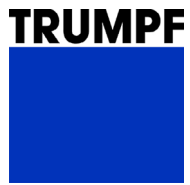


## Project Partners



[www.lampas.eu](http://www.lampas.eu)

[info@lampas.eu](mailto:info@lampas.eu)

 [lampas-eu-project](#)

 [lampaseuH2020](#)

The first laser system for high-throughput low-cost production of surfaces with controlled topographic characteristics.

Connect with LAMPAS

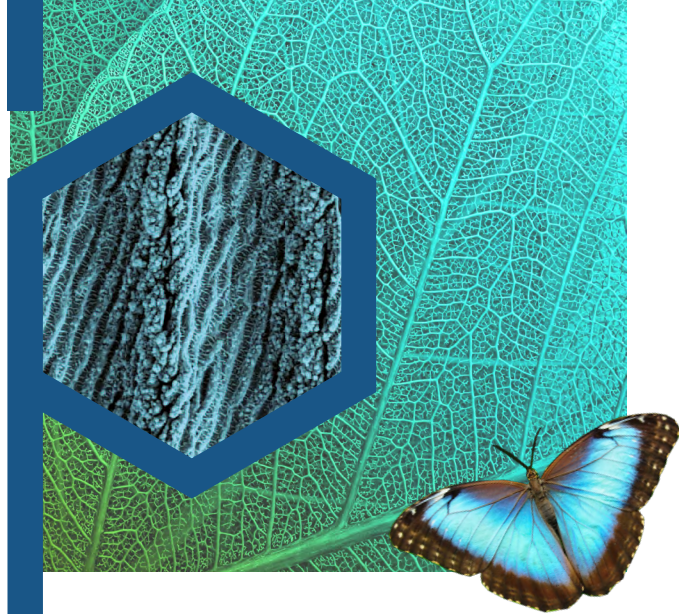


Funded by



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement N° 825132. It is an initiative of the Photonics Public Private Partnership ([www.photonics21.org](http://www.photonics21.org)). © 2020 European Commission and Photonics21. Any presented result reflects only the author's view. The EU is not responsible for any use that may be made of the information herein contained.



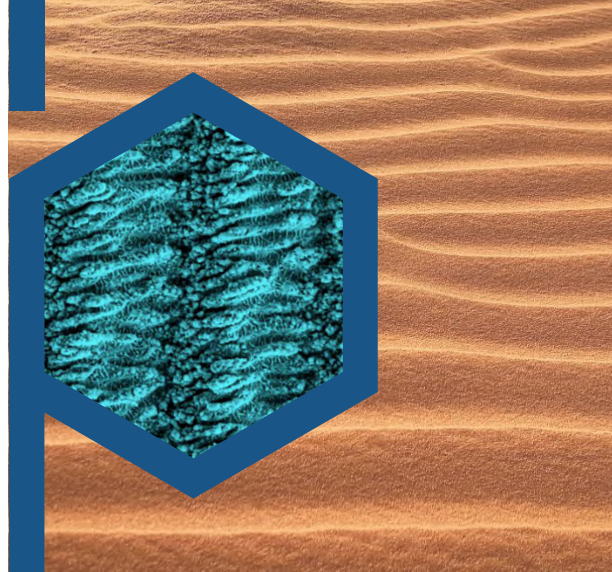


## Inspired by Nature

There are many examples in nature where special nano- and micrometer-sized features result in outstanding surface properties like becoming super-hydrophobic or anti-bacterial.

This is exactly what we want to reproduce in LAMpAS. We are constructing an innovative laser machine capable of producing micro-nano topographical features on large areas with high throughput in order to imitate these functions.

The capabilities of this laser system allow for new products with surfaces with outstanding features.



## Surface Enhancements

By enhancing the efficiency, flexibility and productivity of the process based on the development of a high-power ultra-short laser system as well as strategies and concepts for beam delivery, LAMpAS will significantly increase the potential of laser structuring for the design of newly functionalized surfaces providing:

- Anti-fingerprint properties
- Decorative finishes
- Anti-bacterial properties
- Easy to clean surfaces
- Anti-friction properties
- Visual effects
- Anti-counterfeit marking
- Anti-icing features
- Anti-fouling properties



Open for test trials

## Potential Applications

The LAMpAS laser system integrates a high-power ultrashort laser source, new beam delivery concepts, together with interference patterning optics and real-time monitoring systems. The improved level of productivity drastically reduces the processing cost per part, while ramping up the production of functionalized surfaces for applications such as:

- Household appliances
- Pharmaceutical packaging
- Industrial machinery
- Aeronautics
- Medical implants & tools
- Food processing
- Sports equipment
- Furniture finishes
- Energy storage