



International Mineralogical Association  
Commission on Applied Mineralogy  
[www.ima-mineralogy.org](http://www.ima-mineralogy.org)

**2011 Annual Report**

**1. Title of Commission:**

Commission on Applied Mineralogy (CAM)

Current Officers:

Chairman: Eric Pirard

Vice-Chairman: Maarten Broekmans

Secretary: Megan Becker

Past-Chair: Dogan Paktunc

Sub-commission Chair (Building Materials): Maarten Broekmans

Sub-commission Chair (Cultural Heritage and Archaeological Materials): Patrick Degryse

Sub-commission Chair (Advanced Ceramics and Glasses): Hans-Joachim Kleebe

Sub-commission Chair (Geometallurgy): Dee Bradshaw

Reporter:

Megan Becker

**2. Objectives:**

*Vision:* To provide leadership in knowledge sharing for the broad range of applied mineralogy fields and to offer means for professional development for applied mineralogists.

*Mission:* To build and sustain a strong commission that provides value to its members in alignment with the IMA's vision.

CAM's interest areas cover a full spectrum of applied mineralogy activities in extractive metallurgy, mineral exploration and mine development, building materials, ceramics, glasses, preservation of cultural heritage and archaeological materials, disposal of mine and industrial wastes, and development of advanced characterization techniques.

### **3. Business Meeting held during 2011:**

A business meeting was held on August 2<sup>nd</sup>, 2011 at the Radisson Hotel, Trondheim, Norway during the course of the 10th ICAM. Desh Chetty (South Africa), Dogan Paktunc (Canada), Richard Hagni (USA), Elen Roaldset (Norway), Tegist Chernet (Finland), Herbert Pöllmann (Germany), Ying Gu (Australia), Dieter Rammlmair (Germany), Carina Ulsen (Brazil), Henrique Kahn (Brazil), Daniel Uliana (Brazil), Juliana Livi Antoniassi (Brazil), Robert Schouwstra (South Africa), Alan Butcher (UK), David Haberlah (Australia), Musarrat Safi (South Africa), Vulani Mafada (South Africa), Fanus Viljoen (South Africa), Shibu Mamabolo (South Africa), Aleksandrs Korjakins (Latvia), Olga Kotova (Russia), Anatoly Titov (Russia), Dee Bradshaw (Australia), Maarten Broekmans (Vice Chairman), Megan Becker (Secretary) were in attendance.

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

#### ICAM 2011

The 10<sup>th</sup> ICAM conference was held from 1-5 August 2011 in Trondheim, Norway. Maarten Broekmans who is CAM's sub-commission chair on building materials served as the chair of the scientific committee and editor in chief. The conference was attended by 150 delegates from over 30 countries worldwide. Altogether 96 papers were submitted to the conference. These were published as formal peer reviewed conference proceedings. The final conference papers were formally published by Springer-Verlag of Heidelberg, Germany in April 2012.

The conference was preceded by an excellent workshop on Particle Tracking organised by Prof Pertti Lamberg from Lulea University in Sweden.

#### ICAM 2013

Two formal proposals to host the next ICAM conference were submitted to the organising committee and presented at the ICAM general meeting on the 3<sup>rd</sup> August 2011. Prof Faqin Dong from the Southwest University of Science and Technology in the Sichuan Province in China presented a proposal for the next conference. Dr Megan Becker from the University of Cape Town also presented a proposal on behalf of the Mineralogical Society of South Africa for the conference to be held under the umbrella of the next IMA general meeting in South Africa in 2014. A vote was taken and the bid from China was chosen. The next ICAM is to be held in Miangang City, China from 8-10th July 2013. More details are available at: <http://www.icam2013.org/>. Experience and information from the 10<sup>th</sup> ICAM has been transferred over to the 11<sup>th</sup> ICAM organizers in China and a Memorandum of Understanding signed accordingly.



(a) Delegates at the technical visit to the 1000 year old Nidaros soap stone cathedral as part of the 10<sup>th</sup> ICAM. (b) Prof Faqin Dong invites conference delegates to the 11th ICAM in Mianying City, China in 2013.

Prof Dee Bradshaw was a member of the organising committee of the 1<sup>st</sup> AusIMM GEOMET conference held in Brisbane, Australia from 6-7<sup>th</sup> September 2011. The conference is believed to be the first specialist conference dedicated to this topical and rapidly developing field. This was preceded by a one day course: Foundations in Geometallurgy: Technical Bridging Course.

The 2<sup>nd</sup> International Conference on Geometallurgy GEOMET 2012 has already been scheduled from 5<sup>th</sup> to 7<sup>th</sup> December 2012 in Santiago, Chile. GEOMET 2012 is an unique opportunity for professionals from the field of geometallurgy to share knowledge and experiences and to interact with professionals from around the globe. Chile is home of many of the global mining companies and offers a great variety of operations that apply geometallurgy in the different stages of development and operation of an ore body.

## 5. Chief accomplishments in 2011:

### Change in Appointments:

Prof Isabelli Turbanti-Memmi stepped down from her position as Chair of the Subcommittee on Cultural Heritage and Archaeological Materials. Maarten Broekmans (V/Chair) nominated

Prof.Dr. Patrick Degryse from the Catholic University of Leuven, Belgium to fill the position. Prof DeGryse has subsequently accepted the nomination.

#### Journals and Books:

Broekmans, MATM & Pöllmann, H were the editors of the special volume (74) of Reviews in Mineralogy & Geochemistry (2012): Applied mineralogy of cement and concrete: p364.

Maarten Broekmans is in the process of revising the RILEM ([www.RILEM.net](http://www.RILEM.net)) guideline AAR-1 on petrographic assessment of aggregate materials for use in concrete, to be published in a Special Issue in Materials & Structures (Springer) together with AAR-2:5 in 2012. He is also busy preparing a Position Statement for the Geological Society of America on “Geologists for infrastructural and civil engineering works”.

Megan Becker and Dee Bradshaw have initiated a Process Mineralogy Monograph to be published as part of the formal Monograph Series published by the Julius Kruttschnitt Mineral Research Centre of the University of Queensland. To date various experts in the field have been invited to contribute to the Monograph. The editorial team comprises Dr Megan Becker (University of Cape Town), Dr Elaine Wightman, Dr Cathy Evans, Dr Ying Gu, Prof Dee Bradshaw and Prof Ben Adair (all of JKMRRC) and is to be published in 2013 or 2014.

#### Mineralogy Round Robin:

The concept of holding a mineralogy round robin was raised at the General meeting in 2011. A task team was subsequently formed to follow up on this opportunity. The task team has had several e-mail discussions to date on the format of the round robin and will meet again in November 2012 at the MEI Process Mineralogy '12 Conference in Cape Town. Members of the task team are: Ying Gu (JKMRRC, Australia); Dogan Paktunc (CANMET, Canada); Eric Pirard (University of Liège, Belgium); Megan Becker (UCT, South Africa); Mussarat Safi (AngloAmerican Research, South Africa); Desh Chetty (Mintek, South Africa); Fanus Viljoen (UJ, South Africa); Maarten Broekmans (NGU, Norway).

#### Website:

A website for CAM is currently under development by Prof Eric Pirard from the University of Liege in Belgium.

### **6. Chief Problem Encountered in 2011:**

It has been recognised that the list of National Representatives appears to contain several names of people who have not been actively participating to CAM activities, for reason of retirement, changed interests or otherwise. From a practical point of view, this may be in conflict with CAM objectives, vision and mission which implicitly require active commitment. ‘Applied mineralogy’ arguably represents the most ‘tangible’ subdiscipline of geology for modern society

and daily life, yet is in dear need of public awareness, as much with the general public as with policy makers. Therefore, the list of national representatives should preferably comprise members actively promoting ‘applied mineralogy’ rather than a being list of honoraries.

## **7. Work plan for 2012 and beyond:**

The continual development of a CAM website that is sustainable and frequently visited. This may overlap with a WIKI site on applied mineralogy. A suitable sponsor for the website may need to be found.

The development of appropriate samples for the mineralogy round robin following decisions on the manner of sample analysis and data interpretation. It has been decided that coordination and interpretation of the results may best well be done as part of a postgraduate thesis involving mineralogy and statistics.

Dee Bradshaw is one of the lecturers in a short course on Geometallurgy: “Introducing a comprehensive approach to ore characterization for processing” to be held in Hobart, March 19-30<sup>th</sup> 2012. The course is run by the ARC Centre of Excellence in Ore Deposits (CODES) at the University of Tasmania, in association with AMIRA, UQ JKMRC and CRC ORE. The course introduces a range of techniques to enhance the information that geologists produce in the mine environment, and which are relevant to mining engineers and metallurgists. The program includes lectures, practical exercises and a range of computer based modelling exercises.

Megan Becker is the technical consultant for the Minerals Engineering International, Process Mineralogy ’12 Conference to be held in Cape Town from 7-9 November 2012. <http://www.min-eng.com/processmineralogy12/index.html>

### IMA 2014

The next IMA is to be held from the 31st August to 5th September 2014 in South Africa, entitled “Delving deeper: Minerals as mines of information”. Chief conference organisers are Dr Desh Chetty and Dr Sabine Verryn. The conference is jointly organized by the Mineralogical Society of South Africa, and the Geological Society of South Africa. The conference venue has already been booked and a Professional Conference Organiser enlisted. The call for session proposals will be made in early 2012 and should be supported by several CAM sessions.

### ICAM 2015

Dogan Paktunc has been championing a potential bid to hold ICAM 2015 in Turkey and has had several discussions with members of the Mining Faculty of the Technical University of Istanbul.

## **8. National Representatives:**

Austria - Dr. V. Kahlenberg  
Belgium - Prof. Jan Elsen  
Bulgaria - Thomas Kerestedjian  
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. Kazumasa Sugiyama  
Netherlands - Dr. T.G. Nijland  
New Zealand - Dr. J. L. Mauk  
Romania - Dr. Gheorghe Damian  
Russia – Dr Olga Kotova\*  
South Africa - Dr 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

\* New national representatives.