CONSORTIUM MEMBERS

Innovative Training Network – European Industrial Doctorates
This project has received funding from the European Union´s Horizon 2020 research and innovation program under the **Marie Skłodowska-Curie** grant agreement No 860141.

INTERfaces ESRs will combine material science and protein engineering to design tailored enzymes and (bio-based) materials that will complement each other to obtain optimized heterogeneous biocatalysts.

1.

These tools will be applied to solve synthetic challenges in the use of two biobased monomers as starting materials to synthesize products for application fields like antioxidants and biopolymers.

2.

Process optimization and up-scale in industry will reveal key factors for synthetic utilization of the biocatalysts.

H2020

INTERfaces

Innovative Training Network (ITN)
European Industrial Doctorates

H2020-MSCA-INTERfaces H2020-MSCA-INTERfaces h2020-msca-interfaces

www.h2020interfaces.eu

> **Nature has complex and beautifully working multi-step reactions that are found in all living organisms.**
>
> Assoc. Prof. Dr. Selin Kara

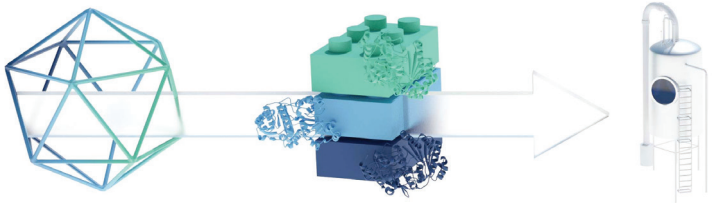
WE ARE WORKING TOGETHER

23 partners ranging from high-tech SMEs to large-scale production companies, are taking part in the project.

academic institutions **10**

industrial partners **13**

Ph.D positions **14**



WP1 Material and Protein Design

WP1 aims to develop a toolbox for material design, surface modification techniques, protein engineering methods to fulfill the demand of preparation and implementation of heterogeneous (bio)catalysts.

WP2 Assembly of heterogeneous (bio)catalysts

WP2 assembles multi-functional heterogeneous (bio)catalysts with desired spatial arrangements (compartmentalization or co-localization) to develop efficient reaction sequences to obtain valuable biobased derivatives.

WP3 Process engineering & up-scaling

WP3 focuses on technical implementation of the heterogeneous cascades either with compartmentalization or co-localization techniques for the synthesis of (bio-based) chemicals with the targeted productivities.

PhD training on cutting-edge projects at the interface between research and industry

Therefore, the strong involvement of three large companies and ten high-tech start-ups is crucial to achieve our goals in this project.

Commercial relevant processes will be up-scaled together with industry for technical implementation.

INTERfaces will train 14 Early State Researchers (ESRs) for engineering of the designed cascades in solid phase.
This includes;

- the design of material surfaces and enzymes
- use of computational modeling tools
- the design of reactors and application of the right operational modes
- reaction medium needed for desired space-time-yields and product titers.

€3.7 million funding

Academia and industry to pave the way for sustainable production of chemicals within a 4-year EU sponsored research project.

We're taking the first steps toward understanding the needs of complex multi-enzymatic reactions.