



NEWSLETTER No. 1

28 February 2023



Project: 101059534 — PFAS twin
HORIZON-WIDERA-2021-ACCESS-02

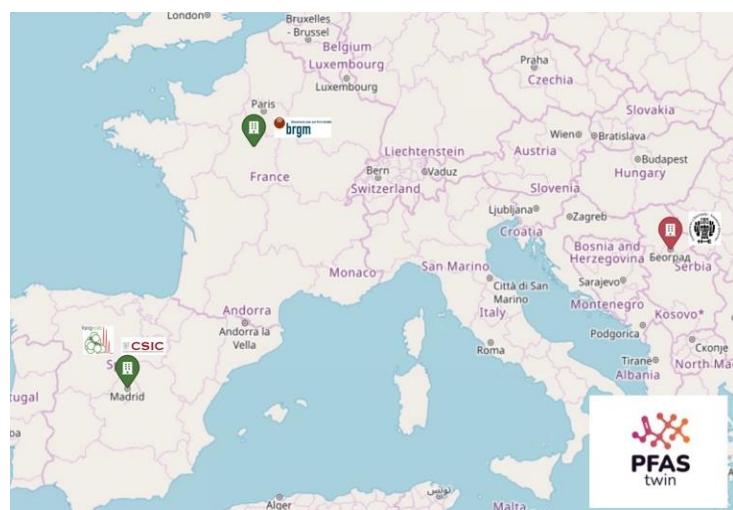


Funded by the
European Union

What is PFAS twin?

Per- and polyfluoroalkyl substances (PFAS) are synthetic chemicals widely used for more than 60 years to make plastics, firefighting foams, and lubricants, and help create stain-resistant, waterproof, and nonstick products. These chemicals contain covalent bonds between carbon and multiple fluorine atoms, one of the strongest single bonds in chemistry and nature. These strong C-F bonds give PFAS numerous beneficial chemical properties. But the devil is always in the details. They ended up in the environment and now can be found in the soil, water, sediment, accumulated in human bodies and represent a worldwide challenge. Recently published studies have also confirmed that certain PFAS can accumulate and stay in the human body for long periods. In humans, they can be associated with health harm effects, including high cholesterol, immune suppression, thyroid hormone disruption, low infant birth weights, and even certain cancers.

The Serbian national chemicals legislation recognizes these chemicals, but none of the existing scientific or governmental institutions analyze these compounds. It is estimated that there are around 100.000 sites in Europe which might emit PFAS. Therefore, as (bio)chemists, we have to react and act urgently, that's why PFAS twin project was designed.



PFAS twin enhance networking activities between University of Belgrade-Faculty of Chemistry (UBFC) and two top-class counterparts, who are leaders in PFAS analysis: Spanish National Research Council, Institute of General Organic Chemistry (IQOG-

CSIC) and Bureau de Recherches Géologiques et Minières, (BRGM) from France with the aim to adequately analyze and investigate PFAS.

Furthermore, the aim is to raise the individual strength of Republic of Serbia to mitigate the PFAS pollution, as well as to develop innovative strategies for solving the most challenging environmental problems around the world. And last, but not least, to promote knowledge transfer between researchers, industry, funding agencies, and policy makers in the field of PFAS, and to raise the research profile and enhance capacity of the UBFC.

What we did in the first 6 months?

Members of PFAS twin Project were quite busy from the beginning of the Action (1st of September 2022) working collaborative on development of a scientific strategy for dealing with PFAS and raising awareness about PFAS and importance of our Project.

PFAS twin kick-off meeting was held in Belgrade at Faculty of Chemistry. The meeting passed in very constructive environment with intensive exchange of ideas and experiences with colleagues from France and Spain, which has continued even after the meeting was officially over. Meeting was attended by Dr. Begoña Jiménez and Dr. Juan Muñoz-Arnanz from IQOQ-CSIC (Madrid, Spain), Dr. Fabienne Battaglia-Brunet and Dr. Marc Crampon from BRGM (Orlean, France) and all colleagues involved in Project from UBFC (Belgrade, Serbia).

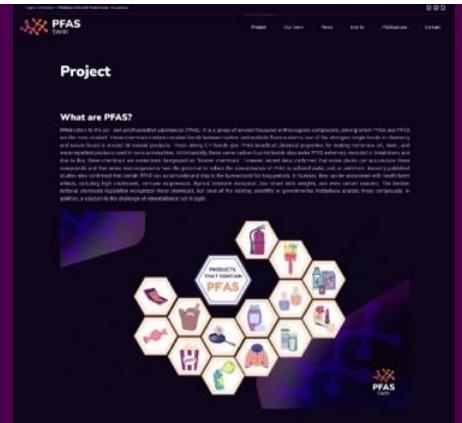
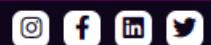


Participants of PFAS twin kick-off meeting

We have launched the user-friendly Website

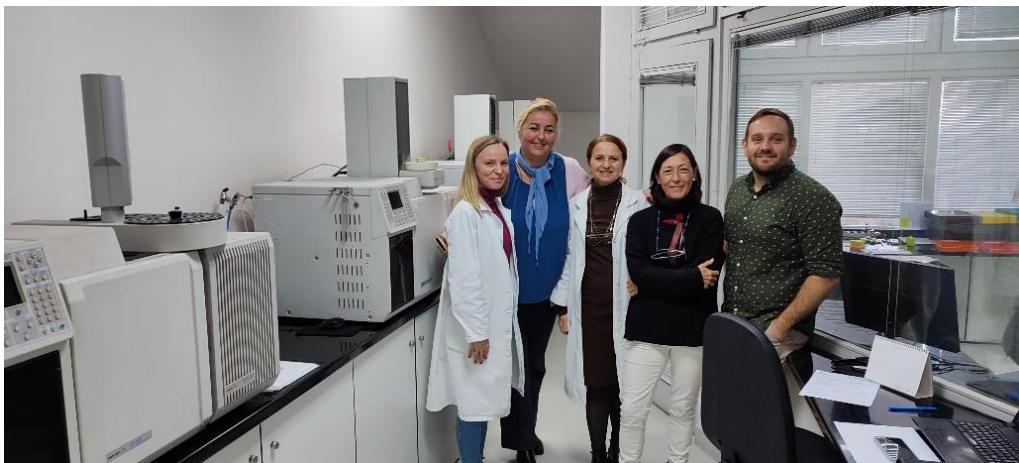
<http://pfastwin.org>

where all of the activities of the PFAS twin can be monitored. PFAS twin social media pages have been started to provide news, announce events that the consortium organizes, and to attract a young and broad audience.



Official meeting and visits

In November 2023, Dr. Begoña Jiménez and Dr. Pere Colomer Vidal (researchers from IQOG-CSIC) visited UBFC. Besides writing Scientific strategy on PFAS in Serbia, we also had meeting with the industry representatives: researchers from CSIC together with researchers from UBFC visited the most equipped private chemical laboratory in Serbia, the ANAHEM ltd laboratory. Goal of their visit was to broad the analysis of the capacity of the Republic of Serbia for PFAS analysis.



Members of PFAS twin project from CSIC in ANAHEM ltd laboratory

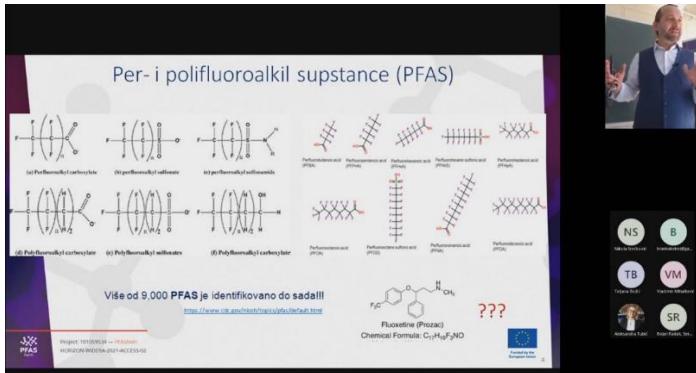
Meeting with Ministry of Environmental Protection (MoEP) representative was very important to achieve the goals of our project. The meeting was held at the UBFC, and team members from CSIC, Dr. Begona Jimenez and Dr. Pere Colomer Vidal took part, as well as External Advisory Board member Ivan Djurickovic, Focal point in Serbia for the Stockholm convention of POPs chemicals from MoEP of Republic of Serbia and team members from UBFC, including PI, prof. Vladimir Beškoski.



Meeting of PFAS twin members with representatives from the MoEP of Republic of Serbia

Popular and scientific lectures

PFAS twin project coordinator, Prof. Beškoski, held lecture at Faculty of Science, University in Novi Sad entitled: "[Perfluorinated compounds: from ecological challenge to ecological solution](#)". The lecture was part of the cycle of lectures organized on the occasion of the 40th anniversary of the Environmental Chemistry Section of the Serbian Chemical Society. This cycle of lectures gathered experts in the field of environmental chemistry from all major Serbian universities, which was great opportunity to present PFAS twin to colleagues interested in research of PFAS. It was held in hybrid regime, therefore it was accessible to wider audience.



PFAStwin promotion on the 40th anniversary of the Environmental Chemistry Section of the Serbian Chemical Society

Members of PFASwin have presented the project within 1st Training workshop in the framework of TwiNSol-CECs project. The aim of this event was to gather scientists and experts interested in problems of CECs' (contaminants of emerging concern) environmental occurrence and relevant analytical methods.



Promotional lecture at the University of Novi Sad in Serbia



Discussion about PFAS chemicals in Fifth Belgrade gymnasium

Together with academics from Japan who visited Serbia in the frame of more than ten years of collaboration, the PI of the PFAS twin project discussed per- and polyfluorinated compounds with a selected group of high school students gifted for chemistry and biology in Fifth Belgrade gymnasium.





Members of PFAS twin project at the 22nd European Meeting on Environmental Chemistry, Ljubljana, Slovenia

Prof. Branimir Jovančićević and Prof. Konstantin Ilijević members of PFAS twin project from UBFC presented their research in the area of environmental chemistry at the 22nd European Meeting on Environmental Chemistry (EMEC) which was held in Ljubljana, Slovenia. It was a great pleasure to see the banner of the PFAS twin presented in the main hall of the conference and in the break room because we got the chance to pass essential contact information about the Project to many interested colleagues from Europe and the world.

Promotional activities

PFAS twin project coordinator, Prof. Beškoski, took part on the TV Nova broadcast and talked about the PFAS twin project and PFAS molecules in the environment. The host had numerous interesting questions: What are PFAS? Where do they come from? Are they present in Serbia and in bodies of Serbian citizens? How dangerous are they? Why didn't we monitor them sooner? Professor Beškoski was more than happy to answer all questions and to highlight important role of PFAS twin project in increasing our knowledge related to this subject.

The whole interview is available at:

<https://www.youtube.com/watch?v=mB1SzDOD2Jc>



One of our most favorite promotional activities was presentation of PFAS twin to the pupils who visited Open Door manifestation organized by the Faculty of Chemistry. It was attended by more than hundred pupils from schools in Serbia. Pupils have also received our freshly printed dissemination material



Project PFAS twin has organized a hands-on seminar “**Preparation and Proposal Writing of Horizon Projects**”. The seminar was held Mrs. Tatjana Božić, Head of the International Cooperation and Project Office at the Faculty of Chemistry and PM of the PFAS twin project and Mr. Ratko Bojović, European Training Agency (EUTA).

The seminar was held in the Conference Hall of the Faculty of Chemistry in Belgrade on 24th February. All interested researchers from the Faculty of Chemistry, the Innovation Center of FC, and the Institute of Chemistry, Technology and Metallurgy had chance to improve their skills, gain new insights and share experiences with the lecturers.



Hands on seminar on Proposal Preparation and Writing at UBFC

Latest news

On February 7, **European Chemicals Agency (ECHA)** published restriction proposal for around 10 000 per- and polyfluoroalkyl substances (PFASs). The proposal was prepared by authorities in Denmark, Germany, the Netherlands, Norway and Sweden and submitted to ECHA on 13 January 2023. It aims to reduce PFAS emissions into the environment and make products and processes safer for the people. The timeline for the next steps published at ECHA official web page emphasize the following activities (<https://echa.europa.eu/-/echa-publishes-pfas-restriction-proposal>):

- Step 1. Restriction proposal submitted to ECHA (13 January 2023)
- Step 2. Proposal made available on ECHA's website (7 February 2023)
- Step 3. Start of a six/month open consultation (22 March 2023)
- Step 5. Online information session (5 April 2023)
- Step 6. ECHA's committees' evaluation
- Step 7. ECHA's committees' adopt their opinions
- Step 8. Opinions of ECHA's committees sent to the European Commission

We will carefully monitor the next actions since this restriction, if applied not selectively on all chemicals with CF_2 and CF_3 groups, both fluoromonomers and fluoropolymers, can have a negative impact on the usage of some very useful antitumor drugs, and also the aviation industry, electric vehicles, medical devices, and energy production.

In addition, on February 23, the Forever Pollution Project a collaboration of journalists and media from across Europe, published The “Map of Forever Pollution” highlighting four types of sites: 20 PFAS producers; 17 471 sites where PFAS contamination is known; 232 PFAS users; and 21 431 presumptive contamination sites (sites where testing has not confirmed the presence of PFAS, but which can be presumed to be contaminated) (<https://foreverpollution.eu/>).

Since this story moved the journalists and partly disturbed the public, Prof. Beskoski was a guest in the morning program of NOVA S national broadcasting TV station and answered questions on the topic of PFAS compounds, their durability, harmfulness, inertness, but also compared the harmfulness of these compounds with some other natural and artificial pollutants that are very common in the environment.



Available at:

<https://www.youtube.com/watch?v=eBGQ7VJm-VA&t=223s>

We will continue to work hard, and you will be regularly informed about all activities, both scientific and social. Follow our website and social media until the next newsletter.