



# aipea

ASSOCIATION INTERNATIONALE POUR L'ETUDE DES ARGILES  
INTERNATIONAL ASSOCIATION FOR THE STUDY OF CLAYS  
INTERNATIONALE VEREINIGUNG ZUM STUDIUM DER TONE  
МЕЖЛУНАРОЛНАЯ АССОЦИАЦИЯ ПО ИЗУЧЕНИЮ ГЛИН

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## 1. MESSAGE FROM THE SECRETARY-GENERAL

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### Clay minerals and materials science: where are you going to?

We are entering the 21<sup>st</sup> century and the third millennium. This is a good opportunity to reflect on clay science, its challenges and its future. Clay minerals are natural materials, given to us by nature. People have made good use of these clay minerals from the very ancient times on. Pottery, ceramics, paper industry, iron ore industry, cat litter, catalysis and hundreds of small scale applications have been invented and successfully applied. In modern scientific research three major trends have emanated at the end of the 20<sup>th</sup> century: (1) the explosive increase of knowledge in biological sciences; (2) the search for and the development of nanomaterials; (3) the increasing need of interdisciplinary research. Clay minerals can be put in the center of each of these three areas. What we see in the literature are some scattered papers in the three domains, but one cannot talk about a sustained research effort. The latter is needed, if one does not want to see clay minerals as a marginal topic in scientific research and in modern industrial applications. Let's elaborate a little bit on these ideas.

The explosive growth of knowledge in biological sciences is due to molecular biology. It is the ability of scientists to study biological phenomena at the molecular level that is at the basis of this knowledge explosion. This evolution of scientific knowledge in biological sciences is somehow similar to what has occurred in physics and chemistry. Here also the knowledge explosion was a consequence of understanding physical and chemical phenomena at the molecular level. In a second stage such knowledge explosion is followed by technological applications and one might foresee then a tremendous conversion of scientific knowledge of biology into technological applications in the beginning of the 21<sup>st</sup> century.

The possible role of clay minerals in biology has been recognized by some of the most famous clay scientists: G. Brindley, J.J. Fripiat and A. Weiss. In their laboratories experiments for studying the interaction between clay mineral surfaces and biological molecules have been set up. Even the idea that clay minerals could be at the origin of life i.e. could act as catalysts for conversion of simple molecules into biologically active molecules such as aminoacids, was vividly present in their research.

At present, one can go further and do much more. Clay minerals are able to adsorb molecules on their planar surfaces or in their interlamellar space. In such a two-dimensional restricted space molecules can be organized in a two-dimensional array to form a two-dimensional supramolecular system. The amount of molecules and their organization can be controlled by the size of the clay mineral platelets, the cation exchange capacity and the localization of the layer charge in the clay mineral. Given the right molecules and the right organization in the two-dimensional supramolecular array new physical and chemical properties such as optical non-linearity are generated. The idea of supramolecular organization of molecules is also in the heart of biology. Biological systems are typically organized, supramolecular systems. Simply think of a living cell. Thus one might as well think of synthesizing a two-dimensional array of biological molecules in the interlamellar space and study their chemical and physical properties.

There is one more dimension to it. Clay minerals consist of submicron-sized platelets, about one nanometer thick. They are nanomaterials. Because of their plate-like nature they can relatively easily be arranged in thin films, so-called fuzzy-assembled films and even self-assembled films. With the right molecules supramolecularly organized in the interlamellar space films with the desired optical, electrochemical, chemical and physical properties are obtained. They can be used as sensors, in chiral chromatographic columns, in clay-modified electrodes and as optical materials. Several research groups, especially in Japan, are active in the domain, but the full potential of clay minerals is far from

being reached. A sustained interdisciplinary research effort is needed to put clay minerals on the scene of nanomaterials and to exploit their full potential.

Interdisciplinary research is a key issue, not only for research on nanomaterials, but also for any kind of clay minerals research such as clay minerals in environmental science and in sustainable agriculture. Interdisciplinarity is not only among various disciplines in natural sciences such as physics, chemistry and materials science. It is indeed not only necessary to build a material that performs excellently from an engineering viewpoint, it must do so with less waste and without harm to the public health. That means that the products and processes must be accepted by the public. This is only possible if scientists, and thus also clay scientists are active in the public debate and meet in this debate the highest moral and ethical standards. A scientist without high ethical standards will not be accepted by the public, whatever the value of his/her scientific work. Interdisciplinarity involves then also psychology, ethical science and sociology. It requires collaborative efforts at all levels: between different departments of one university, between different universities in one countries and in different countries all over the world. Let's put clay minerals research then in the centre of interdisciplinary research.

Robert Schoonheydt  
Secretary-general.

Homepage AIPEA: <http://www.agr.kuleuven.ac.be/intorg/aipea/aipea.htm>

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## 2. COUNCIL

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The 1997-2001 AIPEA council is composed as follows :

president:	E. Roaldset, Norway
past president:	H. Murray, USA
vice president:	R. Kühnel, The Netherlands
treasurer:	P.M. Huang, Canada
secretary-general:	R. Schoonheydt, Belgium
second term councillors:	T. Eggleton, Australia A. Banin, Israel H. Hayashi, Japan
first term councillor:	J. Dixon, USA J. Percival, Canada G. Lagaly, Germany
teaching committee chair:	D. Schulze, USA
nomenclature committee chair:	S. Guggenheim, USA
two representatives of the organizing committee of the 12th ICC:	E. Dominguez, Argentina F. Cravero, Argentina

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## 2. Committees

### Nomination Committee

E. Roaldset, president  
J. Wilson, UK  
A. Yamagishi, Japan  
H. Murray, USA  
M. Formoso, Brasil

### Bradley Award Committee

E. Roaldset, president  
J. Churchman, Australia  
H. Kodama, Canada  
C. Johnston, USA  
A. Banin, Israel

### AIPEA Medals Committee

E. Roaldset, president  
R. Kühnel, vice-president  
H. Murray, past-president  
E. Galan, Tolsa representative  
V. Drits, Russia  
H. Chamley, France  
H. Minato, Japan

Teaching Committee: chair D. Schulze

Nomenclature Committee: chair S. Guggenheim

## 3. NOMENCLATURE COMMITTEE

### Report of the Nomenclature Committee

The Committee is in the preliminary discussion stage for developing a chlorite nomenclature and for developing guidelines for the use of "crystallinity", "order", "disorder", "amorphous", and other terms relating to atom nonperiodicity in crystalline and noncrystalline materials.

### List of past AIPEA Nomenclature reports and predecessor reports

Note: Some reports have been published in multiple journals. Only one journal is given.

- Guggenheim et al. (1997) Report of the Association Internationale pour l'Étude des Argiles (AIPEA) Nomenclature Committee for 1996. *Clays and Clay Minerals*, 45, 298-300.
- Guggenheim, S. and Martin, R.T. (1996) Reply to the comment by D.M. Moore on "Definition of clay and clay mineral: Joint report of the AIPEA and CMS Nomenclature Committees. *Clays and Clay Minerals*, 44, 713-715
- Guggenheim, S. and Martin, R.T. (1995) Definition of clay and clay mineral: Joint report of the AIPEA and CMS Nomenclature Committees. *Clays and Clay Minerals*, 43, 255-256.
- Bailey et al. (1989) Report of the AIPEA Nomenclature Committee. *AIPEA Newsletter* No. 26, Feb., 1989.
- Bailey et al. (1986) Report of the AIPEA Nomenclature Committee (Illite-Glaucconite-Volkonskoite). Supplement to the *AIPEA Newsletter* No. 22, Feb., 1986.
- Bailey et al. (1982) Report of the Clay Minerals Society Nomenclature Committee for 1980-1981: Nomenclature for regular interstratifications. *Clays and Clay Minerals*, 30, 76-78. (This was actually an AIPEA report)
- Bailey, S.W. (1980) Summary of recommendations of AIPEA Nomenclature Committee. *Clays and Clay Minerals*, 28, 73-78.
- Brindley, G.W. and Pedro, G. (1970) Report of the AIPEA Nomenclature Committee. *AIPEA Newsletter* No. 4, 3-4.
- Frank-Kamenetsky, V.A. (1960) A crystallographic classification of simple and interstratified clay minerals. *Clay Minerals Bulletin*, 4, 161-172.
- Lazarenko, E.K. (1959) Nomenclature and classification of the clay minerals. *Clay Minerals Bulletin*, 4, 67-68.
- Mackenzie, R.C. (1959) The classification and nomenclature of clay minerals. *Clay Minerals Bulletin*, 4, 52-66. (Report of the meeting under the auspices of C.I.P.E.A.)
- Anonymous (1951) The nomenclature of clay minerals. *Clay Minerals Bulletin*, 1, 194-195.
- The Nomenclature Committee Chair has about a dozen additional reports, in typed form, from the 1960's and 1970's. These include:  
Mexico City (typed report), 1975; Spain (typed report), 1972; typed report, 1971; AIPEA Newsletter No. 4, 1970; typed report, 1969; AIPEA Newsletter No 2, 1968; typed report, 1966-7; typed report, 1967; typed report, 1965-66; typed report, 1966; C.I.P.E.A. typed report, 1966 and another dated 1966; C.I.P.E.A. typed report, 1964

### Other reports of interest:

- Rieder et al. (1998) Nomenclature of the micas. *Clays and Clay Minerals*, 46, 586-595
- Martin et al. (1991) Report of The Clay Minerals Society Nomenclature Committee: revised classification of clay minerals. *Clays and Clay Minerals*, 39, 333-335.

- Flörke, O.W., Graetsch, H., Martin, B., Röller, K., and Wirth, R. (1991) Nomenclature of micro- and non-crystalline silica minerals, based on structure and microstructure. *Neues Jahrbuch Miner. Abh.*, 163, 19-42.
- Bailey et al. (1984) Report of The Clay Minerals Society Nomenclature Committee for 1982 and 1983. *Clays and Clay Minerals*, 32, 239-240.
- Bailey et al. (1979) Report of The Clay Minerals Society Nomenclature Committee for 1977 and 1978. *Clays and Clay Minerals*, 27, 238-239.
- Bailey, S.W. (1977) Report of the I.M.A.-I.U.Cr. Joint Committee on Nomenclature. *American Mineralogist*, 62, 411-415.
- Bailey et al. (1971) Summary of national and international recommendations on clay mineral nomenclature, 1969-70 CMS Nomenclature Committee. *Clays and Clay Minerals*, 19, 129-132.
- Bailey et al. (1971) Clay Mineral Society, Report of nomenclature committee, 1969-1970. *Clays and Clay Minerals*, 19, 132-133.

S. Guggenheim, Chair

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#### 4. AIPEA MEDALS

AIPEA medals were established by the general assembly of AIPEA to honour active clay scientists in recognition of their contributions to clay science. The following rules were established:

- 1) The AIPEA medals are established to award clay scientists for their outstanding contributions to the advancement of knowledge of clays and clay minerals. A maximum of two medals will be awarded every four years at the occasion of the International Clay Conference.
- 2) Candidates must be active clay scientists. Active means a minimum of three publications in refereed and internationally recognized journals in the two years preceding the year of the international Clay Conference at which the medals will be awarded.
- 3) Candidates can be proposed by affiliated societies, by AIPEA members or by at least three individual AIPEA members. Candidates may submit their own application with their Science Citation Index.
- 4) Each application consists of:
  - the curriculum vitae of the candidate;
  - his/her list of publications of the last ten years;
  - letters of support from those who propose the candidate.
- 5) The applications are judged by the AIPEA medal committee consisting of the president (chairman), the vice-president, the past-president and four members, three appointed by the council and one by the sponsoring company.
- 6) The applications must be submitted to the secretariat of AIPEA, from which all information concerning the AIPEA medals can be obtained. The closing date of submission of candidates is **November 1, 2000**.

The Bradley award will be presented during the 12th International Clay Conference in Bahia Blanca. The closing date for submission of manuscripts is **November 1, 2000**.

All correspondence must be addressed to Prof. Robert Schoonheydt, secretary-general AIPEA, Center for Surface Chemistry and Catalysis, K.U.Leuven, Kardinaal Mercierlaan 92, 3001 Heverlee, Belgium. All AIPEA members should encourage entries of high quality. You are therefore requested to circulate the regulations and the application form among possible candidates.

#### Rules

1. The objective of this award is to offer financial assistance to the recipient to enable him or her to participate in an International Clay Conference for the purpose of presenting his or her paper.
2. Candidates must submit five copies of a paper of approximately 4000 words in English, French, German, Russian or Spanish on a topic relevant to one of the sessions at the Conference. Papers written in a language other than English must be accompanied by an extended summary of not less than 1000 words in English. The paper should be written in a format acceptable for international journals. Assessment will be on scientific content only and the winning entry shall form the substance of a paper to be presented by the successful candidate at the Conference to which the award relates.
3. The award will normally be made at four-yearly intervals and initially will not exceed 1000 \$, although the value will be reviewed from time to time. An award shall not be made if it is considered that candidates do not reach the required standard.
4. Persons eligible for the award shall be under 35 years of age on the closing date for submission: no restriction is placed on the sex or nationality of the candidate or the nature of his or her employment. Every application must be supported by two members of AIPEA.
5. The selection committee shall consist of the President of AIPEA and four members nominated by the Council of AIPEA. The paper must be in the hands of the selection committee at least six months before the Conference to which it relates.
6. A suitably inscribed certificate will be presented to the successful candidate during a plenary session to be followed by the oral presentation of the winning paper. A portion of the prize may be sent to the successful candidate in advance in the form of a ticket enabling him or her to travel to the Conference.
7. The attached form must be completed and returned with each entry to arrive before the official closing date (see end of newsletter). The candidates must note that the deadline will be strictly observed.
8. The winning paper must be submitted for publication in the Conference proceedings.

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## 6. STUDENT TRAVEL FUND

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The following *rules* are adopted for support of students to travel to the 12th International Clay Conference, Bahia Blanca, Argentina:

1. The student submits an abstract and his/her curriculum vitae.
2. This submission is supported in writing by his/her supervisor.
3. Both the student and the supervisor are members of AIPEA.
4. The student is under 35 years of age.
5. The financial support can only be used to attend an International Clay Conference and its associated excursions, field trips and workshops.
6. Student can only apply for one International Conference.
7. The amount of money can be up to \$ 500,- per student.

Address for submission: AIPEA secretariat

The *selection committee* will consist of H. Murray, J. Percival and G. Lagaly.

For the 12th ICC the *deadlines* are as follows:

- submission of abstract + CV + letter of support: **October 1, 2000**
- notice of decisions: **January 1, 2001**.

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## 7. 12th INTERNATIONAL CLAY CONFERENCE

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**Bahia Blanca, Argentina**  
**July 29 - August 4, 2001**

**2001: A clay Odyssey**

The Conference will be held in the Universidad Nacional del Sur, Bahia Blanca, Argentina under the auspices of the Association Internationale pour l'Etude des Argiles (AIPEA) with the participation of the International Society of Soil Science (Commission VII). Bahia Blanca is a city of 300.000 inhabitants located 700 km southeast of Buenos Aires (capital of Argentina). It has one of the most important ports on the Atlantic Ocean.

The organizing Committee is formed of research scientists and professors from local Universities.

The program will include current sessions, symposia, posters displays, field excursions and social activities.

### *Current Sessions*

Clays in Geology  
Clays and the Environment  
Soil Mineralogy  
Colloidal properties and surface chemistry  
Crystal Chemistry, structure and synthesis  
Poorly crystalline clays and accessory minerals  
Clays in Industry  
Methods

### *Symposia*

Teaching Clay Mineralogy  
Clay barriers and waste management  
Clays in hydrothermal deposits  
Clays in ceramics  
Clays resources in the Mercosur

### *Field Excursions*

Precambrian-Paleozoic clays deposits. Sierras Septentrionales (Buenos Aires Province)  
Bentonitic and kaoline deposits. Extra-Andean Patagonia (Neuquén Province)  
Kaolin Deposits of Patagonia (Chubut Province)  
Lateritic-Tropical soils. NE Argentina (Misiones Province)  
Buenos Aires Province Soils.  
Brasil kaolin deposits. Rio Jari, Brasil

### *Social Program*

The social program will include sightseeing tours around the city, visiting the port with a typical seafood lunch and an industrial petrochemical area. A cocktail reception and a typical Argentinian asado (barbecue) with folklore music and a dinner with tango dancing will be offered to all the delegates and accompanying persons. For accompanying persons, a visit to a ranch located in a nearby area is planned. Fishing and horse riding excursion could also be arranged.

### *Chairman*

Dr. Eduardo DOMINGUEZ

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### *Secretary General*

Dra. F. Cravero

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**Conference of the European Clay Groups Association  
Krakow, Poland  
September 4-10, 1999**

*EUROCLAY 99 in Krakow from the perspective of the organising committee*

450 people came at the beginning of September to Krakow to participate in EUROCLAY 99. Among them were 134 participants from Central Europe, 168 from Western Europe, 56 from Eastern Europe, 26 from Middle East and Africa, 23 from Far East, 30 from North America, 6 from South America, and 7 from Australia and New Zealand. This strong showing made the organisers happy and meant that the EUROCLAY 99 grew to the size of the International Clay Conference in Ottawa. The number of participants was not the only resemblance. We thought that the Ottawa meeting was very well organised and we borrowed from it the layout of the book of abstracts and the idea of special symposia organised by convenors.

200 copies of the first circular were brought to Ottawa, unfortunately too late to be put in the conference bag. 600 copies were distributed by mail, using a mailing list compiled from the list of participants of the Leuven and Ottawa conferences, CMS Directory, ECGA membership list, and the list of East European scientists accumulated by J. Srodon as the head of the East European Liaison Committee of CMS. WWW page was opened and the conference announcement was sent to several journals and newsletters of scientific organisations. Based on the reaction to the 1<sup>st</sup> circular, 1000 copies of the second circular were printed and almost all of them were distributed. The layout of both circulars was eclectic, based on studying a big number of examples from various conferences.

The deadlines were set as late as possible for the participants' comfort. This put an extra pressure on the organising committee to evaluate the abstracts, to correct English in many cases, and to construct the conference program on time. The job would have been easier and better done if the abstract submission and the fee payment deadlines were set one month earlier.

When designing the conference program we discussed the format and agreed that we will return to a more balanced proportion of oral and poster presentations than adopted in previous Euroclay meetings. The participants were given a choice and most people got what they wanted: the preferences turned out to be ca. 1/3 oral and 2/3 poster. Posters were displayed during the whole day and the poster sessions (not overlapping with the oral sessions) were scheduled to last for one hour after the lunch break. Some participants suggested that they should have lasted longer. Altogether, 160 oral and 260 poster presentations were given. Many participants appreciated the fact that almost all oral sessions, poster sessions and manufacturers' exhibits were located in one building, which created a very interactive atmosphere.

A plenary lecture, entitled "Illite/smectite in three dimensions", was offered by Prof. Robert C. Reynolds Jr. during the opening session. For logistic reasons (lack of a hall of an adequate size at the university), only one plenary lecture was organised.



Robert C. Reynolds Jr.  
Plenary lecture during the opening session.

13 topics of special symposia were selected by the organising committee, based on our judgment which subjects we would like to have covered for sure. Some of the topics were selected with the intention to bring into the clay meetings certain groups of people who are working with clays but traditionally meet outside of clay conferences. This was the case of students of basalt alteration and low-temperature metamorphism. The convenors were free to organise their symposia the way they wanted and to invite speakers. The cooperation over internet turned out to be very easy and most of the convenors were a great help to the organising committee, serving de facto as a scientific committee of the conference. Some convenors helped also with generating a financial support. One disadvantage of the selected format was that the symposia topics covered almost all clay fields, probably giving an impression that what is left outside is less important. As a result, the participants often tried to get accepted into one of the symposia instead of sending their contributions to the general sessions, where they belonged. If this

format is used again, it is probably better to organise a smaller number of well focused special symposia.

Several business meetings took place during the conference. The General Assembly of ECGA elected Prof. Gerhard Lagaly as new president and accepted the Italian offer to host the next Euroclay conference. A federation of Central European clay groups was formed and it decided to organise common conferences (the first in 2001 in Slovakia). The Martin Vivaldi Award was offered to Dr. Peter Uhlík during the closing session.

The post-conference workshop on environmental applications of clays, combined with a field trip in central Slovakia, was an autonomous event organised in Banska Stiavnica, Slovakia, by Dr. Vlado Sucha and his colleagues from Bratislava. The workshop was attended by 46 participants. 29 people participated in two pre-conference field trips visiting clay deposits and historical monuments of Lower Silesia. The trips were organized by a team from the Wroclaw and Warsaw universities, led by Dr. Czeslaw August.

The financial policy adopted by the organising committee was to use all money raised from different sponsors for supporting scientists from countries of former Soviet Union, Romania and Bulgaria, which are at present in particularly miserable economical situation. A grant program was offered and enough money was generated from sponsors to bring to Krakow 56 people who applied for the grants. A very generous contribution from the Polish Committee of Scientific Research was decisive for the accomplishment of this goal.



Reception at the Castle of Pieskowa Skala

The social program was constructed in such a way as to give participants every day an opportunity of informal interaction. Also two guided tours exploring different aspects of Krakow were offered every day to the participants and in particular to the accompanying persons. The social program was designed and organised in detail by Aka Srodon, keeping the services of tourist agencies at minimum. This approach cut costs dramatically and made it possible to include lunches and five social events in the conference fee of 280\$. The welcoming and farewell parties took place in the university hall. The conference dinner was organised 125 m underground in ancient Wieliczka salt mine. No claustrophobic

reactions were recorded and the dances following the dinner were quite vigorous, including the senior participant Prof. Boris Zvyagin. In a Renaissance castle 25 km outside Krakow the klezmer music was enjoyed along with the food and drink prepared by one of the most renowned Krakow restaurants. The Mayor of Krakow met the conference participants in the fin-de-siècle Slowacki Theatre at a cocktail following a chamber music concert. Judging from the letters received after the conference, our guests liked the social program as much as the scientific one.

Jan Srodon

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## 9. REPORTS OF THE NATIONAL CLAY GROUPS

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### THE AUSTRALIAN CLAY MINERALS SOCIETY

The 17<sup>th</sup> ACMS conference will be held in Adelaide, South Australia 10-12 April, 2000. We invite everyone to check the ACMS web page (<http://www.unisa.edu.au/acms>) for updated information on our conference and other activities. The 2<sup>nd</sup> International Symposium on Activated Clays will form a special session of ACMS 2000. A delegation from Argentina is confirmed to present papers there. The conference will be preceded by the inaugural ACMS Workshop on Techniques for the Analysis of Clay Minerals: Applications for Science and Industry. Speakers and topics will include experts from Australia and overseas. We also have an excellent 2-day post conference field excursion planned.

The special issue of Applied Clay Science focusing on sources, characterisation and uses of Australian and New Zealand clays and clay minerals is on track.

The Official Launch of the Source Book on Australian and New Zealand clays will take place during ACMS 2000.

Among our number, Rob Fitzpatrick has just received the Verco Medal from the Royal Society of South Australia, for his career-long study of the weathering processes in Australian landscapes. Tony Eggleton recently received the prestigious Brindley Award from the Clay Minerals Society at their annual meeting.

Some ACMS members, Jock Churchman, Theo Kloprogge, Marek Zbik and Will Gates were in Krakow, Poland for Euroclay 1999, the 11<sup>th</sup> Conference of the European Clay Groups. The conference, and also the Post-Conference Workshop on Clays in the Environment in Slovakia, were both well worth the long journey from this side of the world.

Jock Churchman

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## BRAZIL

- a) On September 9, 1999, there was the first general assembly of the Brazilian Clay Group was held to approve Statutes and By-laws and to elect the first Council for the period September 1, 1999 to August 31, 2001.

The elected council is:

President: Professor Persio de Souza Santos;  
Vice-President: Professor Antonio Carlos Vieira Coelho;  
Secretary: Professor Samuel Marcio Toffoli;  
Treasurer: Professor Francisco Rolando Valenzuela Diaz,  
all from the Department of Chemical Engineering, Escola Politecnica, University of Sao Paulo, P.O. Box 61548, So Paulo 05424-970, SP, Brazil.

The e-mail of the secretary is: toffoli@usp.br

Present in the General Assembly were 24 Brazilian clay scientists.

- b) At the 43rd Brazilian Ceramic Conference, in the city of Florianopolis, June 1999, 52 papers on clays were presented. Several papers on clays were presented in the meetings of the Brazilian Society of Geochemistry, Brazilian Society of Electron Microscopy and Microanalysis and Brazilian Geological Society in 1999.
- c) The special symposium "I" during the 31st International Geological Congress in Rio de Janeiro in October 1st, 2000, is entitled "Energy and Mineral Resources for the 21st Century"; the topic "I-7: The Use of Clays in the Next Century" will be coordinated by Dr. David Bish (USA).

## INTERNATIONAL WORKSHOP OF ACTIVATED CLAYS

As a result of a cooperation project between the Australian Academy of Technological Sciences and Engineering (ATSE) and the Centro de Tecnologia de Recursos Minerales y Ceramica (CETMIC) (M.B.Gonnet, Argentina) a workshop of activated clays was realized from 6 to 8 December, 1998 in the city of La Plata, capital of the Buenos Aires Province. The Organizing Committee was constituted by Dr. Ing Cristina Volzone, Chairwoman, from CETMIC; Luis P. Traversa (LEMIT-CIC); Norton Jackson (FTSE) and Eduardo L. Tavani (CETMIC-CIC).

Ten papers on activated clays were presented by participants from Argentina, Australia, Brazil, Peru, Uruguay, Belgium, France and Spain from a total number of 30 attending the Workshop. The Proceedings of the Workshop were published under the Editorship of Dr. Ing. Cristina Volzone (for more information : E-mail volzcris@netverk.com.ar).

Following the proposal of Dr. G.J. Churchman (CSIRO Land and Water, Australia), the next Workshop will be in Australia in the year 2000.

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President - Brazilian Clay Group  
Liaison Officer - AIPEA Brazil

Antonio Carlos Vieira. Coelho  
Vice President  
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## CHINA

The National Symposium on Exploitation of Non-metallic Mineral Resources was held in Yantai city, Shandong province, on July 20-23, 1999. About 135 participants attended the meeting. More than thirty papers were presented. All participants were greatly interested in the following topics:

1. Clay in animal feed. Clay in pesticides, drugs and for environmental protection.
2. Delamination of kaolin minerals (Moming deposit) for paper industry.
3. Superfine pulverizing brucite as burn-prevention material.
4. PCC in plastic and paper industry.

The Third National Symposium on Processing and Utilization of Nonmetallic Minerals was held in Xian city, Shaanxi province, on September 15-17, 1999. A selection of the scientific papers was published in the special issue of "China Nonmetallic Mining Industry Herald", 1999 No.5:

1. Research and exploitation of illite deposit of Wenzhou county, Zhejiang province (hydrothermal alteration of ignimbrite and crystal-lithic tuff), and illite deposit of Pingdingshan district, Henan province (sedimentary type).
2. Bentonite deposit of Fugu county, Shaanxi province and the study of clay-organic intercalation.

The Third Symposium on Researches of Industrial Minerals was held in Dalian city, Liaoning province, on October 10-13, 1999. The Symposium was supported by the "Industrial Minerals"--Information and Consult Co. England. At the Symposium some topics about refractory clay, talc, bauxite and bentonite were discussed.

1. Overview of China's industrial minerals (XU, Liquan. China Nonmetallic Minerals Industry. China)
2. The Chinese Bentonite Market, Opportunity and Challenges (John Evans, Thailand)
3. The sudden rise of Chinese wollastonite (ZHANG, Mengxian. Lishu Wollastonite Co. China)
4. Bauxite, fireclay, and sillimanite minerals (LIN, Hongquan. China Fireclay Association. China)
5. PCC opportunities in China (Robert J. Mokskaitis, Specialty Minerals Inc. Bethlehem, USA)

National Symposium on Mineral Raw Material, Technical Mineral and Technical Petrology was held on the campus of China University of Geosciences (Beijing), on October 13-15, 1999. A total of about 80 participants from different provinces, research institutes and colleges attended the meeting. Sixty-three papers were presented orally. In the mineral raw material group, the presentations were as follows:

1. Modification of Clay Minerals and its Application in Geotechnical Engineering (ZHANG, Huifen)
2. Future of the Control of Red Tide by Modified Clay Minerals (WANG, Fuya)
3. Synthesis and Property of Clay-organic Resin Super-Absorbent Composite (ZHOU, Meng)
4. Application of Nonmetallic Minerals to the Pollution Control (YANG, Zanzhong)
5. Regulating the Surface Acidity of Clay Solid Acid and its Catalytic Activity (YE, Ling)
6. Discovery of Dickite Jadestone at Wenling, Zhejiang (ZHENG, Zhe)

## CZECH NATIONAL CLAY GROUP

The Czech National Clay Group organized two seminars in the year 1999. Both of them took place in Prague.

The first meeting was held on June 1 in the Geological Institute of the Faculty of Science of the Charles University. The following lectures were presented:

- Rojík P.: Practical utilization of clay raw materials from the Sokolov Brown Coal Basin
- Melka K. : Hydrobiotite-mixed layer structure in tuffs of the Doupovské bory Mts. region.

The second meeting took place on December 8 at the Czech Geological Survey, Klárov 3. Three lectures were on the programme:

- Řídkošil T.: Clay minerals and zeolites as sorbents and molecular sieves.
- Balek V.: Emanation thermal analysis used for testing temperature changes in the structure of natural clay materials and ceramic interproducts.
- Melka K. and Adamová M.: Information on the Euroclay conference in Krakow.

Proceedings of the conference in Brno are prepared for distribution.

The Czech National Clay Group together with "Sedlecký Kaolin" and "Gekon" will organize the XVIth Conference on Clay Mineralogy and Petrology in famous Karlovy Vary Spa on August 27-31 August 2000.

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## HUNGARY

Papers on clay mineralogy were presented in the sessions and meetings of the Hungarian Geological Society and the Hungarian Silicate Science Society, held in Budapest. The following lectures were read:

*May 10, 1999*

Viczián, I.: Prof. Friedrich Lippmann (1928-1998) - obituary

On *June 20-21*, The international meeting "The Geology of today for tomorrow", dealing with problems of radioactive waste disposal was held in Budapest. The following presentations dealt with clay problems:

- Neerdael, B. (Belgium): Repositories for high level waste in argillaceous formations
- Árkai, P., Balogh, K., Demény, A., Fórizs, I., Máthé, Z., Nagy, G. (Hungary): Study of composition, diagenetic and post-diagenetic alterations of the Boda Albitic Claystone Formation (Permian, ecsek Mts.)
- Kesserű, Zs.: Self-healing in argillaceous host rocks: origin, evaluation and process control.

On *September 21*, the 70th birthday of *Zoltán Juhász*, a former professor of the Veszprém University was celebrated. The following papers dealing with clay problems were presented in the festive session:

- Opoczky, L., Sas, L.: Mechanochemical phenomena in the practice of the concrete industry
- Földvári, M.: Use of corrected decomposition temperatures for the study of clay minerals
- Zelenka, T.: Geological and technological investigations on clay deposits of Tokaj Mts. - history, present state and perspectives
- Kolláth, B.: Mechanochemical activation of pyrophyllite
- Juhász, A. Z.: Remarks on the colloids of silicate systems.

On *September 21*, a *PhD Thesis* on the Sedimentology, geochemistry and clay minerals of the Jurassic Komló Calcareous Marl Formation, Mecsek Mts., was defended by Béla Raucsik at the Szeged University.

*December 13*

Presentation of posters presented elsewhere on various international meetings during the year (including those dealing with clay minerals):

- Lovas, Gy., Pop, D., Weisburg, T.: An XRD study of glauconitic minerals: a similar case to illitic materials?
- Németh, T., Berényi Üveges, J., Michéli, E., Tóth, M., Demény, A.: Climate induced transformation of illite to smectite in paleosols in North Central Hungary
- Papp, G.: Serpentine minerals in xenoliths: A case study from Csódi Hill, Dunabogdány, Visegrád Mts., Hungary.

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## GRUPPO ITALIANO AIPEA

Composition of the Council 1998-2001

President	Prof. Luciano Tomadin
Vice-President	Dr. Saverio Fiore
Past-President	Dr. Bruno Fabbri
Treasurer	Dr. Rocco Laviano
Secretary	Dr. Fabio Tateo
Liaisons Officer	Prof. Antonio Violante

Several Italian clay scientists attended EUROCLAY 99 held in Krakow (Poland) from 5 to 10 September 1999 and presented oral and poster papers dealing with a great variety of clay problems. Dr. Annunziata De Cristofaro was the recipient of the 1999 Luigi Dell'Anna award and presented the paper "Effect of hydroxy-aluminium species on the adsorption and interlayering of proteins onto montmorillonite".

In Krakow the Council of AIPEA invited the Italian AIPEA Group to organize the next EUROCLAY2003. The Clay Conference will be held in Modena. Chairman of the EUROCLAY is Dr. Maria Franca Brigatti.

A training course was held in Tito (Potenza) in September 1999 on "Determinative methods in clay mineralogy" (Chairman Dr. Saverio Fiore, Istituto di Ricerca sulle Argille of the National Research Council).

Thirtyfour participants, mainly graduates and PhD students and researchers, attended the course. A book, containing all the Lectures presented by leading scientists in their respective subject areas, will be published in a near future.

A Symposium on "Argille e fanghi peloidi termali e per trattamenti dermatologici e cosmetici", sponsored by Italian AIPEA Group, was held in Montecatini Terme in May 1999 (Chairman Prof. Fernando Veniale). The papers presented at the Symposium will be published in a special issue of "Mineralogica et Petrographica Acta".

In 1999 Dr. Giovanni Novelli retired from academic tasks after an illustrious and long career. He granted the Italian AIPEA Group scientific books and journals and 500 EUR to help young researchers to carry out studies on smectites. The collection of books and journals ("Donazione Novelli") is held at the Istituto di Ricerca sulle Argille of the National Research Council, Tito Scalo (Potenza).

Next year, the Luigi Dell'Anna award and the Giovanni Novelli award (500 EUR), sponsored by the Italian AIPEA Group will be offered to young Italian clay researchers mainly to promote their participation at International Congresses and Meetings.

The Third Symposium ISMOM2000 of the Working Group MO of the International Union of Soil Sciences entitled "Soil Mineral-Organic Matter-Microorganisms Interactions and Ecosystem Health" will be held in Naples and Capri (Italy) on 22-26 May 2000. The Working Group MO serves as a forum for the interactions of soil mineralogists with soil chemists, soil microbiologists, soil biochemists, and environmental scientists. Chairman of the Symposium is Prof. Antonio Violante (e-mail:violante@unina.it). The technical program of the third Symposium ISMOM2000 will consist of special sessions (oral and poster sessions), including invited lectures by scientists of international stature (Website: [www.unina.it/ismom2000](http://www.unina.it/ismom2000)).

The website (<http://www.pz.cnr.it/aipea>) will provide information on the scientific activities of Gruppo Italiano AIPEA.

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## THE CLAY SCIENCE SOCIETY OF JAPAN

### 1. Committee

The following officers were elected for the fiscal year 1999-2000

President: Dr. K. Tomita, Kagoshima University  
Vice president: Dr. K. Tazaki, Kanazawa University  
Dr. K. Torii, National Industrial Research Institute of Tohoku  
Secretary: Dr. N. Sakamoto, Okayama Science University  
Treasurer: Dr. H. Yamada, National Institute for Research in Inorganic Materials  
Principal editors: Dr. R. Kitagawa, Hiroshima University (Nendo-kagaku)  
Dr. T. Henmi, Ehime University (Clay Science)

### 2. Annual Meeting

The 43rd annual meeting of the Clay Science Society of Japan was held at Kurashiki University of Science and the Arts from 16 to 18, September, 1999. A total of 95 papers (47 oral and 48 poster) were presented. The program also included a guest lecture and a symposium entitled "Clays in Environmental Studies".

The guest lecture was:

"Distinguished skills in Japanese pottery manufacture" by K. Asami, Kurashiki University of Science and the Arts.

The symposium presentations were:

- Status of pollution in soil ecosystem by M. Matsuda of Ehime University.
- Role of clays in behavior of pollutants in soils and sediment by M. Soma and Y. Tani of Shizuoka Institute of Environmental Studies.
- Utilization of ash from municipal calcinator by M. Miyake of Okayama University.
- Application of clay-polymer nano-composites to environmental protection practices by A. Usuki of Toyota Central Institute.
- Status of ground water monitoring in Okayama by K. Nabeshima of Okayama Prefecture Office.

### 3. Publication

Clay Science Society of Japan published four issues of Nendo Kagaku (Journal of the Clay Science Society of Japan in Japanese), Vol. 38, Nos. 2, 3 and 4, and Vol. 39, No.1, and two issues of Clay Science, Vol. 10, Nos. 5 and 6.

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## THE NORDIC SOCIETY FOR CLAY RESEARCH

Elected Council for 2000

Chairman: Kristian Lindqvist,  
Geological Survey of Finland,  
FIN-02150 Espoo, Finland.  
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Secretary: Vibeke Ernsten,  
GEUS, Thoravej 8, DK-2400 Copenhagen, Denmark  
E-mail: ve@geus.dk  
Treasurer: Siv Olsson,  
Laboratory of Quaternary Geology, University of Lund  
Tomav. 13, SE-223 63 Lund, Sweden.  
E-mail: siv.olsson@geol.lu.se  
Liaison Officer : Dr. Vibeke Ernsten  
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### 1998 Meeting

This year the Spring Meeting was cancelled, in favour of the Jubilee Meeting in Lund on the 8-9<sup>th</sup> of October 1998 at the Department of Quaternary Geology, University of Lund. This meeting highlighted the 50<sup>th</sup> anniversary of the Swedish Society and the 25<sup>th</sup> anniversary of the Nordic Society. Responsible for the local arrangements was Dr Siv Olsson at the Department of Quaternary Geology.

After election of the 1999 council, this meeting was continued with the following lectures and activities:

- Glimpses from 50 years with the Clay Society. (Brusewitz, Ann Marie, 1999. *Glimpses from 50 years with the Nordic Clay Group. The Nordic Clay Group celebrated its 50 years Jubilee in 1998.* (See ECGA Newsletter no 3, May 1999.)
- Paleoweathering and paleorelief in Scandinavia. Karna Lidmar Bergström, Siv Olsson & Elen Roaldset.
- Clay and clay minerals in Gothenburg. Laila Engstrand & Rodney Stevens.
- Saponite formed in a submarine geothermal vent, Eyjafjordur, N. Iceland. Hrefna Kristmannsdóttir.
- Occurrence of opal-CT in Tertiary clay deposits on the Norwegian Shelf. Norvald Gjelsvik.
- Performance of smectite clay as isolation of highly radioactive waste. Roland Pusch.
- The session was finished with a visit to Clay Technology, Ideon, introduced by Ola Karland. In the evening there was a Jubilee Dinner.
- During the second day there was an excursion to the CC Höganäs Building Ceramics Ltd. at Skromberga where manufacturing of fire clay and clinker was shown. At the site Vallåkra, the special Vallåkra clay and pottery was demonstrated. In the area of the horst at Söderåsen, province of Skåne, kaolinite weathering was demonstrated.

#### 1999 Meeting

The annual meeting was arranged by Dr Sven Snäll at the Geological Survey of Sweden on the 9<sup>th</sup> of December 1999. After election of the year 2000 council, this meeting was continued with lectures under the following topics:

- Glimpses from the Conference of the European Clay Groups Association in Krakow, Poland, 5-9<sup>th</sup> of September 1999 were given by Vibeke Ernstsén. From the Scandinavian countries 13 delegates took part in the conference. However none from Iceland.
- Weathering studies from three soil profiles developed on till, by Sven Snäll, The Geological Survey of Sweden, Uppsala, Sweden.
- Some remarks on the problems with aggregate formation at heating of special clay deposits in Denmark, Ole Bjørnslev Nielsen, Department of Geology, University of Aarhus, Denmark.
- Experimental diagenesis - formation of chlorite growth upon quartz grains in sandstone, Tore Bastiansen, Department of Geology, University of Oslo, Norway.
- Clay mineralization in an active faulting zone in Finnmark, northern Norway, Elen Roaldset, Norwegian Technical Highschool, Trondheim, Norway.
- Secondary iron minerals in mine environments, Liisa Carlson, Geological Survey of Finland, Espoo, Finland.

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#### CLAY MINERALS SOCIETY (North America)

The Clay Minerals Society's 36th Annual Meeting was held on the campus of Purdue University in West Lafayette, Indiana on 26 June to 1 July 1999. The meeting was hosted by the Department of Agronomy and it was organized by Dr. Cliff Johnston. The theme of the conference was the "Molecular Environmental Science of Clay Minerals". The George W. Brindley lecture was presented by Dr. Tony Eggleton, Australian National University and entitled "Faith is a fine invention". Dr. Stephen A. Boyd, Michigan State University, received the Jackson Mid-Career Clay Science Award

and presented a lecture entitled "Clay Papers". Dr. V.C. Farmer, Macauley Land Use Research Institute, presented the Pioneers in Clay Science Lecture on "Clays seen in an infrared light". No Bailey Award (previously called the "Distinguished Member Award") for distinguished research was presented at this meeting but the first award will be presented next year.



New CMS President,  
Patricia Costanzo,  
receives gavel from retiring  
President Dave Bish at CMS  
Annual Meeting 1999

There were a total of 108 papers, including 40 posters. Sessions included the following areas:

#### General sessions:

I. (9 papers)

#### Symposia:

Chemical and biological processes at minerals surfaces I. (7 papers), II. (8 papers), III. (6 papers), IV (8 papers)

Industrial application of clays (9 papers)

Electrochemistry in clays (5 papers)

Computational chemistry and molecular dynamics at mineral-water interfaces, I (8 papers), II. (8 papers)

#### Posters:

I. (40 posters)

The field trip was taken on 1 July and covered the "Clays and soils of southern Indiana". The pre-meeting workshop was on "Electrochemical reactions at clay interfaces". There is no volume planned for this workshop.

Student awards for research and presentation went to the following: Best Student Paper to E.J. Boyle-Wight, University of Maine, Orono, for "A spectroscopic study of multi-solute interactions in mineral/water systems", Best Student Paper Runner-up to C.A. Johns, University of Illinois at Chicago, for "X-Ray structure of a trimethylsulfoxonium-exchanged vermiculite", Best Student Poster to M.S. Connors, SUNY-Buffalo, for "The use of BP clay to link antimicrobials for the prevention of microbial proliferation on hepa filtration material" and Best Student Poster Runner-up to C. Pitteloud, Université de Lausanne, Switzerland for "The structure of interlayer water in Wyoming-montmorillonite studied by neutron diffraction with isotopic substitution".



Akihito Yamagishi, Bill Jones, Toshihiro Kogure, Hisako Sato talk before banquet at CMS'99, Purdue University, West Lafayette, In. June 29, 1999

Volume 9 of the CMS Workshop Lectures is now available: *Synchrotron X-Ray methods in Clay Science*. It is edited by D. Schulze, J. Stucki and P. Bertsch. The price is US\$23 for non members of the CMS and US\$18 for members. The book can be ordered from the Society Office.

The next annual meeting will be held at Loyola University of Chicago, Chicago, Illinois from 24-29 June 2000. The theme of the meeting is: "Clays in the past and future millenia" and the abstract deadline is 17 March. The workshop is being organized by W. Moll and is entitled: "Industrial uses of

clays". The field trip, organized by R. Hughes, is entitled: "Urban clays". Special symposia include: Nanocomposite materials, Clays in the human futures: Extraterrestrial Clays, Archaeology and clays, Redox processes in clays: agricultural, industrial and environmental significance, Agri-chemicals and clays, Clay minerals and glacial stratigraphy vermiculites and Geology. Dr. Alanah Fitch is the general chair. Inquiries may be addressed to Dr. Alanah Fitch, Loyola University of Chicago, 6525 N Sheridan Road, Chicago, Illinois 60626 USA, phone 00-773-508-3119, fax 00-773-508-3086, e-mail: afitch@luc.edu, or visit the CMS home page at: <http://cms.lanl.gov/>.

S. Guggenheim

## POLAND

The 9th Conference of the European Clay Groups Association EUROCLAY 1999 was held in Cracow (Sept. 5-9, 1999). It was organized by the Mineralogical Society of Poland; the Institute of Geological Sciences of the Polish Academy of Sciences; the University of Mining and Metallurgy in Cracow; the Faculty of Sciences of Comenius University in Bratislava; the Institute of Inorganic Chemistry of the Slovak Academy of Sciences. Professor Jan Srodon was the Chairman of the Organizing Committee, Prof. Ivan Klaus (Slovakia) and Professor Zenon Klapayta acted as vice-Chairmen.

Fifteen Symposia and sessions had the following subject matter:

1. New techniques of clay research
2. Order-disorder features of clay minerals
3. Particle size analysis in clay science
4. Hydrotalcite-type anionic clays (layered double hydroxides)
5. Surface modification of clay minerals and application of such materials
6. Clays in soils and weathering
7. Comparison between alterations of seafloor and land-based basalts
8. Low-grade metamorphism of sheet silicates
9. Clay minerals as tools in basin analysis
10. Clays in hydrocarbon reservoirs
11. New developments in the traditional industrial applications of clays
12. Clay barriers and waste management
13. Crystal chemistry of clay minerals
14. Physical and chemical properties of clays
15. Origin of clay minerals

Hundred sixty oral presentations as well as 260 posters were presented. Four hundred fifty participants attended the Conference, representing 28 European countries (Austria 10, Belarus 1, Belgium 6, Croatia 1, Czech Republic 4, Denmark 3, Estonia 3, Finland 1, France 37, Germany 49, Greece 2, Hungary 8, Ireland 4, Italy 15, Latvia 2, Lithuania 1, The Netherlands 3, Norway 7, Poland 77, Portugal 6, Romania 2, Russia 24, Slovakia 16, Spain 24, Sweden 3, Switzerland 14, U.K 12, Ukraine 20). The Extra-European countries were represented by: 28 participants from US, as well as 19 from Japan, 11 from Turkey, 8 from Israel, 5 from Australia and a number from other countries (Argentina, Brasil, Canada, Chile, Egypt, Kazakhstan, Mexico, Moldova, New Zealand, Republic of China, Saudi Arabia, Taiwan, Tunisia).

All oral presentations and poster sessions took place in Cracow, at the University of Mining and Metallurgy (with the exception of the opening session with the plenary lecture "Illite/smectite in three dimensions by R.C. Reynolds, Jr)

Two pre-conference field trips were organized 1) "Clay alteration of ultrabasic rocks in Lower Silesia, Poland", and 2) "Hydrothermal and weathering clay alteration of Tertiary volcanics and volcaniclastics in Lower Silesia Poland".

The post-meeting workshop "Clay in Environment" took place in Banska Štiavnica, Slovakia, followed also by a field trip.

A number of Business Meetings were held during the Conference: AIPEA Council Meeting, Central European Clay Group Meeting, ECGA Council Meeting and others. The new President of the European Clay Groups Association is Prof. Gerhard Lagaly (Germany). Our congratulations and best wishes of professional success and personal satisfaction!

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## RUSSIA

Under the today conditions of science in Russia the clay mineral problems could be considered in frames of general-sense conferences. The XIV International Meeting on X-ray Mineralogy (St. Peterburg, 21-24. 06. 1999) had sections of crystal chemistry, P-T conditions, phyllosilicates as raw materials, and equipment. It exposed papers on systematics, typomorphism of clay minerals, structural crystallography of micas, distribution of isomorphous replacements, simulation of powder patterns, clay minerals as indicators of diagenesis in sea conditions, transformations in soils.

The 2nd National Conference on the use of X-rays, Synchrotron Radiation, Neutrons and Electrons in the Study of Materials included papers displaying the efficiency and achievements of electron microscopy and electron diffraction techniques in the analysis of fine-grained materials to which clay minerals belong.

However the most exciting event in the clay mineralogy life of Russia in 1999 happened not in Russia. It was the participation in the EUROCLAY'99 (Poland, Cracow, 5-9. 09. 1999) which became possible mainly with the generous support of the organizers, first of all Chairman Jan Srodon and Secretary Aka Srodon (family Srodon). This support is an unique example and it is difficult to overrate its significance. For 24 specialists from different parts of Russia and 40 from the former USSR it became possible to display their achievements indicating that they are still active and productive.

More than that: New possibilities of international cooperation have enriched the clay mineral science. In particular, the school of the Russian scientist, V.A. Drits was able to cross the limits of the Geological Institute of the Russian Ac. Sc. into cooperation with colleagues from France, USA, Denmark and Poland and to reach a leading position which is an international success as demonstrated by the Conference Program. On the other hand communication with numerous specialists from all parts of the world attending the Conference meant also a mental support stimulating further activity.

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## SERBIA

### *Clay activity in Serbia*

A few meetings and conferences were held in 1999: The Second Congress of Brick Industry of Serbia (October 22-23 Vrnjacka Banja), with some papers concerning clay raw materials from Serbia; XXXIX Conference of the Serbian Chemical Society (October 15-17 Belgrade) - a few papers dealing with applied clay mineralogy were presented in the Ceramic Section. During this year "The Yugoslav Association for Mineralogy" restored its activity (after six years) and held the Sixth Symposium (December 13-14, Belgrade). It published its own official journal "Mineralogy" (in Serbian with English summary), including a few articles concerning clay minerals, chemical weathering of rocks, and clay raw materials. At the University of Belgrade (Department of Chemistry) M. Sc. thesis on physico-chemical characteristics of sepiolite from Goleš Mountain was finished.

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## THE TURKISH NATIONAL COMMITTEE ON CLAY SCIENCES

The most important activity of the Turkish National Committee on Clay Sciences during 1999 was the organization of the 9th National Clay Symposium (Clay'99) in coordination with Istanbul University on September 15-18, 1999 in Istanbul. The Symposium Program included 34 oral and 13 poster presentations on the major topics of geology and mineralogy of clays, their physico-chemical properties, clay and environment, soil clays, clays in industry, and geotechnical properties of clays.

Four invited presentations were the highlights of the symposium:

- Prof. Dr. Warren D. Huff from University of Cincinnati, gave a conference on "Mineral and Chemical Characteristics of Lower Paleozoic K-bentonites make them invaluable for Stratigraphic and Tectonomagmatic Studies". K-bentonites from Argentine Precordillera, Europe and North America are valuable information sources for regional stratigraphic, tectonic and magmatic analysis.
- Dr. Werner Fiebigler from Stephan Schmidt Gruppe, presented a valuable speech on "The German Special Clay Industry, Recent Trends and Market Developments". He emphasized specific aspects of development in the clay production technologies and market developments in relation to the industrial clays.
- Alexander Schetnikov, Director of VESCO Joint-Stock Company, presented valuable information on "the Ukrainian Andreyerskove Deposit" of refractory and high melting clays and also the policy, strategy and production of VESCO.
- The presentation by Prof. Dr. Ergun Togrol from Istanbul Technical University about "Over Consolidated Clays and Soil Stability" attracted attention in relation to the disastrous earthquake that took place on August 17, 1999 in the Marmara Region. The emphasis was put on the soil mechanics of consolidated clays and its field applicability.

Another activity involved in the Symposium was a workshop on the topic "The Industrial and Environmental Problems of Istanbul Clay Deposits". Directed by Prof. Dr. Mefail Yeniyo, the Workshop was concerned with subjects like geology of Istanbul clay deposits, land remediation, place of Istanbul clays in ceramic industry, management of deposits and environmental evaluation of clay lands.

The final day of the Symposium was devoted to a field trip to Istanbul clay deposits in Sile area. Clay'99 Symposium was sponsored by the most important Turkish ceramic and industrial raw material companies. It was a successful meeting from the point of view of exhibiting a strong co-operation between university and clay based industry. The Symposium Proceedings edited by M. Yeniyođ, S. Ongen and P.A. Ustaomer were published and made available during the Symposium.

The 10th National Clay Symposium will be organized by joint work of the National Committee and Selcuk University at Konya city in 2001.

Dr. Asuman G. Turkmenoglu  
President  
e-mail: [asumant@metu.edu.tr](mailto:asumant@metu.edu.tr)

### CLAY MINERALS GROUP (United Kingdom)

Report for AIPEA December 1999

#### Group Committee

Chairman: R.J. Merriman,  
Secretary: S. Hillier,  
Treasurer: N.J. Elton  
Principal editor: D. Bain,  
Associate editor: C. Breen  
Members: M. Batchelder, J. Hooper, S. Kemp, N. Thomas, D. Doff, A. Parker,  
I. Scotchman.

#### General Group activities

During 1999 the Group has embarked on a series of measures to improve awareness of the importance of clay minerals, as geological, environmental and industrial materials, and increase research activity in all aspects of clay science in British and Irish universities. Central to these measures was the formation of a working party on clay mineral research activity in the UK and Ireland. Following a strategy suggested by the Working Party the Group sponsored a lecture tour by Professor Bruce Velde who visited six UK University departments in early March 1999. Prof. Velde spoke about the future of clay minerals research, and also took the opportunity to meet research students and their supervisors to discuss clay science research projects.

The group has continued to build on this type of activity and have initiated sponsorship of an annual lecture named after the eminent British clay mineralogist George Brown. The lecture may be compared to the Mineralogical Society's Hallimond Lecture, and will be delivered by a clay mineralogist, academic or industrial, who is a recognised authority in their particular field. The George Brown lecturer will be invited by the Secretary of CMG, based on advice from the Committee, to give the lecture at one of the Group's annual meetings. The lecture would be published as a review in Clay Minerals. A lecture tour around a limited number of other venues might also be arranged as part of the invitation depending on the available funding.

The first George Brown Lecture on 'Order disorder in clay mineral structures' will be given by Dr Alain Plançon, Université d'Orleans at the Spring meeting of the Group on the 6<sup>th</sup> and 7<sup>th</sup> of April at

Exeter University Conference Centre hosted by Watts Blake Bearn & Co. The theme of the meeting is 'Industrial clays: understanding the links between origins, compositions, properties, and processing'. ([www.wbb.co.uk/claymeet.htm](http://www.wbb.co.uk/claymeet.htm).)

Steps are also in hand to update the Group's website: (<http://www.minersoc.org/sigs.htm#Clay> Minerals Group).

To mark the occasion of its Golden Jubilee in 1997, the Clay Minerals Group has published a Cumulative Index of all papers published in Clay Minerals Bulletin and Clay Minerals from 1948 to 1997. This Index, consisting of 150 pages of entries for authors and subjects, is available via the Mineralogical Society website to anyone who is interested: <http://www.minersoc.org>

#### Meetings held in 1999

After an interval of eight years, the Clay Minerals Group again held a general meeting in Dublin on 25th March 1999. The meeting was hosted by the Department of Geology, Trinity College Dublin and was attended by twenty people. The meeting opened with an invited guest lecture by Dennis Eberl (USGS) on the measurement of illite particle thickness and this was followed by five papers covering a wide variety of clay mineral topics. There were also two posters and two computer demonstrations.

Despite the small numbers and short program the meeting was deemed an interesting and enjoyable event by those who participated. The meeting concluded with the now traditional "field trip" to the Guinness Hop Store.

The Group also sponsored two of the symposia held at the Mineralogical Societies Winter meeting 'From Magmas to mud (and Back)' at Reading University 13-15<sup>th</sup> December 1999. The symposia were From lava to mud: the alteration of volcanic rocks and From mud to slate: the role of the clay mineral reaction progress.

For further information on the activities of the Clay Minerals Group please contact the new Secretary, Dr. Stephen Hillier, Macaulay Land Use Research Institute, Craigiebuckler, Aberdeen, AB15 8QH, UK (Tel 01224 318 611, Fax 01224 311 556, e-mail [mi418@mluri.sari.ac.uk](mailto:mi418@mluri.sari.ac.uk)).

## 10. MEETINGS

### XVITH CONFERENCE ON CLAY MINERALOGY AND PETROLOGY

August 27-31, 2000, Congress Center of Karlovy Vary Spa, Czech Republic

The Czech National Clay Group is inviting you to attend the XVI<sup>th</sup> Conference on Clay Mineralogy and Petrology in Karlovy Vary. The organizers and main sponsors of this meeting are Sedlecký Kaolin and Gekon Praha in cooperation with further organizations and institutions.

Scope of the conference: clays and clay raw materials in theoretical and applied research, in geology, in industry and in the environment.

All registered participants will receive a copy of the book of abstracts at the meeting.

Limited number of contributions will be published in a special Proceedings Volume. The official conference language is English.

#### Contact Address

Dr. Bohumil Křelina

Gekon, CLAYS, Slavojova 12, 128 00 Praha 2, Czech Republic

Phone: +420 2 61214966, Fax: +420 2 61216897, e-mail : gekon\_praha@oasnet.cz

### 31ST INTERNATIONAL GEOLOGICAL CONGRESS

August 6-17, 2000, Rio de Janeiro, Brazil

Theme: Geology and Sustainable Development: Challenges for the Third Millennium.

#### Secretariat Bureau:

31st International Geological Congress  
Avenue Pasteur 404, Casa Brazil 2000,Urca,  
Rio de Janeiro RJ, Brazil  
tel.: +55-21-295-5847  
fax: +55-21-295-8094  
e-mail: 31igc@31igc.org  
<http://www.31igc.org>

### 13<sup>th</sup> INTERNATIONAL ZEOLITE CONFERENCE

July 8-13, 2001 Montpellier, France

The scientific programme will include 5 plenary and 10-12 keynote lectures, nearly 100 presentation in three parallel sessions and up to 400 posters in two two-day sessions.

Topical sessions are foreseen on hydrothermal synthesis, structure determination, spectroscopic characterization, modeling, catalysis, adsorption and separation natural zeolite mineralogy and applications, mesoporous molecular sieves, advanced materials, novel experimental techniques and applications.

To receive further information see our website <http://www.izc13.enscm.fr>. For additional information on the scientific and social programme, accommodation and registration contact François Fajula or Francesco di Renzo

Address: 13<sup>th</sup> IZC  
ENSCM  
8, rue de l'Ecole Normale  
F-34296 Montpellier Cedex 5  
Phone: +33-467 144323  
Fax: +33-467 14 43 49  
e-mail: [izc13@argon.enscm.fr](mailto:izc13@argon.enscm.fr)

### 37<sup>th</sup> ANNUAL MEETING OF THE CLAY MINERALS SOCIETY

June 24-29, 2000, Chicago, Illinois, USA

The theme of CMS2K is clays across the millenium. The program will represent a broad range of clay research and applications spanning the past and future millennia.

#### Clays in the future

Clays in the human future: Extra-terrestrial clays  
Nanocomposite materials

#### Clays in the past:

Archaeology and clays  
Clay Minerals and glacial stratigraphy  
Vermiculites  
Redox processes in clays: agricultural, industrial and environmental significance  
Agrichemicals and clays

#### For further information:

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Chicago, Illinois, 60206  
e-mail: [afitch@luc.edu](mailto:afitch@luc.edu)  
<http://cms.lanl.gov/loyola2000.html>

### 1<sup>st</sup> LATIN-AMERICAN CLAY CONFERENCE

September 17-22, 2000, Funchal, Madeira

- Madeira Tecnopolo – Centro Internacional de Feiras e Congressos  
Caminho da Penteadá, PT – 9000-390 FUNCHAL, MADEIRA.
- Madeira Tecnopolo is one of the first off-shore scientific and technological parks of the world.  
E-mail: [oto@madinfo.pt](mailto:oto@madinfo.pt)  
Fax: +.351.291.720010  
Conference Topics and Structure



*Clays in Volcanic Environments* is the Conference main topic emphasizing clay minerals genesis either in marine or in continental volcanic environments. New developments and data on geology, mineralogy, geochemistry, geotechnics, isotope dating, environment and analytical techniques as well as other topics concerned with fundamental and applied clay science are welcome. The number of participants is expected to be around 300-350. Twenty-five senior clay scientists have been invited to present general lectures in short versions (presentations up to 30 minutes, since full texts will be published in a special volume). Conference is going to be organized in symposia on specific subjects.

*Address for Correspondence:*

Secretariat of 1st Latin-American Clay Conference  
Att. Prof. Celso Gomes  
Associação Portuguesa de Argilas  
Universidade de Aveiro - Dep. De Geociências  
Campo Universitário Santiago, PT - 3810-193 Aveiro, Portugal  
E-mail: cgomes@geo.ua.pt  
fax: +.351.234.370605  
tel.: +.351.234.370742

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## 11. BOOKS

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The secretariat received information on The Digital Atlas of the USA 2000 CD-ROM:

- all the data layers compiled by the USGS as part of their National Atlas of USA project <http://www.nationalatlas.gov/> .Plus Elevation and Geology
- easy to use Windows software
- all the raw data from the USGS (over 500 MB of data)
- animation software showing plate tectonic movements(TimeTrek)
- access to a wealth of internet resources on the world's natural history
- access to continuing updates to data and software which are being expanded as new data become available

See more and download demo: <http://www.usatlas2000.com>

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## 12. MEMBERSHIP INFORMATION

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AIPEA accepts as members clay scientists, institutions and companies. Members may join individually or through cooperating national scientific societies.

**Please fill in the attached form for joining AIPEA and send it along with your dues payment to the Treasurer.**

The annual membership fees are as follow: (in US dollars)

	1 year	4 years
Individual member	7.50	30.0
Institution/Company	25.00	100.0
Student member	3.75	15.0

Affiliated societies: 50% reduction per member. *All* members are then automatically AIPEA members.

Your cooperation in observing the following suggestions in paying your membership fees will be appreciated:

AIPEA membership dues can be paid by using a VISA card system. Please state your VISA card number and the expiration date along with authorization for Dr. P.M. Huang, AIPEA Treasurer, to charge your AIPEA membership dues to your VISA card.

1. Pay fees by
  - a) bank money order, payable in US dollars or
  - b) international postal money order, payable in US dollar
2. Pay membership fees for four-year periods
3. Make check or money order payable to AIPEA and mail to:

Prof. Pam M. HUANG, treasurer AIPEA  
Department of Soil Science  
University of Saskatchewan, ,  
51 Campus Drive, Saskatoon, SK S7N 5A8, Canada  
tel.: +1-306-966-6823  
fax: +1-306-966-6881

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**13. AIPEA MEMBERSHIP APPLICATION FORM**

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Please print or type!

Family name : .....

Given name:.....

Title:.....

Mailing Address:.....

Amount of due enclosed: \$ ..... for ..... years

Type of membership: .....

If you are an individual member of an Affiliated Society, give the name of the  
Society.....

Date: .....

Signature: .....

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**14. CHANGE OF ADDRESS**

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Name: .....

New Address: .....  
.....  
.....

Date effective: .....

Please mail to the AIPEA Treasurer:  
Prof. Pam M. HUANG  
Department of Soil Science  
University of Saskatchewan, ,  
51 Campus Drive, Saskatoon, SK S7N 5A8, Canada