

1st Pan African Conference on Crystallography

PCCr1 | 6-11 October 2016 | University of Dschang, Cameroon

DATES	6-11 October 2016	VENUE	University of Dschang	THEME	Crystallography for Sustainable development in Africa
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Conference Overview

The Cameroon Crystallography Association and the University of Dschang invited participants to the First Pan African Conference on Crystallography (PCCr1), held from 6 to 10 October 2016 in Dschang, Cameroon.

The conference was organized under the auspices of the Ministry of Higher Education of Cameroon, with the subject "Crystallography for Sustainable development in Africa". About 300 people from around the world were expected.

The conference aimed to bring together African crystallographers, mineralogists, solid state and structural scientists to increase awareness of crystallography and improve educational opportunities for African researchers and students of all levels.

Its activities offered opportunities to engage with the scientific community, from expert crystallographers to young researchers and students of all ages, and with government representatives and policy-makers from most African countries.

Leadership

Chairman: Prof. Roger Tsafack NANFOSSO, Rector of the University of Dschang, Cameroon.

Co-chairmen: Profs. Ignas Tonle and Jean Ngoune, University of Dschang, Cameroon.

Chairman of the Scientific Committee: Prof. C. Lecomte, University of Lorraine, Nancy, France, and Chair of the IUCr Committee for the Initiative in Africa.

Programme

The programme included:

- two plenary sessions by Profs. Gautam R. Desiraju and Ron Lifshitz;
- keynotes by eminent crystallographers;

- lectures and poster sessions;
- two round tables devoted to "Crystallography as vehicle to promote Science in Africa and beyond" and "Equipments for African crystallography laboratories".

The topics of the conference were organized around seven microsymposia:

- Inorganic Materials and Mining Industry;
- Inorganic Materials and Industry Minerals;
- Crystal engineering and structural chemistry: function through design;
- Crystallography data bases;
- Crystallography for life sciences;
- Large Facilities for emerging countries.

The programme also included exhibitions, a workshop on the CCDC software and two social activities in the western region of Cameroon.

Host City

Dschang is located in the Western region of Cameroon. The region contains many valleys through which river flows are interrupted by waterfalls, and it offers round-topped mountains and a temperate climate with an average annual temperature of 25 °C.

The beauty of the area is complemented by the richness of its craftsmanship: clay pipes, earthenware, utensils, figurines, copper masks, stools decorated with beads and the Bamileke dancers in their picturesque costumes.

Warm welcome to all - Ignas Tonlé K.

Plenary Lectures

Opening Plenary Lecture

6 October 2016; 7.00 - 8.00 PM

Gautam R. Desiraju, IUCr Immediate Past President, IISc Bangalore, India.

From molecule to crystal.

How do molecules aggregate in solution, and how do these aggregates consolidate themselves in crystals? What is the relationship between the structure of a molecule and the structure of the crystal it forms? These are among the questions addressed by the crystal engineering community, which draws from organic, inorganic and physical chemistry, crystallography and solid state science.

The talk offered a historical introduction to crystal engineering, an assessment of the supramolecular synthon, and a view of directions in which the subject might move, including in the context of crystallographic endeavors in Africa.

References: G. R. Desiraju, *Angew. Chem. Int. Ed.*, 46, 8342, 2007; *J. Am. Chem. Soc.*, 135, 9952, 2013; *Science*, 343, 1057, 2014.

Closing Plenary Lecture

10 October 2016; 11.00 - 12.00 AM

Ron Lifshitz, Raymond and Beverly Sackler School of Physics and Astronomy, Tel Aviv University, Israel.

What is a crystal? - New answers to an old question.

In 1982 Dan Shechtman discovered a new kind of crystal that seemed to contradict the laws of nature. His discovery, for which he received the 2011 Nobel Prize in Chemistry, ignited a scientific revolution that demonstrated that what may seem impossible today can become real tomorrow.

Keynotes

- Alessia Bacchi, President of the European Crystallography Association, University of Parma, Italy.
- Robert Mokaya, University of Nottingham, UK.
- Alejandro Buschiatto, Institut Pasteur, Montevideo, Uruguay.
- Colin Groom, Cambridge Crystallographic Data Centre, UK.
- Gilberto Artioli, University of Padua, Italy.
- Ashwini Nangia, University of Hyderabad, India.

Microsymposia and Round Tables

Crystal engineering and structural chemistry: function through design 1

7 October 2016, 8.30 - 13.00. Chairs: Susan Bourne and Hocine Merazig. Invited lecturers: Clement Tella, Delia Haynes, Jules Abodou Tenon and Kamel Boukhedadden. Contributed talks: tbd.

Inorganic Materials and Industry Minerals

7 October 2016, 15.00 - 19.30. Chairs: Wulf Depmeier and Lahcen El Ammari. Invited lecturers: Michele Zema, Lahcen El Ammari, Brahim Elouadi, Herbert Poellmann and Márcia Carvalho de Abreu Fantini. Contributed talks: tbd.

Crystallography for Life sciences

8 October 2016, 8.30 - 13.00. Chairs: Alejandro Buschiatto and Mino Caira. Invited lecturers: Heinrich Dirr, Mino Caira, Bryan Trevor Sewell, Richard Garratt and Nouredine Benali Cherif. Contributed talks: tbd.

Crystallography databases

8 October 2016, 15.00 - 19.30. Chairs: Colin Groom and Oliver Smart. Invited lecturers: Zéphirin Yav, Patrice Tsobnang Kenfack, Matteo Leoni and Oliver Smart. Contributed talks: tbd.

Inorganic Materials and Mining Industry

9 October 2016, 8.30 - 13.00. Chairs: Gilberto Artioli and Robert Kinsford Adaboh. Invited lecturers: Shimelis Admassie, Robert Kingsford-Adaboh, Leslie Felicia Petrik and Neli Mutemeri. Contributed talks: tbd.

Crystal engineering and structural chemistry: function through design 2

9 October 2016, 15.00 - 19.30. Chairs: Ashwini Nangia and Magatte Camarra. Invited lecturers: Aliou Haadi Barry, Mamoudou Diallo, Aleksandar Visnjevac and Emmanuel Aubert. Contributed talks: tbd.

Large Facilities for Emerging Countries

10 October 2016, 8.30 - 11.00. Chair: Giorgio Paolucci. Invited lecturer: Florence Porcher. Contributed talks: tbd.

Round tables

Crystallography as vehicle to promote Science in Africa and beyond, chaired by Andreas Roodt, 7 October 2016, 21.00 - 23.00.

Equipment for African laboratories and the African Light Source, AfLS, chaired by Seraphin Kati Coulibali and Gerard Fauvet, 8 October 2016, 21.00 - 23.00.

Committees

Advisory Committee

Gautam DESIRAJU; Jean P. NGOME ABIAGA; Daniel NYANGANYURA; Romain MURENZI; Pinak P. CHAKRABARTI; Christopher CAHILL; Márcia Carvalho DE ABREU FANTINI; Alessia BACCHI; Dominik SCHANIEL; Michele ZEMA; Prince Jay ORITSEJOLONE OGHIFO; Masaki TAKATA.

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Partners and Sponsors

The 1st Pan African Conference on Crystallography was part of the activities for the "Building Science Capacity in Africa via Crystallography" initiative of the International Union of Crystallography, funded by the International Council for Science through the ICSU Grants Programme 2015.

The IUCr further sponsored the event through its Sponsorship and Support of Meeting and Visiting Professorship schemes.

Partners

- International Union Of Crystallography (IUCr)
- International Council for Science (ICSU)
- United Nations Educational, Scientific and Cultural Organization (UNESCO)
- European Crystallography Association (ECA)
- Association Française de Cristallographie (AFC)
- Cameroonian Crystallographic Association (CCrA)
- Ministry of Higher Education of Cameroon (MINESUP)
- Ministry of Scientific Research of Cameroon (MINERES)
- University of Dschang (UDs)

Companies and Institutions

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Contact

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