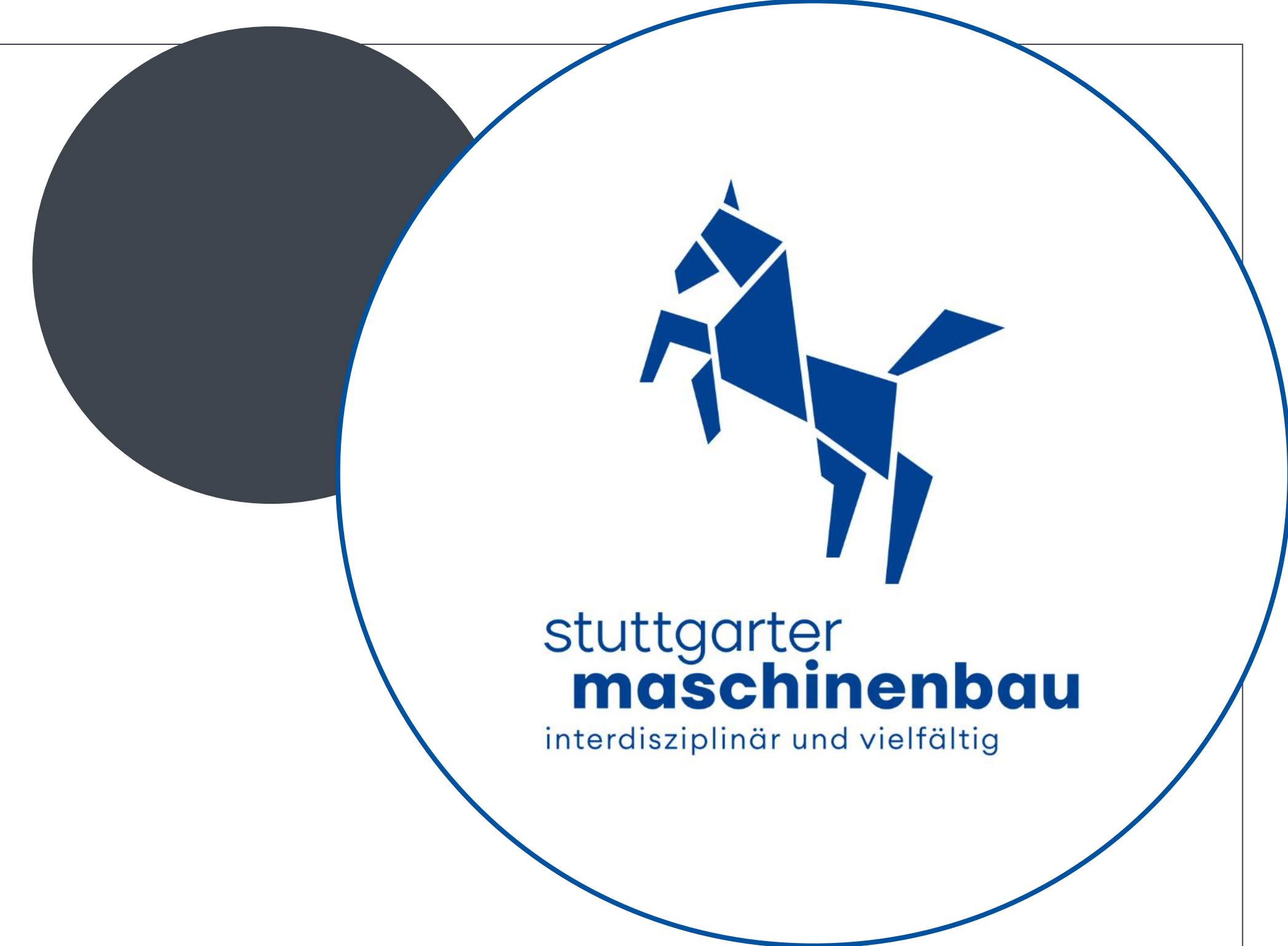


**University of Stuttgart**

**IKMT – Institut für Keramische Materialien  
und Technologien**



## Theses Opportunities

Apl. Prof. Dr. Frank Kern, [frank.kern@ikmt.uni-stuttgart.de](mailto:frank.kern@ikmt.uni-stuttgart.de)

The IKMT continuously offers engaging thesis opportunities in the area of advanced ceramics. Some examples are provided below.

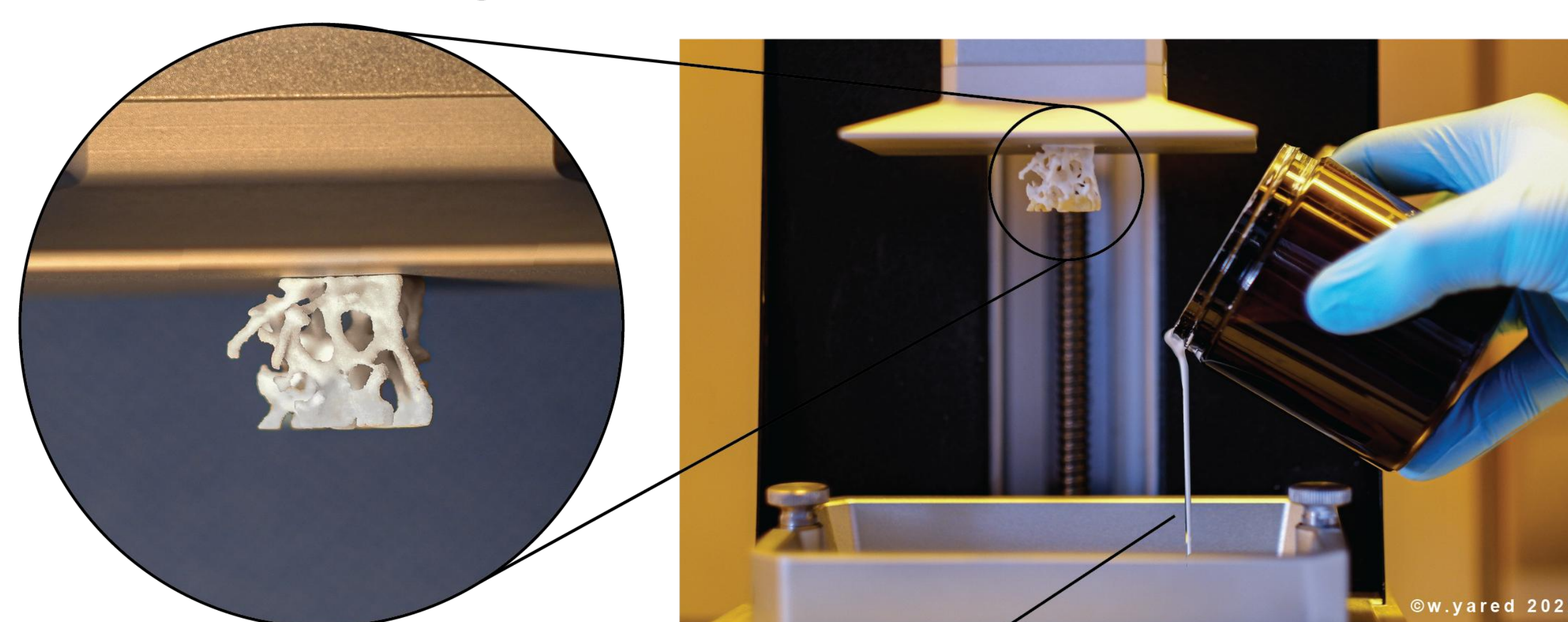
**Want to know more? - [contact us](#)**



### Additive Manufacturing – Stereolithography: [wadih.yared@ikmt.uni-stuttgart.de](mailto:wadih.yared@ikmt.uni-stuttgart.de)

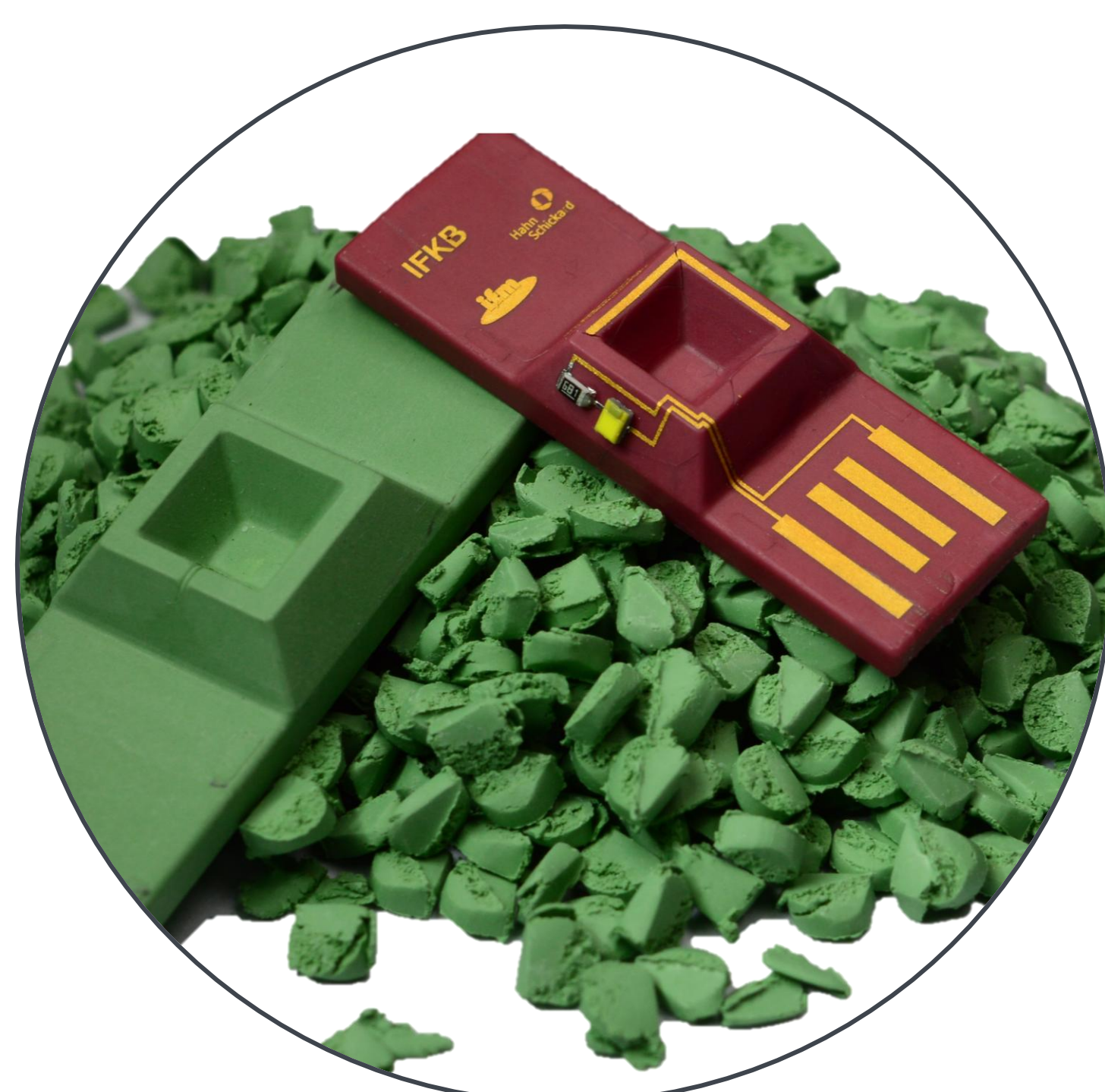
- Development of ceramic suspensions for stereolithography.
- Investigating optimal printing parameters for 3D printing high-performance ceramic-filled resins.
- Optimizing the design of bone implants made from high-performance ceramics using stereolithography.

3D-Printed Bone Graft



Optimized Ceramic-Resin Rheology

### Laser induced direct metallization of ceramics: [simon.keller@ikmt.uni-stuttgart.de](mailto:simon.keller@ikmt.uni-stuttgart.de)



Ceramic Injection Molding

- Material development of ceramic 3D carriers for the application of electronic circuits and sensor technology.



- New type of ceramic injection molding and 5-axis milling of the pre-sintered parts to create 3D circuit carriers.

### Material and process development: [bettina.osswald@ikmt.uni-stuttgart.de](mailto:bettina.osswald@ikmt.uni-stuttgart.de)



- Development of co- and multi-doped zirconia or oxide ceramic composites to improve mechanical properties and ageing resistance.
- Material property characterization tailored for various applications such as dental restorations, ceramic implants, and other biomedical uses.
- Suspension preparation and spray drying of ultra-fine oxide ceramic powders.

