



IYCN

THE INTERNATIONAL
YOUNGER CHEMISTS
NETWORK
NEWSLETTER

September 2020, Issue 12



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Upcoming Events and Activities in 2020

Due to the current COVID-19 situation many of our activities at conferences are cancelled. We are working on alternative projects to promote the IYCN. Please, check our social media channels regularly to be informed about our upcoming activities. We hope we are able to inform you in the next newsletter again about our physical presence of IYCN members at conferences or congresses.

Please stay safe and healthy

New Articles About the IYCN

“Reflecting on a Year of Elements”, Lori Ferrins, Christine Dunne, João Borges und Fun Man Fung, *Chemistry International* **2020**, *42*, 16-21. DOI: [10.1515/ci-2020-0302](https://doi.org/10.1515/ci-2020-0302)

“EYCN and IYCN: Connecting and Empowering Young Chemists Globally”, Dimitra T. Pournara, Gabriela Desireé Tormet-González, Sebastian Weber, João Borges, Maximilian Menche and Jovana V. Milić, *ChemViews* **2020**, DOI: [10.1002/chemv.202000020](https://doi.org/10.1002/chemv.202000020)



IYCN

Support Wanted

Do you or your organization want to support IYCN and its progress?

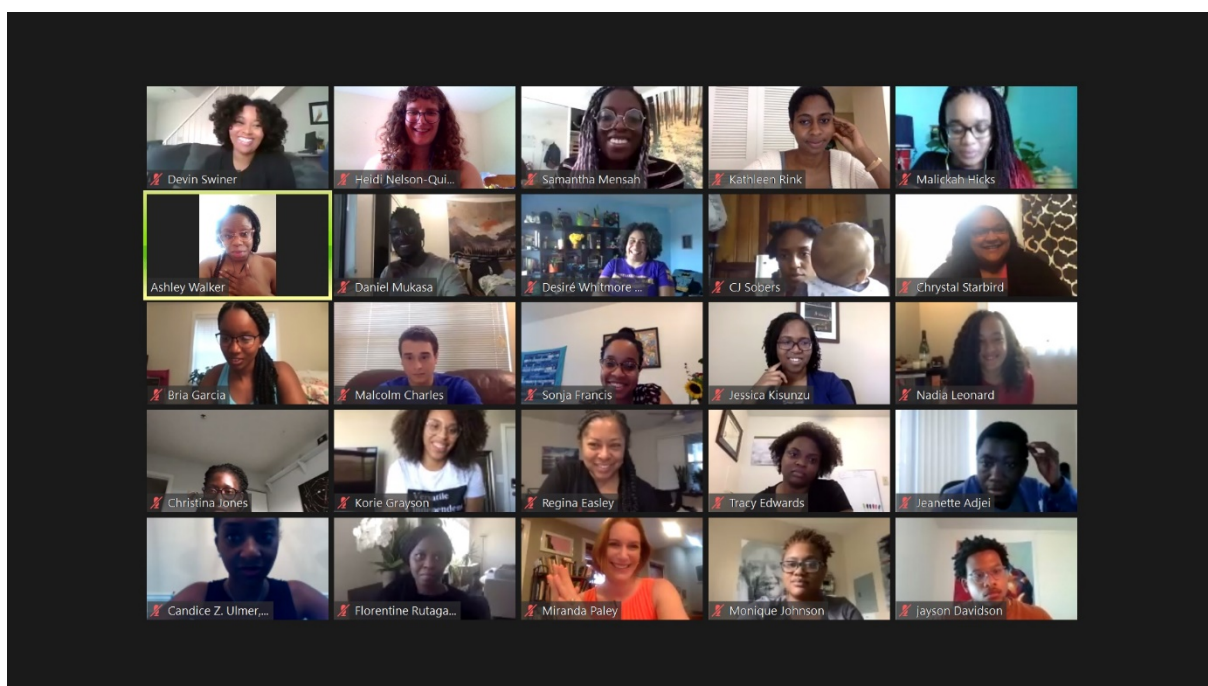
Please contact us via the following e-mail address: iykn@iupac.org.

We are searching for funds to support our activities including the extended development of online activities.

The Impact of #BlackinChem

The last few months, there have been movements showcasing and celebrating Black scientists and #BlackinChem (August 10-15, 2020) was no different. In a similar fashion to #BlackandSTEM, #BlackBotanistsWeek, #BlackinNeuro, etc., we saw an opportunity to bring this kind of visibility to our own field. Most people cannot name a lot of Black chemists, whether they are historical figures or current graduate students, so this week was important for the community. We wanted to make sure that we all had access to each other and that our non-Black counterparts knew we existed as well. This is work that I have always been involved in throughout my career because I know what it is like to be in spaces that are not designed for me or in spaces where I am not well represented. Providing a network and support system for Black chemists is not new, organizations like the National Organization for the Professional Advancement of Black Chemists and Chemical Engineers (NOBCChE) have been doing this work for decades, and I proudly serve as the chapter president at The Ohio State University providing a similar space for Black students. Because of this set structure, the co-founders of #BlackinChem wanted to take it a step further and used Twitter as the means to connect with people in the U.S. and beyond. It truly was a sight to see MC Hammer (@MCHammer), Michael B. Jordan (@michaelb4jordan), and Michelle Williams (@RealMichelleW) from Destiny's Child support our movement. I really cannot put into words how lifechanging August 10-15, 2020 was for everyone. The beauty of movements like this is that we are not stopping. #BlackinChem will be a yearly Twitter event and we are also working on other monthly ones as well. The work is just beginning for us and for those of you that would like to join and celebrate it, we are on Twitter, @BlackinChem, and we have a website, blackinchem.com, both of which will keep you up to date on opportunities and future events.

Devin Swiner (@Devin_Eleven)



Participants of an online meeting during the #BlackinChem week

#DiverseSTEM: IYCN Celebrates Diversity in the Chemical Sciences

IYCN is dedicated to creating an environment where all of those in the chemical sciences globally are welcome. We believe that celebrating our differences and what makes us unique, including, but not limited to race, ethnicity, gender, disability, sexual orientation, gender identity, national origin, tribe, caste, socio-economic status, thinking and communication styles, will help us to create a more sustainable and inclusive scientific community, and world. We rely on our diverse membership and essential partner organizations to bring their unique skills, views, and experiences. We can only succeed if early career chemists from all backgrounds and nations have the opportunity to join, network and participate.



Credit: Andy Brunning/Compound Interest

Recently, members of IYCN's Executive Board contributed to the editorial 'A diverse view of science to catalyse change' to demonstrate their support for diversity, equity and inclusion. The article "A diverse view of science to catalyse change" is co-published in the following journals: Nature Chemistry (<https://doi.org/10.1038/s41557-020-0529-x>), Chemical Science (<https://doi.org/10.1039/D0SC90150D>), Journal of the American Chemical Society (<https://doi.org/10.1021/jacs.0c07877>), Angewandte Chemie International Edition (<https://doi.org/10.1002/anie.202009834>), Canadian Journal of Chemistry (<https://doi.org/10.1139/cjc-2020-0323>), and Croatica Chemica Acta (<https://doi.org/10.5562/diversity2020>). The accompanying community blog "Diverse Views in Science" is accessible via: <https://chemistrycommunity.nature.com/channels/diverse-views-in-science>. Everyone is invited to contribute their diverse views on scientific trends in the future, leadership and advice to the younger generation.

IYCN Public Outreach Competition

IYCN is pleased to announce that the winning submission of its 2nd annual public outreach competition is entitled “Detection of the production of CO₂ by *S. cerevisiae* during sugar fermentation and preparation of acid-base indicator,” designed by Adalgisa Martínez-Silveira and Soledad Martínez from Universidad de la República, Uruguay (Figure 1). The experiment uses a cabbage dye indicator to help participants see the production of CO₂ when yeast is combined with sugar. The experiment contextualizes the reaction with other examples of reactions that produce carbon dioxide. The authors suggest several ways that the experiment can be adapted for participants, including different sources of sugar and different preparations of the cabbage dye indicator.

About the winners

Soledad Martínez is a 27-year-old PhD student born in a city on the east coast of Uruguay. She has always been really curious and creative, and when she was 12 years old she decided she wanted to study chemistry. When she was 17 years old, she participated in the Chemistry Olympics and then moved to the capital city to start a degree in Clinical Biochemistry. Since 2015 she has been working in the Microbiology Area of the Faculty of Chemistry (Universidad de la República), where she carries out research on the quality and safety of drinking water, using molecular and bioinformatics techniques. She also loves painting and drawing, when she is not filtering water.

Adalgisa Martínez-Silveira works as a professor and researcher at the Faculty of Chemistry of Universidad de la República. Earlier this year she finished her PhD in chemistry, in which she studied an alternative raw material for biodiesel production. Recently, she joined a research group on the quality of drinking water. She is 31 years, was born in Brazil but lived all her life in Uruguay. She graduated from Clinical Biochemistry and has worked in microbiology since 2010. She is happily married to a chemist, loves cats and does crossfit as exercise.

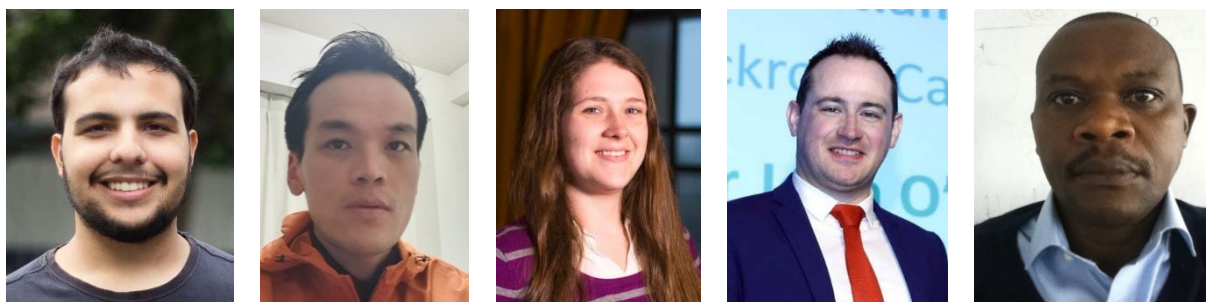


The 2020 Winners (from left to right): Adalgisa Martínez-Silveira and Soledad Martínez (both from Universidad de la República, Uruguay).

About the 2020 outreach competition

This is the second year of the event, “Engaging the next generation: an IYCN outreach competition.” The 2020 theme of the competition was **Earth Chemistry**, in celebration of the 50th anniversary of Earth Day, created in 1970 as a unified response to an environmental crisis including oil spills, smog and pollution. Applicants were invited to submit their designed chemistry experiments that could be used for outreach and public engagement under the proposed theme from 28th of January to 22nd of April (Earth Day), which was extended to 6th of May, 2020. The competition is coordinated and managed by the Public Outreach Committee of the International Younger Chemists’ Network (IYCN).

The 2020 panel of judges consisted of five volunteers: **Matheus da Silva Souza**, a biotechnologist and PhD candidate in Medicinal Chemistry field in the Institute of Physics of Sao Carlos (IFSC), University of Sao Paulo (USP); **Dr. Kar Ban Tan**, an associate professor at the Department of Chemistry, Faculty of Science, Universiti Putra Malaysia, who is interested on the synthesis and characterization of functional electroceramics, and has published more than 100 scientific papers and conference proceedings; **Dr. Deanna Montgomery**, who has a Ph.D. in medicinal chemistry from the University of Michigan, and is currently the Communication Lab manager in the electrical engineering and computer science department at the Massachusetts Institute of Technology; **Dr. John O’Donoghue**, the Education and Public Engagement Coordinator for the school of chemistry at Trinity College in Dublin where he serves as a module coordinator for the unique PhD Chemistry Outreach Module, is project coordinator for the largest secondary school science engagement programme in Ireland, and winner of the 2018 Science Foundation Ireland Outstanding Contribution to STEM Communication Award; and **Dr. Henry Mwangi**, a full time lecturer at Kenyatta University, School of Pure and Applied Sciences, whose research focuses in the area of Natural Organic Chemistry, specifically on the Phytochemistry of medicinal plants and algae. Each judge scored three to four experiments, evaluating their chemistry content, accessibility, creativity, and suitability for the suggested audience. Please refer to Figure 2 for photos of this year’s judges.



The 2020 panel of judges (from left to right): Matheus da Silva Souza (IFSC-USP, Brazil), Dr. Kar Ban Tan (Universiti Putra Malaysia, Malaysia), Dr. Deanna Montgomery (MIT, USA), Dr. John O’Donoghue (Trinity College Dublin, Ireland), and Dr. Henry Mwangi (Kenyatta University, Kenya).

History of the competition

The experiment competition was launched in 2019 as the result of a survey in which IYCN members requested support for early-career chemists to do outreach. The 2019 competition winners were announced during the IYCN program at the [47th IUPAC Congress](#) in Paris, France. All winning experiments will be translated and added to the database of outreach resources available online on IYCN website (<https://www.iycnglobal.com/experiments>).

The goal is to create an outreach database of experiments for a general audience, that are tailored how-to guides with everyday-language communication tips. In order to effectively support early-career chemists in countries where outreach resources aren't readily available, we decided that experiments would be translated into multiple languages and made freely available. Because this project has been developed by volunteers with little experience in translation tasks and the Public Outreach volunteers are not expert editors, we chose a method to validate the translation work based on the editorial process of scientific journals. One of the members of the Public Outreach team, Marilia Valli, was assigned as the person-in-charge (editor), who decides the languages the experiments will be translated into and looks for translators in the volunteer translator database. For any language, there are two translators: one in charge of the initial processing of the text (Main Translator) and another in charge of reviewing the initial translation and to correct mistakes (Proofreader), both receiving a certificate of participation. We interacted with more than 100 volunteers to translate the winning experiments in 2019, and we thank our volunteers for making this project possible. In our experiment database there are currently four experiments, two model experiments, uploaded from members within our team and the two winning experiments from the 2019 competition. Each of these experiments has been translated into 20-25 languages, from Albanian to Yoruba, depending on translators' availability. The experiments follow a fixed format that will help in the standardization of all of our educational resources. If you are interested in serving as a volunteer translator for future experiments, please reach out to us at publicoutreach.iycn@gmail.com and include "volunteer translator" in the subject line.

We plan to run the 3rd outreach competition again in 2021, so stay tuned to design an experiment and enter the next competition!

Marilia Valli

Impressions of ChemCYS Conference

In the last newsletter issue we already had an article included about the ChemCYS conference in Blankenberge (Belgium) where IYCN was represented by Emiel Dobbelaar. In this issue we will have additionally some impressions from the conference.



Green Chemistry Online Postgraduate Summer School, 6-10 July 2020

Fun Man Fung represented IYCN during the Green Chemistry Online Postgraduate Summer School. You can find more information about the Summer School under the following link: <https://www.unive.it/pag/29448/>

During the talk Fun Man used online live tools to elaborate the country of origin of the participants which you can find in the following graphic showing the broad diversity of origin of all participants.

Which city, which country are you from?



Graphic Designer Wanted!



We are looking for a new graphic designer! If you're interested, please apply via the following email: socialmedia.iycn@gmail.com. Please send us an example of a flyer about the representation of IYCN at a conference and your CV together with a short motivational statement until **18 October 2020**.

UN SDG 4 Project: the Collaborative Platform WeLearn



Photo courtesy of Sustainable Development UN

As education has become more prevalent in the 21st century, the focus of learning has dived into sustainability- to ensure equal opportunities for lifelong education. Within this digital age when information is readily available with a click of the mouse, the paradigm of learning has shifted drastically. Hence, in conjunction with the WeLearn team in CRI Paris at University of Paris, the National University of Singapore (NUS) “Learning to Learn Better Team” aims to tackle the problem of sustainable education for all through the collaborative platform of WeLearn.

WeLearn project

Despite the rapid improvements in technology, an estimated 260 million children all around the world are out of school. <http://data.uis.unesco.org/>. Furthermore, many university students are burdened with student loans once they graduate. We believe that a community of learners can help provide support and necessary resources, bringing us closer towards the goal of sustainable quality education. In partnership with the French development agency and UNESCO, WeLearn aims to build a community of learners. Potentially the ‘Facebook’ for learning, users can share ideas with one another and network with possible academic experts. Users of similar interests can discuss shared interests and find mentors and mentees in their respective fields. As part of the global digital learning ecosystem, WeLearn functions as a network-based plugin to organize learning resources by concepts and share the information with other users. In addition, the web-based extension provides categorization of articles based on complexity ranging from easy to difficult. This function allows the user to determine their level of competency in their topic of choice. We made a video guide to illustrate how learners can join this SDG project as a global learner. You can find a more detailed article with further information and examples about the project on the IYCN website:

<https://www.iycnglobal.com/post/un-sdg-4-project-the-collaborative-platform-welearn>

Lucas Tay Hao Yang and Fun Man Fung

ChemVoices – Showcasing the Future of Chemistry



The Periodic Table of Younger Chemists was the idea of Dr. Christine Dunne and was a collaborative effort between IUPAC and IYCN as part of the 2019 IUPAC100 Celebration. Elements were awarded monthly in order of discovery to 118 outstanding early-career scientists from around the world who embody the mission and core values of IUPAC. The final six elements were awarded during the 47th IUPAC World Chemistry Congress in

Paris, France on July 10, 2019. The resulting Periodic Table of Younger Chemists highlights the diversity of careers, creativity, and dedication of the early-career chemists leading us into the next century.

Following the successful unveiling of the completed table, we sought to find a way in which we could provide these talented early-career chemists with a platform to discuss matters that were pertinent to not only their careers but also the scientific community as a whole. This led to the development of ChemVoices! We are excited to showcase the talents of these early-career chemists and discuss matters that impact our community.

We would encourage you to check out <https://chemvoices.org/> to see the content that we have planned, to discover upcoming webinars, or to re-watch the past webinars, and to get in touch with us if you have ideas for future webinars.

Active Members in IYCN



Eliza Jara-Negrete is an Ecuadorian scientist, with training in Forensic and Analytical Chemistry. She completed her undergraduate studies at the Pontifical Catholic University of Ecuador (PUCE); during her postgraduate degree she was a fellow of the European Union with an Erasmus Mundus program, which led her to study in Spain, Portugal and England. She is currently a teacher and researcher at the PUCE School of Chemical Sciences, where she applies her knowledge of Analytical Chemistry in various projects that cover areas such as nanotechnology, bioremediation, environmental and food analysis. Starting in 2019, Eliza is also a doctoral researcher at the Integrative Biological Sciences Research Unit from University of Liège (Belgium).

Sub-committee/Position: Governance



Manuel Pühringer received his bachelor's in chemistry and chemical technology at JKU Linz in 2017 followed by his master's degree in 2019. He began his PhD thesis at the institute of organic materials at JKU Linz in April 2019, working on biomimetic adhesives specializing in polymer synthesis. Since 2014 he was a member of the student council for chemistry and chemical technology and switched to the student council for PhD students after his graduation of the master's program. He became a member of the "Jungchemiker" (Austrian young chemists) in 2016 as a regional representative of Linz before resignation in 2018 of this function to become "just" a member of the group.

Sub-committee/Position: Social Media



Nicolas Hauck received his B.Sc. in Chemistry in 2012 from the University of Bayreuth, Germany, and his M.Sc. in Chemistry in 2016 from the Technical University of Dresden, Germany. He is currently a Ph.D. student in Polymer Chemistry at the Leibniz Institute of Polymer Research Dresden, Germany.

Selected Awards

- 2019 DAAD Scholarship for a 3-month stay at Harvard University, USA

Sub-committee/Position: International Society Liaison



Guido Zichittella received his PhD in Heterogeneous Catalysis from ETH Zurich (Switzerland) in December 2019. Since January 2020, he is a postdoctoral fellow in the group of Prof. Javier Pérez-Ramírez in ETH. His work focuses on the development and understanding at the molecular level of novel technologies for the transformation of light alkanes, key constituents of natural and bio-gas, into chemical commodities. He is a chemical engineer by training, and his field of expertise expands to material science and characterization as well as *operando* spectroscopy in heterogenous catalysis.

Selected Awards:

- 2019 Forbes 30Under30 Europe List Honoree in Science and Healthcare, England
- 2016-2019 ETH Research Fellow, Switzerland
- 2018 Best Poster Award in Catalysis Engineering, SCS Fall Meeting, Switzerland

Sub-committee/Position: Conference Presence



Arish Naim received her BS in Industrial Chemistry from Aligarh Muslim University (India) in 2019, and worked at the University of British Columbia (Okanagan, Canada) as a Visiting Research Scholar afterwards. She established the American Chemical Society students' chapter at her university in India during her bachelors and served as its Secretary. Arish represented her university at the 257th ACS National Meeting in Orlando, USA. She is passionate about research and development in material sciences, focusing specifically on sustainable bio-based novel materials. Arish received an award from a non profit USA based organisation for her meritorious academic record and extracurricular engagements in college.

Selected Awards:

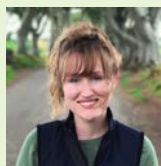
- Sir Syed Scholar Award, SSGSA USA, 2019
- Shastri Indo Canadian internship award, 2019
- American Chemical society Students' chapter Travel award, 2019

Sub-committee/Position: International Society Liaison

IYCN Executive Board



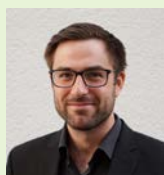
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Lori Ferrins



Chair-Elect
Bailey Mourant



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Fun Man Fung



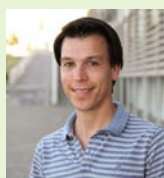
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