



EDITORIAL



Chemicals Strategy for Sustainability

Setting the new standards

The Motion for Resolution (MfR) is a starting point on the Chemicals Strategy for Sustainability, which is one of the pillars of the Green Deal. In this regard, the new Sustainable Chemicals strategy should be coherent with and complementary to the other policy objectives of the Green

Deal such as Circular Economy 2 Action Plan, and part of the framework of the Industrial Strategy and EU Beating Cancer Plan.

With this MfR the Parliament calls the Commission to come forward with the Chemicals Strategy for Sustainability based on the following key priority: to upgrade the level of protection of the consumers and the environment. For example, the Parliament is asking for elimination of risks and/or hazardous substances and substitution to safer alternatives when feasible and calls the Commission to take into account the risk posed from endocrine disruptors and the combination effect of different chemicals.

In addition, we should promote a science-based grouping approach complimentary with the “one substance one assessment” principle. Grouping is an important approach to assess families as a whole and facilitate the industry by upgrading the protection of the consumers.

Our target is to set up global safety standards for all chemicals produced, imported, and used within EU. In this regard, the European Chemicals Agency (ECHA) could support the EU’s international trade policy by defining provisions and fostering regulatory systems built upon EU standards for chemical safety. This would enhance protection beyond the EU’s borders and extend the level playing field.

The Strategy should also ensure that unnecessary animal tests are avoided, incentivising the development of smart testing strategies and Artificial Intelligence (AI) methods.

Last but not least, the Strategy should also be aligned with the two main aspects of the Green Deal, “green” and “digital”. In this regard, we fully support ECHA’s initiative to promote the establishment of a fully connected and interoperable EU chemical safety database platform to facilitate seamless sharing of data between authorities and provide public access to researchers, regulators, industry and the citizen at large.

*Maria Spyrali
Member of the European Parliament*

FOCUS

What's new at EuChemS?

After Twitter, Facebook and LinkedIn, the European Chemical Society is now also on YouTube. You can find there Chemistry-related content, including videos on our activities and events happening in Europe and beyond.

The two most recent videos that are available on [EuChemS YouTube channel](#) are:

- [European Chemical Society - EuChemS](#)

This video aims to present the European Chemical Society’s dynamic work, missions, and goals to the public.

- [EuChemS 50th anniversary online celebration](#)

This video is the full recording of the EuChemS 50th birthday celebration which was organised online on 3 July 2020.

Don’t forget to subscribe to [EuChemS YouTube channel](#) and stay up to date on our latest videos!



In this issue of Chemistry in Europe, we wanted to give special focus to our community of chemists who had to adapt to the measures taken due to the COVID-19 pandemic. Testimonies from EuChemS Executive Board members, our Professional Networks and the EYCN Board members and Delegates were collected for this purpose.

You can read their testimonies in the section Notes of this issue, page 13.

EuChemS Secretariat

POLICY

The Council of the European Union: what about research?

The Council of the European Union, a brief overview

The Council of the European Union, also known as 'the Council', is one of the three legislative bodies of the European Union. Together with the European Parliament, it is responsible for negotiating and adopting legislative acts proposed by the European Commission, but also for adopting the EU annual budget. Agreements related to foreign and security policy are also negotiated by the Council.

The Council is intergovernmental, and it is composed of 27 government members, one from each EU member state. Although the Council coordinates member states' policies, it remains a supranational institution since its decisions and international agreements may affect most (if not all) EU nations.

The Council of the European Union is led by the Council Presidency, which is responsible for propelling the Council's work. The Presidency is formed by a group of three member states and they are called the 'trio'. A certain trio sets long-term goals and prepares a common agenda of topics that need to be addressed by the Council over a period of 18 months. Setting these long-term goals is guided by the European Council's strategic agenda. The Presidency trio rotates among the three member states every 6 months. The order of rotation of the Presidency is set by the Council itself.

What can be expected from Germany's 6-months Presidency of the Council of the EU for Research and Innovation

Germany, Portugal, and Slovenia form the Presidency trio of the Council for the period from 1 July 2020 to 31 December 2021. Germany took

over the lead of the Council from Croatia, in the midst of the global health crisis. The chosen motto 'Together for Europe's recovery' leaves no doubt: the COVID-19 pandemic is at the heart of Germany's agenda, and with it, research, and innovation.

In view of the current crisis, the German Presidency announced supporting European research and its scientific community by enhancing online platforms and open access. And it has already started: the European Commission opened a roadmap on 'the future of the European Research Area (communication)', an initiative to reboot the European Research Area (ERA) policy to enhance research and innovation within the poorer regions of the European Union, from September 2020 onwards. Earlier this year, the COVID-19 Data Platform, part of the ERAvsCorona Action Plan, was launched and aims to accelerate Coronavirus research by facilitating data sharing and analysis. Germany's role will be to support these efforts and to make science more accessible and efficient in order to tackle current societal challenges.



Environmental challenges are not left out of Germany's 6-month programme: in order to successfully implement the European Green Deal, Germany would like to strengthen international cooperation in research and education areas. Germany's Green Deal plan can be summarised with the following key points:

- supporting green hydrogen initiatives;
- further developing civic participation;
- developing open online platforms.

Last but not least, the German Presidency of the Council of the EU announced that they will also support the Commission's Europe's Beating Cancer Plan:

'We will support the drafting of the Europe's Beating Cancer Plan announced by the Commission and discuss this in the Council with the objective of advancing both the prevention and treatment of cancer and also enhancing the potential of the digital transformation for improved cancer treatments. Moreover, we will lend our support to the Commission's research and innovation mission for cancer.'

- Programme for Germany's Presidency of the Council of the European Union, I. Europe's response to COVID-19 pandemic, p.15

You can read the full programme [here](#).

Laura Jousset
EuChemS Science Communication & Policy Officer

Sources:

The Council of the European Union website: <https://www.consilium.europa.eu/en/council-eu/>

The German Presidency of the Council of the European Union website: <https://www.eu2020.de/eu2020-en>

RESEARCH

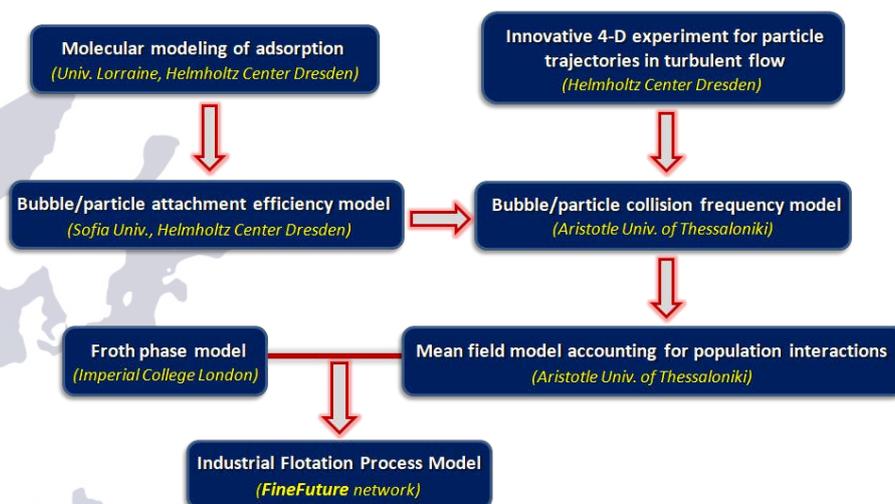
Flotation: A paradigm of an industrial process requiring scientific knowledge from different disciplines and at several size scales

Flotation is a process of separation and concentration of suspended solid materials in liquids by exploiting the differences in the physicochemical properties of interfaces. It includes sub-processes such as adsorption at solid-liquid and gas-liquid interface, coagulation of solid particles, thin liquid film destabilization, particle-bubbles collision, bubble coalescence and breakage, three phase flow, turbulence creation etc. Obviously, a multidisciplinary approach is needed for its study with the chemists at one edge and fluid mechanics scientists at the other.

Europe's industry has a leading role in the manufacturing of mining equipment and technologies for metallurgical processing. The development of technologies that can efficiently separate very fine particles are indeed required for the valorisation of multiple minerals. Unfortunately, such break-through technologies have not yet been developed due to lack of fundamental understanding of the underlying physical phenomena.

To overcome the aforementioned problems, a joint effort of Europe's leading institutions from the private and public sector is made through the newly established FineFuture consortium (<https://finefuture-h2020.eu>). The FineFuture partners are convinced by their experience, expertise, and stakeholder knowledge that flotation, will remain the key technology for mineral particle processing. Yet, flotation needs to be entirely reengineered for the separation of very fine particles. In this respect, a new unified mathematical model of flotation, covering all the size scales from the molecular scale to the device scale is developed. A combination of co-current and sequential multiscale approaches is invoked. In particular, the pulp and froth physical domains are treated in parallel. Each of the two domains is treated through sequential multiscale approach. The adsorption process is simulated through molecular modelling and the bubble/particle attachment efficiency through thin film stability analysis. The above submodels are integrated to a bubble-particle collision frequency model taking into account the gravitational forces and the fine structure of the turbulence flow field. The resulting expressions are incorporated to a population balance model which will be the heart of the multiphase computational fluid dynamics code that will be used to simulate the actual flotation devices.

It is believed that this approach will promote essentially both the scientific knowledge and the technology innovation and will set Europe as the world leader in flotation process.



Workflow structure of the model under development

Margaritis Kostoglou
 Aristotle University of Thessaloniki, Department of Chemistry, Greece



How chemistry is helping in the fight against Coronavirus

Chemistry, like many other sectors, has been hit hard by falling demand and an uncertain future; however, and thanks to the efforts of many, it is playing a key role in this global fight against the disease. Many chemists have shown great commitment and flexibility in this difficult time. Some have reinvented themselves to quickly develop the much-needed quick tests for the detection of the virus. For example, a group of scientists from the University of Maryland School of Medicine (U.S.) has developed an experimental diagnostic test for COVID-19 that can visually detect the presence of the virus in just 10 minutes. Chemists are also playing a major role in the race for a new vaccine and have delivered some promising alternatives in a matter of few months (see Figure 1). For example, the vaccine candidate originally developed to target MERS, and now adapted by a team of Oxford University researchers, has already entered in phase II/III human's trials. These, and many other examples, speak volumes of the commitment and adaptability of chemists to contribute when their help is most needed.

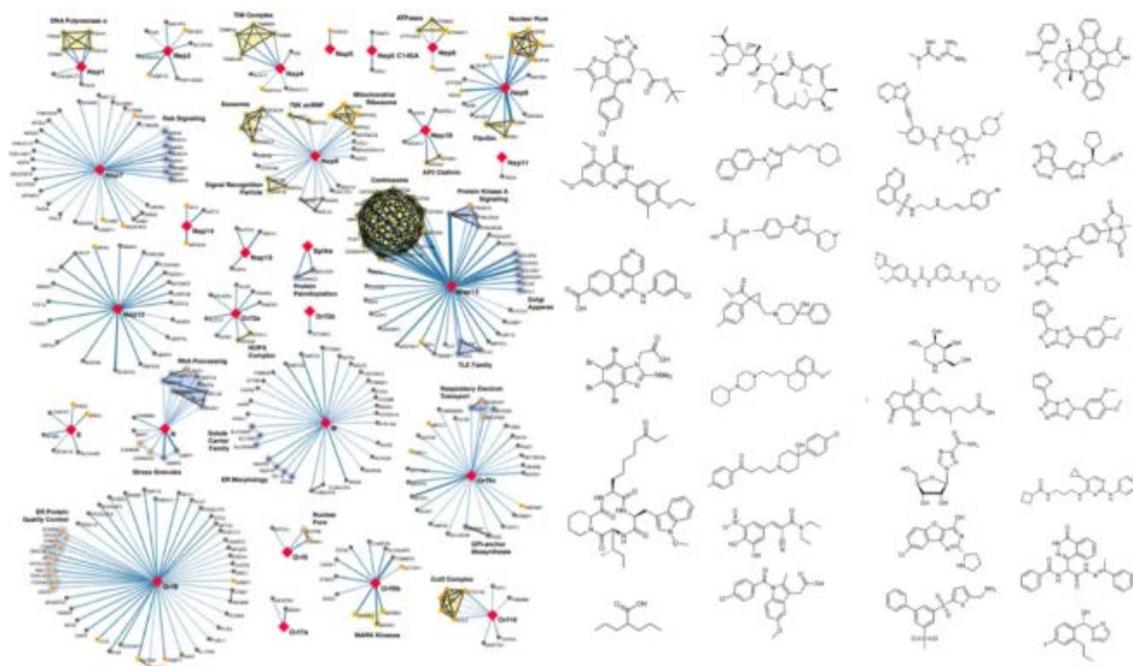


Figure 1. SARS-CoV-2 interactors and molecules that modulate those interactors identified as potential therapeutic alternatives. Source: *Nature* 583, 459–468 (2020)

I also want to highlight the efforts of Chemistry educators who adapted their courses on the spot to teach remotely, learning, and incorporating new tools to being able to communicate, respond, and examine their students. Nothing of this, including balancing our professional and personal lives, has been easy, but there are important lessons for all in what the future of Chemistry education will look like in the post-COVID-19 time.

The chemical industry has had to reinvent itself without notice to produce the disinfectants, soaps, cleaning products, and the personal protective equipment that are having a key role in the control of the spread of the disease. In a time when supply chains are simply broken, many chemical plants have been reconverted to produce those chemicals we so desperately need. For example, BASF's plant in Tarragona (Spain) has adapted to produce three million tons of hand sanitizer that are being donated to local hospitals. Similarly, Dow Chemical Company has been producing 300 tons of hand sanitizer per month in Stade (Germany), and has repurposed an existing facility in the U.S. to increase its production of this critical product. The new normal that will follow COVID-19 is going to demand profound changes in the chemicals industry to respond and in a more agile and effective way to the rapidly changing needs of volatile and uncertain time. Part of this effort should involve the digitalization of all its processes – from the plant to the office – and the diversification of its supply chains to ensure production and adapt to a rapidly changing demand.

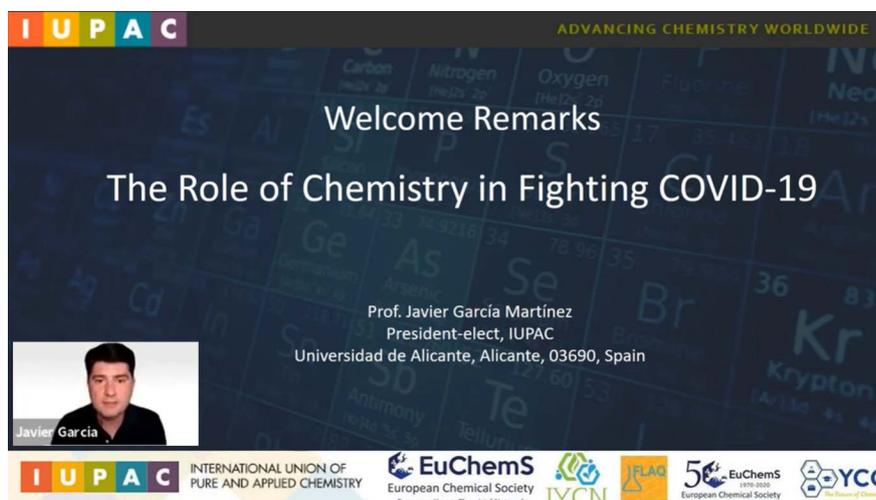


Figure 2. Frame from the webinar “Chemists Fighting COVID-19 – The Status Quo” held on 2 April 2020 devoted to explaining how chemistry is playing a major role in the fight against the Coronavirus, from the production of disinfectant, the discovery of new treatments, to the development of effective vaccines.

At IUPAC, we have contributed to showcasing how chemistry is contributing to the fight against COVID-19 in a collaboration with the International Younger Chemists Network (IYCN) and the European Young Chemists’ Network (EYCN) through a series of webinars (see Figure 2). I want to take this opportunity to congratulate these young chemists for their leadership and for proving great examples of how Chemistry is key to solving the great problems of our time.

Javier García Martínez
 President-Elect of the International Union of Pure and Applied Chemistry (IUPAC)
 Director of the Molecular Nanotechnology Lab and Professor of Inorganic Chemistry
 at the University of Alicante, Spain

Sources:

Maryland test: <https://www.umaryland.edu/news/archived-news/may-2020/covid-19-results-in-10-minutes-umb-studies-rapid-test.php>

Oxford vaccine: <http://www.ox.ac.uk/news/2020-05-22-oxford-covid-19-vaccine-begin-phase-iii-human-trials>

BASF donation: <https://www.basf.com/es/es/media/Noticias/Noticias2020/basf-tarragona-tambien-adapta-su-produccion-para-fabricar-gel-de.html>

DOW donation: <https://corporate.dow.com/en-us/news/press-releases/dow-commits-3-million-to-aid-covid-19-relief-efforts-and-adjust.html>

IUPAC/IYCN/EYCN webinars: <https://www.youtube.com/watch?v=xzpX7qeB8Vg>



MEMBERS' PERSPECTIVES

German Chemical Society supports Diversity and Equality

On 4 June 2020, *Angewandte Chemie* (*Angew. Chem.*), the renowned journal owned by the German Chemical Society (GDCh), published an essay by Tomas Hudlicky. The article expressed offending views about women and other groups underrepresented in science. In addition, the Chinese research community was unjustly defamed. The article has led to significant criticism on social media, especially on Twitter. As an immediate consequence, the article was retracted pending the results of an internal investigation.

“Not only the Advisory Board of *Angewandte Chemie*, but also the Board of Directors of the GDCh, distances itself from the statements made in the Hudlicky article and we sincerely apologize to those who feel hurt by the article,” said Peter R. Schreiner, GDCh’s President. “We are fully committed to the principles of diversity and we are convinced that diversity not only enriches our society but also stimulates our research and thus leads to better results.” On 25 June, a Guest Editorial “From Scientists to Scientists – Moving *Angewandte* into the Future” was published with a detailed description of the incident and its consequences: <https://onlinelibrary.wiley.com/doi/10.1002/anie.202008469>.

“We are committed to freedom of speech and *Angewandte Chemie* should continue to be a journal in which different opinions have their place and are discussed respectfully”, emphasized Wolfram Koch, CEO of GDCh. “However, it must not and will not happen again that statements that are diametrically opposed to our values are published.” Since the investigation confirmed the concerns that the publication infringes the publisher’s professional ethical code, the essay was formally withdrawn before a Version of Record had been generated. As a consequence, the copyright on the article fell back to the author.

As a further consequence, GDCh wants to use this incident to implement activities towards diversity and equal opportunities more resolutely than before in full agreement with GDCh’s mission statement of diversity (<https://bit.ly/3iMtGhZ>). “There is no doubt that the idea of equal opportunities is overwhelmingly approved in the community of the approximately 31000 members of the GDCh”, said Stefanie Dehnen, Vice President of GDCh. “We are confident that this incident, however painful it is at the moment, will enhance communication, foster diversity, reduce biases and thus will lead to a better understanding within the chemical community.”

Karin J. Schmitz
GDCh, Head of Public Relations Department



MEET...



Tom Welton is the new President of the Royal Society of Chemistry (RSC). He is currently the Dean of the Faculty of Natural Sciences at Imperial College London.



Gaetano Guerra is the new President of the Italian Chemical Society (Società Chimica Italiana – SCI). He is currently a Professor of Macromolecular Chemistry at the Chemistry and Biology Department “A. Zambelli” of the University of Salerno.



NOTES

EuChemS turns 50!

On Friday, 3 July 2020, at 10:00 CEST, chemists and friends of chemistry from all around the world gathered to celebrate the 50th birthday of EuChemS, an online event which was a great success.

EuChemS, the European Chemical Society, previously the European Association for Chemical and Molecular Sciences EuCheMS, started in Prague as the Federation of European Chemical Societies (FECS) on 3 July 1970. Therefore, 2020 is the year of our 50th anniversary and we had planned a great ceremony at the University of Chemistry and Technology, in Prague, where it all started 50 years ago. Due to the COVID-19 pandemic, this celebration event had to be cancelled and substituted by an online event, for which we strived to prepare a diverse and entertaining programme.



We were delighted to welcome many live speakers: Nobel Laureates Jean-Marie Lehn, and Ben Feringa, EuChemS Executive Board members Eckart Rühl, Floris Rutjes and Marco Arlorio, Chair of one of EuChemS Professional Networks, Brigitte Van Tiggelen, Presidents of EuChemS affiliates Gregori Ujaque (SCQ), Anu Airaksinen (SKS), Peter R. Schreiner (GDCh), Livia Simon Sarkadi (MKE), Yves Auberson (EFMC), and Council Member Cristina Todașcă (SChR), covering small and large societies belonging to the North and the South, Eastern and Western European countries. We had the pleasure of receiving live the greetings of the President of IUPAC, Christopher Brett, and Presidents of FACS, Federation of Asian Chemical Societies, Reuben Jih-Ru Hwu, and FLAQ, Federation of Latin American Chemical Societies, Daniel Garcia Rivera, and a video from the President of ACS, American Chemical Society, Luis Echegoyen.

In addition, there were some photos and memories from the past, and two videos, one recorded for the event by the EYCN, European Young Chemists' Network, and a promotional video of EuChemS that was released for the first time on this occasion. Of course, there is no real birthday celebration without greeting cards, in fact we received many original ones from chemical societies and friends, and we had a birthday cake with candles that were blown, albeit virtually.

In summary, a very exceptional anniversary, which was attended by around 200 people from all over the world and which could not have been possible without the dedication and enthusiasm of our Secretariat led by Nineta Hrstelj, Secretary-General, and our two Science Communication and Policy Officers, Jelena Lazić and Laura Jousset, who coordinated the live stream. It was a big challenge for them, indeed for all of us, but it turned out a great achievement, as inferred from the many congratulations we received from the attendees.

Finally, let me thank all the speakers and participants, who enthusiastically accepted to engage in this adventure of commemorating 50 years of European Chemistry, 50 years of EuChemS; it was all of you who made this event a great success.

Pilar Goya
EuChemS President

Interview with EuChemS EUCYS 2019 winner, Zeyad Bady

Zeyad Bady has been awarded the special EuChemS prize for his project “High particulate matter filtration efficiency Nano-fibrous membrane” which was selected as the best Chemistry project at the 2019 edition of the EU Contest for Young Scientists (EUCYS).

Zeyad’s project looks at how particulate pollution has led to catastrophic health and environmental consequences. As a result, new approaches have been examined to increase the efficiency of the air filtration equipment. A novel nanofibrous air filter made via electrospinning process has attractive attributes of high filtering efficiency and low resistance to air flow. The filter could be manufactured with a transparency of 90% and an efficiency of >85% under intense smoke exposure. Consequently, the filter could be applied as a muzzle, an alternative for catalytic converters of car exhausts or fabric filters used in the treatment of factories’ emissions. Additionally, the filter is made from hydrophobic polyacrylonitrile which makes it recyclable and efficient in humid circumstances.

First of all, congratulations for winning the EUCYS EuChemS Award. When did you start having interest in chemistry? And when did your interest for this field start?

My passion for Chemistry started when I joined secondary school, Assiut STEM school. Unlike traditional schools, this school is unique because it introduces project-based learning. I started making chemical experiments in the framework of our Chemistry curriculum, and from then onwards, I fell in love with Chemistry. Moreover, in every semester, we were asked to make a capstone project which addresses one of Egypt’s grand challenges. Chemistry appeared to me as the perfect tool for tackling these challenges.

Could you tell us more about how your winning project began? Did the initiative to compete come from you? How did you learn about this competition?

The project mainly came from my personal experience. The city where I live in Egypt suffers from urban congestion and high-level PM (Particulate Matter) pollution. Besides, the burning of agricultural wastes in Egypt represents another major source of air pollution. I am allergic to smoke and I wished I could open the window in my room and enjoy a breeze of fresh air. Therefore, I envisaged an air filter that could be almost transparent and applicable for window-screening. From there, I started researching into nanofibers. Now let me say where the initiative to compete came from. For starters, I must thank my school colleagues. Every year, a decent number of my school colleagues undertake scientific projects and compete on a national and international scales. They were the main inspiration that helped me in completing my project, despite the fact there were many obstacles. Some of them had already participated in the EUCYS competition and when they heard of my project idea, they advised me to apply too.

Besides my colleagues, I wanted to spread my idea further and to seek more opportunities for developing it. I thought that science fairs would provide a fertile soil to pursue my goals.



Nineta Hrastelj, EuChemS Secretary General and Zeyad Bady, EUCYS EuChemS 2019 Awardee.

What were the main obstacles you have encountered during your research?

The resources and mentorship were the main obstacles that I encountered during my research. As I mentioned in the description of my project, I used electrospinning, a technique in nanotechnology, to create my prototypes and run my experiments.

Although the idea behind the electrospinning is quite simple, there was only one electro-spinner device in the whole country of Egypt! What made things even harder for me was that the only university that owns this device is in the North of Egypt. Therefore, I had to travel for over 8 hours, cross more than 650 kilometres and stay in a remote city, Alexandria, to pursue my research. In addition to the distance obstacle, getting permission to conduct research is complicated, because it is not something usual to do for high school students in Egypt. This is why it has been difficult for me to get the permission to conduct my research in that specific university and to use the rare electro-spinner.



What were the scientific outcomes of the project?

It was concluded that electro spun PAN (Polyacrylonitrile) nanofibers can be a highly effective PM filter because of their small fibre diameter and surface chemistry, as well as their chemical composition. This opened the door to the use of novel electro-spun PAN fibres as an alternative for conventional fibres used for air filtration, such as polystyrene and polyvinyl alcohol. Moreover, the results showing high tolerance of PAN fibres to humidity can lead to the investigation of its usage with other secondary air treatment processes, such as FGD (flue-gas desulphurisation), which could enhance the quality of air filtration systems.

Have you published these findings? Have you thought about applying for a commercial patent?

This year is my senior year of Highschool, and I am completely focused on my studies and extracurricular activities in order to graduate with the highest degree possible and be able to enrol in a university that can help me further develop and publish these findings. However, I am a part of a Chemistry project that is applied on a medium scale by NWRC (National Water Research Centre) which investigates the usage of cactus species *Opuntia ficus-indica* as a bio-coagulant for wastewater treatment and the project was presented in the 2nd international Cairo Water Week (CWW 2019).

Do you see any future applications of your research to our everyday life?

Of course! What is interesting about this project is its high applicability. As I mentioned before, the nanofibrous product could be used as a transparent window-screen in highly polluted areas. However, it could also be used as a muzzle by increasing the thickness of the nanofibrous membrane. Moreover, the material of this membrane (Polyacrylonitrile) is hydrophobic, making it insoluble and resilient to humid conditions. This could lead to the use of these fibres as an alternative to conventional fabric filters, currently used in factories as air filtration systems. In the industries, the FGD (Flue gas desulphurization) is used for the removal of acidic gases and at the same time, the humidity of the outlet air is increased, resulting in the degradation of the commercial fabric filters. However, this novel nanofiber showed higher efficiency in the removal of particulate matter with increased humidity, thus making it an excellent alternative.
minated air.

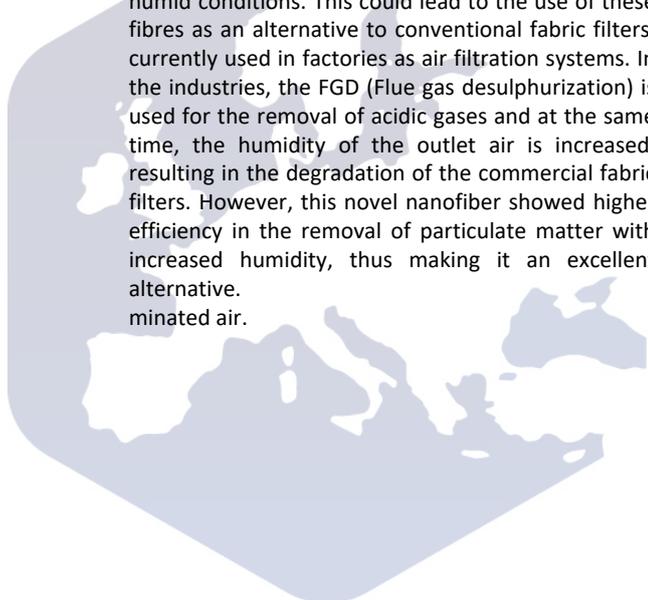
In addition to the removal of particulate matter, this nanofiber could easily be functionalized, and by doing so it may be possible to also remove other harmful gases. In the future, I would like to work on functionalising the nanofibers with silicate nanoparticles with the idea to create a membrane able to remove excess CO₂ from contaminated air.

Another interesting aspect regarding nanofibrous membranes is they are currently being investigated as muzzles for the removal of viruses. For example, the membranes made of chitosan are currently being assessed for the removal of water-borne viruses, and the results are promising. Also, the manufacturing costs are considerably lower than production of conventional masks, which makes the novel membrane more applicable. This last point is relevant, especially considering the current pandemic crisis we are facing.

Finally, on behalf of EuChemS we would like to wish you great success with the continuation of your research in Chemistry. Is there any message you would like to leave to younger people who are reading this interview?

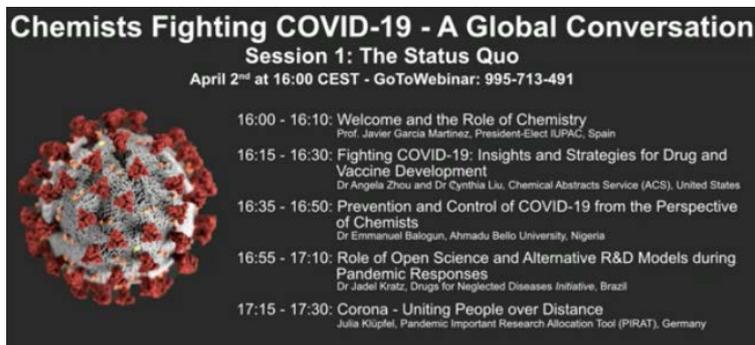
From my modest experience through this and other projects I had the opportunity to be a part of, I can say that the most important thing is to never give up. Maybe you do not have enough resources, maybe you do not have enough experience... The most important thing is to seize every opportunity and try your best.

*Interview of Zeyad Bady
Conducted by Laura Jousset
EuChemS Science Communication and Policy Officer*



Webinar Collaboration: COVID-19, Job Hunting and Awards

During the pandemic, the European Young Chemists' Network (EYCN), had to find new and exciting ways of reaching our audience. Thus, the EYCN, in cooperation with the International Younger Chemists Network (IYCN), organised a series of webinars on COVID-19 and related topics.



Chemists Fighting COVID-19 - A Global Conversation
Session 1: The Status Quo
 April 2nd at 16:00 CEST - GoToWebinar: 995-713-491

16:00 - 16:10: Welcome and the Role of Chemistry
 Prof. Javier Garcia Martínez, President-Elect IUPAC, Spain

16:15 - 16:30: Fighting COVID-19: Insights and Strategies for Drug and Vaccine Development
 Dr Angela Zhou and Dr Cynthia Liu, Chemical Abstracts Service (ACS), United States

16:35 - 16:50: Prevention and Control of COVID-19 from the Perspective of Chemists
 Dr Emmanuel Balogun, Ahmadu Bello University, Nigeria

16:55 - 17:10: Role of Open Science and Alternative R&D Models during Pandemic Responses
 Dr Jadel Kratz, Drugs for Neglected Diseases Initiative, Brazil

17:15 - 17:30: Corona - Uniting People over Distance
 Julia Klüpfel, Pandemic Important Research Allocation Tool (PIRAT), Germany

Session 1 (2 April 2020) of the first webinar specifically on COVID-19, was opened by Professor García Martínez, President-Elect of IUPAC, with an introduction on the vital role of chemistry for general wellbeing. Dr Angela Zhou from the Chemical Abstracts Services (USA), followed up by providing insights into development strategies for drugs and vaccines. Other speakers were Dr Emmanuel Balogun from Ahmadu Bello University (Nigeria), Dr Jadel Kratz from the Drugs for Neglected Diseases initiative (Brazil), and Julia Klüpfel from the Pandemic Important Research Allocation Tool (Germany). Session 2 (3 April 2020) was opened by Dr João Borges and Dr Antonio Rodríguez García, who briefly introduced the IYCN and the EYCN. Talks on tools and strategies for education and divulgation of chemistry under the new conditions were given by Dr Fun Man Fung, from the National University of Singapore, Dr Emma Pewsey from Chemistry World (UK), Dr Fernando Gomollón Bel from the Graphene Flagship (UK). The session included a panel discussion, involving the three speakers, as well as Professor Alisa Lincoln and Professor Jen Heemstra (both USA). The panellists highlighted the importance of staying healthy during this period and shared some advice on what they are doing during this time to cope with the circumstances.

The next webinar was hosted on 4 May 2020 and was focused on job hunting during COVID-19. This webinar was opened by Bayley Mourant, Chair-Elect of the IYCN. The session included talks by ChemJobber on the insecurities of the US chemistry market, Dr Paulette Vincent-Ruz, from the University of Michigan (USA), Michelle Lucas from Sibelco (Belgium), and Dr Robert Bowles from the Royal Society of Chemistry (UK).

The latest webinar took place on 4 June 2020 and focused on different European awards and fellowships. Firstly, Professor Pilar Goya reminded young chemist about various awards, like the EuChemS Lecture Award and the European Young Chemists' Award (EYCA). Then, Dr. Alice Soldà, advisor of the EYCN, presented the initiative of moving the ECC8 young chemists' symposium and the EYCA online (e-YCN@ECC8, 25-26 August 2020). Furthermore, Margarida Santos, National Contact Point for the Marie Skłodowska-Curie actions (MSCA), discussed the general concept of the fellowships and Dr Claudia Bonfio, MSCA Fellow at the University of Cambridge (UK), shared some tips on preparing the fellowship application.

The events were a great success and were attended live by more than 1400 participants, while the recordings were viewed more than 2500 times. For the future, the EYCN and the IYCN intend to host more joint webinars, and we would like to thank all speakers and attendees for making this such a great event! Recordings of all events can be found online ([Session 1](#), [Session 2](#), [Session 3](#), [Session 4](#)).

Antonio M. Rodríguez García
 EYCN Chair

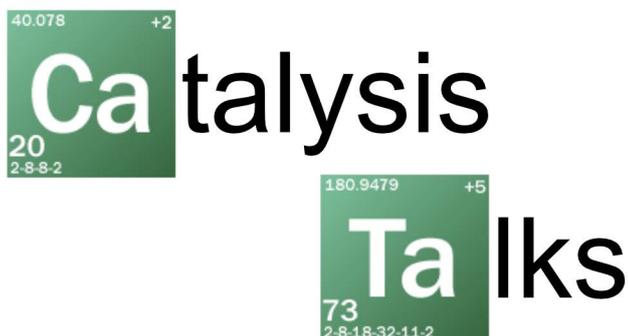
Maximilian Menche
 EYCN Secretary



CatalysisTalks – Bringing Research to the World during the COVID-19 Pandemic

Organising a scientific conference requires a strong team, lots of time and needs to be done well in advance of the event date or in short: blood, sweat and tears. Only shortly after the global outbreak of the COVID-19 pandemic, conference organisers around the globe lived up to their responsibility and cancelled or postponed their scheduled events. This is unfortunate for all organisers that had put in their hard work and had to cancel their scientific programmes, but it is also a significant setback for many PhD students, postdoctoral researchers and early-career researchers that might be hunting for one of the heavily contested faculty positions.

The European Young Chemists' Network (EYCN) and the Young European Catalysis Network (YEuCat) teamed up to start an online seminar series on catalysis research named CatalysisTalks. Each session of the series, which launched in Mid-May, hosts three speakers from various positions, countries, and career stages with a particular focus on enabling a special presentation experience for early-career chemists. Across the five sessions, we've enabled 15 researchers to present their work in the past months. These included six PhD students, two postdoctoral researchers and four early-career group leaders. Furthermore, to make the experience more memorable for the young presenters, we've sometimes invited established renowned catalysis Professors. These included David Cole-Hamilton (former EuChemS President), Frances H. Arnold (2018 Nobel Prize in Chemistry) and Robert H. Grubbs (2005 Nobel Prize in Chemistry). With this approach, the series gained quite a lot of attention, and more than 750 researchers from over 50 different countries around the world signed up to receive updates and registration links and dozens of abstracts were received. While most registrants are PhD students and postdoctoral researchers (65%), the series has also reached many Professors, industrial chemists, and others.



Finally, our contribution is complemented by multiple other online events from various chemical societies and companies, e.g. the Phosphorus Chemistry Series by the German Chemical Society, the Main Group Chemistry Talks by the Royal Society of Chemistry or the Global Inorganic Discussion Weekend by the Chemical Institute of Canada. With all these combined efforts, we believe that this is an important step towards dealing with the current situation and, possibly, also towards a new research and conference culture.



Follow @CatalysisTalks on Twitter!

Maximilian Menche
EYCN Secretary



COVID-19 Testimonies

During the confinement due to COVID-19, EuChemS has continued to be very active. We have held several online Executive Board and Task Group meetings, more so since we had to move our 8th EuChemS Chemistra Congress in Lisbon to 2022, and to substitute our 50th anniversary event in Prague to an online celebration, which turned out to be a great success.

However, if personally I have to choose an experience which was particularly different, I would mention my participation, for the first time, in an online PhD thesis defense. I was chairing a committee to evaluate a PhD thesis dealing with Computer-aided Drug Design (CADD), which would normally imply spending one morning in the university, including chairing a public session to examine the candidate, and afterwards, a private meeting with the jury to award the mark.

We did it all in a webinar, but it turned out to be more complicated, with two closed sessions of the committee, a public one with the candidate presenting his results and answering questions, and secret voting by mail to decide on the mark. In addition to all this, we had to have a previous rehearsal making sure the communications software was going to work, so not only it took more time, but we lost the atmosphere and the whole university's experience when its number of doctors is enlarged, which is always considered a reason for joy.

Probably the COVID-19 experience has shown us how meetings, otherwise presential, can be held online but in my opinion, this is not a good option for a PhD thesis defense act, which should be one of the most important memories of the life of a researcher.

Pilar Goya
EuChemS President

Working From Home (WFH): no antennas

Since I became Professor, I stopped doing experiments in the lab, therefore working from home in principle is fine for me. However, that means that on a longer run, a lot of informal communication is missing, especially as an addition to the formal Zoom meetings from nine 'till five. No quick chat in between the meetings, no small talk in the corridor and no glimpse of PhD-students walking past my office – I can often see from the smile on a face that a reaction has worked. That is what I miss when working from home, it is like having no antennas...

Floris Rutjes
EuChemS Vice-President

The changes in my personal and work life during the beginning of the pandemic were initially accompanied by some fear and uncertainty: when will I become infected and how can I avoid this? This initially blocked some of my productivity, especially after the labs were closed and it became clear that there will be no regular teaching for the next year. Urgent needs to get familiar with the video production and the routine use of software for taping six hours of lectures every week were the next steps in this evolution. Multiple video conferences every day for research, teaching, review panels, and group meetings became soon my routine and showed me that many activities in daily life can be easily abandoned and replaced by electronic communication. The gain in freedom, time, and saving resources was substantial: no frequent trips for meetings were required, while the quality of teaching was even increased. Certainly, the lack of personal contacts was the biggest loss. Other positive aspects were that staying together at home strengthened my social life. Joining scientific seminars all over the world was delightful and the world-wide scientific community gained a new meaning. I hope that some of these positive changes will last for some time.

Eckart Rühl
EuChemS Treasurer

The EuChemS Secretariat with its seat in Brussels interacts with members of the European Chemical Society and other stakeholders from all around Europe and beyond mostly online since many years. Still, COVID-19 restrictions requested some urgent change of working practices. Since March, we have thus made just a remaining step forward in online direction and have fully converted to online meetings, webinars, trainings and even online celebrations. By doing so, we are by now an entirely and fully online managed organisation. During these COVID-19 weeks, we have learnt many new things, which made these times very exciting and left no time for complaining about the unfortunate situation we all found ourselves in. Surely, some of the solutions we have implemented so far which encompass online collaborations will also remain in the future when face-to-face meetings hopefully get back into place. A balanced combination of both online and physical meetings is the future of successful European scientific collaboration.

Nineta Hrastelj
EuChemS Secretary-General



No matter how foolish it sounds, we've learned to expect the unexpected.

We were happy with the technology development and all those gadgets we use to make our lives easier. We were spending more time inside than outside. Then the official decision came: "You must stay at home for 12 hours every day, and spend your weekends indoors" Our way of living was not good news anymore!

However, we have adjusted very fast. My lectures on Analytical Chemistry on Webex platform were well accepted and there were vast possibilities for interaction with students. I am enthusiastic about learning new things, but my "cyber" classroom is only a fair replacement for the real one, it's not an excellent solution. I enjoy the direct contact with students and my colleagues, no matter how much fun I had with "cyber" things. Labs and experiments were behind the stage during this time. Still, we finally had enough time to focus on scientific writings and readings, but also on the social networks, jokes, music, and good vibrations (not only in spectroscopy) which helped when we were comforting ourselves because of cancelled trips and meetings with colleagues and friends in Europe. The meeting of the EuChemS Division of Analytical Chemistry in the Netherlands was cancelled, we are "Zoom-ing" instead, always happy to see each other, work together and plan to meet soon.

And when we can finally go out again normally, that will be really good news!

Slavica Ražić

Chair of the EuChemS Division of Analytical Chemistry

The COVID-19 pandemic started amidst my transition to a postdoctoral research stay in the United States. The uncertainty about the impact on the health system abroad as well as restrictions in travel and hiring made this a challenging endeavour. Fortunately, I am still working at the institute where I completed my PhD to continue research and to perform computational studies. While I enjoy travelling to new places and countries for conferences, I believe that particularly shorter meetings should enable online participation for people from further away to save cost, be sustainable and avoid the stress of travelling in the future.

Torsten John

Postdoctoral Researcher, Leibniz Institute of Surface Engineering (IOM), Leipzig, Germany

I am working in analytical chemistry for bioactive molecules and small molecules with mass spectrometry. Over the last few months, my life has changed significantly and I had to adapt my way of working in my lab due to the COVID-19 pandemic. This included minimizing time for experiments in the lab and to do all other work from home. Also, I had to adjust time dedicated to EYCN activities and had to prepare myself for a new-born at the end of March. It was fantastic that I could enjoy time with my wife and son and use all that positive energy to help me achieve goals in my private and professional life.

Maxime Rossato

*Mass Spectrometry Specialist, York University,
Toronto, Canada*

Imagine starting your PhD in the home office. This became my challenge during the COVID-19 outbreak when I moved to Darmstadt to start my PhD! Although this wasn't my first move to a new country, it was the strangest. Trying to build your life when social contact is prohibited has been a big challenge. Luckily, I've started in a very social group that has been taking excellent care of me and I am looking forward to establishing my new life in Darmstadt once the health crisis is over. But for now, it's great to have colleagues that are already making me feel at home.

Lieke van Gijssel

*PhD Student, Technical University Darmstadt,
Darmstadt, Germany*

As a last-year PhD student, I was forced to work remotely more-or-less around the time when I intended to write my thesis full-time anyway. Therefore, I could fully concentrate on writing it, and planning my future career. Having had more time to focus on exploring Postdoc applications was definitely beneficial. Nevertheless, due to travel restrictions, I was unfortunately not able to conduct the summer research internship, that I had planned. Coming back to the lab after two months, I felt a bit rusty, but it was a welcomed change of environment.

Denisa Vargová

*Final-year PhD Student, Comenius University,
Bratislava, Slovak Republic*

The year 2020 will always be marked by the pandemic, and how forced remote learning changed the teaching/learning landscape and left research activities on standby. In Portugal, the quarantine period overlapped with the call for project proposals, so I was able to dedicate myself only to writing the application instead of alternating between experimental work and writing. The biggest challenge was converting the Organic Chemistry course into remote learning on such a short notice. Teaching stereochemistry, which is very abstract in nature, was a nightmare and only by the use of open-source online tools it was possible to increase student spatial cognitive abilities.

Carina Crucho
 Postdoctoral Research Fellow, Instituto Superior
 Técnico, Lisbon, Portugal

This has been an extraordinary time, both professionally and personally. While the overall uncertainty has been particularly challenging, it was also encouraging to witness the community coming together in support, which we have experienced at the university, as well as through online conferences. Moreover, for me as a commuter, this period has brought more evidence in favour of not having to commute daily to the office since most of the work could be effectively performed remotely. In addition, we have collectively become more thoughtful about research planning and meetings, which is something that I hope persists after this crisis is overcome.

Jovana V. Milić
 Scientist, Ecole polytechnique fédérale de Lausanne
 (EPFL), Lausanne, Switzerland

This pandemic hit me right at the finish of the experimental work for my PhD thesis. From one day to another, I was tied to my desk instead of doing the lab experiments, which I had planned to do like many other students. So, I started writing my thesis earlier than planned. Nevertheless, this gave me the chance to reflect about what I did for the last few years more profoundly and ahead of time, as I probably would do this later in the year all the while stressing out to meet numerous deadlines. Also, I could plan experimental work for the upcoming months more deliberately.

Beate Steller
 PhD Student, Graz University of Technology, Graz,
 Austria

COVID-19 arrived like “a bull in a china shop” to Spain, breaking every limit we have ever imagined. The first week or March everything was under control; it was going to be “a bit more than the typical flu”. The week after I was rushing to the faculty on a Friday afternoon to switch off some experiments I had left running overnight. We were sent home for a couple of weeks, which changed to months. Still I consider myself lucky: I had my health, my job and the EYCN to keep me busy. Only now, speaking to other people who have suffered first-hand, I realised everything we’ve been through.

Antonio M. Rodríguez García
 Postdoctoral Researcher, Universidad de Castilla-La
 Mancha, Ciudad Real, Spain

It has been an unusual time to be a researcher. As a PhD student of chemistry, my experience has been no different. I have gone from being in the lab every day, to only gaining access when the university is in possession of sufficient amount of hand sanitisers. It seemed impossible to find ways to fill my time that would still be beneficial to my research; you can’t spend all your time reading. The numerous webinars available made a huge difference, offering invaluable experiences and opportunities, and I have learnt much more in this time than I would have thought possible.

Shona Richardson
 PhD Student, University of Edinburgh, Edinburgh,
 Scotland, UK

As a student of chemistry, I have had my fair share of difficulties as I was finishing my Master’s studies. This meant having my defense being held online. Although convenient, it has shown that possible technological issues can hinder the success of the presentation and the lack of direct social interaction after the defence does not create the same atmosphere as when done in the university classroom. Overall, the management of the institution I am working at has temporarily adjusted working hours, and implemented stricter sanitation policies.

Robert-Andrei Țincu
 Student, Centrul de Chimie Organica, Bucharest,
 Romania



CALENDAR

In the current environment and status of COVID-19, some events recognised by EuChemS are being postponed or canceled. However, EuChemS Events calendar is being updated on a regular basis.

If you plan to attend an event, we invite you to check the calendar [here](#).

FUN FACT



Zzzz
@hallie_jacksonn

Caption this

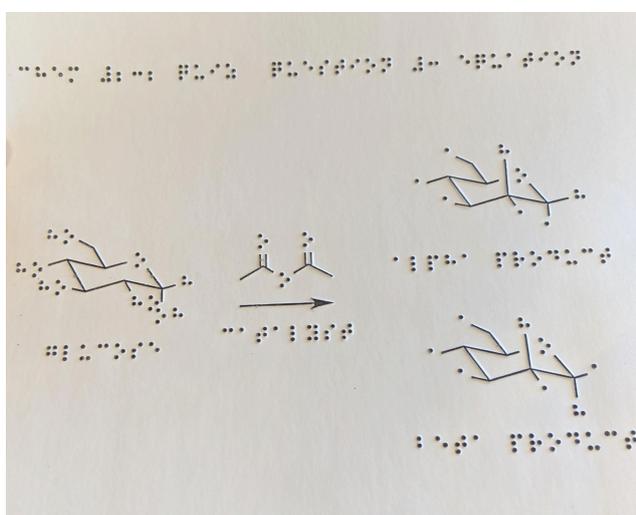


Armin
@Glucosebaba

1s2 2s2 2p6 3s2 3p6

Fun

Source: https://www.reddit.com/r/chemistry/comments/9xkd8e/caption_this/



Fact

Chemicals reactions in braille

Source: https://www.reddit.com/r/chemistry/comments/f7i5l3/til_that_you_can_use_chemdraw_to_print/

COLOPHON

Chemistry in Europe (CIE) is the EuChemS quarterly newsletter mainly intended for an audience of chemists. Its objective is to inform the community about research in Europe, to provide updates from EuChemS Member Organisations, and to investigate the latest policy-related developments.

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