

# **IMA**

## **Commission on Applied Mineralogy (CAM)**

### **Annual Report to IUGS for the Year 2005**

1. Title of Commission:  
Commission on Applied Mineralogy (CAM)

Current Officers:  
Richard D. Hagni\*, Chairman  
Eric Pirard, Vice-Chairman  
Henrique Kahn, Secretary

\*Dick Hagni, who has served as CAM chairman since 1990, has asked to step down from the chairmanship of CAM, and the three current officers of CAM have unanimously recommended to the IMA Council that the incoming chairman of CAM be Dogan Paktunc, who is expected to take office prior to the upcoming IMA quadrennial meeting in Kobe, Japan

Reporter:

Richard D. Hagni

2. Objectives:

The principal objectives of CAM have been the sponsorship of papers relating to applied mineralogy at two quadrennial international meetings: 1) IMA, and 2) ICAM. CAM also has occasionally sponsored sessions at other international meetings (e.g., IGC in Rio de Janeiro, Brazil). CAM has a close relationship with the International Council on Applied Mineralogy (ICAM), which sponsors quadrennial Congress meetings (also called ICAM) that are timed to occur exactly one-half way between IMA quadrennial meeting. CAM co-sponsors much of the quadrennial stand-alone ICAM meetings, and ICAM co-sponsors sessions at the quadrennial meetings of IMA.

3. Business Meeting held during 2004:

CAM held a full business meeting on September 22, 2004 at the ICAM meeting in Àguas de Lindóia, Brazil. The principal activity at that business meeting was a long discussion regarding what the relationship should be between CAM and ICAM. At the end of that discussion, a vote was called for and it was nearly unanimous (only 3 dissenting votes) in the agreement that ICAM and CAM should continue as separate entities, but co-sponsor sessions at both IMA and ICAM quadrennial meeting. CAM has no financial support.

#### 4. Interface with other International organizations:

The strong interaction between CAM and ICAM has been noted above in section 2. CAM will serve to co-sponsor the quadrennial meeting of ICAM in Brisbane, Australia in 2008.

#### 5. Chief accomplishments in 2004:

##### Technical Meeting:

The principal accomplishment during 2004 was to help co-sponsor the quadrennial ICAM meeting organized by Henrique Kahn in Àguas de Lindóia, Brazil, and held September 22-24, 2004, together with pre-meeting and post-meeting field trips and short courses. This meeting was a great success and CAM participated fully in the meeting. There was a large participation, large number of papers, short courses, field trips, and a two-volume publication. ICAM 2004 attracted 326 delegates from South America (182), Europe (83), North and Central America (20), Africa (20), Asia (16) and Oceania (5).

A two-volume publication of 1062 pages resulted from the ICAM meeting in Àguas de Lindóia, Brazil. The publication entitled “Applied Mineralogy: Developments in Science and Technology” contains 250 papers (4-page extended abstracts) together with 7 plenary lecture papers (v.1, ISBN 85-98656-01-01 & v.2, ISBN 85-98656-02-2). In addition, ICAM 2004 field trips were published in a CD format (ISBN 85-98656-03-8).

##### Short Courses:

IMA-CAM provided in-kind sponsorship to the Process Mineralogy short course held on January 19, 2004 in Ottawa, Canada. The short sponsored by the Canadian Mineral Processors, a division of the Canadian Institute of Mining, Metallurgy and Petroleum (CIM) was organized by Dogan Paktunc covering an overview of the tools, techniques, methodologies and state-of-the-art developments in the use and applications of mineralogy in metallurgical processing.

IMA-CAM co-sponsored two short courses presented during ICAM 2004 meeting in Brazil:

- Image Analysis on Applied Mineralogy Workshop (SCP2)
- Quantitative X-Ray Diffraction by Rietveld Method – QXRD (SCA3)

##### Web site:

A web site has been constructed for ICAM and CAM by Henrique Kahn at the University of Sao Paulo. The web site is: <http://www.appliedmin.org/>. The web site includes sections on: 1) ICAM, 2) IMA-CAM, 3) Conference announcements, 4) Literature (journals, books, and proceedings), 5) Laboratories and research groups around the world, and 6) links to related scientific organizations. This web site will undergo revision by the end of 2005.

##### Database of individuals interested in applied mineralogy:

A large database listing individuals interested in applied mineralogy has been constructed by Henrique Kahn at the University of Sao Paulo.

#### 6. Chief Problem Encountered in 2004:

The timing of the IGC meeting conflicted with that of the ICAM meeting, and that prevented CAM members, who were intimately involved in the ICAM meeting, from attending the IGC meeting.

#### 7. Workplan for 2006 (Provisional):

With the replacement of Dick Hagni by Dogan Paktunc, new goals and objectives will be discussed at the CAM business meeting at the upcoming IMA quadrennial meeting in Kobe, Japan. Initial initiatives by Dogan Paktunc include:

- Suggestions for sessions on the quantitative aspects of applied mineralogy will be offered for the Frontiers in Mineral Sciences meeting in Cambridge, England in 2007.
- Organize a short course on Process Mineralogy and Geometallurgy to be held on June 5, 2006 at the Laurentian University in Sudbury, Canada in conjunction with the International Conference, Mineral Process Modeling, Simulation and Control. The following topics will be covered: Geometallurgy; Mineralogical characterization including quantitative mineralogy; Mineral processing applications; Hydrometallurgy applications; Process simulations.
- Investigate the feasibility of designing modular CAM short courses featuring various aspects of applied mineralogy. Each module will cover a specific topic endorsed by CAM and will be given by one speaker.

#### Paper for Elements:

A short contribution (a column, rather than a full paper) in print by Dick Hagni in Elements dealing principally with the relationship between IMA-CAM and ICAM, and more briefly discussing with the scope of applied mineralogy.

#### 8. Sponsorship of sessions at IMA-Kobe:

Two sessions will be co-sponsored by CAM and ICAM:

- 1) Process mineralogy (session 29)
- 2) Crystals, ceramics, and glasses with advanced physico-chemical properties (session 28)

Four additional sessions on environmental and applied mineralogy, co-sponsored by ICAM:

- 3) Clays and zeolites: natural and synthetic materials (session 27)
- 4) Environmental and medical mineralogy (session 26)
- 5) Mineral-water interactions: from microscopic to macroscopic aspects (session 25)
- 6) Bio-Geo interface in minerals (session 24).

#### 9. National Representatives:

Austria - Dr. V. Kahlenberg

Belgium - Prof. Jan Elsen

Bulgaria - Dr. Ivan Dontchev

Canada - Dr. William Petruk

Denmark - Dr. Tonci Balic-Zunic

Egypt - Professor Mohamed A. Mandour

Finland - Dr. Kari Kojonen  
France - Dr. Georges Calas  
Germany - Prof. Dr. Robert B. Heimann  
India - Dr. J. N. Bhadra Chaudhri  
Italy - Maria Franca Brigatti  
Japan – Prof. Tadato Mizota  
Netherlands - Dr. T.G. Nijland  
New Zealand - Dr. J. L. Mauk  
Romania - Dr. Gheorghe Damian  
Russia - Professor V. M. Bzoitko  
South Africa - Ms D. Chetty  
Spain - Professor E. Galan  
Sweden - Prof. Ulf Halenius  
Switzerland - Prof. Bernard Grobéty  
United Kingdom - Dr. John F. W. Bowles  
United States - H. Catherine W. Skinner