



aipea

Association Internationale pour l'Étude des Argiles
International Association for the Study of Clays
Internationale Vereinigung zum Studium der Tone
Международная ассоциация по изучению глин

www.aipea.org

NEWSLETTER 54 • APRIL 2022



Follow us on Twitter @aipea_org

I N S I D E

2021's President's Report	1
AIPEA Officers and Council	3
AIPEA Website	5
AIPEA Educational Series (AES)	6
Council Affairs	7
Early Career Clay Scientists Committee	9
Treasurer's Report	10
AIPEA Listserves	11
IUGS	12
Conference News	14
News from National and Regional Clay Groups	16
Upcoming Meetings	45
AIPEA Membership Application Form	47

Volume Editor

Prof. Peter Crowley Ryan
Secretary-General
Middlebury College
Department of Geology
McCardell Bicentennial Hall 429
Middlebury, VT 05753 - USA
Phone: +1 802 443 2557
Email: pryan@middlebury.edu
Email: secretary@aipea.org

Series Editor

Saverio Fiore
Email: saverio.fiore@cnr.it

ISSN: 2421-0757 [online]

Graphic layout by Digilabs (IT)

President's Report

Dear clay community! Two years with SARS-CoV-2 virus have now passed, and our young generation was left out again from intensive discussions with (senior) scientists at meetings with physical presence. To improve the situation, the AIPEA Council decided to establish the Early Career Clay Scientists (ECCS) Committee. This group of scientists that are within 5 years after completion of their PhD have already started building up a worldwide network. ECCS will be responsible for two new grants (Travel and Research) that will be given during the Closing Ceremony at ICC-17 in İstanbul (Turkey). AIPEA spends this money on top of the already established student support.

After 2 years of pandemic, scientists worldwide now have to face a new challenge posed by military violence and humanitarian crisis in Ukraine, interrupting their cooperation and communication via international conferences and research collaborations. The largest umbrella group of all, the International Science Council, has prepared statements and we reference here the latest version (<https://council.science/current/news/isc-statement-ukraine/>) to keep you informed, and to make note of this sad historical development in our records.

We are making important steps forward with the new video format for student awards judging developed together with CMS. Students willing to be judged will be directed during registration and abstract submission to upload 4-minute videos of their poster or oral presentation. These will be judged ca. 2 weeks before the ICC meeting by independent referees. This format makes us more independent from physical attendance; however, we have to keep in mind to pay appropriate attention to students during poster sessions/oral presentations at the meeting. More than ever before they need us to share their ideas with our experience.

Computational Mineralogy in Clays is the third volume in the AIPEA Educational Series (AES). This follows volume 1 on *Interstratified Clay Minerals* and volume 2 on *Magne-*



AFFILIATED SOCIETIES

- Algerian Clay Group
- Chinese Association for the Study of Clays (CASC)
- Clay Minerals Group of the Mineralogical Society (GB and Ireland)
- Clay Minerals Society of India (CMSI)
- Clay Science Society of Japan (CSSJ)
- Croatian Clay Group
- Czech National Clay Group (CNCG)
- European Clay Group Association
- French Clay Group (GFA)
- German-Austrian-Swiss Clay Group (DTTG)
- Korean Clay Science Society (KCSS)
- Hungarian Clay Group (HCG)
- Israel Society for Clay Research
- Italian Association for the Study of Clays (AISA)
- (North American) The Clay Minerals Society (CMS)
- Polish Clay Group (PCG)
- Portuguese Clay Group (APA)
- Russian Clay Group
- Slovak Clay Group
- Spanish Clay Society (SEA)
- Tunisian Clay Group (TCG)
- Clay Science Society-Turkey
- Ukrainian Clay Group

sian Clays. The organization of the chapters in volume 3 followed the didactic approach of the 3rd the AIPEA School for Young Scientists (ASYS) convened at the Andalusian Institute of Earth Sciences (CSIC-UGR, Granada, Spain) on July 15 and 16, 2017. As the two former issues, the new book can be downloaded free of charge: <https://aipea.org/publications/>.

When this newsletter is distributed, call for abstracts will be closed and the scientific program of the ICC-17 in İstanbul (Turkey) will be more or less finished. Along with field trips, this ICC also offers three workshops: AIPEA School of Young Scientists on *kaolin*, a CMS workshop on *bentonites*, and a *clay-organic* workshop. See more information about the ICC inside this newsletter and on the <https://icc.aipea.org/> website.

Website Our renewed AIPEA website seeks to serve you as a platform for worldwide clay research. We also serve the National Clay Groups by offering them a free of charge website in English, good new examples of which are the Israeli Society for Clay Research: <https://israel.aipea.org/> or The Clay Science Society of Japan: <https://japan.aipea.org/>. These webpages shall be linked to existing websites for deeper information. Anyone searching for “clay” should find this collection of National Clay Group websites and should be able to find YOUR clay group website in your country along with much other information about clays. I’m sure we are on a good track to finish that in the next years. If you don’t find your clay group’s website ask the Representatives of your National Clay Group to send us the required text blocks, and we will open the sites asap.

NCGs AIPEA now has 23 active Affiliated Societies or groups from worldwide with a growing participation from Asia. AIPEA welcomes the Kurdistan Clay Group (in Iraq) as a new affiliated clay group of AIPEA. AIPEA would like to expand its activities to countries without formal clay societies/groups. We would like to learn if new or revitalized societies / groups are in activity and willing to cooperate with AIPEA in the promotion of clay science.

NCGs/Website/listserver/newsletter/Elements: Our goal is to encourage the formation of new national or regional clay groups (NCGs), the revitalization of “sleeping” ones, and the affiliation of existing active clay groups. The new candidates should fill the [form](#) available at the AIPEA website and send their application to secretary@aipea.org. Meanwhile most of our affiliated societies contributed to our 54th Newsletter. We encourage all National Society Representatives to respond promptly to our Secretary-General’s and Treasurer’s requests for information. Please take some time to check if your society / group has effectively sent report to AIPEA. If not, I would like to encourage you to contact your representative and reinforce the importance of doing this small gesture of international cooperation.

AIPEA continues to publish reports in *Elements* magazine as a powerful means to communicate with the mineralogical and geochemical community. In the last 3 years we used parts of our Newsletter reports to inform the global mineralogical community about our worldwide activities. We used your contributions in *Elements* with thousands of readers. Please let Prof. Peter C. Ryan, our Secretary-General, or me know if you have information that deserves the attention of the scientific societies. We can include it on our six-month report in this journal. AIPEA also continues to be an affiliated society to the International Union of Geological Sciences (IUGS) and provides information for the IUGS bulletin, another excellent way to communicate with scientific societies all around the world and to integrate AIPEA and clay research into international geological activities.

With best wishes
Reiner Dohrmann
Jan 3, 2022

AIPEA OFFICERS AND COUNCIL

The AIPEA Council was elected during the 16th International Clay Conference at Granada (Spain), in July 2017. The Officers and Councillors who serve for AIPEA during 2017-2022 are as follows:

AIPEA Executive Officers for 2017-2022

Dr. Reiner Dohrmann

President

State Authority of Mining, Energy and Geology (LBEG)
Federal Institute for Geosciences and Natural Resources (BGR)

Phone +49+511 643 2557

Email: president[at]aipea.org

Prof. Jocelyne Brendle

Vice President

Institute of Material Science of Mulhouse
CNRS UMR 7361

Mulhouse Cedex France

Phone: +33 (0)3896801

Email: jocelyne.brendle[at]uha.fr

Dr. Saverio Fiore

Past President & Chair Hazardous Minerals Committee
Institute of Methodologies for Environmental Analysis – CNR

c/o Dpt Earth & Geoenvironmental Sciences – Bari – Italy

Phone: +39 080 5442618

Email: saverio.fiore[at]cnr.it

Prof. Peter Ryan, Secretary General

Middlebury College

Department of Geology

Middlebury, VT 05753 – USA

Phone: +1 802 443 2557

Email: pryan[at]middlebury.edu

Dr. Alberto Lopez Galindo, Treasurer

Instituto Andaluz de Ciencias de la Tierra – CSIC – Universidad de Granada – Armilla (Granada) – Spain

Phone: +34 958 230 000 ext. 190212

Email: alberto[at]ugr.es

AIPEA Council Members for 2017-2022

Prof. Georgios Christidis Councillor (2nd term)

School of Mineral Resources Engineering

Technical University of Crete

Chania – Greece

Phone: +30 38210 27622

Email: christid[at]mred.tuc.gr

Dr. Victoria Krupskaya, Councillor (2nd term)

Institute of Geology of Ore Deposits, Petrography, Mineralogy and Geochemistry Russian Academy of Science

Russian Federation

Tel: +7 (499) 230-82-96

Email: krupskaya[at]ruclay.com

Prof. Makoto Ogawa, Councillor (2nd term)

Dpt. Chemical and Biomolecular Engineering – Institute of Energy Science and Engineering

Vidyasirimedhi Institute of Science and Technology – Rayong

– Thailand

Email: makoto.ogawa[at]vistec.ac.th

Dr. Jana Madejová, Councillor (1st term)

Institute of Inorganic Chemistry

Slovak Academy of Sciences Dubravská – Slovakia

Phone: +421-2-59410406

Email: jana.madejova[at]savba.sk

Prof. Cliff T. Johnston, Councillor (1st term)

*Dpt of Agronomy & Dpt of Earth, Atmospheric, and
Planetary Sciences Purdue University
Lafayette, Indiana – USA
Phone: +1 765 496 1716
Email: cliffjohnston[at]purdue.edu*

Prof. Chun Hui Zhou Councillor (1st term)

*College of Chemical Engineering
Zhejiang University of Technology (ZJUT) – Zhe Jiang –
China
Qing Yang Institute for Industrial Minerals (QYIM) – An
Hui – China
Email: clay[at]zjut.edu.cn*

Dr. Bruno Lanson

*Chair, Nomenclature Committee
ISTerre | Université Grenoble Alpes
CS 40700 – Grenoble Cedex 9
FR-38058 – France
Phone: +33 476 635 195
email: bruno.lanson[at]univ-grenoble-alpes.fr*

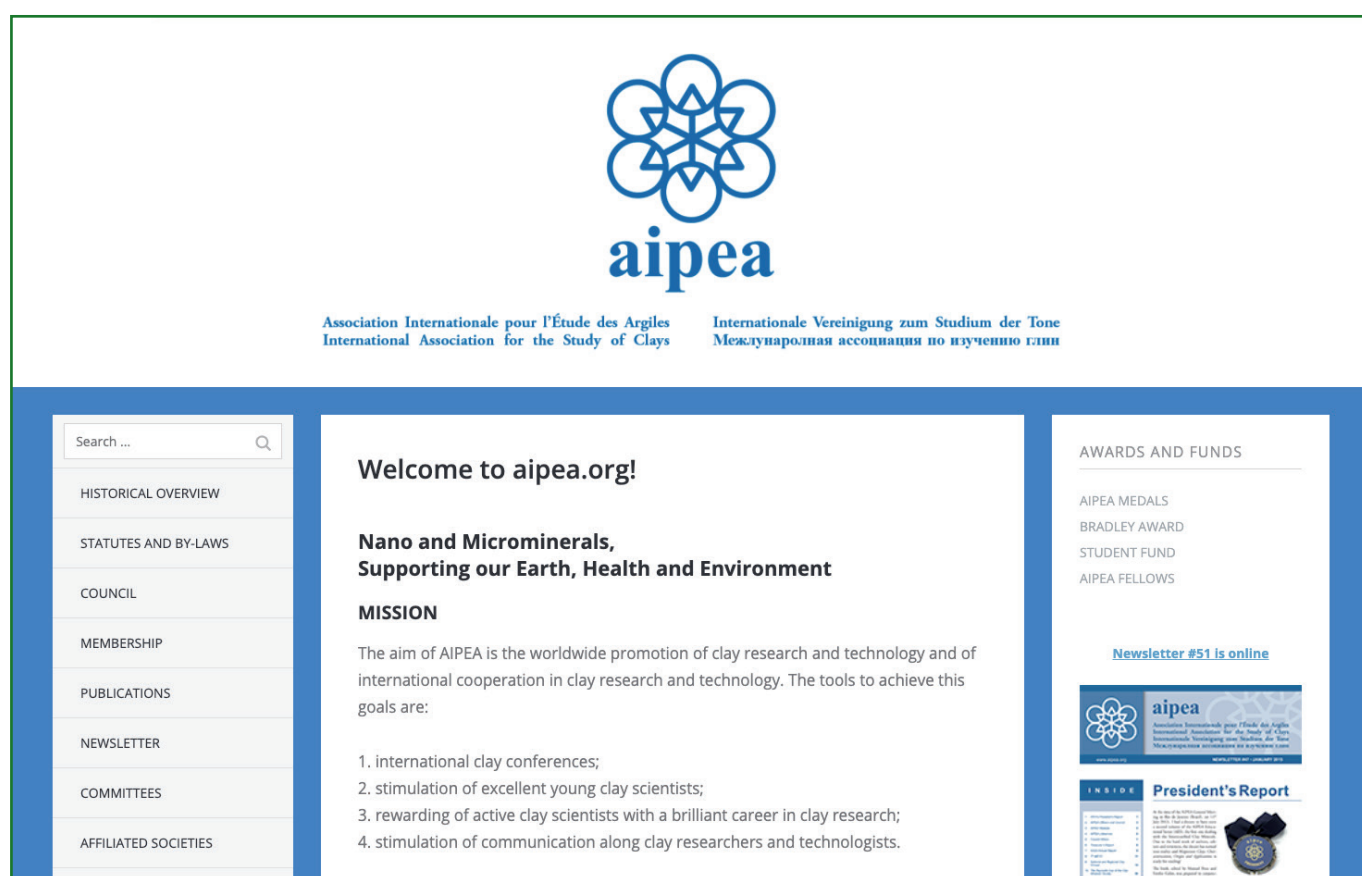
Dr. Jeanne B. Percival

*Chair, Teaching Committee
Geological Survey of Canada – Natural Resources Canada
Ottawa – Canada
Phone: +1 613 992 4496
Email: jeanne.percival[at]canada.ca*

Prof. Dr. Asuman Türkmenoglu

*Representative of 17th ICC
Dept of Geological Engineering Middle East Technical
University (METU) – Ankara Turkey
Phone: +90 312 210 5720
GSM: 0 555 362 0832
Email: t.asuman[at]gmail.com*

AIPEA Website



The screenshot shows the AIPEA website homepage. At the top is the AIPEA logo, a stylized blue flower-like emblem with the text 'aipea' below it. Underneath the logo are the organization's names in three languages: 'Association Internationale pour l'Étude des Argiles', 'International Association for the Study of Clays', 'Internationale Vereinigung zum Studium der Tone', and 'Международная ассоциация по изучению глины'.

Below the header is a navigation menu on the left with links: 'Search ...', 'HISTORICAL OVERVIEW', 'STATUTES AND BY-LAWS', 'COUNCIL', 'MEMBERSHIP', 'PUBLICATIONS', 'NEWSLETTER', 'COMMITTEES', and 'AFFILIATED SOCIETIES'. The main content area features a 'Welcome to aipea.org!' message, followed by the theme 'Nano and Microminerals, Supporting our Earth, Health and Environment' and a 'MISSION' statement. The mission states that AIPEA aims to promote clay research and technology through international cooperation. It lists four goals: 1. international clay conferences; 2. stimulation of excellent young clay scientists; 3. rewarding of active clay scientists with a brilliant career in clay research; 4. stimulation of communication along clay researchers and technologists.

On the right side, there is a section for 'AWARDS AND FUNDS' listing 'AIPEA MEDALS', 'BRADLEY AWARD', 'STUDENT FUND', and 'AIPEA FELLOWS'. Below this is a link to 'Newsletter #51 is online' and a preview of the newsletter cover. At the bottom right, there is a 'President's Report' section with a list of contents and a small image of a medal.

The AIPEA website serves as one of the main means of communication for the international clay research community. A new feature of the aipea.org website is the capacity to host English-language websites for national and regional clay groups. A snapshot of CSSJ's page is shown below. If you are president or webmaster of your clay society, please contact the AIPEA webmaster to establish a site for your society (webmaster@aipea.org). The CSSJ page is shown here as an example. It is easy to fill in the page containing information about your National Clay Group. You need basic WordPress knowledge! Is it a problem? Don't worry: we can do it at a very low cost (€100.00+tax). Rules? yes, there are: You cannot change the template and the page must be in English!



The screenshot shows the website of The Clay Science Society of Japan (CSSJ). The header features the CSSJ logo, the text 'AIPEA Affiliated Clay Society', and 'The Clay Science Society of Japan'. The main banner image shows Mount Fuji with the text 'The Clay Science Society of Japan' and the URL 'Http://www.cssj2.org/'. Below the banner is a section titled 'The Clay Science Society of Japan' with a detailed description of the society's mission and activities. The text describes the society as an academic organization established for basic and applied research on clay and clay-based materials, focusing on the dissemination of research results and promotion of communication among members and non-members inside and outside Japan. It highlights the importance of clay in various fields, from traditional pottery to modern materials like nanocomposites, optical recording materials, thin-film materials, catalysts, and other advanced industrial materials. The society's mission is to promote research and communication in these fields, recognizing the deep relationship between clay and the Earth's system, and its role in the birth of life and the global environment. The CSSJ is noted as Japan's only academic organization that comprehensively handles a wide range of clay research, from basic to applied, and enjoys a high reputation inside and outside Japan.

AIPEA Educational Series (AES)

In 2021, AIPEA published the 3rd volume in the AIPEA Educational Series (AES). The preface to this volume is presented below.

Preface AES3, Hannover 18.03.2021
Computational Mineralogy in Clays is the third volume in the AIPEA Educational Series (AES), the first one dealing with the Interstratified Clay Minerals and the second one with Magnesian Clays.

The first two volumes were prepared in conjunction with the ASYS, the AIPEA School for Young Scientists. ASYS was successfully convened at the Andalusian Institute of Earth Sciences (CSIC-UGR, Granada, Spain) on July 15 and 16, 2017, under the supervision of Dr. Claro Ignacio Sainz Díaz, researcher of this centre, and in close connection to the 16th International Clay Conference in Granada (ICC 2017). Young and not so-young clay scientists actively participated in the ASYS providing a fertile cultural substratum for discussing a third volume, Computational Mineralogy in Clays.

The organization of the chapters in this book follows the didactic approach of the 3rd ASYS. The didactic material, accompanied by an extensive literature, has been collected to form 8 chapters authored by Ignacio Sainz-Díaz (Spain), Andrey Kalinichev (USA), Triq Jamil (Pakistan) and Hendrik Heinz (USA), Alfonso Hernández-Laguna (Spain), Pauline Simonnin, Duo Song, Vitali Alexandrov, Eric J. Bylaska and Kevin Rosso (USA), Sergey V. Churakov and René Schliemann (Switzerland), Edgar Galicia-Andrés, Peter Grančič, Martin. H. Gerzabek, Chris Oostenbrink and Daniel Tunega (Austria), and Ana Borrego-Sánchez and C. Ignacio Sainz-Díaz (both Spain).

It is my certitude that this book will highlight very relevant developments in the fast growing application of computational approaches to the study of clay minerals.

Volume 3 covers aspects dealing with Introduction into



Computational Mineralogy in Clays (Chapter 1) and Atomistic Modeling of Clays and Related Nanoporous Materials with ClayFF force field (Chapter 2). Chapter 3 introduces Simulations of Clay Minerals with IFF All Atom Models: Advantages, Validation, and Applications and Chapter 4 Fundamentals of Ab Initio calculations. Chapter 5 details Modeling Electron Transfer in Iron-Bearing Phyllosilicate Minerals and Chapter 6 discusses on Ab initio simulations of clay minerals reactivity and thermodynamics. And finally, Chapters 7 and 8 focus on Modeling of interactions in natural and synthetic organoclays as well as on Absorption of Pharmaceutical drugs onto clay minerals surfaces. These book chapters are milestones in a tradition of presenting status reports about Computational Mineralogy in Clays, the first one I remember was given by Kubicki and Bleam as Editors of a CMS workshop about Molecular Modeling of Clays (CMS 1998, Cleveland, Ohio). These chapters should be considered as an opportunity for continuing studies in clay science. Editorial responsibility for this volume was taken by C. Ignacio Sainz-Díaz, Saverio Fiore (Italy) took care as AES Series Editor.

We are proud as AIPEA to now have a third volume of the AIPEA Educational Series. I personally, and on behalf of AIPEA, heartily thank the authors, the editors and the reviewers for their efforts to support clay science.

Reiner Dohrmann
AIPEA President

Council Affairs

Council Affairs 2021

The following is a summary of issues addressed by AIPEA Council in 2021.

AIPEA Council Discussion No. 1/2021 – Rescheduling the ICC-17 to July 2022

The proposal made by the ICC organizing team to reschedule the ICC-17 to July 2022 was accepted by most Council members; however, there was also fundamental criticism and one NO. The President communicated to the ICC organizing team Council's agreement to postpone, and the Secretary General informed the clay community of this decision by email (members@aipea.org and talk@aipea.org).

AIPEA Council Discussion No. 2/2021 – Treasurer Report 2020 - Financial report and statement

The Treasurer's Report requested by President and Treasurer was approved by all other Officers and all Councilors without discussion. This report is presented in subsequent pages of this newsletter.

AIPEA Council Discussion No. 3/2021 – Terms of council members and officer

Council and officers of AIPEA have terms that extend from one ICC to the next, so given the postponement of the 17th ICC to July 2022, it was agreed that terms for council members and officers be extended to the rescheduled ICC in July 2022.

AIPEA Council Discussion No. 4/2021 – Membership of AIPEA Nomenclature Committee

AIPEA council and officers approved of new members of this important committee. Current members of the nomenclature committee are listed in this newsletter and on the AIPEA website.

AIPEA Council Discussion No. 5/2021 – AIPEA nomination committee for Early Career Clay Scientist (ECCS)

Council and officers approved an AIPEA nomination committee consisting of the following members: AIPEA President, two Ordinary Councilors and two individual members of AIPEA not currently serving on Council. The committee members are Reiner Dohrmann, Chun-Hui Zhou, Makoto Oga-
wa, África Yebra Rodríguez, and Fakher Jamoussi.

Council Discussion No. 6/2021 – Approved application of Kurdistan Clay Group to become an AIPEA-affiliated society

The decision to welcome the Kurdistan Clay Group to AIPEA as an affiliated society was done recognizing complex questions of borders and regional geopolitics that included fundamental criticism and one NO.

Council Discussion No. 7/2021 – Approved application guidelines and forms for ECCS research and travel grants

Council and officers approved of the application forms and process developed by the ECCS committee to announce and review applications for research and travel grants.

Peter Ryan
Secretary-General, AIPEA
March 2022

AIPEA NOMENCLATURE COMMITTEE

Bruno Lanson is now Chair of the AIPEA Nomenclature Committee.

The purpose of the AIPEA Nomenclature Committee is to make general and specific recommendations concerning:

1. definitions of mineralogical and crystallographic clay-related terms;
2. classification and terminology of clays, clay minerals and related terms;
3. standardization of structural and descriptive terms;
4. the establishment of procedures/criteria for determining species;
5. the emphasis (or re-emphasis) of the proper use of terms; and
6. any additional aspects relating to nomenclature.

Approximately 25 published and unpublished reports have been written since the 1950s. An extensive report was published in *Clay Minerals* (2006; 41, 863-877).

Committee Members are:

Bruno Lanson

(CNRS-Grenoble) – Chair

Jan Dietel

(Landeslabor Berlin-Brandenburg, Germany)

Katja Emmerich

(Karlsruhe Inst. Technol., Germany)

Hongping He

(Guangzhou Inst. Geoch., China)

Steve Hillier

(James Hutton Institute, UK)

Toshihiro Kogure

(Univ. Tokyo, Japan)

Balwant Singh

(Univ. Sydney, Australia)

Elizabeth Rampe

(NASA Johnson Space Center, USA)

Marek Szczerba

(Polish Acad. Sci., Poland)

George E. Christidis

(*Clay Minerals* Editor, ex officio)

Joseph Stucki

(*Clays and Clay Minerals* Editor, ex officio)

Yuan Peng

(*Applied Clay Science* Editor, ex officio)

Early Career Clay Scientists Committee



AIPEA established an Early Career Clay Scientists (ECCS) Committee for scientists within 5 years of completion of their PhD. The aim of the Committee is to create meaningful networking opportunities for early career clay scientists to foster the international collaboration, the exchange of newest research achievements and to contribute to the inter-generation knowledge transfer in the field of clay sciences.

Committee members are Liva Dzene (Institute of Material Science of Mulhouse, University of Upper-Alsace, France), Guanzheng Zhuang (Institute of Resources Utilization and Rare Earth Development, Guangdong Academy of Sciences, China) and Eisuke Yamamoto (Institute of Materials and Systems for Sustainability Division of Materials, Nagoya University, Japan).

One of the first activities of the Committee was to establish Research and Travel Grant Guidelines to support ECCS research activities and to give the opportunity to ECCS to attend 17th ICC in Istanbul.

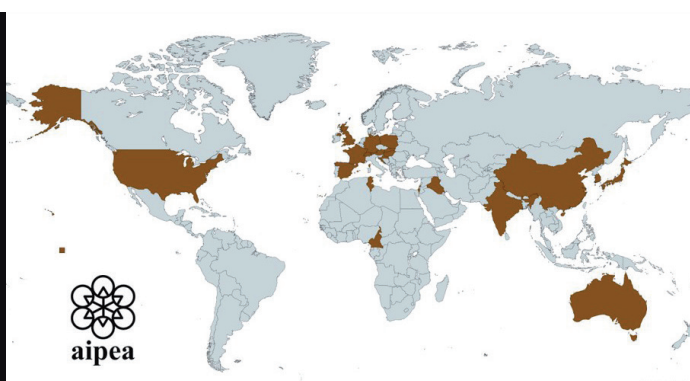
The AIPEA Early Career Research Grants provide financial support in a form of seed-money to assist early-career researchers (post-doc, assistant professor or lecturer) of clay science and technology to explore a proof of concept or to fund areas of an ongoing project that were not in-

cluded in the original project scope. It should allow then to support further applications to national or regional research funding bodies. The AIPEA awards 2 grants in a period of 4 years (from ICC to ICC). Application guidelines and application forms of both new grants will be available at aipea.org website.

On 3rd December 2021, the first National Clay Group ECCS representative meeting was held to launch the network. The meeting was attended by early-career scientists from 16 national clay societies who presented the activities of their national clay groups specifically tailored for early-career scientists. It was a great opportunity to exchange the ideas, learn about each other, and brainstorm new ideas for the possible future common activities.

The ongoing work of the Committee focus on preparing activities specifically tailored for ECCS during the ICC in Istanbul. In future, the Committee plan to focus on developing a strategy on the effective communication of newest research achievements using social networks.

Prepared by Liva Dzene



Treasurer's Report

(Jan.-Dec. 2021)

National Clay Groups

Dues corresponding to 2021 were received from France, Italy, Spain, North American CMS and British CMS groups, as well as those coming from Japan (2020-21), Poland (2017-21), Ukraine (2019-22) and Czech (2020-21) groups.

Individual Membership

Request to pay individual dues has been sent to those individual members finishing their affiliations during this year. Payment has been received for 1 renewal period (8 years), 3 renewal period (4 years) and 2 payment for two years.

PayPal

Payment of membership fees is facilitated through the use of PayPal (treasurer@aipea.org). Dues can be paid in either US dollars or Euros.

Volume 3. AIPEA Educational Series

The third volume of the AES, corresponding to the ASYS held in Granada during the XVI ICC and entitled "Computational modeling in clay mineralogy" (ISBN 978-88-7522-048-8), has been published.

Website Support

The website is supported by AIPEA. We continue to acknowledge the contributions of Dr. Saverio Fiore and the Italian Clay Group for keeping it up to date.

Financial Statement

The Balance Sheet and Profits & Loss statements are provided for 2021.

Alberto López Galindo
January 2021

AIPEA Balance Sheet

January through December, 31th 2021

ASSETS	
Current Assets	
Chequing/Savings	
CaixaBank Current Acct.	77,308.81 €
Paypal	839.26 €
Cash	28.03 €
Total Chequing/Savings	78,176.10 €
Total Current Assets	78,176.10 €
TOTAL ASSETS	78,176.10 €
LIABILITIES & EQUITY	
Equity	
Unrestricted Net Assets	80,660.89 €
Net income	-2,484.79 €
Total Equity	78,176.10 €
TOTAL LIABILITIES & EQUITY	78,176.10 €

AIPEA Profit & Loss

January through December, 31th 2021

Ordinary Income/Expenses	
Income	
Program Income	
Membership Dues	4,026.48 €
Total Program Income	4,026.48 €
Total Income	4,026.48 €
Expense	
AIPEA newsletters n. 53	624.00 €
AIPEA Educational Series vol 3 (ASYS)	5,686.91 €
Bank Charges & Interest	200.36 €
Total Expense	6,511.27 €
Net Ordinary Income	-2,484.79 €
Net Income	-2,484.79 €

AIPEA Listserves

The international community of clay mineral researchers benefits from two AIPEA list-serves. They are intended to make information pertaining to all areas of clay sciences available quickly. The first AIPEA list-serve (**members@aipea.org**) contains the e-mail address of all AIPEA members and those of its affiliated societies (national and regional clay groups). These e-mails are updated annually, and all members are automatically included in the AIPEA Members List. If you are a member of any AIPEA affiliated society and are not receiving messages, please check whether your affiliated society has sent an updated list of e-mails to the AIPEA webmaster. If your affiliated society is not yet affiliated with AIPEA, please encourage those in charge to make contact with the AIPEA President (president@aipea.org) or Secretary (secretary@aipea.org) for information. Alternatively, please also check the spam or junk or clutter box to be sure that AIPEA messages have not been misdirected to it.



AIPEA has also organized a “talk list” (**talk@aipea.org**) for people interested in clay science but who are not yet engaged in affiliated societies or AIPEA. Those interested in participating in the AIPEA talk listserv should send a message to talk.subscribe@aipea.org. Subscription to the list is completely free and you may remove your name from the list at any time just by sending a message to talk.unsubscribe@aipea.org.

Finally, if you wish to share information about any topic related to clay minerals with AIPEA members, please send a message to the AIPEA webmaster (webmaster@aipea.org) and/ or to the AIPEA Secretary- General (secretary@aipea.org).

Peter Ryan
Secretary-General, AIPEA
April 2022

International Union of Geological Sciences Annual Report

REPORTING FORM FOR IUGS AFFILIATED ORGANIZATIONS

Name of Affiliated Organization:

Association Internationale pour l'Etude des Argiles – AIPEA

Overall objectives:

AIPEA is an umbrella organization for the world's national clay societies. The aim of AIPEA is to promote international co-operation in clay research and technology. To fulfill this purpose its activities shall include the organization of:

- Meetings, notably International Clay Conferences;
- Field excursions;
- Visits to centers of clay research and technology;
- Workshops for young clay scientists;
- Publication of issues on clay research and technology;
- Publication of a periodical Newsletter to inform members of activities concerning clay research.

Relate goals to overall IUGS scientific objectives:

- Organize and/or collaborate in the organization of conferences of clay worldwide interest;
- Stimulation of excellence in young clay scientists;
- Rewarding active clay scientists with a brilliant career in clay research;
- Stimulation of communication among clay researchers and technologists.

Structure and organization:

AIPEA is administrated by a council that includes officers (President, Vice-President, Secretary General, Treasurer, the immediate Past-President) as well as six Ordinary Councillors, representatives of the Organizing Committee of next International Clay Conference, and the Chairs of the Nomenclature Committee, Teaching Committee and Hazardous Minerals Committee.

Current members of AIPEA Council for 2017-2022 include:

Dr. Reiner DOHRMANN, President - president@aipea.org (or Reiner_Dohrmann@web.de)

Prof. Jocelyne BRENDLE, Vice-President - jocelyne.brendle@uha.fr

Dr. Peter Crowley RYAN, Secretary-General - secretary@aipea.org (or pryan@middlebury.edu)

Dr. Alberto LOPEZ GALINDO, Treasurer - treasurer@aipea.org (or alberto@ugr.es)

Dr. Saverio FIORE, Past President - saverio.fiore@cnr.it

Dr. Georgios CHRISTIDIS, Councillor (2nd term)

Prof. Cliff T. JOHNSTON, Councillor (1st term)

Dr. Victoria KRUPSKAYA, Councillor (2nd term)

Dr. Jana MADEJOVÁ, Councillor (1st term)

Dr. Makoto OGAWA, Councillor (2nd term)

Prof. Chun Hui ZHOU, Councillor (1st term)

Dr. Asuman Günel TURKMENOGLU (Representative of the 17th ICC)

Dr. Jeanne PERCIVAL, Chair Teaching committee

Dr. Bruno LANSON, Chair Nomenclature committee

Dr. Saverio FIORE, Chair Hazardous Minerals committee

Interaction with other International organizations and projects:

AIPEA has 23 affiliated societies / groups from around the world, including: Algerian Clay Group; Clay Minerals Group of The Mineralogical Society of Great Britain and Ireland; Chinese Association for the Study of Clays; Clay Minerals Society of India; Clay Science Society of Japan; Croatian Clay Group; Czech National Clay Group; European Clay Groups Association; French Clay Group; German- Austrian-Swiss Clay Group; Korean Clay Science Society; Kurdistan Clay Group; Hungarian Clay Group; Israel Society of Clay Research; Italian Association for the Study of Clays; North American Group (Clay Minerals Society); Polish Clay Group; Portuguese

Clay Group; Romanian Group for the Study of Clays and Clay Minerals; Russian Clay Group; Slovak Clay Group; Spanish Clay Society; Tunisian Clay Group; Clay Science Society – Turkey; Ukrainian Clay Group. AIPEA has three committees working on key themes of international interest: Nomenclature, Teaching, and Hazardous Minerals. AIPEA also co-operates in international programs for excellence in Clay Science, such as the International Master in Advanced Clay Science (IMACS), a program jointly delivered by: the University of Poitiers (France); the Technical University of Crete (Chania - Greece); the University of Aveiro (Portugal); the University of Ottawa (Canada); and the Federal University of Rio Grande do Sul (Porto Alegre – Brazil).

Chief products:

The International Clay Conference (ICC), which takes place every four years, is the main AIPEA activity, and the next one is scheduled for Istanbul in July (25-29) 2022. AIPEA continues to improve its website as a source of information and support for the worldwide clay community (www.aipea.org).

AIPEA also produces an annual Newsletter that is distributed to members via e-mail and is also made accessible via the AIPEA Website.

AIPEA has published three monographs of the book series AIPEA Educational Series (AES; ISSN: 2283-687):

- Interstratified clay minerals. Origin, characterization & geochemical significance. Editor: C. Ignacio Sainz-Diaz. ISBN: 978-88-7522-046-4. doi: 10.14644/AES.001
- Magnesian clays: Characterization, origin and applications. Editors: Manuel Pozo & Emilio Galán. ISBN: 978-88-7522-093-6 – ISSN: 2283-687X. doi: 10.14644/AES.002
- Computational modeling in Clay Mineralogy. Editors: Saverio Fiore, Javier Cuadros & F. Javier Huertas. ISBN: 978-88-7522-048-8 – ISSN: 2283-687X. doi: 10.14644/AES.003

Electronic copies of the volumes are available for free download. Information can be found at <https://aipea.org/publications/>

Chief accomplishments for 2021 and plans for 2022:

AIPEA produces an Annual Newsletter in digital format, which is available at the Association website. One of the main objectives of AIPEA is the quadrennial International Clay Conference. Planning is underway for 25-29 July, 2022 in Istanbul <https://icc.aipea.org/>.

AIPEA is now a legally-registered non-profit society in Spain, a process that was necessary to undertake in order to comply with international regulations. We are in the process of registering members who represent regional clay societies.

Through AIPEA.org, a members email list and a list-serve, AIPEA continues to serve as a means to communicate updates on news and forthcoming conferences.

AIPEA officers and council have convened electronically to assess the ICC-17 situation and along with the ICC-17 local committee in Istanbul, decided to postpone ICC-17 to 2022.

Specify how any IUGS Allocation was used:

AIPEA is financially independent and receives income from individual members and affiliated societies and from registrations to the International Clay Conferences.

Budget request with justification (only applicable to low income groups):

None.

Does your website have a link to IUGS?

Yes.

Name, address and e-mail of person preparing this report:

Dr. Peter Crowley Ryan
Geology Department
Middlebury College
Middlebury Vermont 05753 USA
pryan@middlebury.edu
January 29, 2022

Conference News

WORLD FORUM ON INDUSTRIAL MINERALS

Advancing Sci-Tech for Using Clay Minerals and Relevant Industrial Minerals in a Green and Sustainable Way

Qing Yang Institute for Industrial Minerals (QYIM), Zhejiang University of Technology, and the Chinese Association for the Study of Clays, along with some other universities and research institutions, successfully organized and held **THE 5th FORUM ON INDUSTRIAL MINERALS (WFIM-5)** on October 30-November 2, 2021, in Qing Yang, Anhui Province, China.

Around 150 attendees consisted of clay mineral scientists, technologists, managers, science journalists, and staffs from relevant governmental sectors. Prof Giuseppe Falini (the University of Bologna, Italy), Prof Hui Fang XU (University of Wisconsin, Madison, USA), Prof Hong Juan SUN (Southwest University of Science and Technology, China), Dr. Jia Hua LIU and Prof Chun Hui ZHOU (Zhejiang University of Technology & QYIM, China), and Prof Yong Jun Feng (Beijing University of Chemical Technology, China) delivered plenary speeches. Prof Jian Xi ZHU (Guangzhou Institute of Geochemistry, Chinese Academy of Sciences), who is Chairperson of Specialty Committee of Mineral Physics and Mineral Structure, Chinese Society for Mineralogy, Petrology and Geochemistry, gave an address at the opening ceremony. Prof Lin Jiang WANG (Guilin University of Technology) made an introductory talk for a new book—*CaCO₃: Clean Processes and Products Chains*, written by Chun Hui ZHOU, published by CIP Co., Ltd. The presentations and discussion in the forum well demonstrate and highlight new advances in scientific studies, technological innovations and increasing commercialization of high value-added clay minerals and relevant industrial minerals-based products in a sustainable, green and clean way.



Together snapshot of some participants of the 5th Forum on Industrial Minerals (WFIM-5) [photo courtesy of Chui-Hui Zhou]



A Team for Organizing the 5th Forum on Industrial Minerals (WFIM-5) [photo courtesy of Chui-Hui Zhou]

ANNOUNCEMENT

Now Scientists in the field of clay minerals and other industrial minerals around the world are all welcome to submit latest work to and attend:

The 6th World Forum on Industrial Minerals (WFIM-6)

Theme: Science and Technology for Non-metallic Mineral Industry of High-quality

October 22-25, 2022

Qing Yang (Jiu Hua Shan), Chi Zhou City, Anhui, China



E: wfim6_2022@126.com

W: <http://www.qyim-cn.com/forum/index.html>

The activities expect to range from oral and poster presentations, enjoyable social banquets to pleasure one-day field trips to gorgeous UNESCO World Geological Parks.

For details on WFIM-6,

please contact: wfim6_2022@126.com

Looking forward to meeting you in Oct 2022 just in scenic Qingyang County and Jiu Hua Shan World geological park!



National and Regional Clay Groups

This session of the AIPEA Newsletter brings together the reports about the many activities developed by its Affiliated Societies/Groups up to December 2021. It represents an effort to coordinate communication among all National (Regional) Clay Group (NCG) members and the individual members of AIPEA. It aims to become a key vehicle for communication of all clay scientists.

For this issue, AIPEA Newsletter has received reports or announcements from the majority of AIPEA affiliated societies and groups. We are grateful to all our collaborators, as we believe that sharing information will provide inspiration and ideas for collaboration and initiatives within and among societies. The readers will notice that the content of each report is particular to each society, bringing together their national flavor. Some original reports included many photos and we had to leave some on the cutting room floor in order to keep the size of this edition easy to be accessed by digital means.

All has been done with much care and interest and we wish you a pleasant reading.

Peter Ryan
Secretary-General, AIPEA
December 2021

ALGERIAN CLAY GROUP (GAA)

1- Committee:

Currently the members of the Algerian Clay Group (GAA) are preparing a General Assembly for renewal of the members of their office.

2- National Activity of the Algerian Clay Group during 2021:

The health crisis has forced us to cancel the annual conference initially scheduled for the 4th trimester of 2021. On the other hand, the next one is scheduled for the end of 2022 after the installation of the new GAA office members. Additionally, regional meetings are organized between universities, research centers and industry to promote clay valorization.

3- International organization of scientific session Congress 2022:

The Algerian Clay Group will participate in scientific sessions of two congresses in 2022:

The first one is CAV-MMS2022 – this hybrid meeting will take place in Tunisia from March 20-25, 2022 with the special session entitled “TS08 - Advances in fibrous and tubular clay minerals” (<https://www.scientevents.com/cav2022/sessions/>). The second is the 17th International Clay Conference (ICC 2022) in İstanbul organized by the clay science society of Turkey and the Clay Minerals Society of USA from 25-29 July in Istanbul (Turkey), with the scientific session “TS20-Fibrous clays: from fundamental research to functional materials” (<https://dekongroup.com/iccthematicsessions/>).

4- Guest Editor in Minerals Journal.

A member of the GAA is participating as a guest Editor for a special issue “Nanotubular and Nanofibrous Clay Minerals” on Minerals journal (<https://www.mdpi.com/si/minerals/NNCM>).

For further information, please contact:
Dr. Mohamed KHODJA

Or

Sonatrach/Algerian Petroleum Institute
Avenue 1 Novembre 35000 Boumerdes
Algeria

Phone: +213 (0) 24 79 57 11

Fax: +213 (0) 24 79 57 21

e-mail: Mohamed.Khodja@Sonatrach.dz

Prof. Lala Setti BELAROUÏ

Université Oran1 Ahmed Ben Bella

Laboratoire de Chimie des Matériaux

BP.1524 Oran El M'Naouer – Oran 31100

Algeria

Phone: +213 (5) 51 39 00 55

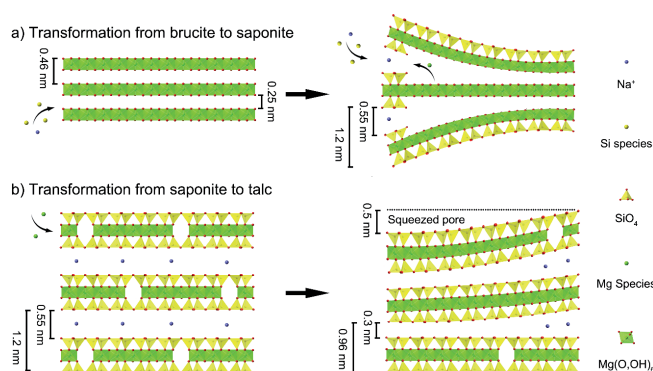
e-mail: belaroui.lalasetti@univ-oran1.dz

CHINESE ASSOCIATION FOR THE STUDY OF CLAYS

Because of the effects from Covid-19, most of the scientific conferences were cancelled in China, and the Chinese Association for the Study of Clays (CASC) thus did not have any conferences in this year. The progress from CASC this year mainly occurred in the following aspects.

1. Scientific research progress

In this year, the CASC members have published more than 30 scientific research papers, which involve the genesis, transformation, environmental behaviors, and applications of clay minerals. For example, He and his group conducted hydrothermal experiments to investigate the transformation of brucite to layered silicates. The experiments demonstrated that brucite can transform into saponite at 160°C in Si-rich environments and the resulting saponite could be subsequently converted into talc at 500°C, via a solid-state transformation mechanism. During such transformation processes, fluid pathways at the nano-scale were established, and water and exchangeable cations (e.g., Na, Ca, and Mg) could be transferred and cycled in the system. These findings are of high importance for understanding porosity generation, fluid flow, and geochemical cycle of elements during the alteration of the oceanic crust in nature (Applied Clay Science, 2021, 106097).



The schematic diagram for the transformation processes

2. Scientific Conference

"The Technology and Industry Development of Non-Metallic Minerals" was held on 26th June 2021, in Hangzhou, China. This conference focused on the scientific research progress and the industrial applications of non-metallic minerals, particularly clay minerals. More than 300 participants attended this conference, and seven sections were organized. About 20 oral presentations were given by the CASC members.



3. The research grants

A number of scientific research grants were awarded to the CASC members from the Chinese government (e.g., National Natural Scientific Foundation of China, Ministry of Science and Technology of the People's Republic of China) in this year. One grant awarded to professor Hongping He's group is the National Key Research and Development Program of China, which focus on the important role of clay minerals in the formation of rare earth elements deposit in the weathering crust of South China. The total funding of the grant is about 10 million CNY.

CROATIA CROATIAN CLAY GROUP



The Croatian Clay group (CCG), affiliated to the Croatian Geological Society (Hrvatsko geološko društvo), consists of 13 active and additional 13 passive members, mainly coming from the field of geology. In the future, we are working on expanding our members to other scientific fields involved in clay research in Croatia, mainly civil engineers and/or chemists. The activities in 2021 included one joint meeting organized jointly with other society branches, in virtual form. It was the 70th anniversary of the Croatian Geological Society, where some of the most important projects of the society members in recent years were presented. The CCG member Jasmina Martinčević Lazar successfully defended her doctoral thesis at the Faculty of Mining, Geology and Petroleum Engineering, University of Zagreb, under the supervision of Prof. Goran Durn and Prof. Snježana Mihalić Arbanas, with the title "The influence of clay minerals on the physical properties of fine-grained soils from the Zagreb Podsljeme area" (Utjecaj minerala glina na fizička svojstva sitnozrnastih tala podsljemenske zone grada Zagreba). Additionally, she was nominated as the candidate of the Croatian Clay Group for the AIPEA newly established Early Clay Scientists (ECCS) network. The members didn't attend the clay-related conferences, due to postponed MECC, Euroclay and ICC conferences to 2022 and 2023, which are traditionally attended. The group will be engaged in organizing activities and meetings in the following year.



Photo: Dr. Jasmina Martinčević Lazar during the doctoral thesis defence.

President: Dr. Nikolina Ilijanić
(Croatian Geological Survey)
Secretary: Dr. Jasmina Martinčević Lazar
(Croatian Geological Survey)

CZECH REPUBLIC CZECH NATIONAL CLAY GROUP

The Czech National Clay Group published two numbers (68–69) of the “Informátor” bulletin in Czech language with information about clay science. ISSN of the printed version is 1802-2480; ISSN of the internet pdf version is 1802-2499.



Informátor published information about laboratories interested in clay minerals and two full articles with titles: “Natural and cultural attractions of Povází considered by geologist”, given by Pavel Hájek and “Influence of glass sand mining on minerals composition of sediments of the Libuňka river” given by Martin Štátný and Pavel Hájek. Other information about books, conferences and contributions of members related to clays was included. We did not organize two traditional seminars in this year due to Covid restrictions.

Contemporary board of CNCG: Martin Štátný (chairman), Miroslav Pospíšil (vice-chairman), Jana Schweigstillová, Pavel Hájek, Petr Praus, David Koloušek, Barbora Doušová (board members).

Correspondence address:

RNDr. Martin Štátný, CSc. (chairman)
Institute of Geology AS CR, v. v. i.
Rozvojová 269, 16500 Prague 6, Czech Republic
e-mail : stastny@gli.cas.cz,
tel.: +420 233 087 233

or

RNDr. Miroslav Pospíšil, Ph.D. (vice-chairman)
 Charles University, Faculty of Mathematics and Physics
 Department of Chemical Physics and Optics
 Ke Karlovu 3, 12116 Prague 2, Czech Republic
 E-mail: pospisil@karlov.mff.cuni.cz

All above mentioned papers and other information about CNCG are presented at our www pages: www.czechclaygroup.cz

By Miroslav Pospíšil,
 February 9, 2022

FRANCE FRENCH CLAY GROUP (GFA)



1. Committee

The French Clay Group continues to have a stable membership base around 100 members. In 2021, membership fees have been removed for non-permanent members to encourage them to join the network. Liva Dzene, member of the GFA advisory board, has now joined the Executive committee.

2. Accomplishments

2.1. Annual meeting of French Clay Group



The annual meeting, originally planned in Nantes, was moved online due to the covid pandemic. The event was chaired by Dimitri Deneele (Institut des Matériaux de Nantes). It gathered around 95 participants on Zoom.

The program was divided into three half days, each beginning with an invited lecture:

Nathalie FAGEL (ULiège, Belgium): Valorization of clays in the design of high-performance, accessible and eco-responsible building materials

Bernard HUMBERT (IMN, Nantes): RAMAN spectroscopy to make matter talk – Overview of some potentialities of this material investigator

Fabien HUBERT (IC2MP, Poitiers) as the GFA 2020 Award for “Young” investigator: Nature of interstratified clay minerals in temperate climate soils



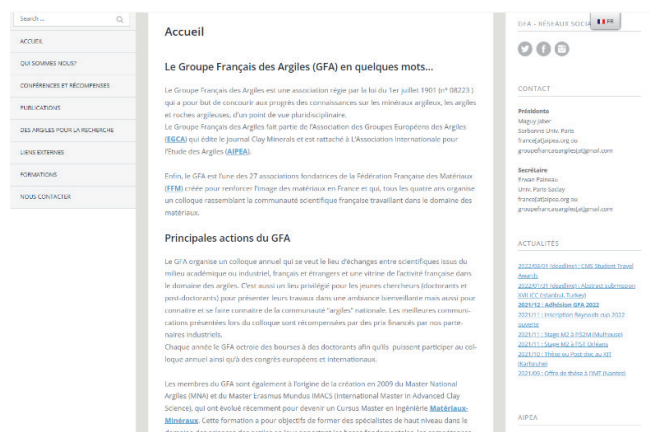
Fabien HUBERT, GFA 2020 Award for “Young” investigator

25 oral presentations and 8 poster flash presentations were given by PhD/postdocs and established researchers. The winner of the best presentation award is Rana Al Tahan, from the University of Limoges for her presentation entitled: *Characterization of the surface properties of kaolins in aqueous suspension by acoustophoresis - Influence of the crystallochemistry of kaolinite* (R. Al-Tahan, C. Pagnoux, N. Tessier-Doyen & G. Gasgnier).

The next annual meeting will be held in Paris in May 2022.

2.2. Opening of a new website

The GFA has proceeded to the complete redesign of the website using the tools offered by the AIPEA. It is now available at the following address: <https://france.aipea.org/>. The international version will be available soon although the French version is operational yet. This site provides useful information on the GFA, the composition of the committees, GFA e-news, annual meetings and training.



Overview of the GFA home page on the new website (in French).

We would particularly like to thank Bruno Lanson and Dimitri Deneele who contributed to the completion of this work and Saverio Fiore for his assistance in setting up the website on the AIPEA side.

2.3. French Federation of Materials Association

The GFA is part of the 29 French scholarly societies that have founded the French Federation of Materials Association (FFM). The FFM Association aims at federating French language actions around material sciences. The mission of this association is to be an actor of strategic analysis, scientific programming and operational implementation in the field of materials. Jocelyne Brendle (GFA advisory board) and Maguy Jaber (GFA president) have joined the Executive committee of the FFM Association. A quadrennial meeting (Matériaux 2022 – Lille) is organized by the FFM for which GFA members are strongly involved in the organization and/or participation through oral contributions.

3. Implication of members in international instances

Sabine Petit, Research Director at CNRS – Poitiers is the new Vice-President Elect of the Clay Minerals Society (USA). Bruno Lanson, Research Director at CNRS – Grenoble, now serves as Past President of the CMS. He continues to be the chairperson of the nomenclature Committee of the AIPEA. Liva Dzene, Assistant Professor at Institut de Science des Matériaux de Mulhouse, has been elected as a Council Member of the CMS. She serves also as chair of Early Career Clay Scientists Committee of the AIPEA. Jocelyne Brendle, Professor at IS2M – Mulhouse, continues to be the vice-president of the AIPEA.

Submitted by Maguy Jaber
with the assistance of Erwan Paineau
Paris, January 2022

GERMAN-AUSTRIAN-SWISS CLAY GROUP DTTG

The 2021 highlight for the DTTG was that we were able to hold the 9th DTTG Workshop in person, September 13 to the 17th 2021, at the Research Institute for Inorganic Materials – Glass/Ceramic in Höhr-Grenzhausen (FGK) and the Koblenz University of Applied Science - West-WaldCampus. (see picture below). Christoph Piribauer and colleagues organized this successful international workshop. During the week, which was fully packed with lectures and practical exercises, the participants got the chance to deepen their knowledge in basic as well as advanced techniques in clay mineral characterization and quantification. The topics included Rietveld modeling of XRD patterns, as well as several other methods such as FTIR, CEC, STA, chemistry of clay minerals and electron microscopy. As the FGK is an applied R&D facility working in the field of ceramics there were also lectures dedicated to applied clay science. The FGK thanks all lecturers and participants for contributing and actively participating in the workshop and are happy to welcome you all again in for the 10th international workshop “Quantitative and Qualitative Analyses of Clay Minerals” in 2023! If interested in participating in the 2023 workshop contact Christoph Piribauer sooner rather than later, because the workshop typically fills up quickly.



consists of Matthias Schellhorn, Stephan Schmidt KG in Dornburg, as President, Georg Grathoff, University of Greifswald, as VP, and Kristian Ufer, BGR Hannover, as treasurer. Further details of upcoming meetings, workshops, and the composition of the complete board can be found on the DTTG website <https://www.dttg.ethz.ch/>

The DTTG membership is not shrinking, which is good news. We are growing by becoming an associated member in the DVGeo (Dachverband Geowissenschaften), representing the biggest German geosciences societies. The DVGeo is unifying the geosciences to increase the visibility and political clout of the geosciences, politically, scientifically and socially. The continued DTTG board



INDIA CLAY MINERAL SOCIETY OF INDIA



THE CLAY MINERALS SOCIETY OF INDIA

Division of Soil Science & Agricultural Chemistry
Indian Agricultural Research Institute, New Delhi - 110012

Proceedings of 23rd Annual Convention and National Conference of the Clay Mineral Society of India (CMSI) held at ICAR- IARI, New Delhi 110012

The 23rd Annual Convention and National Conference on Application of Clay and Allied Sciences in Agriculture, Environment and Industry” held at ICAR-IARI, New Delhi during December 22-23, 2021. A brief report of the Convention is presented hereunder.

DAY 1: December 22, 2021

Inaugural Session

The inaugural session was held on 22nd December, 2021 at ICAR-IARI, New Delhi. The programme was started at 11.00 AM with the Invocation song. The Conference was inaugurated by **Dr. S.K. Chaudhari, Deputy Director General (NRM), ICAR**. The guest of honor was Dr. S.K. Ghosh, Former Head, Division of Soil Science and Agricultural Chemistry, ICAR-IARI, New Delhi. The programme was presided by Dr.

S.C. Datta, President CMSI and Chairman of the Organizing Committee. Several awards of CMSI were conferred in the inaugural session when citations were delivered by Dr.

S.K. Mahapatra, Secretary CMSI and Organizing Secretary. The Honorary Memberships for the year 2020 were conferred to Dr. Saroj Kumar Sanyal, Former Vice Chancellor, BCKV, Mohanpur, West Bengal and Dr. Siddhartha S Mukhopadhyay, Former Director, Electron Microscopy & Nanoscience Laboratory, Punjab Agricultural University, Ludhiana. The Fellows of CMSI for the year 2020 were conferred to Dr. P. Raja, Principal Scientist, ICAR-IISWC Research Centre, Theetukal, Tamil Nadu and Dr. Samar Kumar Gangopadhyay, Former Principal Scientist & Head, ICAR-NBSS & LUP, Regional Centre Kolkata. A book entitled “Clay and other Minerals in the Formation, Management and Ecosystem Services of Indian Tropical Soils” authored by Dr. D.K. Pal, Former President, CMSI, was released by the Chief Guest. Dr. Pal presented the overview of the book. After this Dr. S.K. Chaudhari delivered the inaugural address wherein he highlighted the importance of research in Clay Sciences. The session ended with the formal vote of thanks by Dr. S.K. Mahapatra, Secretary, CMSI.

Special Lecture

After the inaugural session, a special lecture was delivered by Dr. S. K. Sanyal, Former VC, BCKV, Mohanpur, on the topic “Arsenic contamination of groundwater in parts of West Bengal (India): build-up in soil-crop systems and mitigation”.

Best Ph.D. Thesis Presentation Award Contest

Three candidates participated in the contest. They were Dr. K. Velmourougane, ICAR- CICR, Nagpur; Dr. Priya Gurav, ICAR-ISSS, Bhopal and Dr. Seema from BHU, Varanasi. On the basis of their presentations and evaluation by the Judging Committee, Dr. Priya Gurav was selected for best PhD thesis presentation award of CMSI. The award carries a certificate and cash price of Rupees five thousand (Rs.5000/-).

Annual General Body Meeting

The 23rd Annual General Body Meeting of the Society (CMSI) was held on 22nd December, 2021 at 5.00 PM. Dr. S.C. Datta, President, CMSI, chaired the meeting. The business of the meeting as per the listed agenda was transacted. The proceedings of the 22nd AGM held on September 23, 2019 at ICAR-IARI, New Delhi were considered and confirmed by the house. The Annual Report for the year 2019-2020 and 2020-2021 of the Society was presented by Dr. S.K. Mahapatra, Secretary, CMSI. He mentioned that during the year 2019-2020, the 22nd Annual Convention cum National Conference was held at ICAR-IARI, New Delhi during September 23-24, 2019, wherein 6th Professor

S.K. Mukherjee CMSI Foundation Lecture, Special Symposium and four Technical Sessions were organized. Both the issues of Clay Research 2019 (Vol.38, 1&2) were published. During the year 2020-21, Annual Convention and AGM could not be held due to Covid Pandemic situation prevailing in the country. However, several EC meetings were held on virtual platform. The 7th Professor S.K. Mukherjee CMSI Foundation Lecture was organized on May 16th, 2021 in virtual mode. The lecture was delivered by Dr. Reiner Dohrmann, President AIPEA, on the topic “From ion exchange to XRD Rietveld refinement of clay minerals in sediments, soils and radwaste application- challenges for method development”. One special lecture was also organized from the industry side on January 31, 2021, in virtual mode. It was delivered by Padmashri Dr Swapan Guha, Former President, Indian Ceramic Society, on the topic “Use of clays in ceramics: issues and challenges”. Both the issues of Clay Research 2020 (Vol.39, 1&2) as well first issue of 2021 (Vol.40, No

1) were published during the year. Secretary, Dr. Mahapatra also mentioned that the documents for revised NAAS rating of the CLAY RESEARCH journal was submitted to NAAS with the sincere efforts of Dr. S. S. Mukhopadhyay, Chief Editor and Dr. Nayan Ahmed, Vice President. The Secretary was pleased to announce that the NAAS rating of the journal was restored with a higher score of 4.37, w.e.f. 1st January, 2021. The house appreciated it. Secretary then requested all the members to intimate their colleagues, friends, students and other researchers to submit research articles for publication in CLAY RESEARCH. After this, the audited statement of account for the years ending 31st March, 2020 and 31st March 2021, were presented by the Treasurer, Mrs. Ritu Nagdev. After this, the agenda for election of Executive Council (EC) for years 2022 and 2023 was taken up. Dr.

Mahapatra informed that in response to the announcement for new EC, only two nominations viz. Dr. Priya Gurav, Scientist, ICAR-ISSS Bhopal for Councilor of West Zone and Dr. Dibendu Chatterjee, Scientist, ICAR-NRRI, Cuttack for Councilor for East Zone, were received by the Society. House accepted their nomination. Then the elections for all the remaining positions were held. The elected EC for the year 2022 and 2023 is mentioned below.

CMSI EXECUTIVE COUNCIL 2022 -2023

President	Dr. Nayan Ahmed
Vice Presidents	Dr. S.K. Mahapatra Dr. P. Chandran
Secretary	Dr. Prasenjit Ray
Joint Secretaries	Dr. Ruma Das Dr. Debarup Das
Treasurer	Mrs. Ritu Nagdev
Chief Editor	Dr. S.S. Mukhopadhyay
Councilors	
East Zone	Dr. S.K. Reza Dr. Dibyendu Chatterjee Dr. Abir Dey
North Zone	Dr. Raj Mukhopadhyay
South Zone	Dr. K.S. Anil Kumar Dr. P. Raja
Central Zone	Dr. (Mrs.) Priya Gurav Mrs. Khushboo Rani
West Zone	Dr. Ranjan Paul Dr. (Mrs.) Swati P Zade

The meeting ended with the vote of thanks by Dr. S.K. Mahapatra, Secretary.

DAY 2: December 23, 2021

Technical Sessions

Two Technical Sessions were organized by the Society.

Technical Sessions I:

The technical session-I was chaired by Dr. S.K. Ray, Principal Scientist and Head, ICAR-NBSSLUP Regional Centre Kolkata.

Out of 15 abstracts submitted for the session, 10 were presented. Out of these 10 presentations, 4 papers were on applications of clay science, including the nutrient delivery, both macro and micro, and remediation of environmental pollution from Arsenic and synthetic dyes; 3 on the effect of clays and clay minerals on various phenomena

like soil carbon stability, mango yield and quality, and soil degradation, 1 on clay mineralogy and weathering of soil, 1 on soil acidity, and 1 on selecting a suitable extractant for soil K.

Dr. Nintu Mandal from Bihar Agricultural University, Sabour presented on Nano-clay polymer composite (NCPC) based formulations of Zn and Mn for increasing their use efficiency in crops. They have prepared and evaluated Zincated NCPC, Chitosan grafted ZNCPC, Starch grafted ZNCPC and observed promising results in enhancing plant available Zn in soil and Zn uptake by rice and wheat, along with apparent recovery. The Mn-NCPC also showed some positive results. Apparently, there were no harmful effect of these polymers on soil microbes. However, such findings have to be corroborated further through long-term field experiments. Moreover, the economic aspect has to be looked into for real life agricultural application.

Sarath Kothari from ICAR-IARI synthesized and evaluated novel N fertilizer products involving bentonite, and found that naturally polymerizing oil and nutshell based products along with bentonite clay can be successfully used for coating urea fertilizer to impart slow release characteristics.

Siyaaram Meena from ICAR-IARI used Fe or DMSO modified bentonite, kaolinite and red mud for immobi-

lization of As in aqueous system and observed best As sorption with Fe-bentonite, DMSO-bentonite and Fe-red mud. However, focus should be put on the practical feasibility of this approach of immobilizing As and also the disposal of modified clay products after As adsorption.

Dr. Indu Chopra from ICAR-IARI used bentonite for removal of Reactive Black-5 dye from water and found that the dye-adsorbing capabilities of bentonite were less than the commercially available activated C, especially for large sized azo dyes. In future, attempts will be made to modify the bentonite with low-cost inputs in order to increase its dye-adsorbing capabilities without introducing much of expenses.

Dr. Abinash Das from ICAR-IISS Bhopal demonstrated the effect of pedogenic clays on soil organic C stability. He found that smectite, vermiculite and smectite/vermiculite interstratified minerals helped in the accumulation of higher labile C fractions; whereas, illite and kaolin promoted lower labile C fractions. Also, smectite tends to decrease SOC mineralization, while kaolin dominance leads to high SOC mineralization.

Dr. R. Srinivasan from NBSSLUP Hebbal worked on the influence of clay distribution and slope position on mango colour and yield and observed good colouration of mango at 3–8% slope due to highest exposure to sunlight at this slope. Best marketable mango was obtained from moderately deep to deep and sandy clay loam textured soil with upland situation.

Dr. Ranjan Paul from NBSSLUP Nagpur worked on some cotton growing soils from Maharashtra and demonstrated a cause-effect relation of palygorskite induced natural soil degradation in terms of drainage both in sodic and non-sodic Vertisols. However, in-depth studies are required before assigning the drainage problem entirely to the presence of palygorskite.

Dr. P.S. Vishnu from Kerala Forest Research Institute studied the clay mineralogy and weathering of soils in forest ecosystems of western ghats of Kerala, and found younger soils with less weathering in the natural forest systems, whereas managed plantations led to accelerated weathering.

Dr. Chandrakala M. from NBSSLUP Hebbal worked on forms and distribution of soil acidity in surface and sub-surface under different landform and land use in tropical humid region of India. She concluded crop growth can be severely restricted when Al occupies more than 50%

of the exchange complex. However, the suggestion of ameliorating sub-soil acidity by gypsum needs further in-depth study.

Subhadip Paul from ICAR-IARI compared different cations and anions for exhaustive K release from soils and found 0.1 N BaCl_2 to be the most effective under successive leaching conditions. He was suggested to look into the changes in mineralogy of fine, medium and coarse clay fractions along with silt before and after leaching experiment for a better understanding of the involvement of different minerals in K release under exhaustive conditions.

The session ended with remarks and vote of thanks from the chairman.

Technical Sessions II:

The Technical Session-II was chaired by Dr. Nayan Ahmed, Principal Scientist, Division of Soil Science and Agricultural Chemistry, ICAR-IARI, New Delhi. The rapporteur of the session was Dr. Prasenjit Ray, Scientist, ICAR-IARI, New Delhi.

In the Technical Session-II, 10 deliberations were made in form of oral presentation. The broad themes of the presentations were conservation agriculture, adsorption behaviour of zinc (Zn) on clay, soil acidity, soil quality, phosphorus (P) dynamics in soil, and characterization of carbonaceous vermicompost and engineered biochar for applicability in agriculture.

The presentations involving conservation agriculture highlighted the effects of management practices (e.g., tillage, residue and nutrient management) on soil properties and crop productivity, temperature sensitivity of soil organic carbon and adsorption behaviour of soil P. Soil properties in different cropping systems as affected by the management practices under conservation agriculture was highlighted by Dr. Dhinu Yadav from CCS HAU, Hisar. Results indicated that the long-term zero-tillage practice in mung bean-wheat cropping system resulted relatively higher soil nitrogen, organic carbon and microbial biomass content with higher dehydrogenase, cellulase and urease activities at 0-15 cm soil depth in comparison to conventional tillage practice. Mr. A.K. Dash from ICAR-IARI, New Delhi in his presentation highlighted the temperature sensitivity of soil organic carbon as affected by crop residue and nutrient management practices under conservation agriculture. He found that retention of crop residue at the rate of 2 to 4 t ha⁻¹ had significant positive

effect on cumulative C mineralization (C_t) in bulk soil, and macro- and micro-aggregates, whereas different K fertilizer rates did not register any significant effect. Ms. Chinmayee Behera from ICAR- IARI, New Delhi reported significant reduction in P adsorption capacity in triple zero tillage with residue retention plot under conservation agriculture as compared to conventional tillage plot.

Mr. Kapil Chobhe from ICAR-IARI, New Delhi presented on the adsorption behaviour of Zn on bentonite clay. Batch experiments were carried out to assess the feasibility of using bentonite clay for the removal of Zn metal from aqueous solutions. It was reported that maximum adsorption (up to 80%) of the Zn^{2+} ion could be achieved at pH 9 with the equilibrium time of 20 minutes.

Dr. Prasenjit Ray from ICAR-IARI, New Delhi in his presentation highlighted that the apparent clay CEC is an important indicator of acidity of soils occurring in a catenary sequence under hilly terrain of the Northwestern Himalayan region. High magnitude of total potential acidity in the studied soils was attributed to the presence of high activity clay minerals in these soils as revealed from the apparent clay CEC ($>24 \text{ cmol}(+) \text{ kg}^{-1} \text{ clay}$).

Dr. Sunanada Biswas from ICAR-IARI, New Delhi assessed soil quality under 22 years (1998-2020) old long-term experiment with rice-mustard-sesame cropping system in Inceptisol of lower IGP and reported that the highest soil quality index was obtained with the 50% recommended doses of NPK fertilizer along with FYM@ 7.5 t ha^{-1} (NPKF), as well as with FB (FYM@ 11.25 t ha^{-1} + biofertilizer@ 10 kg ha^{-1}) treatments. She added that in view of limited availability of organics and yield sustainability, NPKF treatment may be recommended for rice-mustard-sesame cropping system in Inceptisol of lower IGP.

Mr. Avijit Ghosh from ICAR-IARI, New Delhi in his presentation highlighted the usefulness of rice straw (RS) and P solubilizing microbes (PSMs) in mobilizing inorganic soil P under varying hydrothermal regimes. It was reported that RS application at 12 and 14 Mg ha^{-1} under sufficient and limited moisture availability, respectively, along with PSMs could enhance P availability in soil under incubation study.

Dr. Dibyendu Chatterjee from ICAR-NRRI, Cuttack prepared vermicompost from non- conventional plant and animal sources (e.g., poultry litter, paddy straw, azolla) and assessed the feasibility of using the compost for enhancing the yield and quality of bell pepper. It was reported that application of vermicompost improved the

morphological, biochemical and yield attributes, which in turn translated into higher yield and improved quality of the bell pepper. In addition to the yield and quality of the product, application of vermicompost improved soil health as well.

Ms. Saptaparnee Dey from ICAR-IARI, New Delhi delivered a presentation related to the effect of engineered biochar on nutrient retention in Inceptisol. She emphasized that engineered biochar could enhance CEC and AEC simultaneously for higher nutrient retention. She and her group prepared engineered biochars by treating the washed rice straw biochar (RBCW) separately with different oxidising and reducing agents to augment CEC and AEC, respectively and with their combined treatments to further reinforce CEC and AEC. It was reported that the engineered biochars reduced the leaching of NH_4^+-N , $NO_3^- -N$, P and K from soil in a laboratory leaching experiment.

Apart from the above research paper presentations, a review paper on oil pollution and soil health was also presented by Mr. Sayan Mukherjee from West Bengal. It was highlighted that bioremediation and phytoremediation could be the possible remediation measures for curbing the adverse effect of oil pollution on soil health.

The session ended with the remarks and vote of thanks by the chairman.

The Plenary session was chaired by Dr. S.C. Datta, President CMSI with the panelists, Dr. D.K. Pal, Dr. Nayan Ahmed and Dr. S.K. Mahapatra, wherein the rapporteurs from the technical sessions presented the reports and the same were deliberated..

The Conference was ended with the formal vote of thanks by Dr. S.K. Mahapatra, Organising Secretary.



S.K. MAHAPATRA

ITALY

ITALIAN ASSOCIATION FOR THE STUDY OF CLAYS AISA

During 2021, AISA members actively participated in the presentation of research results and research programs at international and national conferences.



The Association continues to sponsor all events in schools and at conferences in which its members are involved. In 2021, AISA, in collaboration with the Institute of Methodology for Environmental Analysis - National Research Council (CNR-IMAA), organized the DUST 2021 (4th International Conference on Atmospheric Dust - 2021) which took place in Torre Cintola Conference Centre - Monopoli (Italy) from 4 to 7 October, 2021 under the chairship of Saverio Fiore.



The DUST 2021 Conference focused on inorganic atmospheric particulate with a wide range of scientific contributions, such as the techniques used to characterize the particulates, the impact on human beings and the environment and the importance of dust in geological times, etc. The meeting provided a unique opportunity for mineralogists, physicists, geochemists, engineers, volcanologists, chemists and for many other specialists to share ideas and knowledge on the boundless world of atmospheric particles.

At the end of 2021 AISA members were 30, among whom 24 Ordinary, 1 junior, 4 Life members and 1 Honorary member.

WORK PLAN FOR 2022:

The Association will be engaged in activities designed to further involve members in activities, consolidate membership and increase numbers.

AISA Council Board members 2022-2025

President:

Fernanda Nora ANDREOLA

(Department of Engineering “Enzo Ferrari”, University of Modena and Reggio Emilia)

Secretary:

Rosa SINISI

(Institute of Methodologies for Environmental Analysis, IMAA-CNR, Tito Scalo, Potenza)

Treasurer:

Saverio FIORE

(Institute of Methodologies for Environmental Analysis, IMAA-CNR, Tito Scalo, Potenza)

Councillors:

Mariano MERCURIO

(Department of Science and Technology (DST), University of Sannio, Benevento)

Lara MARITAN

(Department of Geosciences, University of Padova)

Administrative address:

Associazione Italiana per lo Studio delle Argille (AISA)
c/o Dipartimento di Scienze della Terra e Geoambientali
Via Orabona, 4, 70125 Bari – Italia
Fiscal Code. 93296070720

Prepared by:

Rosa Sinisi

Secretary, AISA

segreteria@aipea.it

THE CLAY SCIENCE SOCIETY OF JAPAN



The Clay Science Society of Japan

1. Committee

Officers for the fiscal year 2021 and 2022 were listed below.

President:

Prof. T. Kogure, The University of Tokyo

Vice president:

Prof. M. Nakagawa, Kochi University

Dr. H. Chino, Obayashi Corporation

Secretary General:

Prof. T. Sato, Hokkaido University

Principal Editors:

Dr. T. Hibino, National Institute of Advanced Industrial Science and Technology (Nendo Kagaku)

Prof. T. Nakato, Kyushu Institute of Technology (Clay Science)

2. The 64th annual meeting

The 64th annual meeting of the Clay Science Society of Japan was originally scheduled to be held at Shinshu University on September 15-16, 2020. However, because of the outbreak of COVID-19, it was postponed to September 2021. The Board planned the in-person meeting for September 14-15, 2021. However, due to the increasing number of patients with COVID-19 at August, Shinshu University restricted the entry of outsiders during September. Thus, the Board decided to make the meeting completely virtual. Forty-five oral presentations were given in live format on September 14-15, and 21 poster presentations, including the on-demand format, were given on September 16-18. Five young researchers, Mr. I. Morimoto, Dr. M. Miyagawa, Mr. K. Arakawa, Mr. K. Nakase and Mr. Y. Sendai, were awarded for their excellent presentations. The principal organizer of the meeting was Prof. Seiichi Taruta of Shinshu University.

On 14th September, a special lecture entitled “Non-layered clay minerals” was given by Prof. A. Yamazaki of Waseda University, who was the president of CSSJ for the fiscal year 2019 and 2020. The president of CSSJ typically gives a special lecture at the annual meeting of CSSJ in the last year of his term. However, due to the postponing

of the 64th annual meeting, his special lecture was given at this opportunity.

Also on 14th September, a symposium entitled “SDGs in Clay Science” was given by the following 5 invited speakers.

- Dr. S. Ishihara (National Institute for Materials Science (NIMS)): Gas-releasing materials using layered double hydroxides
- Prof. T. Hara (Chiba University): Development of layered Ni-Zn basic salt catalysts for the chemical immobilization of CO₂ to epoxides
- Dr. H. Miyahara (Ishihara Sangyo Kaisha, Ltd.): Application of clay-based adsorbents for energy conservation and carbon dioxide reduction
- Prof. Y. Watanabe (Hosei University): Smart materials for precision agriculture
- Dr. T. Ebina (National Institute of Advanced Industrial Science and Technology (AIST)) Development of composite materials of cedar-derived lignin-based materials and clay minerals

3. Awards

The society presented awards to the following members at the occasion of the general member meeting.

Clay Science Society of Japan Award was given to Dr. Takeo Ebina, National Institute of Advanced Industrial Science and Technology (AIST).

Achievement Award was given to Dr. Nobuo Iyi, National Institute for Materials Science (NIMS).

Young Researcher Award was given to Prof. Jun Yoshida (Nihon University).

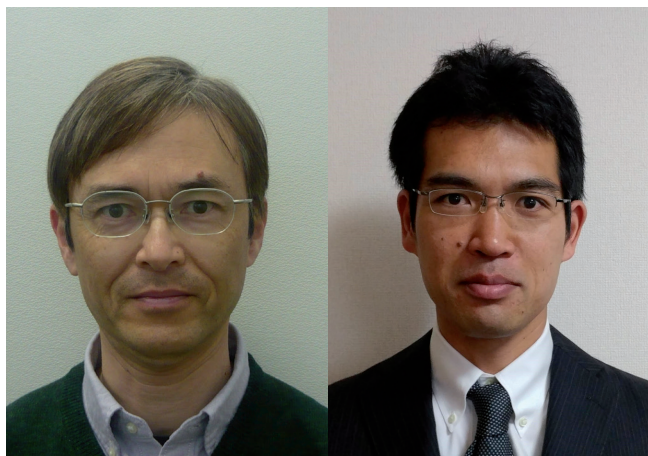
Best Technological Award was given to Nuclear Waste Management Organization of Japan (NUMO).

Best Paper Awards were given to S. Aisawa et al. (Clay Science, 24, 47-54) and Y. Miyoshi et al. (Nendo Kagaku, 59, 33-45).

THE CLAY SCIENCE SOCIETY OF JAPAN



Dr. Ebina

*Dr. Iyi**Prof. Yoshida**Engineers of Nuclear Waste Management Organization of Japan*

4. Publication

Clay Science Society of Japan publishes three issues of *Nendo Kagaku* (Journal of the Clay Science Society of Japan in Japanese), and four issues of *Clay Science* every year.

For further updated information: <http://www.cssj2.org/english/> or contact Jun Kawamata, Yamaguchi University, e-mail: j_kawa@yamaguchi-u.ac.jp.

Jun Kawamata
January/2022

KOREAN CLAY SCIENCE SOCIETY

The aim of the Korean Clay Science Society is to promote both basic research and interdisciplinary studies based on various clay-related academic fields including mineralogy, geology, soil science, physics, chemistry, biology, and etc. The researches will not limited to the academic examination but extend to the practical applications for future industries.

Overview

The Korean Clay Science Society was founded in 2012 following the request to host 2nd Asian Clay Society meeting. Under the extensive academic activity of Prof. Jin-Ho Choy, who is now the honorary chairperson, Korean Clay Science Society started up with clay researcher from various fields including geology, mineralogy, soil science, chemistry, nanoscience, chemical engineering, and etc. Since then, Korean Clay Society has held domestic annual meeting in Spring and Fall. As the representative of Korean Clay Scientists, the society participated in organizing symposia in various clay-related international meetings including Euroclay, International Clay Conference, International Mineralogy Association meeting and even contributed some special symposium in Clay Mineral Society, USA. Based on active academic activities, we not only bring up competitive young scientists in clay science but also open a new era of clay-based industrial applications.

Due to the outbreak of COVID-19, Korean Clay Science Society temporarily closed academic activities in 2020 and 2021. Under the leadership of honorary chairman, Prof. Jin-Ho Choy, Dankook University, Korea, we recently rearranged the steering committee members and prepare for the academic activity after pandemic. Prof. Jae-Min Oh, Dongguk University, Korea is going to take the responsibility of chairperson from 2021.

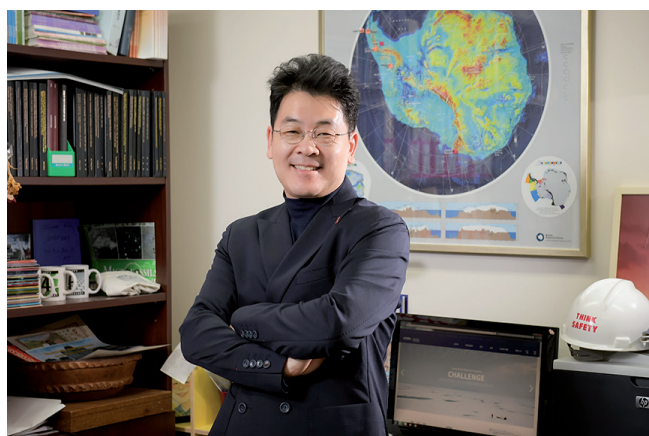
Steering members



Honorary Chair: Prof. Jin-Ho Choy / Intercalation chemistry, Biomedical clay, Clay nanohybrids



Chair: Prof. Jae-Min Oh, Dongguk University / Environmental clay, Medicinal clay, 2D materials



Executive director: Prof. Jin-wook Kim, Yonsei University / Mineralogy, Microbe-clay interaction, Extreme Environment



Executive director: Prof. Dae-Hwan Park, Chungbuk National University / Functional Clay

KURDISTAN CLAY GROUP (KCG)

The idea of Kurdistan Clay Group was first discussed at XIV-ICC International Clay conference (June 2009) with the former president of ai pea Dr. Saverio Fiore through Dr. Reiner Dohrmann and Dr. Stephan Kaufhold from BGR. Very recently, our Clay Group became an AIPEA-affiliated group in Oct-2021.

Committee

President:

Prof. Dr. Bakhtyar K. Aziz (College of Medical and Applied Science- Charmo University- Chamchamal- Iraq)

Secretary:

Assistant Prof. Dr. Dler M. Salh (Chemistry Department-College of Science, University of Sulaimani, Sulaimanyah-Iraq)

Treasurer:

Dr. Irfan Omer Musa (Geology Department, College of Science, university of Sulaimani, Sulaimanyah-Iraq)

KCG is a small group of researchers in the field of clay science. Our plan is to expand the group by inviting researchers from all of the region to join KCG and extend the areas of research to include most of clay and clay mineral fields of research (Fig. 1).



Fig. 1 The first members of Kurdistan Clay Group (KCG)

2021 Activities

The activities of Kurdistan Clay Group for 2021 was mainly focused on field trips, characterization of local clays, environmental and industrial application of local clays.

Traditionally, individuals and sub-grouped members of the Kurdistan Clay Group lead or take part in field trips activities mainly in spring and summer seasons (April to September) (Fig. 2 and 3).



Fig. 2 Field trip to Mawat (Photo by Dr. Heero Abdullah) (29 April 2021)



Fig. 3 Field trip to Azmar (Photo by Hawar F. Ismail) (2021)

Exploration and characterization of local raw bentonite from a selected area of Garmiyān-Kurdistan/Iraq was the aim of a field trip by Dr. Dler m. Salh (Fig. 4)

Characterization of clay sediments and in Kurdistan region of Iraq takes a great part of our groups work and recently, an article was published by Dr. Heero Abdullah from KCG.

<https://doi.org/10.1016/j.jafrearsci.2021.104351>

Using local natural, and modified clay for removing hazardous chemicals from medicinal laboratories is another filed of KCG group. In this direction, couple of articles were published in 2021:

<https://doi.org/10.1007/s12633-020-00833-3>

<https://doi.org/10.1007/s11144-021-01998-7>

and several manuscripts are under review.

Activation of local clay to be used as bleaching earth for re-refining of used lubricating oil industry is an important filed of our study to improve the oil industries economically and environmentally. Very recently, we made an agreement with a local waste engine oil re-refining company to improve the color of their oil product using local clay and implement a recycling and regeneration process for the spent bleaching clay and oil recovery (Fig. 5).



Fig. 5 Pre-test for local clay assessment as a bleaching earth for waste engine oil re-refining by Dr. Bakhtyar K. Aziz



Fig. 4 A field trip to Gramiyan to investigate quality of local raw Bentonite

POLAND POLISH CLAY GROUP

In 2021 the Polish Clay Group focused its activities on organizing the 10th Jubilee Mid-European Clay Conference (MECC'20/22). The Organizing Committee of the conference is planning to hold the event in person from September 11th to the 15th, 2022 at the Kliczków Castle.



However, this may be subject to change in the unlikely case of another lockdown. If so, the conference will have to be held online. All new information will be updated on the website:

<https://mecc20.pl>

The Polish Clay Group signed a contract with the International Visegrad Fund (www.visegradfund.org) related to the grant received in 2020 and dedicated to the project titled "Science and Education". This project will be hosted by the MECC20 conference and includes a technical session and a workshop. The technical session titled "Teaching Clay Sciences" to be led by Czesław August and Franz Ottner will provide information on clay science teaching methodologies currently employed in Visegrad countries. Presentations will be followed by a round table discussion focused on proposing a common educational program based on the state of the art in clay sciences combined with the modern didactic approach. The inventory on training needs will give impetus to educators to provide the courses and qualifications needed to attract young scientists.



We will run a Twitter Campaign (<https://twitter.com/MECC2020>) to publicize our event.



PORTUGUESE CLAY GROUP ASSOCIAÇÃO PORTUGUESA DE ARGILAS

Covid-19 has affected all of us to some extent along 2021. Our members focused on online activities, such as seminars, conferences and post-graduation courses and on-job training activities offered for academia and industry.

Within these activities, some deserve particular mention: Advanced Course on Ceramic Technologies (co-organization of Technological Centre for Ceramics and Glass and University of Aveiro);

Post-graduation Course on Healing Clays (co-organization of Universities of Beira Interior and Aveiro);

Webinars on Li Exploration and Exploitation;

Online Seminar on mining wastes as raw materials for ceramics.



RUSSIAN CLAY GROUP

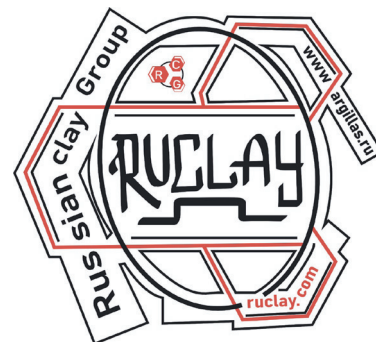
The **Russian Clay Group** (RCG) is affiliated with the European Clay Group Association ECGA. RCG was created in 1994 and includes 43 members who confirmed their membership in 2021.

Honorary President:

Prof. Victor Drits, Geological Institute RAS.

President: Dr. Victoria Krupskaya, Institute of Ore Geology, Petrography, Mineralogy and Geochemistry RAS.

Secretary: Dr. Petr Belousov, Institute of Ore Geology, Petrography, Mineralogy and Geochemistry RAS.



Members of the RCG specialize in different scientific areas, ranging from the geology of clay deposits, to the structural features of clay minerals and their properties, and ending with the industrial application of clays.

The intensification of research in the field of radioactive waste disposal and the creation of the deep geological disposal of radioactive waste in the Krasnoyarsk Territory has led to the emergence of many studies in the field of clay materials as sorbents and components of engineered barrier systems, as well as research on composite materials for purification contaminated water and creating barrier materials of a new generation, field research clay raw materials, etc. In addition, traditional studies of clay minerals continue as well from a fundamental point of view to obtain new knowledge about the composition, structure and evolution in geological and technogenic processes, and various applied areas.

A lot of attention during 2021 has been dedicated to the preparation of the upcoming conference EUROCLAY 2023. The Russian Clay Group has made every possible effort to make the conference a success so that participants of the event could enjoy the scientific and social program. Updated information will soon be available on the Conference website.

As part of the investigations of the geological structure of the bentonite deposit of Russia and their formation conditions, the 10th Khutor bentonite deposit, located in the Republic of Khakassia (Russia) was studied. The deposit is unique, as it has a fairly old age (C_{1-2st}) and at the same time bentonites retain a high ability to accumulate and the absence of illitization at a detectable level. The authors (Belousov et al., 2021) provide the following explanation. In the evaporitic depositional

environment, the high concentrations of soluble salts in the pore waters might have caused flocculation of the smectite particles leading to the compaction of the formation and causing the observed low microporosity and decreasing permeability. This in turn would have hindered potassium diffusion and retarded illitization, which remained limited. An alternative possibility would be that, due to diagenesis, the smectite particles display partial ordering, which might lead to larger particles. However, more analytical work is necessary to support this possibility, which is beyond the scope of this study.

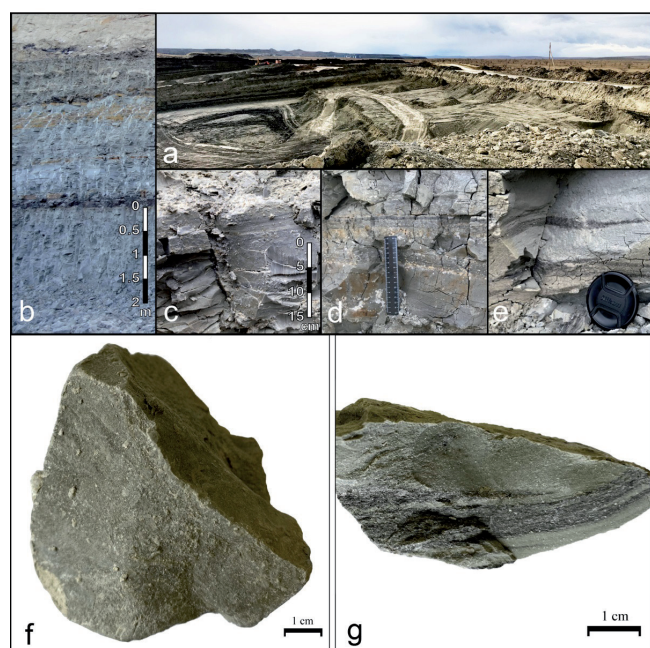


Fig. 1. Picture of the bentonite mine (a), bentonite layer IV (b) and representative samples with different textures (c,d,e,f,g).

More information can be found in the published article: P. Belousov, N. Chupalenkov, G.E. Christidis, O. Dorzhieva, S. Zakusin, I. Morozov, M. Chernov, T. Zaitseva, E. Tyupina, V. Krupskaya. Carboniferous bentonites from 10th Khutor deposit (Russia): composition, properties and features of genesis. *Applied Clay Science*. 2021, 2015, 1-14

A group of researchers from Tomsk Polytechnic University (M. Rudmin et al) are implementing projects in the field of research and use activated nanocomposites based on smectite (montmorillonite) or glauconite and urea that are alternative, complex and polyfunctional fertilizers. Controlled release of nutrients through the selection of mechanochemical activation parameters (mineral-urea ratio, mill type and activation time) is the key to the production of efficient and environmentally friendly nanocomposite fertilizers based on economically

available raw materials. A technological scheme based on experimental observations with a description of the main operational parameters for the creation of polyfunctional composite fertilizers based on smectite (montmorillonite) or glauconite and urea is proposed. The beneficial qualities of these fertilizers are associated with the activation of encapsulated (internal), absorbed and adsorbed (external) nitrogen in the structure and on the surface of clay minerals. It has been established that the main characteristics of such fertilizers vary depending on the following technological parameters: the type and time of activation, the composition of the inhibitor, and the mineral-filler ratio

Scientific group of IGGD RAS (St. Petersburg) and GIN RAS (Moscow) continue joint mineralogical-crystal-chemical and isotopic-geochronological (Rb-Sr) studies of globular layered silicates (GLS) of the Riphean of Siberia and the Southern Urals, as well as the Lower Ordovician of the northwestern part of the East-European Platform (Northern Estonia and Western Latvia). The study of the cationic distribution in the structure of the mineral, as well as the modeling of GLS powder diffraction patterns, was carried out within the framework of the model of a physical mixture of micaceous microcrystals with different parameters b (8.98–9.15 Å), made it possible to analyze the crystallochemical heterogeneity of GLS grains, to reveal the features of the distribution of their individual micaceous varieties and relate them to the physicochemical conditions of crystallization at different stages of the formation and transformation of sedimentary rocks.

Of course, the results presented above cover only a small part of the research being carried out by the Russian Clay Minerals Group.

Despite the sharp decrease in field expeditionary work, some field research still took place. So, in June 2021, the RCG members participated in the fieldtrip to the Latnenskoye refractory clay deposit located in the Voronezh region. During the trip, samples from the deposit were tested in laboratory of the plant using various express- methods. At the end of the trip, the members of the RCG visited some local national parks.



Fig. 2. Field trip at the Latnensky deposit of kaolin clays, a refractory plant and chalk rocks in the Voronezh region.

Scientific events

Due to the COVID-19 restrictions, the VII Russian Workshop on Clay Minerals «Argilla Studium» and the V Russian Conference on clays and clay materials «CLAYS» were postponed to April 18-22, 2022. The deadline for registration and abstract submission is March 15, 2022.

The special section dedicated to the memory of B.B. Zvyagin is planned. Boris Borisovich Zvyagin (1921-2002) made a great contribution to the development of scientific ideas about the crystal chemistry of minerals

and, in particular, the crystallochemical structure of clay minerals, his works are recognized all over the world, and still, many of his discoveries and achievements remain relevant and modern. Within the framework of the special section, it is planned not only to consider the scientific works of B.B. Zvyagin, but also to remember his life and personal path. Laureate of the Prize of the Presidium of the USSR Academy of Science in crystallography named after E.S. Fedorova (1986) and the highest award of the Clay Mineral Society of the USA (2000). He is one of the founders of the electron diffraction method and its application in structural crystallography. His name is associated with the formation and development of the electron diffraction method for the study of layered minerals. If you have something to tell about this remarkable scientist and person, please contact the Organization Committee.



Fig. 3. Boris Zvyagin (1921-2002), honoree at the V Russian Conference on clays and clay materials

The program of events will traditionally include lectures by leading experts in the field of research and methodology of clay minerals, as well as oral and poster presentations of the meeting participants.

For more information about the events and the program of the conference, please follow the link: <https://www.argillas.ru/clay-conference>

The group's activities are covered on several resources:

www.ruclay.com (under construction) - the official website of the group **www.ruclay.com** - dedicated to scientific projects

www.argillas.ru - the website of the initiative group

President of Russian Clay Group
Dr. Victoria Krupskaya
krupskaya@ruclay.com

SLOVAK CLAY GROUP (SCG)

The year 2021 started sadly for the Slovak Clay Group. Our friend and colleague Dr. Peter Komadel passed away at the age of 65 on February 27, 2021. He spent most of his professional life at the Institute of Inorganic Chemistry of the Slovak Academy of Sciences. At the same time, however, Peter was a prominent, internationally recognized clay scientist focused mainly on the characterization and chemical modifications of smectites. As a fellow, he completed several stays abroad at top research institutions in USA, France, Great Britain, and Australia. Probably, the most significant was his stay at the University of Illinois in Urbana-Champaign in the USA, where he collaborated with prof. J. W. Stucki on the research of iron reduction in smectites. Peter was a long-term member of the Slovak National Clay Group and its President. Moreover, he was the President of The Clay Minerals Society, the European Clay Groups Association, and a member of the AIPEA council. He was also a member of the editorial boards of the Applied Clay Sciences, Clay Minerals, Clays and Clay Minerals.

Dr. Komadel was not only an excellent and distinguished scientist, but also a friendly person willing to help anyone who turned to him. He did not discriminate between a young scientist and a “scientific star”, whether they were colleagues from the East or the West. Proof of this is the large number of friends within the clay scientific community. He loved meetings with them and discussion of various topics at the international conferences. He will always remain in our memory.



Photo 1 Peter Komadel our former president, colleague and friend



Sometimes life is very difficult, but we have to go despite of the loss of a loved one. Regardless of the ongoing pandemic of Covid, our clay group organized the 8th Workshop of Slovak Clay Group in Habovka, September 6 – 8, 2021. Habovka is a village in the North Slovakia very close to the Western Tatras mountains. 23 participants presented 19 contributions. Nine young scientists gave oral presentations of their results (Photos 2-5). The invited lecture, presented by Marián Janek, described the Terahertz response of $\text{Er}^{3+}/\text{Yb}^{3+}$ co-doped $\text{La}_2\text{Zr}_2\text{O}_7$ ceramics. Nice weather allowed us to enjoy the hiking in the Western Tatras mountains (Photos 6). Unfortunately, the next wave of COVID-19 came later again, and the other activities planned for 2021 were canceled.

http://www.slovakclaygroup.sk/images/book_of_abstracts_web_r.pdf



Photo 2 The workshop was held at the nice hotel Julianin dvor in Habovka



Photo 3 Conversations of our youngs (in front: Eva Skoura, Martin Barlog, Daniel Moreno-Rodriguez with his back and in back smiling Peter Škorňa)



Photo 4 Still young Juraj Bujdák (in the middle) with Peter Boháč (left) and Marek Pribus (right).



Photo 5 Marian Janek looks satisfied.

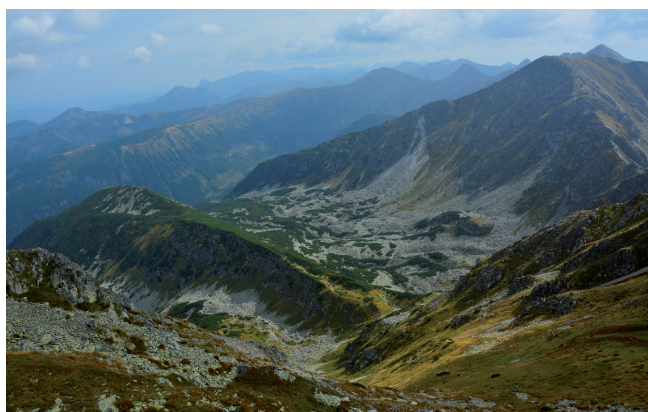


Photo 6 View of the Western and High Tatras. Peter Komedel also liked it.

SCG Council: Peter Uhlík (president) peter.uhlik@uniba.sk
 Helena Pálková (vice-president)
 Jana Madejová, Iveta Štyriaková, Juraj Bujdák

Correspondence address:

Slovak Clay Group
 Institute of Inorganic Chemistry
 Dúbravská cesta 9
 845 36 Bratislava
 Slovak republic
 e-mail: uachsnec@savba.sk
<http://www.slovakclaygroup.sk/>

SPAIN

SPANISH CLAY SOCIETY - SEA



The annual Scientific Meeting of the Spanish Clay Society was held in Madrid on November 19, with 27 contributions of 56 participants. The Organizing Committee was formed by SEA members from the Complutense University of Madrid, coordinated by Professor Emilia García-Romero.

The Scientific Meeting included a posters session and a plenary lecture ('Pasado y presente en el uso de arcillas: hacia su empleo en materiales avanzados') by Prof. Eduardo Ruiz-Hitzky, Research Professor Scientist at the National Research Council of Spain (Materials Science Institute of Madrid, ICMM-CSIC). Prof. M Carmen Hermosín and Prof. Juan Cornejo, both of them Research Professor Scientist at the National Research Council of Spain (Institute for Natural Resources and Agrobiology of Sevilla) received honorary membership during the Meeting. The Young Researchers' Award offered by the SEA was given to Ana Filipa Cardoso Barra (University of Aveiro) for her paper titled "Electrically conductive carbon-clay bionanocomposites: application in food packaging".

Javier García Rivas (Complutense University of Madrid) was elected as representative of the Spanish Clay Society young researchers in the newly created AIPEA Early Career Clay Scientists (ECCS) Committee.

Activities planned for 2022

The Spanish Clay Society (SEA) and the Spanish Mineralogical Society (SEM) will hold their annual meeting jointly in Baeza (Jaén, Spain), from June 27 to July 1, 2022. The preliminary program includes a workshop ('Continental sediment metal contamination by agricultural, industrial and mining activities: mineral processes and bioavailability') for PhD students and early career scientists, a field trip and the scientific conference. The Organizing Committee is formed by members of both societies from the University of Jaén, coordinated by Dr. Isabel Abad and Dr. África Yebra-Rodríguez. Further information will be released in the website <https://semsea2022.es>. Please contact secretaria@sea-arcillas.es for more information.

Four thematic sessions will be organized by SEA members, among other conveners, during the next International Clay Conference (XVII ICC) in Istanbul, Turkey:

- Pilar Aranda, session TS-02 'Property,

functionalization and applications of one-dimension nanoporous clay minerals: from nanofiber to nanotube'. The topics of this session will cover the fundamental aspects and actual applications of tubular and fibre-like clay minerals, such as halloysite, palygorskite, sepiolite, and imogolite, among others.

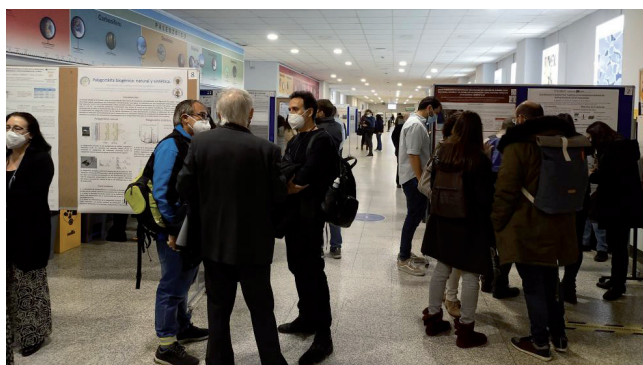
- Manuel Pozo, Alberto López-Galindo, session TS-08 'Sepiolite, palygorskite and bentonite: geology, properties and applications'. This session focuses, on geological aspects including description of the deposits, mineralogy, geochemistry, usefulness in palaeoenvironmental reconstructions and genesis of these special clays, technological processes used to enhance certain properties and their industrial, environmental and health-related applications.

- Saverio Fiore, César Viseras, session TS-10 'Clays and health'. This session welcome not only contributions for classical applications of clay based advanced health care materials but also information on national/international regulations on use of micro and nanominerals for medical purposes. Contributions related to mineralogical-biological interactions and cytotoxicity effects are also welcome.

- Patricia Aparicio, session TS-30 'Clays for ceramics'. This session welcomes contributions on the research of new clay deposits and new applications of known clays, as well as studies on the technological behavior of clays in the production of bricks, tiles, pottery, tableware, sanitaryware, lightweight aggregates, and silicate refractories. Relevant subjects include methods to determine ceramic properties in clays, sintering or rheological behaviour, phase transformations during processing, mineralogical composition of clays in ceramic manufacturing, waste recycling in clay-based bodies, global view on clay demand for ceramic production, novel technologies of clay beneficiation and improvement of performance.



Prof. Eduardo Ruiz-Hitzky gave a plenary lecture during the Scientific Meeting of the Spanish Clay Society at the Complutense University of Madrid.



Meeting attendees discussed during the posters session at the Scientific Meeting of the Spanish Clay Society at the Complutense University of Madrid.



Prof. M Carmen Hermosín and Prof. Juan Cornejo received honorary membership from the President of the Spanish Clay Society Fernando Nieto García.



Fernando Nieto García, President of the Spanish Clay Society, gives the Young Researchers' Award offered by the SEA to Ana Filipa Cardoso Barra.



The Organizing Committee of the Scientific Meeting at the Complutense University of Madrid (from left to right, Javier García Rivas, José M. Fernández-Barrenechea, Emilia García-Romero, Xabier Arroyo and Pablo del Buey).

África Yebra-Rodríguez
Secretary of the Spanish Clay Society

TURKEY CLAY SCIENCE SOCIETY



Clay Science Society
**Kil Bilimleri
Derneği**

AIPEA-XVII INTERNATIONAL CLAY CONFERENCE, İSTANBUL-TURKEY 25-29 JULY 2022

One of the major activities of our Society is the organization of the 17th ICC-İstanbul in 2022 (icc.aipea.org). Abstracts have been received for a wide spectrum of themes related to many topics of the clay science and its applications. The organizing committee is working hard for a successful and a memorable conference and will be happy to host all of you in İstanbul. There are 34 themes convened by estimable clay scientists as listed below:

-Durability of clay-based bending mortars and their regulation frame- M. Stefanidou.

-Property, functionalization and applications of one-dimension nanoporous clay minerals: From nanofiber to nanotube- P. Yuan, P. Aranda, G. Lazzara, A. Thill, M.Liu, P. Pasbakhsh.

-Fibrous clay minerals: properties and implications for paleoenvironment and diagenesis- N.Fagel, L. Daoudi, M. Ouahabi.

-Clay minerals throughout the solar system- T.Peretyazhko, L. Rampe, B. Sutter.

-Soil minerals in connection with pedogenic processes- K.Stahr, S. Kadir, S. Kapur, E. Costantini, M. Bronnikova.

-Clays for contaminants control- B. Sarkar, D.S. Alessi.

-Natural zeolites and clays as ion-exchanger- A.Sirkecioğlu, F. Esenli.

-Sepiolite, palygorskite and bentonite: geology, properties and applications- M. Pozo, F.Jamoussi, A.L. Galindo.

-Clay minerals, deposits and cultural heritage- E. Gliozzo, A. Hein.

-Clays and health- S. Fiore, C. Viseras.

-History of clay science and of its societies- K. Murphy, B. Lanson.

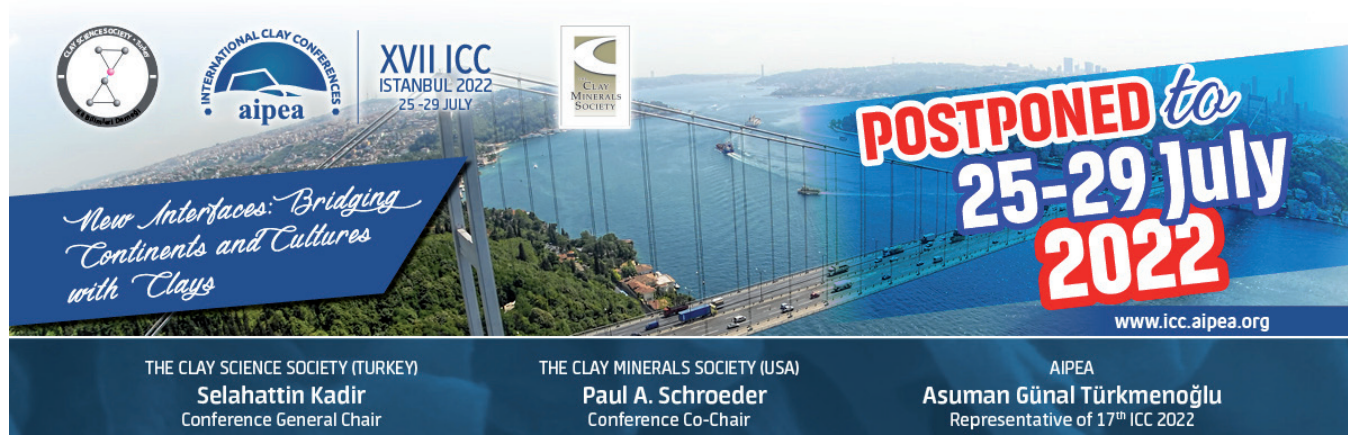
-Soil mineral quantification -from poorly crystalline phases and interstratified soil clay minerals to digital soil mineralogy- J. Dietel, R. Dohrmann, A. Georgiadis, S. Hillier, F. Hubert, C. Mikutta.

-Clay geochronology- A. Allard, J.M. Wampler.

-The geochemistry of clay minerals as a proxy for the origin and/or provenance of sedimentary particles- N. Fagel.

-Interaction between clay minerals and organic carbon: from natural clay-carbon compound to hybrid materials- D. Liu, B.K.G. Theng, L. Xiandong, S. Hongjuan, G. Lv.

-Teaching clay science- W.D. Huff.



- Advanced microscopy in clay research**-W.A.Chiou, G. Christidis, R. Dohrmann.
- Layered double hydroxides: Advanced 2-D clay-materials for applications in energy, environmental remediation and health**- V.Prevot, Y. Tokudome, G. Abellan.
- High temperature impact on bentonite barrier systems in the context of radioactive waste disposal**- O.Leupin, M. Olin, R. Dohrmann, P. Sellin, D. Svensson.
- Fibrous clays: from fundamental research to functional materials**- L.S. Belaroui.
- Authigenic clays in petroleum exploration**- R.J.Donahoe, İ. emen.
- Clays in oil & gas applications**- H. Kaminsky, T. Fischer.
- Occurrences of the rare-earth element resources in clays**-W.C. Elliott, P. Mall.
- The role of clays in critical zone architecture and function**- P.A.Schroeder, B. Lanson.
- Palygorskite: from fundamental research to functional materials**-A. Wang, J. Zhang.
- Clay minerals studies in sedimentary basins predicting geotherms, fluid- and hydrocarbon migration systems**-B. Šegvić, S. Potel, R.F. Mählmann.
- Clay mineral reaction progress during burial diagenesis and very low-temperature metamorphism**- Ö. Bozkaya, J. Środoń, R.F. Mählmann.
- Multiscale computational modeling of clay-related materials and their fluid interfaces**- A.G.Kalinichev, T.R.Underwood.
- Stability of smectite from experiments to natures**-L. Nguyen-Thanh.
- Clays for ceramics**-P. Aparicio, G. Cultrone, M. Dondi.
- Clays and the molecules of life**- J.F. Lambert, M. Jaber.
- Clays in geotechnical applications**- J.J.K. Daemen, H. Akgün, M.K. Koçkar.
- Clays and viruses**- Jennifer E. Kyle.
- General session**- Ö.I. Ece, H. Ünal-Ercan, P. Schroeder.

19TH NATIONAL CLAY SYMPOSIUM

The organizational works have started for the 19th National Clay Symposium which will take place at the Eskişehir Technical University in October, 2022. Eskişehir is a city located on the banks of the Porsuk River, in western

Turkey. The city is popular as a university town, where Eskişehir Osmangazi University, Eskişehir Technical University and Anadolu University are located. Magnesite mining industry is widespread and meerschaum (sepiolite) handicraft tobacco pipes, referred to as Meerschaum pipes, are popular in the Eskişehir region.



SCIENTIFIC ACTIVITIES

The Members of the Clay Science Society have continued their research and activities regarding various clay related topics. Some of them in terms of publications, conference attendances, post graduate achievements are presented below:

-Akıška, E. and, **Karakaş, Z.** 2021, Clay mineralogy and paleoclimatic properties of the Neogene Deposits in Sinanpaşa Basin (Afyon-Western Anatolia), *Bulletin of the Mineral Research and Exploration*, 164, 93-117.

- **Cengiz, Ö.**, Uyan, P., 2021, Chapter 9: A technical evaluation of two ceramic clays from the regions of inner west and mid-Anatolia, in: *Engineering Sciences: New Trends, Concepts and Research* (Ed. H. İbrahim Kurt), ISBN: 978-2-38236-233-4, Livre de Lyon, 133-146.

-**Demirkol, N.**, Başgedik, G.E., 2021, The effect of binder amount and temperature on compression strength in the production of clay bonded insulating composite materials", *SERES'21- V. International Ceramic, Glass, Porcelain, Enamel, Glaze and Pigment Congress*, 13-15 October 2021, Eskişehir.



Nermin Demirkol & Gökçe Ege Başgedik (at right)- graduate student of Kocaeli University, Civil Engineering Department.



-**Bozkaya, Ö., Günal-Türkmenoğlu, A., Göncüoğlu, M.C., Okuyucu, C.**, 2021, Geological, mineralogical and geochemical characteristics of Mississippian K-bentonites from southern Turkey: A correlation with coeval tephra from Gondwana-derived terranes. *Journal of African Earth Sciences*, 181, 104258.

-Šegvić, B., Zanoni, G., **Bozkaya, Ö.**, Sweet, D., Barnes, M., Boulesteix, T., Sole, J., 2021, K-Ar geochronology and trace-element geochemistry of 2M1 illite from upper Paleozoic shale of SW Laurentia – Insights into sediment origin and drainage pathways in the Anadarko Basin, USA, *Palaeogeography, Palaeoclimatology, Palaeoecology*, 575, 110486.

-**Hozathlıoğlu, D., Bozkaya, Ö., Yalçın, H.**, 2021, Geochemical properties of phyllosilicates in Göksun, Afşin and Ekinözü Metamorphites (Kahramanmaraş, Turkey), *Geological Bulletin of Turkey*, 64/1, 41-74.



Close view of the green K-bentonite bed (TBP-10).



Mississippian K-bentonite from southern (Akşehir) Turkey-
J. Srodon, A.G. Türkmenoğlu, Ö. Bozkaya, B. Semiz and
Ö. F. Özkaya at the K-bentonite outcrop (TBP-10) in the
Engilli section.

-**Ataytür, Ö.**, 2021, Short-term high-temperature calcination effects on the physicochemical, mineralogical and micromorphological properties of Ca-bentonite from Ünye (Ordu, NE Turkey), M.Sc. Thesis, Muğla Sıtkı Koçman University, Thesis Supervisor: **C. Küçükuysal**.

-**Ataytür, Ö., Küçükuysal, C., Güngör, C., Tecer, H.**, 2021, Effects of short-term high-temperature calcinations on the physico-chemical and mineralogical properties of Ca-bentonites from Ünye (Ordu, NE Turkey), *Journal of Thermal Analysis and Calorimetry*, doi:10.1007/s10973-021-10626-4.

-**Ataytür, Ö.**, 2021, Synthesis and characterization of layered silicates for the study of their acid properties, joint M.Sc. at Poitiers University (France), Master STPE (M2) Advanced Material Science / IMACS Internship Report, Internship Supervisor: Liva Dzene.

-**Şahin, G.**, 2021, Investigation of soil behavior of Ankara Clay based on geotechnical field and laboratory experiments, M.Sc. Thesis, Hacettepe University, Thesis Supervisor: **M.K. Koçkar**.

-**Kadir, S., Külah, T., Erkoyun, H.**, Önalgil Uyanık, N., Eren, M., Elliott, W.C., 2021, Mineralogy, geochemistry, and genesis of bentonites in Upper Cretaceous pyroclastics of the Bereketli member of the Reşadiye Formation, Reşadiye (Tokat), Turkey. *Applied Clay Science*, 204, 1-19.

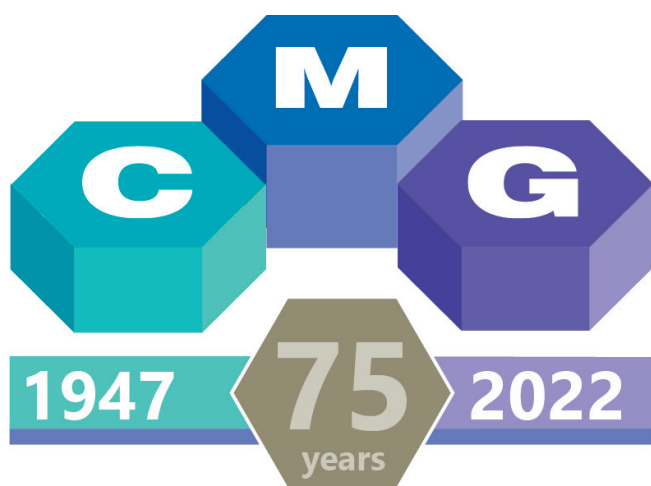
-Eren M., Akgöz, M., **Kadir, S.**, Kapur, S., 2021, Primary characteristics of selected stalagmites from four caves located between Erdemli and Silifke (Mersin), southern Turkey-implications on their formation. *Carbonates and Evaporites*, 36, 20-37.

Clay Science Society
Executive Committee

January 2022

UK AND IRELAND CLAY MINERALS GROUP

In the past year (2021), the Clay Minerals Group (CMG) resumed most of its regular activities after a slow and quiet year due to the pandemic in 2020. We are looking forward to even more activities in 2022 – as the CMG will be celebrating 75 years of clay science! We have not only updated the group's logo to mark this jubilee year but have put together a year-long programme. See below for more information.



Research in Progress Meeting

The CMG Research in Progress (RiP) Meeting planned for 2020 was postponed to 2021 and was held jointly with the Mineralogical Society's Environmental Mineralogy Group (EMG) online on 14 June 2021. The organisers of the meeting 'Minerals in the Natural and Built Environment' were, on behalf of the EMG, Oliver Moore (University of Leeds) and Jay Bullen (Imperial College) and from the CMG, Anke Neumann (Newcastle University). The meeting programme included the **22nd George Brown Lecture delivered by Prof David Manning** (Newcastle University), a **keynote presentation given by Prof Karen Hudson-Edwards** (University of Exeter) and a total of 16 presentations (including 3 3-minute poster lightening talks).

Overall, 97 attendees registered for the RiP meeting and most came from the UK (64%). The online format also enabled attendance from EU-based researchers (19%) and even from the Americas, Asia and Africa (total: 17%). Informal interactions during coffee and lunch breaks were facilitated via the online platform Cosmos. Prizes were awarded for the best oral and poster presentations by both the CMG (oral: Harry Brooksbank; poster: Maggie White) and the EMG (oral: Callum Robinson; poster: Jody Grassby).

The CMG is excited by this fantastic uptake across the globe and will continue to strive for more equitable par-

ticipation in future meetings by offering a blended, or hybrid, approach to attendance (in-person and online).

Clay Minerals

The CMG is responsible for the journal *Clay Minerals*, an international journal of mineral sciences, published four times a year. Last year, the four issues published comprised a total of 32 papers and one [review article](#) based on the 20th George Brown lecture delivered by Toshihiro Kogure (University of Tokyo).

Look out for the release of three special issues in 2022!

Imminent topics in clay mineralogy will be discussed in the special issues on 'Clays in extraterrestrial environments' organized by Javier Cuadros and Karen Olsson-Francis; 'REE and critical metal in clays' organized by Asuman Turkmenoglu; and 'The applications of stevensite (a rare trioctahedral smectite)' organized by Miroslav Pospisil.

The success of the journal is made possible by the hard work of the Principal Editors, George Christidis (Technical University of Crete) and Chun Hui Zhou (Zhejiang University of Technology), and the entire Editorial Board, which has further grown in 2021 by three new members (Hendrik Heinz, University of Colorado Boulder; Hongping He, Guangzhou Institute of Geochemistry, Chinese Academy of Sciences; and Liva Dzene, Université de Haute-Alsace).

CMG-sponsored activities

Due to the pandemic, many major conferences have been postponed to 2022. The CMG will support sessions and sponsor talks at the prestigious International Clay Conference (Istanbul, 25-29 July 2022), including the **23rd George Brown Lecture by Yael Mishael** (The Hebrew University of Jerusalem) in the session 'Clays for contaminants control' coordinated by Binoy Sarkar (Lancaster University) on behalf of the CMG. At the Mid-European Clay Conference (Kliczków Castle, 11-15 September 2022), **Sabine Petit** (Université de Poitiers) will deliver the **21st George Brown Lecture**, which was postponed due to the pandemic.

2022: the CMG 75-Year Jubilee

Founded in 1947 with an inaugural meeting in Burlington House, the Clay Minerals Group of the Mineralogical Society was (one of) the first 'special interest groups' that have contributed so much of the life and success of this Society. Coming into its 75th year in 2022, the Clay Minerals Group will be celebrating this jubilee year – and, on its behalf - the committee is inviting everyone to celebrate with us!

The committee has been organising and coordinating a jubilee year of activities and events to excite clay scientists and make the topic accessible to the wider mineral-inter-

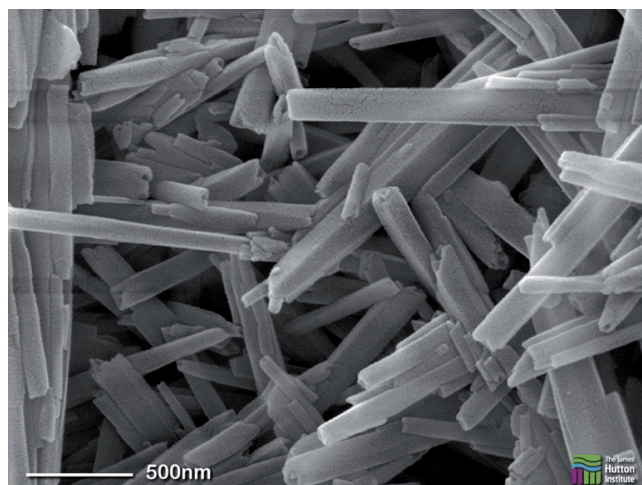
ested community. The main event will be the **2-day 75-year Jubilee Meeting** taking place in the Natural History Museum in London, UK (**25-26 May 2022**), and online. The meeting will comprise one day of invited research presentations by Claire Fialips (TotalEnergies), Chris Greenwell (Durham University), Stephen Hillier (The James Hutton Institute), Christopher Jeans (University of Cambridge), and CMG past-chair Simon Kemp (British Geological Survey), followed by a second RiP meeting day. Do join us to celebrate the past, present and future of clay research and the Clay Minerals Group! More information on the [Jubilee Meeting Webpage](#).

As part of the jubilee year, the CMG will host a series of **monthly online interviews** highlighting the diversity of minds and hearts behind the fantastic world of clay mineral research and application. The interviews will be available through our YouTube channel and direct links are available on the [Jubilee Year Webpage](#).

We have also started releasing our **75 tweets** on past, present and future activities of the Clay Minerals Group, clay mineral trivia and surprising facts. So don't miss out on this and follow us on Twitter (@CMG_minsoc)!

If you are a PhD student or Early Career Researcher (ECR), our new **CMG Research Grant** might be just for you! The principal objective is to promote, instigate and deliver clay mineral-based research. Being launched as part of the 75-year jubilee, there is up to £5,000 available this year. For terms and conditions, consult the [bursaries webpage](#).

The CMG is hosting the 'Images of Clay' Archive, which is an ongoing project and joint initiative with The Clay Minerals Society (USA). The CMG will be adding one new image each month, courtesy of Stephen Hillier and Evelyne Delbos (both of The James Hutton Institute). The exception is the 12th image, which will be determined in a **competition** to find the 'best' new clay image. Visit the [Jubilee Year Webpage](#) to find out how to participate and win your place amongst the **Images of Clays**. To inspire you, here is the first of these new images, which features a halloysite.



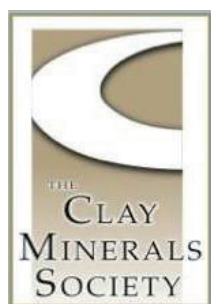
Stay in touch!

There are many ways to keep up to date with the CMG's activities. The CMG has an active Twitter account (@CMG_minsoc) and LinkedIn Group (Clay Minerals Group (MinerSoc)). The [CMG webpage](#) is being updated regularly. Recently, the CMG has launched a **Jubilee Year Newsletter**, to which you can sign up any time on our [webpage](#).

On behalf of the CMG committee,
Anke Neumann (Chair)
and Helen Pendrowski (Secretary)

USA

THE CLAY MINERALS SOCIETY - CMS



Meetings and Events:

The 2021 CMS Annual Meeting was planned to be held in Istanbul jointly with AIPEA and the Clay Science Society (Turkey) as the XVII International Clay Conference. Because this meeting has been postponed to 25-29 July, 2022, the 2021 CMS Annual Meeting was held as a two-day webinar, 18-19 October, 2021. The topic was **Clay Minerals in Healthcare Applications**. Presentations were recorded and can be viewed through our website, https://www.clays.org/past_meetings. The Clay Minerals Society Workshop Lecture Series continues in Istanbul: **Advances in the characterization of smectites in bentonites**, organized by **George E. Christidis**.

CMS Officers:

The CMS welcomes new officers who were elected by the Executive Committee in October: Secretary **Katerina Dontsova** and Treasurer **Yuji Arai**. Many thanks to our former Secretary (**Warren Huff**) and Treasurer (**Paul Schroeder**), for their many years of service to the society. We are also grateful to **Warren Huff** for his generous gift to the society. Thanks also to our Past President, **Bruno Lanson** for leading the CMS through such an unusual year. Take time to know our various committees and their members via <https://www.clays.org/>. The CMS is also currently seeking a new society Historian. As we work to identify our next Historian, plans are underway to upload photos and documents from annual meetings to the CMS website.

CMS Professional and Student Awards:

The 2021 and 2022 CMS professional award recipients will deliver plenary lectures at the ICC. 2021 awardees are **David Bish** (Bailey Award) and **Hongping He** (Jackson Award). 2022 awardees are **Jin-Ho Choy** (Bailey Award), **Lynda Williams** (Brindley Lecture), **Michael Hochella** (Pioneer Lecture), and **Young-Shin Jun** (Jackson Award). The 2021 student research grant award recipients (six) were highlighted in the October and December 2021 issues of the *Elements* magazine. CMS Student research

grants support US and international students. CMS also provides student travel grants to attend annual meetings and promote their clay science research.

Get Involved with CMS:

News and announcements from the CMS can be found on our social media as well as *Elements* magazine pages. Keep in touch with TheClayMineralsSociety (**Facebook**) and @ClayMinSociety (**Twitter**). Recorded seminars can be viewed on our **YouTube** channel "The Clay Minerals Society".

LAST MINUTE NEWS FROM ECGA



The quadrennial meeting of the European Clay Groups Association, EuroClay, was originally to be held in Moscow in July 2023. Because of the Russia-Ukraine armed conflict, the Russian Clay Group withdrew their plan to organize and host the meeting. ECGA representatives unanimously decided to approve the offer of the Italian Association for Clays to host the meeting. It will be held in Bari, Italy, on 24-27 July 2023.

Information is available at www.euroclay.aipea.org

Saverio Fiore
President, ECGA
March 2023

Upcoming Meetings

2022

8th International Conference on Clays in Natural and Engineered Barriers for Radioactive Waste Confinement
13-16 June
Nancy, France
<https://www.clayconferencenancy2020.com/>



17th International Clay Conference (ICC)
25-29 July
Istanbul, Turkey
<https://icc.aipea.org/>



Mid-European Clay Conference
11-15 September
Kliczków Castle, Poland
<https://mecc20.pl/home/>



The 6th World Forum on Industrial Minerals (WFIM-6)

&
AIPEA Short Course
第五届世界非金属矿科技和产业论坛
暨
国际粘土学会研修培训课程 中国行

Qing Yang (Jiu Hua Shan), Chi Zhou City, China
October 22-25, 2022

Theme: Working Together on Industrial Minerals in a Green and Sustainable Future

CLAYS APPLICATION & VALORISATION - CAV2022
MINERALS & MATERIALS SCIENCES - MMS2022
International Joint Conference
December 17-21, 2022 | Hammamet, Tunisia
www.cav2022.org



2023

DUST 2023
5th International Conference on Atmospheric Dust
22-25 May 2023 - BARI, Italy
<https://www.dust2023.atmodust.net/>



EuroClay 2023

24-27 July 2023 - BARI, Italy

<https://euroclay.aipea.org/>

International Conference of European Clay Groups Association

Villa Romanazzi Carducci Conference Centre

BARI | Italy | 24-27 July 2023



AIPEA Membership Application Form

Becoming member of AIPEA is recommended to everybody interested in clays and clay minerals. At the moment, the main mean of communication among all members of this association is its website (www.aipea.org). There, all information is concentrated and made available to all AIPEA members, such as updated information from many events that are being organized around the world besides other information that might be of general interest.

The rules of acceptance of new members are defined in the AIPEA Statutes and By-Laws (www.aipea.org/statute.html), as follows:

Statutes:

"II. MEMBERSHIP"

3. a) AIPEA may accept as members individuals (individual members, who may also be life members), institutions and companies (corporate members), and national or regional societies (Affiliated Societies) with an interest in clay research or technology.
- b) Application for individual or corporate membership shall be made in writing to the ... Treasurer and be accompanied by the appropriate membership fee. Applications from Societies wishing to become Affiliated shall be made to the Secretary General in writing giving relevant information on field of interest, number of members, etc.: if approved by Council (which shall not be required to give any reason for non-approval) the Society shall become Affiliated on payment of the appropriate membership fee.
- c) Membership will be for the period for which the membership fee is paid. If it is one year's dues the member will be in good standing for one year. If the membership fee is not paid, the membership may be cancelled unless there are extenuating circumstances which will be determined by the Council..."

By-Laws:

"Individuals 65 years of age and older who have been individual members for 12 years or more shall automatically become Life Members on notification to the Treasurer. A Life Member must verify his membership every 4 years coinciding with the year of the International Clay Conference..."

To facilitate the admission of new members, AIPEA made available the Membership Application Form at its web page www.aipea.org/membership.html. Those interested in being part of this organization should fill it out and mail it to the AIPEA Treasurer, who will send information of how to pay the annual fee:

Dr. Alberto LOPEZ GALINDO, Treasurer

*Instituto Andaluz de Ciencias de la Tierra, Director
CSIC - Universidad de Granada
Phone: +34 958 230 000 ext. 190212
Fax: +34 958 552620
Email: alberto@ugr.es*


aipea

Association Internationale pour l'Etude des Argiles

MEMBERSHIP APPLICATION FORM

Family Name _____	Given Name _____
Title _____	Phone _____ Email _____
Institution _____	
Mailing Address _____	
Type of membership* _____	Amount of dues _____ for _____ years
Your Society _____ <small><i>If you are an individual member of an affiliated Society, give the name of the Society</i></small>	
Date _____	Signature _____

CHANGE OF ADDRESS NOTICE

Family Name _____	Given Name _____
Title _____	Phone _____ Email _____
Institution _____	
Mailing Address _____	
Your Society _____	
Date effective _____	Signature _____

Fees: \$30.00 USD/4-year individually; \$15.00 USD/4-year student (students must prove their status through an official document provided by their university); \$100.00 USD/4-year corporate sponsor.

*student/retiree - professional - corporate

Note: Affiliated Societies pay dues on behalf of their members.

Payment by PayPal and credit card: visit www.aipea.org/membership.html

Wire Transfer: emailing treasurer treasurer@aipea.org