

Triennial Report of the Commission on Inorganic and Mineral Structures (CIMS) (August 2002 – May 2005)

Preface

Following a proposal submitted by G. Ferraris, the Commission on Inorganic and Mineral Structures (CIMS) has been approved at the 19th IUCr General Assembly in Geneva (August 2002). With this act, it was recognized that even if research on inorganic structures is to some extent related to areas covered by other IUCr Commissions (e.g., those dealing with instrumentation and methods), the establishment of an ad hoc Commission could better attract within the IUCr orbit more inorganic crystallography, particularly that related to materials and minerals science.

Main aims of CIMS were as follows.

- To strengthen links and interactions of structural inorganic scientists with the crystallographic community.
- To promote the presence at the IUCr meetings of microsymbiosia specifically dedicated to the Commission purposes.
- To promote the publication of inorganic crystallography in the Journals of the Union.
- To promote and organize symposia, workshops and schools of interest to the crystallographic inorganic community.

Members and contacts

Members of CIMS approved by the IUCr Assembly were:

1. Giovanni Ferraris (Torino, Italy; Chair).
2. Dmitry Yu. Pushcharovsky (Moscow, Russia; Secretary)
3. Ian David Brown (Hamilton, Canada).
4. Gianluca Calestani (Parma, Italy).
5. Wulf Depmeier (Kiel, Germany).
6. Martin Jansen (Stuttgart, Germany).
7. Anthony Michael Glazer (Oxford, England).
8. Masanori Matsui (Himeji Inst., Japan).
9. Jordi Rius (Barcelona, Spain).
10. Ekkehart Tillmanns (Vienna, Austria).

The following Consultants were later approved:

1. Gerald (Jerry) V. Gibbs (Blacksburg, USA).
2. Lynne B. McCusker (Zurich, Switzerland).
3. Massimo Nespolo (Nancy, France).
4. Björn Winkler (Frankfurt, Germany).

The contacts among the Members and Consultants of CIMS have been maintained mainly via e-mail and the web site <http://www.lcm3b.uhp-nancy.fr/cims/> set up and administered by M. Nespolo.

Occasions for personal contacts of a part of the CIMS members have been:

- IUCr Conference in Geneva (August 2002).
- 18th General Meeting of the International Mineralogical Association (Edinburgh, September 2002).
- ECM-21 (Durban, August 2003).
- ECM-22 (Budapest, August 2004).
- Symposium on Micro- and Mesoporous Mineral Phases (Rome, December 2004).

Co-organization and sponsoring of scientific meetings

The following conferences have been sponsored by the CIMS. Most of them have been (co)organized by members of the Commission, as indicated.

- 9th European Conference on Solid State Chemistry (3-6 September 2003, Stuttgart, Germany; co-organizer, M. Jansen).
- XV International Conference on X-Ray Diffraction Crystal Chemistry of Minerals (St. Petersburg, 15-19 September 2003; members of the programme committee, G. Ferraris and D. Yu. Pushcharovsky).
- Fedorov Session 2003 (St. Petersburg, 9-10 December 2003; members of the programme committee, G. Ferraris and D. Yu. Pushcharovsky).
- Satellite Meeting of ECM-22 "Crystallography at the start of the 21st century: Mathematical and Symmetry Aspects" (Budapest, 24-26 August 2004; organizer, M. Nespolo; lecturers of CIMS, M. Nespolo and W. Depmeier).
- Micro- and Mesoporous Mineral Phases (Rome, 6-7 December 2004; co-organizer, G. Ferraris). This has been the main conference organized by the CIMS and has been financially supported by the Union. A full report is available at <http://www.lcm3b.uhp-nancy.fr/cims/pdf/Confreport-Rome.pdf>. The conference has been devoted to inorganic porous materials other than zeolites. Over 100 delegates from 20 countries with 32 oral and 53 poster presentations attended the meeting. The extended abstracts filled 324 pages of a book of Pre-Prints. The contributions of twelve oral presentations are printed as volume 57 (same title of the meeting) of the series Reviews in Mineralogy and Geochemistry (G. Ferraris and S. Merlino editors). A number of other contributions are in press in a dedicated issue of the European Journal of Mineralogy. Lecturers of CIMS, W. Depmeier, G. Ferraris and L. B. McCusker.
- International School on Mathematical and Theoretical Crystallography (Nancy, 20-24 June 2005; organizer, M. Nespolo).

The following sessions of conferences have been proposed by CIMS. Most of them have been convened by members of the Commission, as indicated.

- ECM-21 (Durban, August 2003): Mineralogical crystallography (convener E. Tillmanns); Perovskites ancient and modern (convener M. Glazer). Invited speakers of CIMS: G. Ferraris and M. Glazer,
- 32nd International Geological Congress (Florence, 20-28 August 2004): Microstructures, modularity, modulations in minerals (convener, G. Ferraris); Crystal structures of minerals: topology and classification (conveners, D. Yu. Pushcharovsky and E. Tillmanns).
- ECM-22 (Budapest, August 2004): Investigation techniques in mineral science (convener, M. Nespolo); Advances in powder diffraction methods (convener, J. Rius). Invited speakers of CIMS: W. Depmeier and G. Ferraris.
- IUCr-XX (Florence, August 2005): Open Commission Meeting (convener, G. Ferraris); MS7 - Crystal chemistry of inorganic and mineral compounds (convener, W. Depmeier); MS35 - Polytypism and twinning (convener, G. Ferraris); MS79 - Inorganic and mineral structures solved and refined by powder diffraction data (convener, J. Rius); MS14 - Modularity and modulation in inorganic and mineral structures; MS28 - Structure/properties relationships of technologically relevant inorganic and mineral compounds; keynote lecturers proposed by CIMS: Lynne B. McCusker (Zurich) and Tim J. White (Singapore).

Other activities of CIMS members

The following activity of members related to the CIMS purposes and not yet mentioned above has been reported to the Chair for the period 2002-2005.

- I. D. Brown is author of the IUCr monograph "The Chemical Bond in Inorganic Chemistry".
- W. Depmeier is co-organizer of the meeting "Mineralogical Museums" (St. Petersburg, June

- 2005) and president of the German Crystallographic Association.
- G. Ferraris is co-author with E. Makovicky and S. Merlino of the IUCr monograph "Crystallography of Modular Materials". He is member of the Programme Committee and convener of the 19th Meeting of the International Mineralogical Association (IMA) (Kobe, 23-28 July 2006); Vice-chair of the Commission on New Minerals and Mineral Names (CNMMN) of IMA.
 - M. Matsui is Chair of the Meeting Secretariat for IMA-2006 (Kobe, Japan) and editor of Physics and Chemistry of Minerals.
 - E. Tillmanns is chief editor of the European Journal of Mineralogy and Chair of the Organizing Committee of the 20th General Meeting of the International Mineralogical Association (IMA) (Vienna, 2010).
 - L. McCusker was member of the Advisory Board for the 14th International Zeolite Conference (Cape Town 2004); she lectured at NHSC-33 (Pune, India), 14th International Zeolite Conference (Cape Town), EPDIC-9 (Prague); Guest co-editor of a special issue of Z. Kristallogr. devoted to "Structure Determination from Powder Diffraction Data"; member of the organizing/program committees of EPDIC-10 (Geneva, 2006) and ZMPC2006 (Yanago, Japan, 2006); co-maintains the IZA websites on zeolites <http://www.iza-online.org/> and <http://www.iza-structure.org/>.
 - M. Nespolo is Associated Editor of the European Journal of Mineralogy, Secretary of the Special Interest Group SIG5 "Mineralogical Crystallography" of the European Crystallographic Association (ECA), and webmaster of the same ECA.
 - D. Pushcharovsky represents CIMS in the Programme Committee of IUCr-XX.
 - J. Rius is member of the ESRF "Review Committee" in the Chemistry area; of the Spanish Committee of Crystallography; of the Scientific Committee of EPDIC-9 (Prague, 2004); Chairman of the Special Interest Group (SIG8) of ECA; Associated Editor of the European Journal of Mineralogy.