

## IMPACT

The LCM technology will be used for the first time for manufacturing of FGCs. LCM will allow cost-efficient production of highly complex-design FGC components by using sinterable conventional ceramic powders and will accelerate the use of FGC in various sectors.

Marie Skłodowska-Curie Fellowship will provide the ER opportunities to increase his potential to implement further independent and mature research projects and open up new career opportunities.

The GraCerLit project is carried out by  
Dr. –Ing. Serkan NOHUT

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To learn more about the project visit our website at:  
**[www.gracerlit.eu](http://www.gracerlit.eu)**

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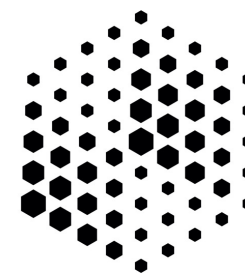
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**GraCerLit**



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## Development of Functionally Graded Ceramics by Lithography-based Ceramic Manufacturing (LCM)



Funded by the  
European Union

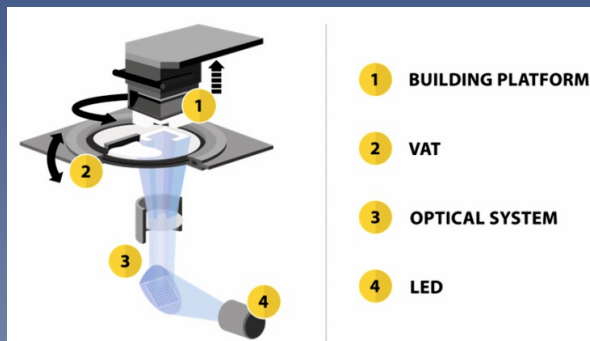
*This project has received funding from the European Union's Horizon 2020 research and innovation programme under the Marie Skłodowska-Curie Grant Agreement No 101020104*

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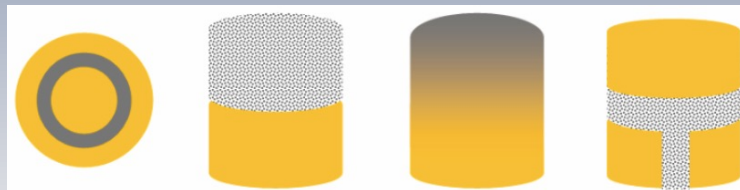
## ABOUT

Special attention is given today to Functionally Graded Ceramics (FGCs) since the demand on highly-complex technical ceramics is increasing in many applications.

Lithography-based Ceramic Manufacturing (LCM) offers exciting new possibilities by providing flexibility for tailored components design of material composition, complicated shapes and functional complexity.

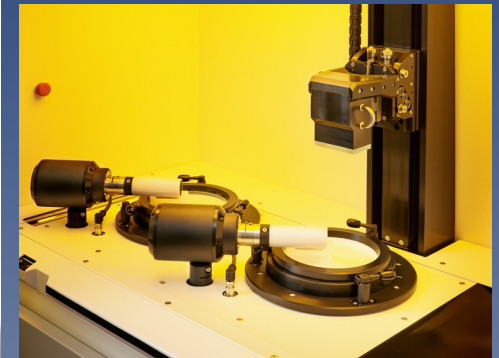


The main motivation of GraCerLit project is to use LCM for additive manufacturing of high-quality ceramic-ceramic FGCs in complex shapes with desired gradient properties.



## PROJECT OBJECTIVES

- Design of a novel LCM printing setup for additive manufacturing of FGCs by simultaneous processing of two photocurable feedstocks that will allow production of customized and multifunctional components with a control of the architecture and microstructure at different scales.



- Characterization of performance of the method and quality of FGC components.
- Application of supervised Machine Learning (ML) algorithms to obtain Process-Structure-Property (PSP) relations so that further novel combinations of FGCs can be developed.