

Development of an Efficient Microwave System for Material Transformation in energy INTensive processes for an improved Yield



Enjoy reading the DESTINY newsletter!

The DESTINY project aims to realize a functional, green and energy saving, scalable and replicable solution employing microwave energy for continuous material processing. The project aspires to introduce a “first-of-a-kind” high temperature microwave processing system, offering a variety of vital benefits to energy intensive sectors such as cement, ceramic and steel: reduced energy consumption, lower lifetime operating costs and enhanced sustainability profile, with the possibility to switch to new business model based on local/decentralized production.

DESTINY PARTICIPATION IN INTERNATIONAL EVENTS

DESTINY's updates and progresses were presented in order to boost the dissemination of the project results, increasing its impacts and visibility towards a wide audience. To this purpose, in its first year of activity, the project was presented in several international events, where a comprehensive overview on its achievements was offered to interested stakeholders and users from academia, industry and public sectors.

THE 9TH INTERNATIONAL SYMPOSIUM ON RADIATIVE TRANSFER

The project partner NTUA (National Technical University of Athens) presented DESTINY at the 9th International Symposium on Radiative Transfer (RAD-19), which took place in Athens (Greece) from 3rd to 7th June 2019. RAD-19 main objective was to bring together scientists and engineers involved in radiative transfer research and to provide a relaxed atmosphere for in-depth discussion of theory, experiments, and applications. NTUA presented the project concept in front of a rich platea coming from academia and private sector.

INTERNATIONAL CONFERENCE ON ADVANCES IN ENERGY SYSTEMS AND ENVIRONMENTAL ENGINEERING (ASEE19)

The DESTINY project was also presented in the International Conference on Advances in Energy Systems and Environmental Engineering (ASEE2019), which took place in Wroclaw (Poland) from 9th to 12th June 2019.



ASEE2019 brought together scientists and engineers involved in cleantech and, in this framework, Luis Guarita - the project coordinator on behalf of Keraben Grupo - presented DESTINY at the International Symposium on Energy Efficiency in Europe. During the symposium, Luis gave a comprehensive overview on the high temperature microwave processing system the project will perform within the industrial sectors of cement, ceramics and steel. Moreover, Luis also attended the workshop on Energy Efficiency in the Ceramic Industry, which highlighted the ceramic kiln process optimisation, including the development of a commercially replicable and innovative waste heat recovery technology.

THE 17TH INTERNATIONAL CONFERENCE ON MICROWAVE AND HIGH FREQUENCY HEATING

The International Conference on Microwave and High Frequency Heating (AMPERE) is the largest event in Europe dedicated to scientific and industrial applications of microwave and radiofrequency power systems. The conference presented the status and trends in the multidisciplinary fields of microwave and radiofrequency heating, dielectric properties, material processing, high power systems and technologies.

The AMPERE conference was held in Valencia (Spain) from 9th to 12th September 2019 and in this unique framework the DESTINY project presented its progresses so far. Many project partners attended the event: UNIVERSITAT POLITÈCNICA DE VALÈNCIA, CEINMAT and LABORELEC, which offered an overview of the project in front of researchers and engineers from academia and industry exchanging innovative ideas, promoting networking, discussing collaborations and meeting international experts in a wide variety of microwave and high frequency technologies at both scientific and industrial scale.

ECOMONDO 2019



DESTINY participated in ECOMONDO 2019, the benchmark event in Europe for green technological and industrial innovation, which took place in Rimini (Italy) from 5th to 8th November 2019.

The main results and technical achievements of the project were outlined in front of the most innovative organizations and industries in the framework of Circular Economy, thanks to a poster session. Many stakeholders interested in the DESTINY concept also gathered in the CIAOTECH-PNO booth, where project's dissemination materials such as brochures and newsletters were displayed.

3RD GENERAL ASSEMBLY MEETING

The General Assembly is one of the governance bodies set for the project execution and meets twice every year. The assembly during the meeting is the ultimate decision-making body of the consortium, which includes at least one representative of each partner and is chaired by the coordinator.

The third DESTINY assembly took place in Valencia (Spain) from 22nd to 23rd October 2019. The agenda of the meeting included different presentations to monitor the progress in different Work Packages and 3 specific workshops: Exploitation, Microwave Technology insights and Safety.

The project partners discussed the results achieved so far, like the characterization of the pigments provided by AL-FARBEN and the characterization of samples provided by BFI and CEMEX.

During the meeting two visits to the laboratories of the UNIVERSITAT POLITECNICA DE VALENCIA and CEINMAT were also organized and the consortium witnessed the pigments being cooked with the first available demonstrators based on DESTINY's technology, tasting how the project will improve the whole system and deliver a far-more advanced prototype!

Further, a special guest was invited as member of the project external advisory board: Dr. Emilio Nieto Gallego – Director of the *Centro Nacional del Hidrogeno*. He had the chance to personally discuss and see the advancement of the project. Project partners are very satisfied with the project implementation and they are all committed to work towards the DESTINY targets more and more!



DESTINY MARKET REPORT AVAILABLE

Under the responsibility of CIAOTECH-PNO, a logical sequence of Market Analysis and Value Chain's stakeholder mapping will be completed in the next 6 months, based on proprietary methodologies to identify innovation networks and champions and finally lead to their positioning with respect to the project, to support market penetration and results exploitation for microwave technology-based plants. The main purpose of the overall strategy is:

- To study in detail the market for innovative plant concepts in the cement, ceramic and steel sectors;
- To support developing innovative business models for the new technology;

- To complete an exploratory business research and define a business plan;
- To define and build a stakeholder community to engage and define the best communication and dissemination actions;
- To propose concrete exploitation and IPR management;
- To assess the socio-economic sustainability aspects;



As first step, in October, The DESTINY Market Report was delivered! In November it will be released and published on the project website and downloadable upon request.

The study is a comprehensive look over cement, ceramic and steel markets, including economic, technological and social scenarios to build the DESTINY's business plan. To download the report, please register to the DESTINY website and visit the [DOWNLOAD](#) page.

DESTINY CONSORTIUM



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For more info about project visit the DESTINY website at: www.destiny2020andbeyond.eu



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