



INTERNATIONAL MINERALOGICAL ASSOCIATION IMA

1st Business Meeting 2022, July 18th

Version not yet approved by adhering organizations
(to be voted in August 2024 at EMC2024-Dublin)

Time: Monday, July 18th, 2022, 1:00 – 2:00 pm
Central European Time (CET)
Location: Lyon Palais de Congrès, room Bellecourt 1+ online (zoom)

IMA council members: Ross Angel, Razvan Caracas, Patrick Cordier, Sylvie Demouchy, Catherine McCammon, Anhuai Lu (online), Hiroaki Ohfuji, Travis Olds, Marco Pasero, Hans-Peter Schertl, Sergey Smirnov (online).

Representing IMA2026-Nanjing (online): Xiancai Lu, Wenxin Yan.

MINUTES

1. Opening, Welcome & Approval of The Agenda

Since the President is not in person in Lyon to chair the meeting, the First Vice-President opened the meeting, welcomed the participants and asked the Past-President to chair the meeting. The agenda was approved.

2. Roll call for the delegates

In person: from Hungary (Nobert Zajzon), Czech Republic (Jan Cempirek), Ukraine (Vladimir Khom), France (Marc Blanchard, Michel Grégoire), UK (Russel Rajendra), USA (Georg Harlow), Italy (Matteo Alvaro, Donato Belmonte, Fernando Camara), Japan (Hiroaki Ohfuji, Mariko Nagashima, Tatsuki Tsujimori, Toru Inoue), Germany (Melanie Kaliwoda), Belgium (Frédéric Hatert).

On line: Switzerland (Jörg Hermann), Australia (Louise Schoneveld), Spain (E. Ruiz-Agudo), China (Anhuai Lu), Poland (Anna Pietranik), South Africa (Desh Chetty, also present as MINSAs member Igor Tonzetic), Bulgaria (Ruslan Kostov), Russia (Sergey Krivovichev).

3. Approval of the Minutes of the 1st and 2nd Business meeting of January 2021

The Minutes were approved by the attendees.

4. Appointment of an Auditing Committee

Michel Grégoire (SFMC) and Donato Belmonte (SIMP) were approved as members of the Auditing Committee.

5. Reports of the Executive Committee

Report of the President

The IMA is affiliated with IUGS. The IMA Council consists of twelve members: President, Past President, First and Second Vice Presidents, Secretary, Treasurer, Communication Officer, and five Councilors. They are elected by the delegates at the Business Meetings and generally remain in charge for



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a period of four years (President, Vice President and Past President for 2 years). My mandate began in early 2021, at a time when the Council meetings and Business meetings moved online in response to the Covid-19 pandemic. And we've been confronted with a military conflict between Russia and Ukraine in the past six months. I must admit that performing my duties in a turbulent international situation has undoubtedly impacted the IMA's affairs greatly. But, in the spirit of being highly responsible for the work, I have united the IMA Council members to overcome difficulties and make progress in the following aspects.

First, organizational construction is of primary importance. The top priority of international academic organizations is to gather scientists and technicians for efficient academic exchange. Therefore, a well-functioning organization is essential to conduct activities and promote scientific development. In this aspect, I have attached great importance to two objectives, one is to strengthen the construction of existing secondary organizations, and the other is to set up new secondary organizations. Over the past few years, IMA's committees and working groups had not functioned very well, and some of them have even paralyzed. After taking office, improving the organization was the first work I carried out. For only if committees and working groups function well, can the overall work of IMA move forward smoothly.

The six IMA commissions were evaluated. The evaluation committee was formed by a group of three IMA council members. Each evaluation team has then their report and conclusion to The Secretary, who summarized all the evaluation results. After discussion and approval at the IMA annual Council, the Secretary and I sent official letters to the chairs of each commission with recommendations for rectification. This arduous work has yielded promising results, with most commissions implementing remedial measures, and a few commission reforms have been left to the next IMA Council.

In view of the current development of international mineralogy, I proposed the establishment of three new working groups on Nanomineralogy, Mineral Informatics, Biominerals and Environmental Mineralogy. I have been in frequent communication and exchange with several experts who are active and potentially in charge of this field, and three of them were willing to step forward to establish the new working groups. As of now, the framework construction of the three working groups has been completed and the nominations for the chair, two vice-chairs and secretary of each working group have been finalized, all of which have been approved by the IMA Council. Temporary chairs were nominated to constitute core groups of members and will be finalized at the IMA2022 business meeting. We strongly believe that the establishment of these new working groups, especially the participation of young people, will bring more vitality and power to IMA.

Today is the era of big data. Mineralogy, based on quantitative scientific research, has accumulated a wealth of data. The construction and application of databases has also attracted much attention. Notably, IMA becomes a Founding Member of the IUGS' Big Science initiative: Deep-time Digital Earth (DDE), so as to IMA associations and commissions to join the DDE community which is continuing to make progress in its mission of data driven discovery in the geosciences, to close collaboration and the development of a long and mutually beneficial partnership between IMA and DDE to promote data driven initiatives. Active participation in academic exchange and contacts with relevant international organizations can also expand IMA's international influence.

Of course, it is my duty to complete IMA routine work. Today, we can easily and quickly communicate and deal with affairs through e-mail and online meetings, including internal IMA Council matters, as well as coordination and communication with a number of member organizations. In August 2021, when the pandemic spread worldwide, I sent a congratulatory letter (Warmest congratulations on the upcoming 9th International Conference Mineralogy and Museums (MM9) in Sofia) on behalf of the IMA to the MM9 conference held in Bulgaria, encouraging them to overcome difficulties and organize the conference positively and enthusiastically. My letter was read out at the opening ceremony.



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In the past two years, the IMA Medal, Ph.D. Award and Mineral of the Year were selected with the diligent efforts of the special Committees. Wherein, Robert Hazen is the 2021 IMA Medalist and Patricia Dove is the 2022 IMA Medalist. I have personally called them to share the exciting news and congratulated them on their achievements. In the meanwhile, 2020 Mineral of the Year was awarded to Bojarite (N.V. Chukanov et al.) and 2021 Mineral of the Year was awarded to Seaborgite (R. K. Anthony et al.). I also issued the certificates by official letter to recognize the inspiring mineral discoveries. Recently, five Ph.D. Award winners were also selected. They were Frederik Borner, Alireza Eslami, Ryo Fukushima, Yanzhang Li and Zsombor Molnar. Indeed, congratulate to these five young outstanding scholars in mineralogy from around the world. All of these award announcements will be posted on the IMA website in time. In particular, I have written a comment *Mineral evolution heralds a new era for mineralogy* for the achievements of 2021 IMA Medal winner, Prof. Robert M. Hazen, which has been published on *American Mineralogist* in July of this year.

Most recently, the focus has been on the partial election of the new board of directors to complete the transition so that international colleagues who are active in IMA development can join and keep the organization vibrant. I also suggest that the IMA2026 conference be hosted in China and that Chinese colleagues actively apply for it. The vast number of mineralogists in China have great enthusiasm for IMA. As early as 1990, the 15th IMA Conference was held in Beijing, China. I believe that IMA2026 will also be a great success with our joint efforts.

The 23rd General Meeting of IMA is held in Lyon (France) now. To celebrate the bicentennial of the death of René Haüy (born 1743) who is a father of modern mineralogy and crystallography, the IMA declared 2022 the YEAR OF MINERALOGY. “*Mineralogy2022*” is linked to the *International Year of Basic Sciences for Sustainable Development (IYBSSD)* which has been approved by UNESCO for 2022; the IMA is one of the first founding partners of IYBSSD.

The primary goal of the IMA is to promote mineralogy as a field of Earth Sciences devoted to the study of natural mineral matter through the coordination of activities of national mineralogical societies and associations on the international scale. Cordially, I also wish the international mineralogy a prosperous future. I strongly agree with the European mineralogist’s idea that “elements are letters and minerals are words”. Only by learning and using mineralogical knowledge well, especially mastering abundant mineralogical “vocabulary”, can we write great “articles” on earth sciences. Mineralogy, as a basic discipline of earth science and material science, requires the cooperation and joint efforts of international mineralogists. Therefore, as the big family of international mineralogists, IMA will still have a long way to make a better place for the Earth science.

Anhuai Lu
July 17th, 2022

Report from the secretary

Upon election as IMA secretary in January 2021 (online business meetings), my main task was to learn the different missions of the IMA secretary and to respond to the three presidents’ requests (past, current and first vice-president). Hans-Peter Schertl as the past secretary and current IMA vice-president has been of great help to train me and ensure a smooth transfer of knowledge, especially on sensitive and historical points. As the Covid-19 situation continued to perturb the scientific conference schedule, attendance to mineralogical meetings were low, also by IMA council members. Nevertheless, I have organized and led IMA council meetings online twice, on 10th December 2021 and 28th April 2022.

2021 - - - - -

The main task was the evaluation the six IMA commissions by the IMA council, which must be undertaken every 6 years. I set up the review protocol (3 reviewers for each commission and a form of



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evaluation), which was then validated by the three presidents (President, first vice-President and past President). The evaluation was completed by the end of 2021, except for IMA-CAM. A second round of evaluation was needed as the IMA-CAM commission chair was not responding to requests from IMA secretary and council. Communication is now re-established but will need to be strengthened in the coming years. The other reports were positive and support the continuation of the IMA-commissions. The evaluations will be presented for approval to the first IMA Business Meeting at IMA2022, in Lyon.

The President has initiated and supervised the creation of three new working groups:

Nano-Mineralogy

Chair: *Juan Liu*, College of Environmental Sciences and Engineering, Peking Univ., Beijing, China.

Vice-Chair: *Keisuke Fukushi*, Institute of Nature and Environmental Technology, Kanazawa University, Japan.

Vice-Chair: *Michael Schindler*, Dept. Geological Sciences, Univ. Manitoba, Canada.

Secretary: *Alejandro Fernandez-Martinez*, ISTERre, Univ. Grenoble Alpes, France.

Mineral Informatics

Chair: Robert M. Hazen, Carnegie Institution for Science, USA

Vice-Chair: Sergey V. Krivovichev, Dept. Crystallography, Saint-Petersburg State Univ. Russia.

Vice-Chair: Yan Li, Peking University.

Secretary: Shaunna M. Morrison, Carnegie Institution for Science, USA

Biomaterialogy and environment

Chair: *Giovanni di Giudici*, Università di Cagliari, Italia

Vice-Chair: *Kevin Rosso*, Pacific Northwest National Lab. USA.

Vice-Chair: *Jurai Maizlan*, Univ. Jena, Germany

Secretary: *Karen Hudson-Edwards*, Exeter Univ. UK.

Their composition is expected to be approved by the IMA Business Meeting at IMA2022, in Lyon.

2022 -----

2022 is a major year for IMA, with two major events: (1) the IMA General Meeting taking place in Lyon in July. Unfortunately, the low attendance of mineralogists from China and Russia will create a large financial deficit to the organization hosting the event (ENS-Lyon). (2) in parallel, the IYBSSD2022, which includes the year of Mineralogy is being launched in summer 2022. Under the leadership of Kevin Murphy, IMA has approved the creation of a dedicated website. <https://min2022.org>.

One of the main tasks in 2022 will be to create a new and improved IMA website as we face the retirement of our Webmaster Wolfgang Zirbs from University of Vienna and the end of support by University of Vienna for the websites of scientific societies (including the Austrian Mineralogical Society). Since January 2021, the webmaster and I have maintained an updated website, displaying information on: Mineral of Year, IMA medal, Meeting announcements, statement regarding Ukraine-Russia war, and PhD student awards. I also maintain the IMA Wikipedia page. Under the leadership of Patrick Cordier, we made 5 PhD student awards for the year 2022; each award is a 1000 Euro travel grant to attend IMA2022 in Lyon.

Very recently, in early July 2022 and under the leadership of Hans-Peter Schertl, Hiroaki Ohfuji, and Travis Olds, the website was transferred to another address <http://mineralogy-ima.org> and server as a temporary measure until a new website is designed and constructed. One of the goals for this new website is to incorporate into the IMA main website the websites of the IMA commissions.



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As in past years, IMA still faces unsatisfying response and availability of the National Representatives and from several commissions (e.g., IMA-CAM). Whereas most colleagues are very helpful and send regular updates regarding changes of their executive boards, from others we do not receive any updates. Some countries currently even do not have a National Representative or did not replace their national representative on time. This issue also impacts our ability to collect membership fees. The complete list of contacts and representatives was updated mid 2022 by our communication officer and IMA treasurer, but with little success so far for the nonresponsive colleagues. More importantly, we also had to face the official disengagement of several national societies: **Denmark, Netherlands, New-Zealand and Norway**, which we deeply regret. Despite several attempts from myself and Hans-Peter Schertl, no mineralogist from Denmark were successfully contacted to renew membership.

At last, I wish to thank Hans-Peter Schertl, Ross Angel and Patrick Cordier for their incredibly good advice, availability and support during my first two years as IMA Secretary, all in remote mode.

Sylvie Demouchy
IMA secretary
17 July 2022

Report from the communication officer

The report from the communication officer was not received in time for this meeting.

Note from the secretary: several pages from the IMA were published in Elements Magazine and the IMA facebook page was maintained by the communications officer.

Report from the treasurer

The invoices for dues were sent in May and as of today the response rate is about 40%, which is higher than usual. Some members have opted to pay their dues several years in advance and several have paid delinquent dues. To date, we have received dues from 13 members totaling \$5140. Those 13 include Australia, Austria, Belgium, Bulgaria, Croatia, Czech Republic, Canada, Georgia, Hungary, South Africa, Switzerland, the UK, and the US. We have been able to make contact with some representatives that did not respond in 2020 or 2021, although several members still have no appointed representative and we have had no contact with roughly half of the membership for several years now. Unfortunately, we have lost several members including Denmark, Netherlands, New Zealand, and Norway.

In 2021 and 2022, several members experienced problems submitting payments via wire transfer. In all instances this was a problem on the members side, because they did not follow the instructions on the dues invoice, or in some cases the sender's bank did not give them an option to input the additional account number needed to route the money properly online. To help with this, we have made several changes, including updating verbiage on the invoice instructions to make the banking terminology clearer and to emphasize that this additional routing number is necessary for successful payment. I have also opened a checking account with Bank of New York Mellon, although this is only useful for payments to and from U.S. and Canadian sources, and as of now, no money is deposited in this account. However, the new bank account has also allowed me to link the Edward Jones investment account with Paypal, the popular electronic payment service that handles payments by credit card or bank account. One of our members that could not send wire transfers has used this option for dues payment already, and although Paypal charges a fee to use its service, this opens the possibility of offering membership to individuals with very easy payments, and it could be an important revenue stream if we can offer meaningful benefits for individual memberships.



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After checking with the U.S. Internal Revenue Service (IRS), we are not considered a 501(c)3 entity, or non-profit, despite having all the necessary qualifications to be one. I found no evidence in any of our past tax documents that we have ever been given 501(c)3 status. When the Edward Jones account was opened in 2019 we were designated as an unincorporated association for tax purposes. I have applied for 501(c)3 status, and should hear back by the end of this month. This will qualify us for significantly lower Paypal fees, but in order to stay qualified for non-profit status, we are required to submit a yearly tax return.

We made no disbursements in 2021, but have made several disbursements in 2022 related to this meeting, including \$1,800 for IMA medalist travel, \$5,000 for Ph.D. student awards, \$1,175 for the year of mineralogy poster, \$103 for the new server for the IMA website, which is a yearly rental cost to be automatically deducted annually from here on out, and \$700 in wire transfer fees. Year to date, we have made only \$15.27 in money market interest, which is more than all of 2021. Our year-end balance for 2021 was \$115,053.60, and our balance as of today is \$109,962.46 (Edward Jones + Paypal).

Lastly, under the direction of our investment company, Edward Jones, I have made updates to our investment strategy. Due to the pandemic and market crash, our money market interest produced less than \$20 in 2020 and 2021. This, in combination with significant financial losses from dwindling membership payments and increased expenses has led to an average loss in total account value of \$3700 per year over the last decade. Earlier this spring, a financial working group, consisting of myself and several other members of the Council, reviewed our long-term financial outlook and made recommendations that were accepted by Council. These included re-organization of a portion of our investments into a ‘retirement-grade portfolio’ consisting of mutual funds. Our investment company, Edward Jones, developed a portfolio of 6 mutual funds designed to yield between 4-6% annual interest, and has made efforts to buy into the funds at low cost considering the pending threat of global recession. So far, \$20,000 has been moved into the mutual funds, and I can make the list and exact amounts of the investments available to anyone who requests it.

According to outlooks from Edward Jones, the extremely low money market interest we saw in 2020 and 2021 will continue for some time and not recover to normal levels; it is currently only 0.75%. Under further advisement of Edward Jones, \$80,000 was moved from money market funds into Certificates of Deposit, or C.D.’s. Prior to 2019, C.D.’s were the primary investment tool used for our funds while being held in the Bank of America account. As with money market funds, money held in C.D.’s is federally insured. Because of current market conditions, short-term bonds and C.D.’s are offering higher interest rates, over 2%, because of high inflation and rising U.S. federal interest rates. The \$80,000 has been “laddered” into 3 different C.D.s; \$20,000 was placed into a 1-year term deposit yielding 2.1%, another \$20,000 in an 18-month term deposit yielding 2.5%, and \$40,000 in a 2-year term deposit yielding 2.8%. At the moment, \$11,326 is still invested in the money market funds. With these changes, we will see balanced income and expenses within 5 to 10 years, but will also guarantee long-term growth that outpaces inflation. Most importantly, these changes will allow us to expand the benefits we offer as well as the activities we can support.

Travis Olds
IMA Treasurer

6. Report of The Chair of IMA Medal Committee

From Daniela Rubatto, extracts from the report from the IMA Medal Committee to Council:

Dear President and Members of the Executive Council,



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In early 2022 the Committee was occupied with two main businesses: (1) replacement of members and (2) recommendation for the IMA Medal.

1) Maria Luce Frezzotti (IT) and Sergey Krivovichev (Rus) left the committee at the end of their term and, after consultation with the other committee members, I proposed for their replacement Juan Liu, Peking University, with expertise in geomicrobiology and environmental geochemistry (surface processes) and Bruno Reynard from CNRS at ENS and University of Lyon, who has expertise in experimental high-pressure and high-temperature mineralogy (deep processes). They both are from countries that are not currently represented in the committee

These two nominations were accepted by the Council and the committee is now composed of:

Chair: Daniela Rubatto (Switzerland), to 2024

Shun Karato (USA), to 2022

Tatsuki Tsujimori Japan to 2022

Tomasz Bajda (Poland), to 2023

Joel Brugger (Australia), to 2023

Liane Benning (Germany) to 2024

Karen Hudson Edwards (UK), to 2024

Juan Liu (China), to 2025

Bruno Reynard (France), to 2025

These changes will keep a good regional and topical distribution of committee members and maintain a good gender balance.

2) The committee considered three nominations for the IMA Medal

The Committee recommended that the 2022 IMA Medal of Excellence be awarded to Prof. Patricia Dove from the Virginia Polytechnic Institute, USA. Patricia Dove has made long-term, outstanding scientific contributions to the field of mineralogical sciences with seminal works that changed the way we think about nucleation, dissolution and growth of minerals in Earth's surface environments and beyond. Dove's research excels in the quantitative approach and the mechanistic understanding of processes. Her key finding that mineral dissolution and growth are manifestations of identical processes, has particularly revolutionized research on minerals in biogeochemical systems. She has inspired scientists with innovative experimental techniques and fundamental method developments. She pioneered truly multidisciplinary science across mineralogy, chemical physics, and biology that has spread into the materials, engineering and medical disciplines.

I can anticipate that for 2023 we will have to replace other two member of the committee, as Karato and Tsujimori will complete their term. Members of the Council are welcome to contact me and suggest potential committee members, who will be considered based on topical, regional and gender balance.

Sincerely,
Daniela Rubatto

7. Nominations for Election of Council Members

During the meeting, two further candidates were nominated: Razvan Caracas and Shauna Morrison. The final slate of nominees is:

Candidates for First Vice-President = Razvan CARACAS (nominated by China, France, Bulgaria and Canada) and Eiji OHTANI.

Candidate for Second Vice-President = Xiancai LU

Candidate for Communication Officer = Michele ZEMA



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Candidates for Councillor (two positions to be filled) = Deshenthree CHETTY, Shauna MORRISON and Sergey SMIRNOV.

8. Internal discussion of the work of the commissions and working groups

Each final evaluation was sent 4 weeks prior to the first business meeting to all delegates. The Past-President summarized the evaluations by Council of the IMA commissions, as follows:

CAM: Favorable, but needs better communication with IMA council.

CGM: Favorable

CM: Very favorable

CNMNC: Favorable

COM: Favorable; the commission is being actively revived under a new temporary chair Jung Malte

CPM: Favorable, but needs better communication with IMA council.

9. Report of commissions and working groups

The business meetings of each commission did not take place yet, and several will take place this week (e.g., CM, COM, CPM, on-line or in person).

Potential changes of officers for commissions or working groups.

The Secretary was informed of only two changes;

IMA-CNMNC, Chair: Ritsuko Miyawaki → Ferdinando Bosi

IMA-COM, Chair: Malte Junge

10. Establishment of three new working groups

Following the initiatives of president Anhuai Lu, three new working groups were proposed:

Nano-Mineralogy

Chair: *Juan Liu*, College of Environmental Sciences and Engineering, Peking University, Beijing, China.

Vice-Chair: *Keisuke Fukushi*, Institute of Nature and Environmental Technology, Kanazawa University, Japan.

Vice-Chair: *Michael Schindler*, Department of Geological Sciences, University of Manitoba, Canada.

Secretary: *Alejandro Fernandez-Martinez*, ISTERRE (Grenoble), CNRS, France.

Mineral Informatics

Chair: *Robert M. Hazen*, Carnegie Institution for Science

Vice-Chair: *Sergey V. Krivovichev*, Department of Crystallography, Saint-Petersburg State University, Russia.

Vice-Chair: *Yan Li*, Peking University.

Secretary: *Shaunna M. Morrison*, Carnegie Institution for Science.

Bio-mineralogy and environment

Chair: *Prof. Giovanni di Giudici*, Dept. Of Chemical and Geological Science University of Cagliari

Vice-Chair: *Dr. Kevin Rosso*, Physical Sciences Division for Geochemistry - Pacific Northwest National Laboratories

Vice-Chair: *Prof Jurai Maizlan*, Institut für Geowissenschaften - University of Jena

Secretary: *Karen Hudson-Edwards*, Institut für Geowissenschaften - University of Jena



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Their creation and composition of these groups will be discussed and voted upon at the second business meeting.

12. Report on the IMA Archive

Annamária KIS 's report is given in attachment. Here is only a summary:

Summarize of IMA Archive activities of the last year with an outlook on the future.

Hungary: archive and digitalization of Professor Kálmán Sztrókay's heritage

Bulgaria: Collaboration with Ruslan Kostov

USA: Prof. Peter Burns and Travis Olds have indicated that there are a lot of documents related to the IMA that they would like to deliver to the IMA Archives.

Australia: Archives from the NHM

IMA GM's abstracts have been also collected and digitized

Finally, a memorial session for Ekkehart Tillmanns will be organized during this year.

The work is continuous, and Annamária Kis will do her best for the success of the enlargement of the IMA Archive. Finally, I would like to ask everyone to please help the subcommittee to preserve the past, the tradition and the heritage of IMA. If you have any documents or information that you can share with the IMA Archive, then please write an email to annamaria.kis@gmail.com. She will do her best to contact you as soon as possible and to help the documents to be part of the IMA Archive.

The Past-President informed all attendees that if they wish to join a memorial session for Ekkehart Tillmanns, they should contact Annamária Kis directly.

13. Status of future General Meetings

IMA – 2026 (Nanjing, China),

Bid booklet is now satisfying, but an international scientific committee is still missing.

Wenxin YAN showed the video describing the bid from Nanjing for the IMA2026 meeting. A short discussion followed regarding the price of the registration, which is expected to be the same as the current IMA2022 registration.

IMA – 2030 (Outlook, Europe or Americas)

Past-president P. Cordier reminded the participants that a venue for the IMA 2030 meeting is needed.

Meeting ends at 1:50 pm.

S. DEMOUCHY
SECRETARY

A. LU
PRESIDENT