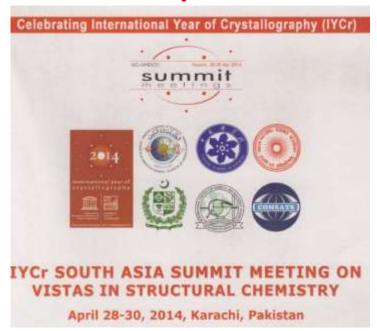


Summary of IYCr activities in India (Pinak Chakrabarti)



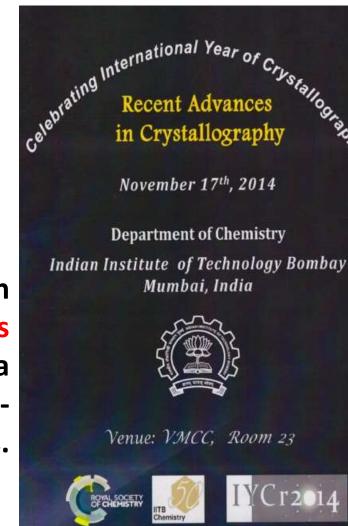
On Jan 30, 2014, a stamp was released to commemorate crystallography. It depicted diamond and the structure of curcumin, the active constituent of turmeric exhibiting anti-inflammation, antimicrobial and anticarcinogenic properties

Summary of IYCr activities in India

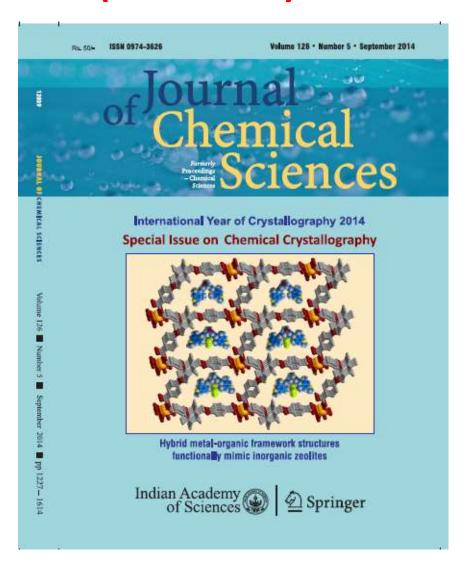


Scientists from India participated in IYCr South Asia Summit Meeting, Karachi, Pakistan

Meetings were organized, incl in remote areas. Articles in magazines and newspapers provided a glimpse of crystallography to non-practitioners.



Special IYCr commemorative issues of journals were published by the Indian Academy of Sciences





Crystallography spreads into new countries



IYCr in Vietnam AsCA 2016 will be held at Hanoi, Vietnam, Dec 4-7, 2016



The 13th AsCA Conference will be held at Kolkata, Dec 5-8, 2015, where Prof. Mohamed Eddaoudi, Saudi Arabia is a plenary speaker. We are exploring if Saudi **Arabia can be brought** into the IUCr fold





crystallography school







Den Lab 3-7 December 2014





Organizers:

Local IUCr Representative

Prof. Ian WILLIAMS Prof. Michele ZEMA

HKUST, Hong Kong U. Pavia, Italy

Lecturers:

Dr. Fraser WHITE Agilent Tech., Oxford, U.K.

Dr. Horst PUSCHMANN OlexSys, Durham, U.K.

Dr. Alison EDWARDS ANSTO, Australia

Prof . Birger DITTRICH U. Hamburg, Germany

Small molecule Workshop: Topics

- 1. Crystal Growth Theory and Practice
- 2. Basics of X-ray Diffraction, Crystals and Symmetry
- 3. Structure Determination Overview
- 4. Selecting and Mounting Crystals
- 5. Diffractometer I. Pre-experiment:

Unit cell and Space group determination

- 6. Diffractometer II. Data Collection and Reduction
- 7. Using the OLEX2 Software Package
- 8. Structure Solution and Refinement
- 9. Validation, Tables and Figures
- 10. Databases and Publication
- 11. Neutron diffraction, Problem Structures



Dipentab 3-7 December 2014

Practical sessions on single crystal X-ray diffractometry and crystal growth also held





December 2014



A total of **38 participants** were registered with 20 from outside of Hong Kong, including Philippines (6), China (5), Thailand (4), Malaysia (3), India (2) and 18 participants were from 4 universities within **Hong Kong**.



Dipental 3-7 December 2014

Achievements and Legacy:

Hong Kong Open Lab one of several in SE Asia with Rigaku Open Lab in Cambodia (7-11 Jul) and Bruker Open Labs in Indonesia (18-22 Aug) & Vietnam (8-12 Dec)

Training and support of young research-active and upcoming **service crystallographers** (Philippines, Thailand, Malaysia).

Set up of several new collaborations (e.g. U.Philippines-Diliman – HKUST).

Proposal of 1-day crystallographic symposium Manila, Philippines, Spring 2016

New lab initiatives for **training and demonstration** & foundation for 'recurrent' **OpenLabs** around the region.

Initiation of IUCr-sponsored X-ray diffractometer renovation and transfer.



Slides provided by Eunice Kim



KOREA: 2014 Annual Meeting

2014/11/07 Friday at Korea Atomic Energy Research Institute Over 100 participants & gathering of past presidents

2014년 1	2014년 한국결정 <mark>학회</mark> 1월 7일 (금), 한국원자력연구원 국		
10:00 ~	58		
	개회사: 김은경 한국결정학회 회장		
10:20 ~ 10:30	축사: 한국원자력연구원 하나로 이용 연구본부 임인철 본부장		
10:30 ~ 11:15	기조강연 1: 정수진 (한국결정학회 전임 회장) "한국 결정학의 50년"		
11:15 ~ 12:00	기조강연 2: 박제근 (서울대학교) "Two tales and one picture of materials science: structure and spin dynamics"		
12:00 ~ 13:30	사진 촬영, 점심, "하나로" 연구용 원자로 견학		
	심포지엄 BS-1 (생명과학) 좌장: 전영호 (고려대학교)	심포지엄 MS (재료과학) 좌장: 박찬 (서울대학교)	
13:30 ~ 14:00	한병우 (서울대학교) "Aminoacyl-tRNA Synthetases; Protein Synthesis and Beyond"	客会群 (DGIST) "Structure determination techniques from powder X-ray data and its application to new intercalation chemistry for Mg and Zn ion batteries"	
14:00 ~ 14:30	진미선 (GIST) "New insights into P-glycoprotein as a multidrug transporter"	김영헌 (한국표준과학연구원) "Atomic structure at the interfaces in epitaxia heterostructures"	
14:30 ~ 15:00	황중원 (KRIBB) "The negative regulation of thioredoxin by thioredoxin-interacting protein"	本 옥 (UNIST) "In situ electric field induced domain evolution in 8a(Zr _{0.2} Tl _{0.8})O ₃ -0.3(Ba _{0.7} Ca _{0.8})TiO ₃ ferroelectrics"	
15:00 ~ 16:00	포스터 발표		
	심포지엄 BS-2 (생명과학) 좌장: 송현규 (고려대학교)	심포지엄 Chem (화학) 좌장: 나명수 (울산과기대)	
16:00 ~ 16:30	김신애(한국원자력연구원) "HANARO neutron beam facilities for crystallography and more"	Kawano, Masaki (Postech) "Kinetic Assembly of Porous Coordination Networks"	
16:30 ~ 17:00	이상호 (성균관대) *Small-angle X-ray scattering for investigating protein interactions at molecular level*	조성준 (전남대 화공과) "Structure Determination of Trigonal Azobenzene Assembly and Self-Assembled B-Peptide Using Powder Diffraction" 최용남 (한국원자력연구원)	
17:00 ~ 17:30	송지준 (KAIST) "Quest for the structures of large supramolecular complexes"	"Physical and Chemical Aspects of Hydrogen Storage Mechanism Investigated by in Situ Neutron Scattering"	
17:30 ~ 17:50	포스터 시상식, 감사패 증정, 폐회사		
18:00 ~ 20:00		저녁	







KOREA: Ribosome Story on the web

"ribosome story" & "ins & outs" of crystallography on the web Nobel e-Library (http://www.nobel.or.kr) is aimed at middle & high school students as well as general audience









2일(사항류우리) 등록물건된 강마르라다면 중하스 스타이스, ND 모나스 등록 ND Www.miletprze.org/nobel_przes/cheelsty/leuresies/2009)





KOREA Commemorative Stamps

Requests from all over the world









IYCr Outcome in Southeast Asia



Activities in Singapore

41st International Conference on Coordination Chemistry (ICCC-41) – 21-25 July 2014 *Special sessions to celebrate IYCr 2014*

Celebrate IYCr 2014 with Crystallographers in Singapore! – 1 August 2014 First official meeting! Thanks to IYCr 2014!

Singapore Crystal Growing Competition – 2014, 27 September 2014 – 11th in the series

8th Singapore International Chemistry Conference 2014 (SICC-8) – 14-17 December, Singapore Special sessions to celebrate IYCr 2014



Activities in Singapore

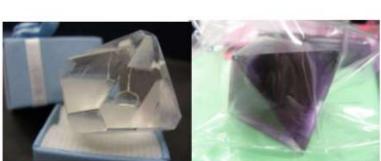
Singapore National Crystal Growing Challenge

Since 1997

Singapore Crystal Growing Competition 2014

27 September 2014













Activities in Thailand

9-11 Jan 2014

<u>Science Avenue</u> Ministry of Science and Technology The National Science Museum, Thailand displayed exhibition of crystals and highlighted their importance. Visitors had also made their own crystals

10-12 Mar 2014

<u>Crystal Nano-camp</u> NSM Science Square The participants learnt about crystals and how to grow them. This was an hands on activity.

31Mar – 4 April 2014 <u>NAC2014</u> Thailand Science Park, Pathumtani The IYCr2014 booklet "Crystallography Matters" was translated into Thai and distributed. The National Science & Technology Development Agency organized this event

21st May 2014

<u>3rd ASEAN Synchrotron Science Camp</u> Nakhon Ratchasima A special lectures: "Introduction to protein crystallography" by Dr. Nuttawn Pramanpol, Synchrotron Light Research Institute and "IYCr2014: Discovery Timeline and R&D in Thailand" by Dr. Danaya Pakotiprapha, Mahidol University

3-7 Nov 2014

Collaborative Conference on Crystal Growth Phuket







Activities in Indonesia



The 6th AONSA Neutron School, 12-17, Oct. 2014

Plenary:

Prof. John White, Australian National University, Australia

Prof. Takesh Kamiyama, KEK/J-PARC, Japan







Activities in Indonesia

Crystallography with Bruker, August 2014

Prof. Yessi Permana, Department of Chemistry, Institut Technologi Bandung, Indonesia

IYCr / Open Lab / SE Asia

18-22 Aug, ITB, Bandung, Indonesia. X2S and D2 Phaser Instruments will be hand, single crystal and powder classroom trainings are planned. Instructors; Prof Effendy (Malang) & Thanh Ha

8-12 Dec., MANAR, HCM City, Vietnam. This site has D8 Venture and D8 Advance(Powder). Instructors are Prof. Luc Van Meervelt and Thanh Ha Nguyen







Activities in Fiji Island

International Conference on Applied Chemistry, March 5-7, 2014 Fiji National University, Suva, Fiji



International Conference on Applied Chemistry (ICONAC-2014)

Theme
Chemistry for Sustainable Development and Innovations

5 – 7 March, 2014

at

Fiji National University, Suva, Fiji











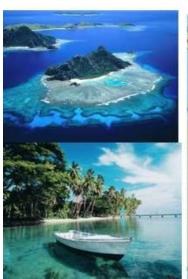
Activities in Fiji Island

WEDNESDAY, 5 MARCH 2014

13:00 - 14:00	LUNCH	
	SESSION - 2	
	CRYSTALLOGRAPHY	
	CHAIR: Assoc. Prof. Surendra Prasad	
14:00 – 14:45	KL7 Applications of Crystallography in Energy Research Brendan J. Kennedy School of Chemistry, The University of Sydney, Sydney, NSW 2006, Australia.	
14:45 – 15:30	IL6 Enhancing Physicochemical Properties of Active Pharmaceutical Ingredients through Co-Crystal Formation	
	Venu R. Vangala Institute of Chemical and Engineering Sciences, A*STAR (Agency for Science, Technology and Research), 1, Pesek Road, Jurong Island, Singapore, 627833.	
15:30 - 15:45	AFTERNOON TEA BREAK	











Australia: COIN Released in July 2014



Crystallography
Coin
(1/5th of \$1 coin
= 20c)

- Royal Australian Mint
- Uncirculated \$1 coin (collector's edition)
- Inaugural coin in the Clever Australia series



Australia: Art
Installations
featuring
crystallography

A KNITTED
neuraminidase model
was exhibited at the
Australian Academy of
Science in Canberra.

Australia: Diamond crystallography (Sydney)

Monday 8 September 2014 9:01AM

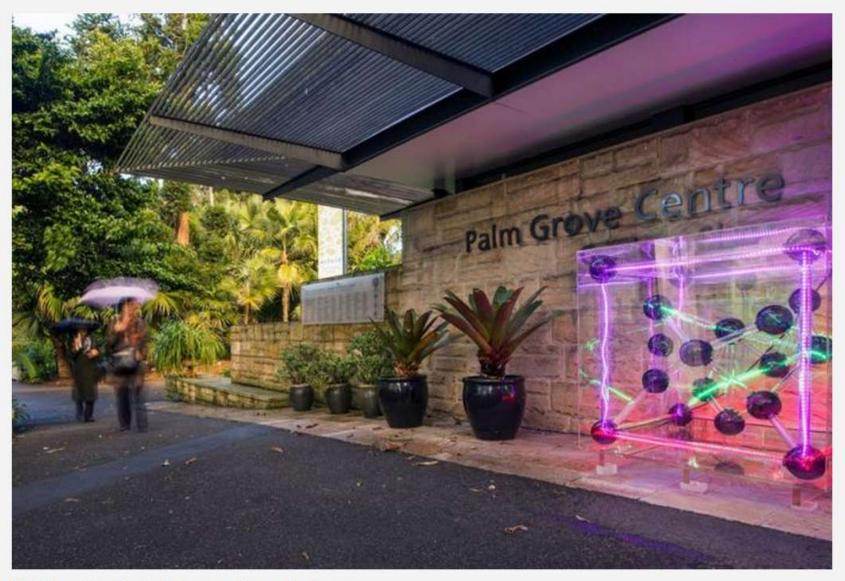


Image: A model of the atomic structure of diamond in the Sydney Botanic Gardens (ANSTO)

Australian National Science and Technology Centre



Blogging a Crystal Structure a Day

@Crystal_in_City - Crystal365

Crystallography365

Blogging a Crystal Structure a day in 2014





Public Demonstration of Live Remote Access Real Time Data Collection

QLD Museum using the Australian Synchrotron

UQ researchers send protein crystal samples to Melbourne
Use robotics and remote access to measure crystal diffraction
(Brett Collins)
for Natl Science Week; with Live tweeting



IYCr Activities

In 2014 Martin Lab Birthday Cakes were crystal-themed

and celebrated the birthdays of crystallography pioneers as well as the birthdays of Martin lab members

Kathleen Lonsdale Jan 28

First Woman FRS (1945); First woman Professor UCL (1949); crystal structure of hexamethyl benzene (1929); diamond (1944); pacifist





"sodium chloride" by Roisin McMahon, postdoctoral researcher

Ada Yonath (Nobel 2009) Jun 22

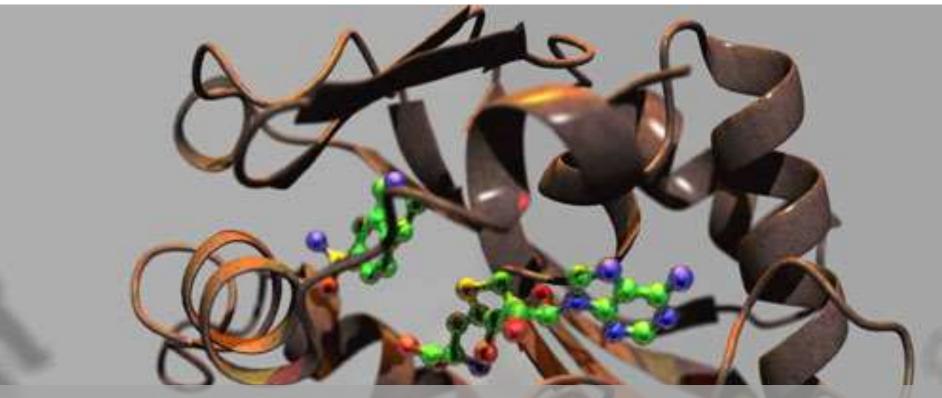
"Ribosome" cake by Maria Halili (postdoc) featuring 30S and 50S subunits: made from chocolate cake, fondant and sweets



Rosalind Franklin July 25

"Photo 51" cake by Wilko Duprez (PhD/postdoc) homemade lime tart; chocolate sweets; cocoa; icing sugar





Japan – history of cryst in Japan published Special sessions of conferences, videos

Many more exciting developments for AsCA in the future