Conference Call

Green Chemistry Postgraduate Summer School

by Mirabbos Hojamberdiev, Aurelia Visa, Fabio Aricó, and Pietro Tundo

The 13th Green Chemistry Postgraduate Summer School was held for the first time in a hybrid way, both online and in-person in Venice 4-9 July 2021, as a result of the ongoing restriction related to the Covid-19 pandemic and some limitations on travelers' mobility.

The Summer School is an international initiative organized and managed by the Green Sciences for Sustainable Development (GSSD) Foundation (www.gssd-foundation.org), a non-profit Foundation based in Venice, Italy. In 2021, it was held in collaboration with IUPAC Interdivisional Committee of Green Chemistry for Sustainable Development (ICGCSD), Ca' Foscari University of Venice, and the Italian National Commission for UNESCO Roma. It was generously sponsored by various organizations, including the Organization for the Prohibition of Chemical Weapons (OPCW), PhosAgro, RSC (UK), and GreeNovator.

For those attending in person, the event took place in the classrooms of Ca' Foscari University of Venice. The event was chaired by Pietro Tundo, President of GSSD Foundation and Chair of ICGCSD. The Organizing Committee included Fabio Aricó from Ca' Foscari University, Mirabbos Hojamberdiev from Uzbekistan, and Aurelia Visa from Romania. The Summer School was also supported by Elena Alfine and Emilia Pasta (administration), Paula de Waal (ZOOM Manager), and Giacomo Rossi and Michele Ruta (website managers). The website www.greenchemistry.school provided the latest information on application for students, selection results, abstract submission, poster presentation, programme, entry visa-related information, lectures,

etc., and was the key platform to communicate effectively with lecturers and students.

The Summer School was internationally followed and widely advertised by IUPAC, which issued press releases daily (<https://iupac.org/brief-from-ssgc2021/>)

In total, 170 applications from postgraduates were received and 130 were considered eligible to attend the Summer School after a rigorous selection conducted by nine members of the International Scientific Committee by strictly followings the set criteria: CVs, publications, recommendation letters from their supervisors, motivation letters, etc. From these 130 selected postgraduate attendees coming from 39 different countries, 15 PhD students attended in-person in Venice. From the 34 lecturers from all over the world, 10 participated in-person and delivered their lectures in Venice.

The program of the Summer School included 13 scientific lecture sessions and 8 poster sessions on the following main topics:

1. Exploitation of renewable resources,
2. New reaction pathways,
3. Energy saving,
4. Food safety,
5. Climate Change damages mitigation,
6. Education, and
7. Health.

In the morning before scientific sessions, various sponsors and institutions also delivered their talks. After each scientific lecture session, 30 minutes were given for questions and answers mixing input from both online and in-person participants.

Welcome Address and Opening Remarks

The welcome address and opening remarks were delivered by

- Pietro Tundo;
- Salvatore Orlando, Director of the Department of Environmental Sciences, Informatics and Statistics (DAIS);
- Christopher Brett, IUPAC President and Professor of Chemistry at University of Coimbra, Portugal;
- Andrey Guryev, CEO of PhosAgro, Russia; Natalia Tarasova, Director of the Institute of Chemistry and Problems of Sustainable Development, Mendeleev University of Chemical Technology of Russia; and
- Sandra Averous-Monnery, Programme Officer at the United Nations Environment Programme (UNEP)

Figure 1. The Organizing Committee: from left, Mirabbos Hojamberdiev, Fabio Aricó, Aurelia Visa, and Pietro Tundo

Figure 2. Some of the in-person postgraduate attendants with Organizing Committee

The detailed day-by-day program is documented in a full report available under <https://www.greenchemistry.school/programme/> and in the daily brief at <https://iupac.org/brief-from-ssgc2021/>

Poster Awards

In total, 79 posters were received, and the postgraduate attendants were given the opportunity to present their research over multiple sessions; 13 posters were presented in-person. The Jury, chaired by Neil Coville, Emeritus professor of University of the Witwatersrand, Johannesburg, South Africa, had the challenging task to review all the posters both online and in-person and was struck by the originality and scientific relevance of the research presented. Ultimately, 11 posters were awarded: four of them in-person were awarded 500 € each by PhosAgro; they were (in alphabetical order):

- **Felipe Sanchez Bragagnolo**, Faculty of Agricultural Sciences, São Paulo State University, São Paulo, Brazil: *A green approach to valorize soy agro by-products*
- **Monika Horvat**, University of Ljubljana, Faculty of Chemistry and Chemical Technology, Slovenia: *Selective Oxidative Cleavage Of C-C Double Bond By Hydrogen Peroxide*
- **Mohammed Kadhom**, Department of Environment, College of Energy and Environmental Science, Alkarkh University of Science, Iraq: *Improving the Performance of TFN Membranes by Incorporating UiO-66 and MIL-125 MOFs Nanoparticles Used for Water Desalination*
- **Manar M. Taha**, Energy Materials Laboratory, School of Sciences and Engineering, The American University in Cairo, Egypt: *Controlled*

Fabrication of Mesoporous Electrodes with Unprecedented Stability for Water Capacitive Deionization Under Harsh Conditions in Large Size Cell

Seven online poster award winners were (in alphabetical order):

- **Luca Filippi**, Karlsruhe Institute of Technology (KIT), Karlsruhe, Germany: *Fully renewable NIPUs via thiol-ene polymerization*
- **Stephanie A. Fraser**, University of KwaZulu-Natal, South Africa: *A novel solvent-based approach towards luminescent cellulose paper*
- **Giulia Rando**, Department ChiBioFarAm, University of Messina, Italy: *Pillararene-Based PES blended polymers: Design, Preparation and Sustainable Applications*
- **Caterina Rovegno**, Department of Chemical, Pharmaceutical and Agricultural Sciences, University of Ferrara, Italy: *Efficiency improvements of CO₂ utilization: the case of styrene carbonate synthesis in microdroplets conditions*
- **Solange M. Selzer**, Physical Chemistry Department, Faculty of Chemistry Science, Universidad Nacional de Córdoba, Argentina: *Study of Toxicity and Cellular Uptake of Magnetic Nanoparticles With Different Coatings*
- **Gabriele Soriano**, Department of Chemical Sciences, University of Naples Federico II, Naples, Italy: *Plant metabolites as stimulants and/or inhibitors of parasitic plant seed germination*
- **Yanru Zhang**, Institute of Chemistry, Chinese Academy of Sciences, P.R. China: *Synthesis of Higher Carboxylic Acids via the Hydrocarboxylation of Alcohols with CO₂ and H₂*

Closing Remarks

The closing remarks were given by Christopher Brett, IUPAC President, who expressed his thanks to the organizers; and by Marco Bella, Member of Parliament of the Italian Republic in the Chamber of Deputies and Professor at La Sapienza University of Rome. Bella underlined the crucial role of a better university education and the need to create a better world not producing “more”, but rather producing “better.” At the end, Aurelia Visa delivered relevant statistics associated with countries, gender, scientific output, awards, grants, etc. about this Summer School attendance. It was announced that the 14th Green Chemistry Postgraduate Summer School will be held online/live and in-person 3-8 July 2022 in Venice, Italy.

Conclusion

The experience from the past 13 editions of the Summer School on Green Chemistry, held from 1997 to 2021 with more than 1000 postgraduate students attending, tells us that young chemists are interested in Green Chemistry and understand the important role of Green Chemistry in building a sustainable society. Green Chemistry is a good key for students to look around scientific disciplines and decide how and where to go forward using Green Chemistry principles. From the outcomes of this latest hybrid Summer School, we learned how to manage the future Summer Schools in a hybrid format, giving a very valuable opportunity to the postgraduate students from emerging nations, who cannot afford travelling to attend in person. This Summer School represents a turning point for a new kind of outreach and capacity building, considering the high quality of scientific contributions, the Green Deal, and a fast scientific progress in developing countries. Our ultimate goal is to make the Summer School a permanent event to be held every year in Venice, Italy. Thanks to the involvement and active participation of outstanding lecturers, partners, and sponsors, we hope to achieve this goal in the near future.

Acknowledgments

The Summer School was organized and managed by the Green Sciences for Sustainable Development Foundation (www.gssd-foundation.org), a non-profit organization based in Venice, Italy, in collaboration with IUPAC, Ca' Foscari University of Venice, and the Italian National Commission for UNESCO Roma. The Summer School was also endorsed by the Ministero della Transizione Ecologica, UNESCO-UNITWIN “Green Chemistry Excellence from Baltic Sea to Mediterranean Sea and Beyond, European Chemical Society,

Associazione Italiana per la Ricerca Industriale, The World Academy of Sciences (TWAS), and Patrocinio Regione del Veneto, and Citta' di Venezia. The Summer School was financially sponsored by the Organization for the Prohibition of Chemical Weapons (OPCW), PhosAgro, the Royal Society of Chemistry, and GreeNovator.

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<https://www.greenchemistry.school/>

Congress of the Slovak & Czech Chemical Societies

by Milan Drábik

The 73rd Annual Congress of the Slovak & Czech Chemical Societies, held 6-10 September 2021 in High Tatras, Slovakia, attracted nearly 400 participants who presented and discussed the large scope of topics and achievements of chemistry research in Slovakia and Czech Republic. The program comprised an exclusive plenary lecture by Pavol Čekan on Development of quantitative and multiplex diagnostic technologies and application, and several invited lectures, lectures, and posters.

As an on-going tradition, the organisers were eager to award IUPAC Poster Prizes to the best posters and as before, they proceeded with the challenging task of reviewing and judging all the submissions. The IUPAC Poster Prize is aimed to PhD students and chemists younger than 40 years, thus poster presentations of 107 young colleagues (from among the total number of more than 200 posters) have been monitored and evaluated with the aim to choose two posters and authors to be awarded. Members of the ad-hoc monitoring and evaluating committee have been Jan John, president of Czech Chemical Society, Eva Víglášová, guarantee of the poster sessions of the Congress, Pavol Čekan, and Milan Drábik, chair of Slovak National Committee of IUPAC. After two evenings of viewing posters and discussions with authors, the committee decided to award and present the certificates to:

- **Klaudia Kvaková**, PhD student at Institute of