortium of Australian government agencies and universities to the extent of \$A3.3 million to be spent over a period of three years. This marked the conclusion of several years of active lobbying for funds by the Australian National Beamline Users' Group, during which time it received very significant encouragement and support from members of the Japanese crystallographic community.

The funding is to be provided to install a beamline at bending magnet 20 which will incorporate a monochromator of the Matushita type with sagittally focussed second reflecting element and a versatile X-ray diffractometer. The diffractometer is unusual in that it incorporates the facility for using a new condensing channel cut monochromator developed by *Dr Stephen Wilkins* and, in its usual mode of operation, uses imaging plates as the detector system.

Its usual role will be as a high resolution powder diffractometer, but its design is arranged such that it will be able to be used for small angle X-ray scattering without modification. As well a variety of detector systems will be available to enable more conventional configurations to be achieved (powder diffraction using a diffracted beam monochromator, for example). Sufficient

space will be available for the mounting of unusual experiments, for example a Bonse-Hart small angle scattering system.

To date, the experimental hutch has been constructed for the beamline. Components for the construction of the beamline have been ordered and detailed designs are being produced for the primary monochromator and instrument.

It is hoped to be able to have a white beam available for experiments by December 1991, with a monochromated beam available by March 1992. For further information contact *Professor D.C. Creagh*, Dept. Phys., Univ. College, Univ. New South Wales, ACT 2603, AUSTRALIA, Ph: 62 68 8766, Fx: 62 68 8786.

## News from Taiwan

### Annual crystallographic meeting

The 1991 Annual crystallographic meeting was held at Gin-San youth recreation center on April 8-9 with 100 participants. We had great honor to have *Professor Yoshihiko Saito* and *Professor Bi-Cheng Wang* as our plenary lecturers. *Professor Saito* gave a two-hour talk on "Structural Studies on Transition Metal Compounds". *Professor Wang* gave a talk on "Crystal Structure of a Neurophysin-Dipeptide Complex Determined from the Single Wavelength Anomalous Scattering Signal of an Incorporated Iodine Atom".

There were 10 papers presented in the oral session and 33 papers in the poster session. In addition, there was a panel discussion on the central facilities of wiggler beamline in SRRC (Synchrotron Radiation of Republic of China), of cold neutron source and of an in-house high resolution small angle scattering instrument.

### SRRC synchrotron source

SRRC is building a 1.3GeV dedicated synchrotron radiation source, the linac and booster part will be commissioning in June, 1991. The commissioning of the light source is expected to be at the beginning of 1993. The budget of a 1.8T, 25 poles wiggler is waiting for the approval from the legislative Yuan. There will be a symposium on the application of synchrotron radiation on July 2-4, 1991. The invited speakers are: *Haydn Chen* (ILL), *James L. Erskin* (UT Austin), *Richard Hewitt* (Exxon), *Brian Kincaid* (ALS), *Yuan T. Lee* (UC Berkeley), *Taizou Sasaki* (KEK), *Lee C. Teng* (ANL), *Francois*

*Wuilleumier* (LURE), *Shih-Lin Chang* (Tsing-Hua U.) & *Wayn Hendrickson* (U. Columbia).

## Taiwan-Japan crystallographic meeting

There was a joint seminar on crystallography held in Tokyo on March 5-6, 1990 between 10 people from Taiwan and 22 people from Japan. The seminar was sponsored by the Interchange Association, Japan. Thanks for *Professor Ohashi* and *Professor Saito* for organizing such a successful seminar. We hope that we will organize one next year.

## News from Korea Korean Crystallographic Association

c/o Dept. of Chem., Sook Myung Women's Univ., Seol 140-742, KOREA  
Ph: 713 4528

### President:

Choong Tai Ahn  
Dept. of Chem.  
Han Kook Univ. of Foreign Studies

### Vice Pres.:

Su Jin Chung  
Dept. Inorg. Materials Engineering  
Seol National Univ.

Young Ja Park  
Dept. Chem.  
Sook Myung Women's Univ.

## News from Japan Annual Meeting of CSJ

The 1990 Annual Meeting and General Assembly of the Crystallographic Society of Japan was held at the Sendai War Memorial Hall, November 20-22. In the Opening address *Prof. M. Tanaka*, the Chairman of the Organizing Committee, drew particular attention to this being the 40th CSJ meeting and that there were 280 participants, including crystallographers from Australia, Brazil, China, Germany, Korea and the United States of America.

*Dr. Akio Takenaka* (Tokyo Inst. Tech.) and *Dr. Naoki Tanaka* (Tokyo Inst. Tech.) were awarded the CSJ prizes for their outstanding contributions to the studies of the molecular mechanism

of tobacco mosaic virus assembly and the phase change in ferroelectric crystals by high-resolution electron microscopy, respectively. *Prof. K. Sawada* of Tohoku Univ. gave the Nishikawa Commemorative Talk, titled "Crystals and pattern formation".

At the meeting 37 papers were presented in the three oral sessions and the two poster sessions included 100 papers. Symposia were organized on quasicrystals and X-ray scattering from solutions. *Prof. J. Deisenhofer* (Univ. Texas), a Nobel Prize laureate, gave an invited talk titled "The photosynthetic reaction center from the purple bacterium *Rhodospseudomonas viridis*".

The next annual meeting will be organized at Fukuoka, Nov. 1991. The CSJ General Assembly approved a motion that the Society will not organize an ordinary annual meeting for 1992 but will join in the organization of the inaugural AsCA Conference which will be held at Singapore in the same year.

## New CSJ President and Executive

*Prof. Hiroshi Iwasaki* was elected as the President of CSJ for the term April 1991 - March 1992. New Executive members are *O. Nittono* (in charge of Journals), *E. Nishikawa* (Treasurer), *H. Horiuchi* (Events), *H. Hashizume* (Public Relations), *N. Yasuoka* (Crystallographic Information) and *K. Ohsumi* (Secretary).

## SPRING-8: New synchrotron radiation source

Japan Atomic Energy Research Institute (JAERI) and The Institute of Physical and Chemical Research (RIKEN) are building a new synchrotron radiation source at Nishi-Harima district in Hyogo Prefecture, 100 km west of Osaka. The facility, named SPing-8 (Super Photon Ring-8GeV), plans an 8GeV storage ring with a 1436 m circumference, an injector linac of 1GeV and an 8GeV synchrotron. The design of the storage ring has recently been finalized. The construction work started in 1990 and the first stored beam is foreseen in 1998. Out of the 51 planned beamlines 10 will be commissioned for the first period. For detailed information contact *Dr. Hiromichi Kamitsubo*, Director General, JAERI-RIKEN SPing-8 Project Team, 2-28-2 Hon-Komagome, Bunkyo-ku, Tokyo 113, Japan.