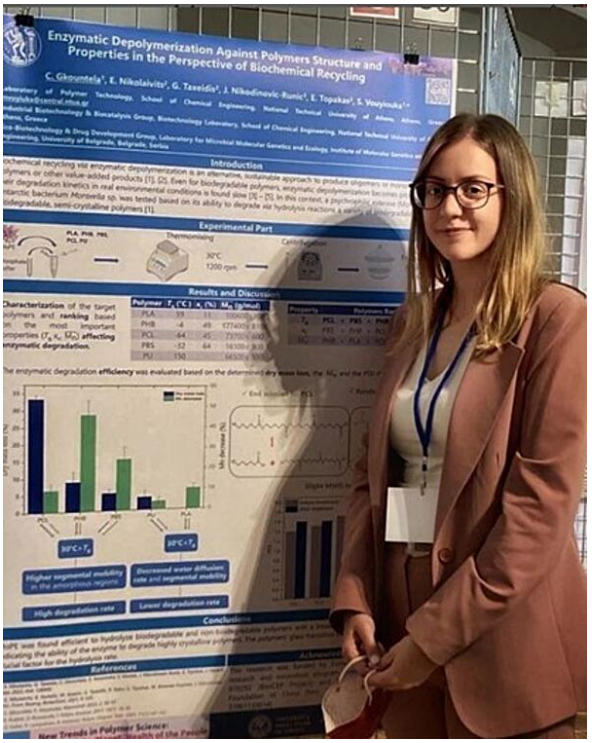
Biocatalysis for the Biological Transformation of Polymer Science conference

Our partners Dr Jasmina Nikodinovic-Runic and Dr Maria Reis presented their research at Biocatalysis for the Biological Transformation of Polymer Science conference organised by EFB Biocatalysis Division and the EFB Biobased Materials Division. Joint work of TUS and IMGGE was presented as a poster titled: Mimicking recycling process through multiple extrusion of polyethylene terephthalate (PET) affects the enzymatic degradation of the polymer by Brana Pantelic. The event was held in the centre of Cologne, Germany from 27-29 June 2022. The scientific programme provided a recent and comprehensive overview of the discovery and design of microbes and enzymes for polymer synthesis and depolymerization, computational understanding of polymer–enzyme interactions, building blocks from renewable resources to biobased polymers, biocatalysis in a circular economy of the polymers.

Our NTUA partners attended New Trends in Polymers Science: Health of the Planet, Health of the People conference

Our partners from NTUA attended this year's "Polymers 2022 - New Trends in Polymers Science: Health of the Planet, Health of the People" conference in Turin, Italy, on May 25–27, 2022. The purpose of the meeting was to bring together scientists from academia and industry to present leading-edge research on the advancements in polymer science and technology in all its main aspects, with a particular emphasis on those aiming to preserve and improve the health of the planet and of people, as per title. The broad themes were addressed during the conference include synthesis, modification, and characterization of synthetic and natural polymers, polymers from green chemistry, polymer hybrids, nanocomposites, polymer biomaterials, polymers in drug delivery and tissue engineering, polymers for human health, bio-based and biodegradable polymers, polymer recycling and re-use, polymers for the environment, functional polymers, and polymers in energy, among others. Over 200 scientists took part in this conference. Our partners presented part of their work with the poster titled "Enzymatic depolymerization against polymers structure and properties in the perspective of biochemical recycling".



The BioICEP project was presented at the 13th Panhellenic Scientific Conference on Chemical Engineering

We are delighted to announce that our partners presented the BioICEP project at the 13th Panhellenic Scientific Conference on Chemical Engineering in Patra, Greece. Posters titled: “High-throughput screening assay for the discovery of novel PETase enzymes” and “Discovery of Novel Polyesterases Capable to Degrade Plastic Waste” resulted in the cooperation of NTUA and IMGGE partners.

The Department of Chemical Engineering of the University of Patras undertakes the organization of the 13th Panhellenic Scientific Conference (13th PESHM). The efforts of the conference focused on the promotion of the interdisciplinary fields of Chemical Engineering, as well as the current trends with the latest developments and research in the field of biological/biochemical engineering, biomedical engineering, nanotechnology, electrochemistry, applied chemistry, nanoparticles, sustainable and sustainable development, safety and hygiene in chemical processes, and efforts to protect the environment and reduce activities that affect climate change around the world. In parallel with these activities, our participants had an opportunity to discuss the current situation and the future of training and employment of Chemical Engineers in Greece and the world, in the particularly difficult current conditions as well as ways of good cooperation.

Our iBET partners presented the BioICEP project at Encontro de Ciência 2022

The annual meeting of science, technology and innovation in Portugal, took place this year on the 16th, 17th and 18th of May, at the Lisbon Congress Centre. The date of May 16, when National Scientists' Day is celebrated, could not be more suitable for this forum for debate and presentation of new ideas and partnerships. This was also the year in which Portugal celebrated the 25th anniversary of the Portuguese National Foundation for Science and Technology.

“Building the Future with Science” was the motto for the presentation of the main research themes that are at the heart of the R&D Units in Portugal and that reflect the central themes in world science today. This meeting also worked as a platform to stimulate interaction and dialogue between participants and to foster new interdisciplinary interactions. The guest country was Egypt, which actively participated in the meeting to represent official entities and scientific institutions.

As in previous years, Ciência 2022 was organised in different types of sessions, from plenary sessions to themes, as well as online communications, demonstrations and posters. The six plenary sessions covered the main themes associated with the missions of the European Union, which correspond to the global challenges facing humanity. These sessions were attended by internationally recognized speakers in their fields, and included, in particular, Portuguese and Egyptian speakers, with the aim of encouraging and deepening collaboration with Egypt.

The program included 6 plenary sessions, 66 parallel sessions, 225 communications, 52 demonstrations and a total of 400 speakers.

Dr Sanja Jeremic talked about BioICEP on Serbian National Television

Dr Sanja Jeremic was a guest at the morning program on Serbian National Television talking about the BioICEP project and raising awareness about plastic pollution in response to recent reports of microplastics found in the human bloodstream .

Dr Marija Mojicevic took a part in LOOPS webinar Series presenting BioICEP

The topic of the episode was Plastics. It was an interesting talk with BioICEP and BIO-PLASTICS EUROPE. Both Horizon 2020 projects are focused on the field of circular economy and innovation. Join the full episode here.

The BioICEP project turns two years old

As the project turns two years old, one of the researchers of the project, Jasmina Nikodinovic-Runic, PhD, from the Institute of Molecular Genetics and Genetic Engineering (IMGGE), answers some questions on the progress of the project.

How would you rate these first two years at a technical level with BioICEP?

I am really proud to be a part of this multidisciplinary team that has made remarkable progress toward BioICEP goals. I am really happy that we are attacking the global plastic waste problem from multiple directions (i.e. green mechanochemistry and biotechnology and trying to reach synergies between approaches). We have also set common grounds for addressing the hardest mixed plastic waste that everyone is trying to stay clear off.

What would you highlight from this second year?

Great communication between material scientists and microbiologists was established and supported by some really excellent publications. Some new potent microorganisms and enzymes have been discovered and excellent tools for targeted screens of biocatalysts for plastic degradations have been established.

What are you looking forward to next year?

As I mentioned, I am looking forward to the challenge of working with mixed plastic waste samples, both pre-treated and untreated and to continued interaction with BioICEP consortium members. Looking forward to some in-person meetings.

The project holds its first workshop

On the 1st of March, on the occasion of the International Seminar on Biotechnology Applied to the Plastic Sector, organized by AIMPLAS, our friend Pablo Ferrero talked about the objectives, progress and results up to date in the first workshop of the project.

Sharing the same goal and playing a key role, Pablo, principal investigator from AIMPLAS, introduced the BioICEP project. The workshop took place within the framework of the seminar, which addressed the challenges and opportunities introduced by biotechnology in the plastics sector, in terms of management and possible treatment of waste from the sector, and the trends and initiatives that are being implemented at an international level.

Our latest technical papers

Characterization of the Thermostable Biosurfactant Produced by Burkholderia thailandensis DSM 13276

Read it

A Circular Bioprocess for the Sustainable Conversion of Polyethylene Terephthalate to Muconic Acid with an Engineered Pseudomonas Putida

Read it

A polyesterase from the Antarctic bacterium Moraxella sp. degrades highly crystalline synthetic polymers

Read it

Multiple recycling of a PLA/PHB biopolymer blend for sustainable packaging applications: Rheology-morphology, thermal, and mechanical performance analysis

Read it

A Review on Biological Synthesis of the Biodegradable Polymers Polyhydroxyalkanoates and the Development of Multiple Applications

Read it

Rendering Bioinert Low-Density Polyethylene Amenable for Biodegradation via Fast High Throughput Reactive Extrusion Assisted Oxidation

Read it

Progressing Ultragreen, Energy-Efficient Biobased Depolymerization of

Poly(ethylene terephthalate) via Microwave-Assisted Green Deep Eutectic Solvent and Enzymatic Treatment

Read it

Follow our activity!

Horizon 2020
European Union Funding
for Research & Innovation

国家自然科学基金委员会
National Natural Science Foundation of China

This Project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 870292.

AIMPLAS, C/ Gustave Eiffel 4, Paterna, , Valencia,España,,,