

University of Stuttgart

IFKB - Institut für Fertigungstechnologie keramischer Bauteile
Institute for Manufacturing Technologies of Ceramic Components and Composites



stuttgarter
maschinenbau
interdisziplinär und vielfältig

Possible Topics for Master Theses

Apl. Prof. Dr. Frank Kern, frank.kern@ifkb.uni-stuttgart.de

At IFKB, there are always interesting topics for theses in the field of advanced ceramics. Some of these are listed below.

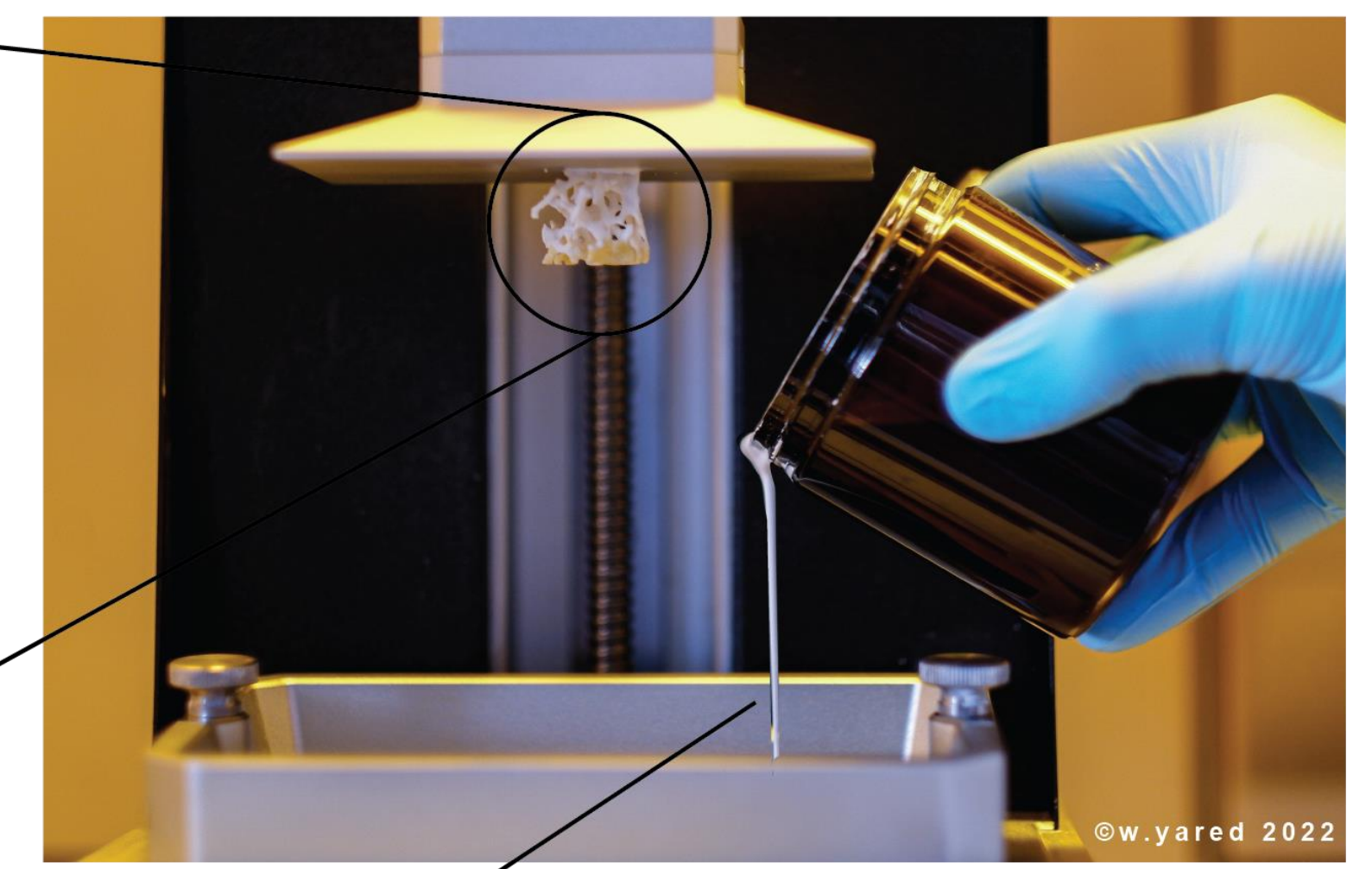
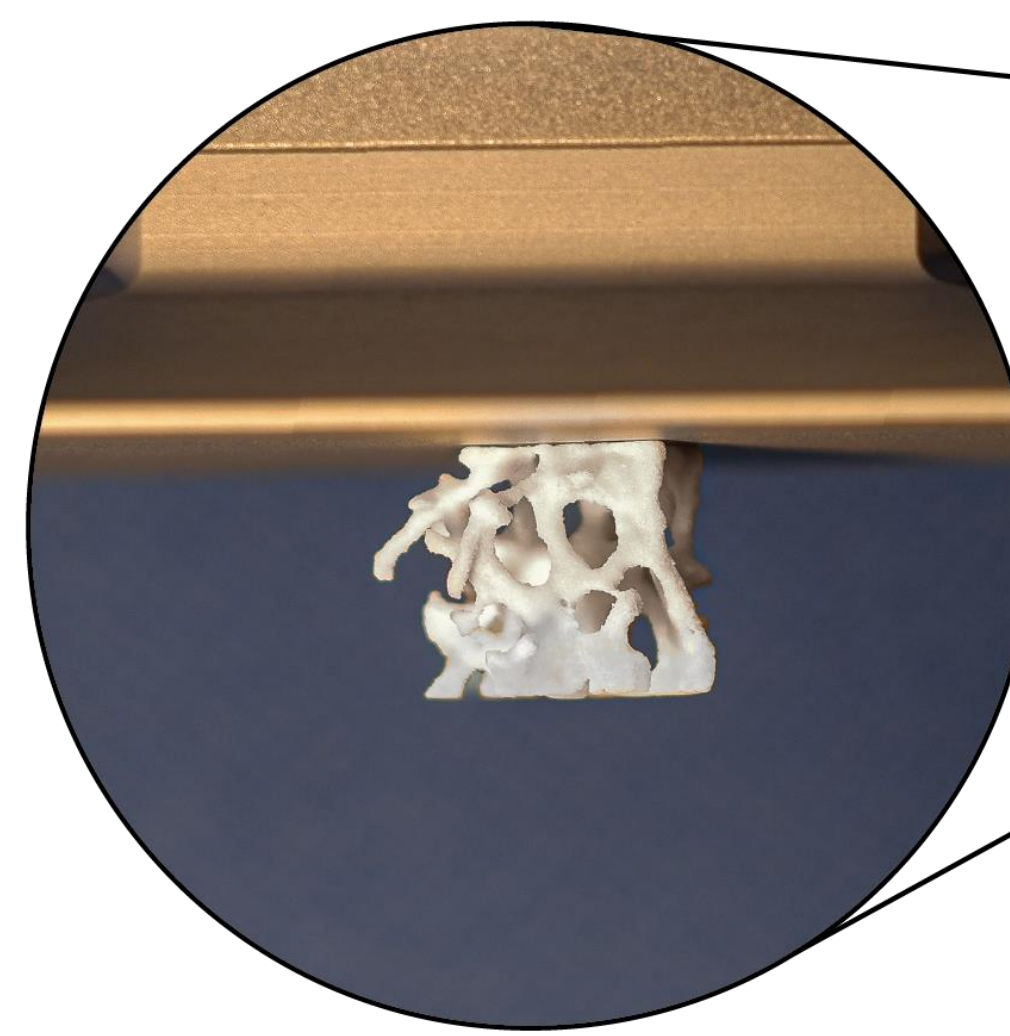
Interested? - [contact us](#)



Additive Manufacturing – Stereolithography: wadih.yared@gsame.uni-stuttgart.de

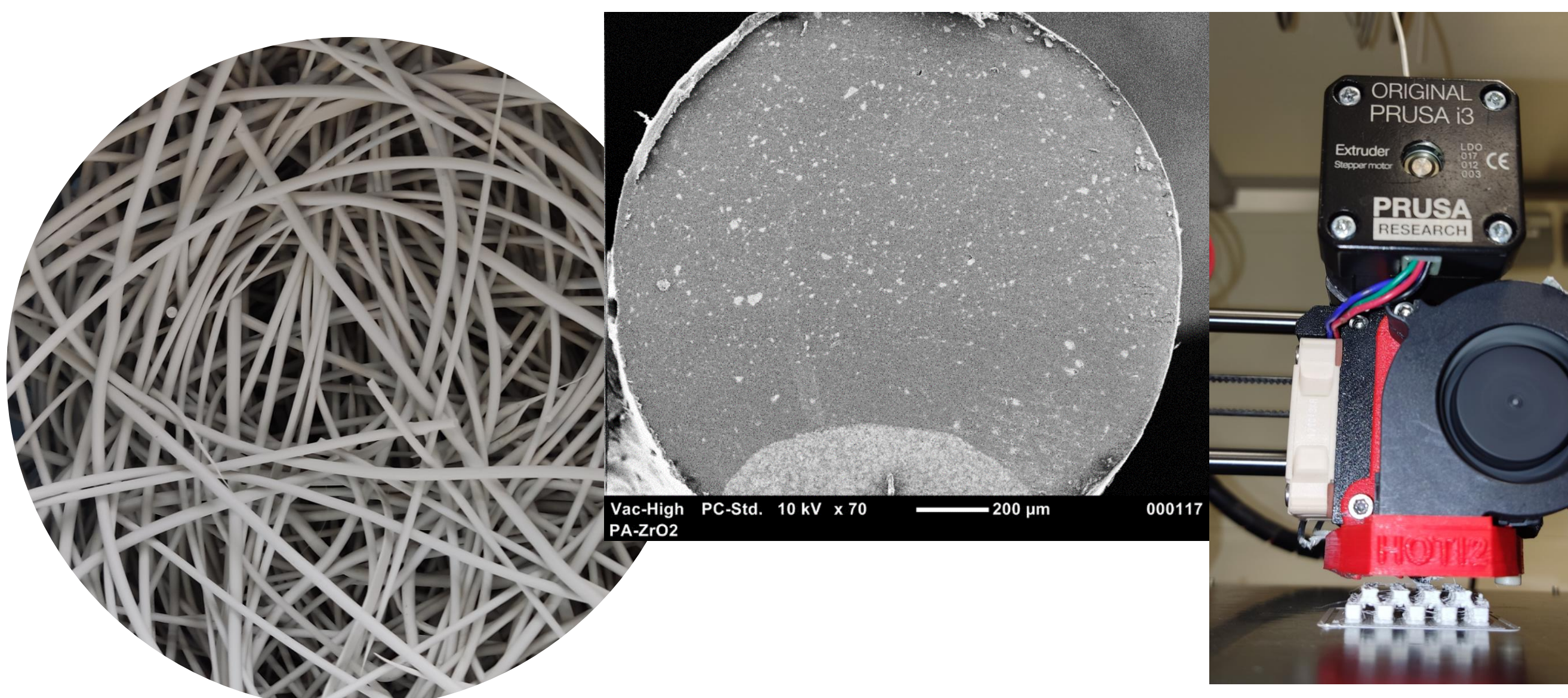
- Optimizing an accessory for a photo-rheometer & investigating factors affecting photo-rheology measurements of ceramic-filled 3D-printing resins
- Investigating optimal printing parameters for the 3D-printing of high-performance ceramic-filled resins
- Optimizing the design of bone implants from high-performance ceramics using stereolithography

3D-Printed Bone Graft



Optimized Ceramic-Resin Rheology

Additive Manufacturing – Fused Deposition of Ceramics : thomas.heim@ifkb.uni-stuttgart.de



- Cordierite filled filament: development, 3D printing and characterization
- Dip-coating: machine design and optimization of the surface quality of 3D printed parts

Laser induced direct metallization of ceramics: simon.keller@ifkb.uni-stuttgart.de

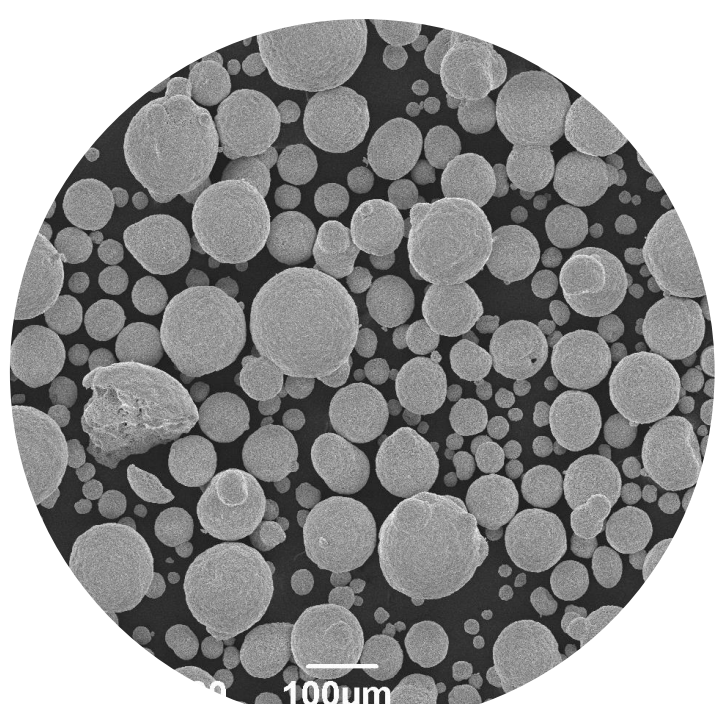


- Material development of ceramic 3D carriers to apply electronic circuits and sensor technology
- New type of ceramic injection molding and milling of the pre-sintered parts to create 3D circuit carriers



Material and process development – Zirconia: bettina.osswald@ifkb.uni-stuttgart.de

- Preparation of co-doped zirconia dispersions, stabilization, spray drying and characterization for dental applications



- Characterisation of new co-doped zirconia materials: mechanics, phase composition and ageing resistance.

