

**Interdivisional Committee on Green Chemistry
for Sustainable Development, ICGCSD
Virtual Meeting
Friday 30 October h 18-20 CET (Central Europe Time)
Minutes of meeting**

(Thanks to Dr. Aurelia Visa, who managed the virtual meeting thru GoToMeeting site and prepared the Minutes of meeting).

1. Welcome and apologies for absence

The Chair Professor Pietro Tundo welcomed the committee members. He conveyed apologies from absent member.

IN ATTENDANCE: ICGCSD titular members, associate members. IUPAC President

Prof. Pietro Tundo (PT), STC-Chair, Italy
Prof. Buxing Han (BH), STC-Secretary China/Beijing
Prof. Christopher Brett (CB), IUPAC President, Portugal (18-19:10 CET)
Prof. Natalia Tarasova (NT), TM, Russia
Dr. Jonathan Forman (JF), TM, USA
Prof. Jane Wissinger (JW), AM, USA
Prof. Florent Allais (FA), AM, France
Dr. Aurelia Visa (AV), AM, Romania
Prof. Zhimin Liu (ZL), AB, China, invited

APOLOGIES:

Prof. Klaus Kümmerer (KK), TM, Germany

During the first hour we had the pleasure to welcome Professor Christopher Brett-IUPAC President. Professor Brett knows very well the ICGCSD activities and objectives, since he was TM in last biennium of ICGCSD.

PT introduced the main reason for this meeting, namely to discuss new project proposals inside our committee, followed by a next meeting in two weeks with Divisions Representatives to highlight our thoughts and to involve the divisions in our project proposals.

CB highlighted that at this particular moment we have the opportunity to influence industry, when they restart their work. Also acknowledged that the Metrics project is important to be published. We desire to make the processes green and with metrics we can do it with objective measures!

Regarding new IUPAC projects, CB pointed out a smaller number of project submissions, that can probably be attributed to the pandemic situation and lack of face to face meetings.

CB acknowledged the email sent by KK which set some interesting points about philosophy and perceptions regarding green chemistry and sustainable development: *“Sustainable chemistry and green chemistry are both normative concepts (i.e. they depend on human values and wishes, e.g. waste is neither “good” nor “bad” for nature. The same holds for energy, but it matters for us as humans (“good or bad”) which is also reflected in: waste has to be a resource by attaching a value to it.”*

2. Call for additional agenda items

No additional items were added to the Agenda. ICGCSD information and reports will continue to be upgraded on the IUPAC website.

3. Chair’s report

The minutes of meeting held in 15 May 2020 was approved and it has to be uploaded on the ICGCSD- IUPAC web-page. PT acknowledges the KK ideas and thoughts shared with all ICGCSD members before the meeting. PT stressed on the need to mark the difference among green/sustainable chemistry and environmental chemistry.

4. Election for the next biennium 2022-2023. Nominating Committee

In the context of elections for the next biennium 2022-2023, the Nomination Committee will be shortly submitted to Dr. Lynn Soby by PT. He anticipated that he will propose as Members: David Black (Australia), Neil Coville (South Africa), Ferruccio Trifirò (Italy), while the chair of NC will be Buxing Han.

BH is the only eligible person to be chair of ICGCSD in the next biennium. PT stressed that we need to go together with all the current Core Members membership on next biennium.

4. Interaction/collaboration with IUPAC Divisions/Committees

JW ask to clarify how will be the interactions with the divisions. From our past experience we observed that the divisions prefer to work alone, therefore we need to invite them in our projects and to work together for IUPAC thru the committees.

PT was contacted by Bipul Behari Saha and asked to collaborate with Indian Chemical Society. After the exchange of information and proposals, no answer was received yet.

PT received a project proposal by Jan Apotheker. Finally ICGCSD did not go to one end. The main reason was that only division VI is involved. We need to avoid to have in the project only one Division, being a reference for all the IUPAC Divisions.

International organizations (OPCW, OECD, UNEP, etc) recently are having a lot of money for a safer chemistry; however we cannot be competitive with them. We need to keep a scientific role in their projects. JF says that we should involve them in our projects, to find right way to approach the International Organizations.

5. Advertising prizes and awards (NHU and Chemrawn VII)

Huizhen Liu (China) and Banothile Makhubela (South Africa) have been awarded the 2020 IUPAC-CHEMRAWN VII for Green Chemistry in recognition of their outstanding contributions to the field of green chemistry. The Jury was composed by Pietro Tundo (Chair), Francesca Kerton (CHEMRAWN), and Aurelia Visa (ICGCSD). Official letters have to be sent to the winners.

PhosAgro/UNESCO/IUPAC green chemistry Grants: these grants will not be awarded this year because the coronavirus didn’t allow meeting in Paris (informal communication by PT and CB). It will be postponed to the next year 2021. Present application will be kept and added to the applications received.

6. Information about 51st IUPAC General Assembly and 48th IUPAC World Chemistry Congress will take place on August 13-20 2021, in Montréal, Canada

PT express a primary need is to meet face to face, hoping that it will happen soon in Venice at the Green chemistry Summer School, July 2021, or/and in Montreal August 2021 or/and on September in Thessaloniki to strength the links to EuChemS. Everybody supports this idea.

We will have discussions on the 51st IUPAC General Assembly and the 48th IUPAC World Chemistry Congress that will take place on August 13-20 2021, in Montréal, QC, Canada: There are 3 scenerios possible due to pandemic situation: either a person to person, hybrid, ora virtual event. A decision will be made in January 2021. To meet in Montreal in 2021, titular members can be reimbursed from ICGCSD budget. PT said that we can be supported from the budget of the projects for the person inviolved. NT highlited that the reimbursement can be also made as representatives delegates (NAO).

7. Projects

- a. Current projects: Metrics for Green Syntheses- Project No.: 2017-030-2-041), Chair: Pietro Tundo

This project have prepared a Technical Report (Metrics, Glossary and Data list) and two research papers (by John Andraos and Marco Eissen) to be submitted to Pure and Applied Chemistry (PAC). PT asked CB and NT about editors of PAC. In this respect, it was clarified that PAC has two editors Hugh D. Burrows (responsible with research articles) and Jürgen Stohner (responsible with technical reports and recommendations).

- b. New project: Assessment of the contribution of IUPAC projects to the achievement of the United Nations Sustainable Development Goals (IUPAC and UN17SDGS)- Project No.: 2020-011-2-041, Chair: Mirabbos Hojamberdiev

Unfortunately, a recent change in Mirabbos Hojamberdiev health will not allow him to continue to be the Task Group Chair for this Project. Therefore, he resigned until his health will allows him to continue working on this Project, Mirabbos Hojamberdiev will be glad to be Member of the Task Group. To go forward with this project PT will act as Chair in the interim and asked all colleagues for supporting him in this temporary work. NT, JW and AV express availability to work on this project, and JF is happy to help in reviewing.

- c. New project: Systems thinking in chemistry for sustainability: toward 2030 and beyond (STCS 2030+) - Project No.: 2020-014-3-050, Chairs: Peter Mahaffy, Stephen Matlin, Marietjie Potgieter, Bipul Behari Saha, Aurelia Sorina Visa

AV report on the progress of the project. On 21 October 2020, Aurelia Sorina Visa, Peter Mahaffy, Stephen Matlin, Marietjie Potgieter and Bipul Behari Saha, organized a task group chair meeting discussing about: Project objectives and goals; Discussion of mechanisms to coordinate the work within each of the three coherent strands (Sustainability, Formal Chemistry Education, and Chemical Industry) and the overall project; Review of Milestones for 2020; What do each of us, see the greatest opportunities and challenges to be. CB was very happy that the present projects are rolling on.

- d. Projects to be developed by the Core Members after their impetus

On this topic there were three project proposals ideas as following:

1. Special issue (on PAC or on other Journals of international importance) dedicated to clean industrial processes. In green Chemistry Industry we have support from various organizations such as L'Oreal, PhosAgro, NHU. FA stressed on interdisciplinarity as chemistry meets biotechnology, food chemistry and we need to prepare papers, books, symposia in this direction. It is very important to use green chemistry into a very productive way. We should teach students to look at constraints. Participants who agreed to take part were: PT, KK, FA, BH

2. Survey on international networks on green/sustainable chemistry (UNEP, OECD, OPCW, ISC; etc). JF and NT expressed their willing to be involved. JF is interested in doing survey in the policy side.
3. Education on green/sustainable chemistry, JW, KK and NT may be involved from ICGCSD. JW discuss about interdisciplinarity in order to consolidate the knowledge. It is necessary to make distinction between green chemistry and sustainability. Also more synergy is needed between environmental chemistry and green chemistry. NT pointed out that education is the center of her activity.
4. Prof. Liliana Mamino asked for a support for a book entitled "Green Chemistry on Africa". ICGCSD might support with 1000\$ when the proposal will be ready.

8. Congress in Athens (October 18-22, 2020) and proposals for 2022

As discussed in our previous meeting in 15 May, due to pandemic situation the Congress in Athens (October 18-22, 2020) could not be organized, therefore the ICGCSD conference will held in 2022, in Athens.

9. Summer School on Green Chemistry in Venice (July 4-10, 2021) and related Symposia

In 2021 the Summer School on Green Chemistry will held in Venice, July 4-10, 2021 and also by remote for students who cannot attend for different reasons; this means that efforts will be done for organizing the school in hybrid system. JW agreed on helping with online, in order to add more activity types for students to promote a better communication.

PT stressed on the need of having qualified teachers as well as high quality students. Web page of the school is under construction and the dissemination to students will start very soon.

10. Communication and dissemination of the work of ICGCSD

PT thanked AV and ZL for their support in the communications.

- a. Webpage
- b. Newsletter
- c. Brochure

11. Any other business

12. Venue and timing of next Committee meeting.

Next meeting will be in two weeks with Core Members and Division Representatives.

Prof. Pietro Tundo
Chair, IUPAC ICGCSD