

INTERNATIONAL MINERALOGICAL ASSOCIATION (IMA)

ANNUAL REPORT TO IUGS FOR 1997

Summary of about 100 words highlighting the most important achievements during 1997

The IMA Commission on Crystal Growth of Minerals prepared an edition (408 pages) of the Lecture Notes of the Short Course on 'Crystal Growth in Earth Sciences'. The IMA Commission on Ore Mineralogy held a Short Course in S. Mamede de Infesta (Portugal) on September 8-10 (41 registered scientists from ten countries), followed by a field trip to 'Somincor' multi-metal mines at Neves-Corvo (September 11-12). The Amphibole Report and 'New Minerals Recently Approved, 1996 Proposals' (Commission on New Minerals and Mineral Names) have been published in several journals; the Mica Report has been submitted for publication. The IMA Home Page has been opened (<http://www.dst.unipi/ima>). The preparation of the 17th General Meeting (Toronto, Canada; August 9-14, 1997) is going on; the second circular, presenting the whole scientific program, has been distributed in June 1997.

INTERNATIONAL UNION OF GEOLOGICAL SCIENCES
REPORTING FORM FOR CONSTITUENT BODIES
1997

1. TITLE OF CONSTITUENT BODY:

International Mineralogical Association (IMA)

2. OVERALL OBJECTIVES:

The main overall objectives of IMA are clearly indicated in its Constitution:
‘The object of the association shall be to further international cooperation in the mineralogical sciences. To this end the activities of the association shall include:

- (a) The promotion of intercourse among mineralogists of all nations by organizing meetings and field excursions and by sponsoring publications of mineralogical interest.
- (b) The maintainance of Commissions to examine and report on certain aspects of mineralogical practice and of committees to expedite other matters.
- (c) The participation in action with other international groups having mineralogical interests.’

3. FIT WITHIN IUGS SCIENCE POLICY (relate goals to IUGS scientific objectives):

IMA has favoured and will favour interdisciplinary activities involving mineralogists, petrologists, geochemists, crystallographers and material scientists; it has co-sponsored and will co-sponsor international scientific programs and projects of IUGS (such as IGCs and IGCPs projects) on mineralogical themes or involving mineralogical ‘expertizes’.

4. ORGANIZATION (broad description):

The work of IMA is carried on through (a) Council, (b) Commissions (C) and Working Groups (WG), (c) Delegates at the Business Meetings.

(a) The Council consists of eleven members: President, Past-President, First and Second Vice-Presidents, Secretary, Treasurer, five Councillors. They are elected by the Delegates at the Business Meetings and remain in charge for a period of four years.

(b) Nine Commissions are presently active (C on Applied Mineralogy; C on Classification of Minerals; C on Crystal Growth of Minerals; C on Gem Materials; C on History and Teaching; C on Museums; C on New Minerals and Mineral Names; C on Ore Mineralogy; C on Physics of Minerals) in the various mineralogical fields.

Five Working Groups are presently active (WG on Cosmic Mineralogy; WG on Databases and Computer Applications; WG on Inclusions in Minerals; WG on Mineral Equilibria; WG on Organic Minerals).

Officers of the Commissions and Working Groups are Chairman, Secretary, and in some cases also a Vice-Chairman; they are are elected by the Delegates at the Business Meetings and remain in charge for a period of four years.

(c) The Business Meetings take place on the occasion of the General Meetings which are held every fifth year. Delegates at the Business Meetings are nominated by the Members Societies.

Apart from the activity carried on directly through its various bodies (Delegates, Council, Commissions and Working Groups) IMA sponsors or co-sponsors scientific meetings, symposia, workshops, schools in specific mineralogical fields.

5. EXTENT OF NATIONAL/REGIONAL/GLOBAL SUPPORT:

Presently thirty four mineralogical societies or mineralogical sections of the geological societies of thirty four different countries are Members Societies of IMA.

Since 1991 there is the possibility of the individual membership.

6. INTERFACE WITH OTHER INTERNATIONAL PROJECTS:

Cooperation has been particularly intensive with the following other international organizations:

- Association Internationale Pour l'Etude des Argiles (AIPEA): AIPEA cosponsored a session at the last IMA General Meeting

- European Mineralogical Union (EMU): close relations exist with that organization: IMA co-sponsors its edition of the 'Directory of Institutions'.

- International Association of Geochemistry and Cosmochemistry (IAGC): the co-operation with IAGC has been particularly strong and fruitful; IAGC co-sponsored four sessions and a plenary lecture at the last General Meeting and will sponsor a plenary lecture at the next General Meeting.

- International Association of Volcanology and Chemistry of the Earth's Interior (IAVCEI).

- International Association on the Genesis of Ore Deposits (IAGOD): IAGOD will sponsor a session at the next General Meeting.

- International Council for Applied Mineralogy (ICAM): ICAM co-sponsored three session at the last General Meeting and will co-sponsor one session at the next General Meeting.

- International Geological Correlation Programme (IGCP): projects within the IGCP were cosponsor of sessions in the last General Meeting and will cosponsor sessions in the next one.

- International Union of Crystallography.

7. CHIEF ACCOMPLISHMENTS IN 1997:

- The IMA Commission on Crystal Growth of Minerals prepared an edition (408 pages) of the Lecture Notes of the Short Course on 'Crystal Growth in Earth Sciences' (held in April 1996) and is preparing a book on 'Crystal Growth in Earth Sciences' to be published by Kluwer next year.

The Commission is also carrying on the preparation of two sessions for the next General Meeting of IMA.

- The IMA Commission on Ore Mineralogy held a successful short course in S. Mamede de Infesta (Portugal) on September 8-10, with the attendance of 41 registered scientists from ten countries. A bound draft volume collecting the lectures of eight contributors was available for the attendees. The short course was followed by a field trip to 'Somincor' multi-metal mines at Neves-Corvo (September 11-12). The Commission is preparing a new short course to be held in Canada in 1998 just before the 17th General Meeting.

- The IMA Commission on New Minerals and Mineral Names continued its systematic examination of new mineral proposals: to date 55 proposals have been submitted to the C; of the 38 proposals for which the voting is now complete, 31 have been approved, 3 suspended and 4 rejected.

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The Amphibole Report has been published in several journals; the Mica Report has been submitted for publication and the Zeolite Report has been approved by the C and will be soon submitted for publication. 'New Minerals Recently Approved, 1996 Proposals' has been published in several journals. The new 'Procedures and Guidelines on Mineral Nomenclature, 1998' is in the final stages of preparation.

- The IMA Commission on History and Teaching cosponsored the I School of the European Mineralogical Union (EMU) on 'Modular aspects of minerals', to be held in Budapest in the period December 14-18, 1997. The Commission started the preparation of a Workshop on 'Teaching of Mineralogy' to be held at Kingston, Canada, June 1998, before the 17th General Meeting.

- The IMA Commission on Classification of Minerals continued its work on the project for the inclusion of structural formulas of minerals in the 'Inorganic Crystal Structure Database' (ICSD) and its work on structural classification of minerals: circulars to the members have been regularly distributed, the next one being planned for December 1997.

- The Working Group on Inclusions in Minerals prepared in 1996 a Socrates/Erasmus 'intensive programme' for a regular European short course on fluid inclusions; this programme was awarded with considerable funds from the European Union in 1997; the first course will be held in 1998 in Siena. The WG, through its Member Phil Brown (Wisconsin University) maintains the 'Fluid Inclusion home page' (giving continuous information on all aspects of fluid inclusions: meetings, abstracts, discussions, e-mail list of fluid-inclusion researchers) at the address <http://www.geology.wisc.edu/~pbrown/fi.html>. The Working Group is organizing a Special Session on 'Fluid and Melt Inclusions in Minerals' for the 17th General Meeting.

- The Working Group on Databases and Computer Applications has carried on activity in three main directions:

a) The IMA Home Page is being constructed at the University of Pisa by Marco Pasero. The results that have been achieved to date can be viewed at the following URL:

<http://www.dst.unipi/ima>

The Home Page will reside on a server at the University of Pisa for the next future.

b) A Directory of Mineralogical Institutions Exclusive of Europe is being developed by the WGDCA under the joint auspices of IMA and EMU. Jack Zussman (University of Manchester) has been co-opted as editor for the volume.

c) Following a highly successful Software Fair at the 16th General Meeting (Pisa), another such fair will be held at the 17th General Meeting (Toronto). It is being organised under the auspices of the WGDCA by Andy McDonald of Laurentian University, Sudbury, Canada.

8. CHIEF PROBLEMS ENCOUNTERED IN 1997 (if any):

Insufficient financial support for the activity of the Commissions and Working Groups, as well as for workshops, schools and conferences.

The budget of IMA depends on the annual dues of the member societies. The annual due has been recently increased and a new increase is not feasible because of the serious financial problems of several IMA members.

9. CHIEF PRODUCTS (eg publications, maps) in 1997:

The IMA Commission on Crystal Growth of Minerals prepared an edition (408 pages) of the Lecture Notes of the Short Course on 'Crystal Growth in Earth Sciences'

The IMA Commission on New Minerals and Mineral Names continued to circulate its monthly memoranda (each memorandum consists of 10-15 pages) for the systematic examinations of new mineral proposals: '*New Minerals Recently Approved, 1996 Proposals*' has been published in several journals. Also the *Amphibole Report* has been published in several journals and the *Mica Report* has been submitted for publication.

The IMA Home Page has been constructed at the University of Pisa (<http://www.dst.unipi/ima>).

The Working Group on Inclusions in Minerals maintains the 'Fluid Inclusion home page' (<http://www.geology.wisc.edu/~pbrown/fi.html>) at Wisconsin University.

The II circular of the 17th General Meeting has been distributed in June 1997.

10. SUMMARY EXPENDITURES IN 1997:

The main expenses in 1997 were:

- \$ 5000: financial support to the Mineralogical Association of Canada for the organization of the 17th General Meeting (Toronto, August 9-14, 1998). This support has to be added to a previous one of \$ 7000 given in 1996.

- \$ 2000: financial support to the III Conference on Mineralogy and Museums (M&M3), sponsored and prepared by four IMA Commissions (C on Museums, C on Classification of Minerals, C on History and Teaching, C on New Minerals and Mineral Names) and held in Budapest, June 3-9, 1997.

- \$ 800: financial support to the School on 'Advanced Studies in Ore Mineralogy' organized in Budapest in July 1995.

- \$ 1000 to the Commission on New Mineral and Mineral Names for expenses (phone, FAX, photocopies, mail) in 1997.

11-13. WORK PLAN FOR NEXT YEAR, CRITICAL MILESTONES TO BE ACHIEVED NEXT YEAR, ANTICIPATED RESULTS/PRODUCTS NEXT YEAR:

In 1998 the 17th General Meeting of IMA will take place in Toronto, August 9-14, organized by the Mineralogical Association of Canada. As it happens every fifth year, the activity of the International Mineralogical Association, of its Commissions and Working Groups will be focused on that event. The preparation of the General Meeting is going on; the second circular (16 pages) has been distributed in June 1997; it presents the scientific program consisting in:

3 Symposia - (a) Mafic and Ultramafic Mineralogy; (b) Gems and Diamonds; (c) Extraterrestrial Mineralogy: Traces of Nebular and Planetary Processes.

26 Special Sessions devoted to various themes of mineralogical, petrological and geochemical interest.

9 Plenary Lectures.

2 Short Courses - (a) Modern Approaches to Ore and Environmental Mineralogy; (b) Minerals and Health.

Workshop on 'Teaching of Mineralogy' and a 'Software Fair' which will take place during the Meeting.

12 Scientific Excursions.

The General Meeting will be also the occasion of two general assemblies of delegates of IMA. The assemblies will indicate the main lines of the future activity of IMA, will elect the new Council as well as the Chairmen and Secretaries of Commissions and Working Groups for the period 1998-2002.

14. COMMUNICATION PLANS:

Distribution of circulars to the member societies, Council, National Representatives, officers of the Commissions and Working Groups as in 1996.

Distribution of information through the newly constructed IMA web site.

15. SUMMARY BUDGET FOR NEXT YEAR (if IUGS support is requested, please specify):

The report of the Treasurer will be submitted to the IMA Executive Committee in January 1998 and the reader should refer to that report. However it is proper to remark that
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the annual budget of IMA is binded by strong constraints: on one side the low income (approximately 4800-5000\$), on the other side consistent fixed expenses (approximately 2000\$ to be set aside for the General Meetings, 1000\$ for the activity of the C on New Minerals and Mineral Names, 1000\$ for the activities of the other Commissions and Working Groups).

16. POTENTIAL FUNDING SOURCES OUTSIDE IUGS:

Due to the severe budget constraints I have indicated in 15) the IMA Commissions and Working Groups, as well as the general chairmen of international meetings sponsored by IMA have to find their own ways to find financial support.

Whereas it is often possible to find partial financial support to Meetings, Conferences, Schools through national institutions and agencies of the countries where the scientific events take place, this is obviously difficult for the normal activities of Commissions and Working Groups which are sometimes forced to waive interesting initiatives and to restrict their field of activity.

17. REVIEW CHIEF ACCOMPLISHMENTS/RESULTS OVER THE LAST 5 YEARS: PERIOD 1993-1997

1994 - 16th General Meeting, Pisa (Italy) September 4-9, 1994. The Meeting was attended by 950 scientists of 44 different countries. 320 oral and more than 500 poster contributions have been presented; an Abstract Volume collected the abstracts of all those contributions.

Five plenary lectures and eight symposia built the main frame of the scientific program of the Meeting. As indicated by the titles of the symposia [1. *Mineral kinetics* (three sessions); 2. *High-pressure environments* (three sessions); 3. *Mineral energetics* (three sessions); 4. *The mineral heritage* (three sessions); 5. *Petrologic mineralogy in metamorphic rocks* (three sessions); 6. *Applied mineralogy* (five sessions); 7. *Ore mineralogy* (three sessions); 8. *Recent developments in mineralogy* (four sessions); 9. *Magmatic processes* (five sessions)] emphasis has been given not only to the various aspects of the fundamental research in mineralogy, but also to the various possible applications: ceramics and high-tech materials; environmental protection; preservation of the cultural heritage; clays and soil mineralogy; gem materials;....

Two Short Courses ('Fluid inclusions in minerals', held in Pontignano (Siena) September 1-4; 'Image Analysis', held in Pisa, September 3-4), a Workshop ('Powder Diffraction', held in Pisa, September 4) and the Software Fair were part of the Meeting.

Two business meetings, two council meetings and meetings of the various Commissions and Working Groups took place, with election of the new Council (1994-1998) and of the officers of Commissions and Working Groups.

6 field excursions of 2-5 days to mineralogical, petrological and volcanological localities of Italy were carried on, two before (1-*Pegmatites of the central Alps and their minerals*; 2-*Ore deposits and marble quarries of the Apuan Alps*) and four after the meeting (1-*High pressure metamorphism in the Western Alps*; 2-*Petrology, geology and ore deposits of the Paleozoic basement of Sardinia*; 3-*Recent volcanism in the Neapolitan area: Vesuvius, Ischia and Phlegraean fields*; 4-*Active volcanoes of Sicily: Aeolian Islands and Etna*).

1996 - Four IMA Commissions (New Mineral and Mineral Names, Museums, Classification of Minerals, History and Teaching) sponsored and organized the third International Conference on Mineralogy and Museums (M & M 3), held in Budapest (Hungary), June 3-9. 229 scientists from 32 countries attended the meeting. 9 oral and poster sessions and a special poster session on 'Mineralogical Museums World-wide' were held, with a total of 137 contributions.

Two workshops (Environmental Scanning Electron Microscopy; Computer Application and Networking) were part of the meeting. The IMA Executive Committee and the four IMA Commissions held technical meetings. 8 field excursions of 2-5 days to mineral localities in the

Czech Republic, Hungary, Romania and Slovakia were carried out, with the attendance of 83 mineralogists.

1996 - 30th International Geological Congress. On the occasion of the 30th International Geological Congress (Beijing, August 4-14, 1996) IMA sponsored 18 sessions in four distinct symposia, with oral and poster presentations:

Symposium 6 - Igneous Petrology: Sessions 6.3, 6.7, 6.8 and 6.9

Symposium 7 - Mineralogy: Sessions 7.1 to 7.9

Symposium 9 - Geology of Mineral Deposits: Sessions 9.1 and 9.3 (both co-sponsored by IAGOD), 9.5, 9.8.

Symposium 12 - Geochemistry: Session 12.2.

In all these sessions IMA indicated convenors who took care of the scientific preparation of the session (invitation to possible speakers, choice of oral and poster presentation), assessed the program and chaired the sessions.

18. SUMMARIZE ANTICIPATED OBJECTIVES AND WORK PLAN FOR THE NEXT 5 YEARS: PERIOD 1997-2001

Three main events will take place in the period:

1998 - 17th General Meeting in Toronto - information on the scientific content of the Meeting has been given at 11)-13).

2000 - 31st International Geological Congress (Rio de Janeiro, Brasil) - as always in the past, IMA plans to play a major role in the scientific aspects of the Congress, sponsoring and organizing scientific sessions on mineralogical themes and, where possible, also short courses and workshops.

2000 - 4th Conference on Mineralogy and Museums. The 3rd Conference (Budapest, June 1996) had a large attendance and we may foresee that similarly a large number of mineralogists will attend the fourth Conference to be held in Australia, cosponsored by four IMA Commissions.

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