

# KET\*

Focus on (\*) Key Enabling Technologies - nanotechnologies, advanced materials, advanced manufacturing and processing

# 360

# INNOVATE TOGETHER

27th June 2019 - Strasbourg - FRANCE

**Project idea/ Field of expertise:**

Smart Implants and surgical support systems

**Organisation Name:**

**n|w**

University of Applied Sciences  
Northwestern Switzerland, FHNW

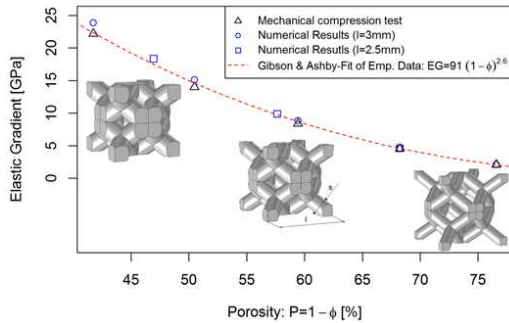
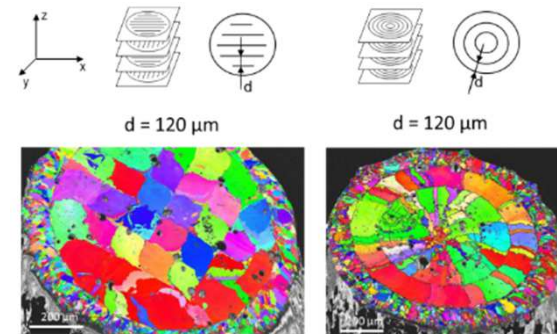
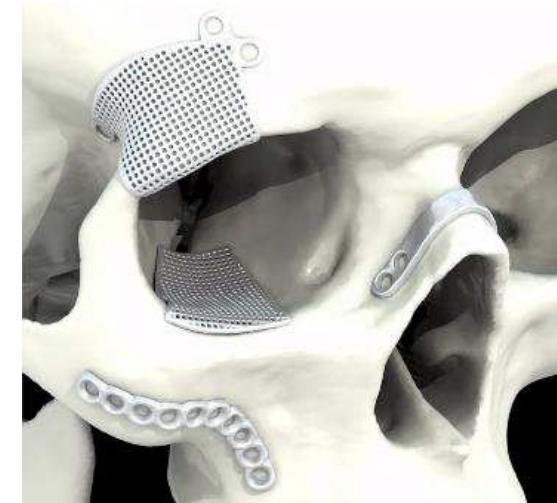
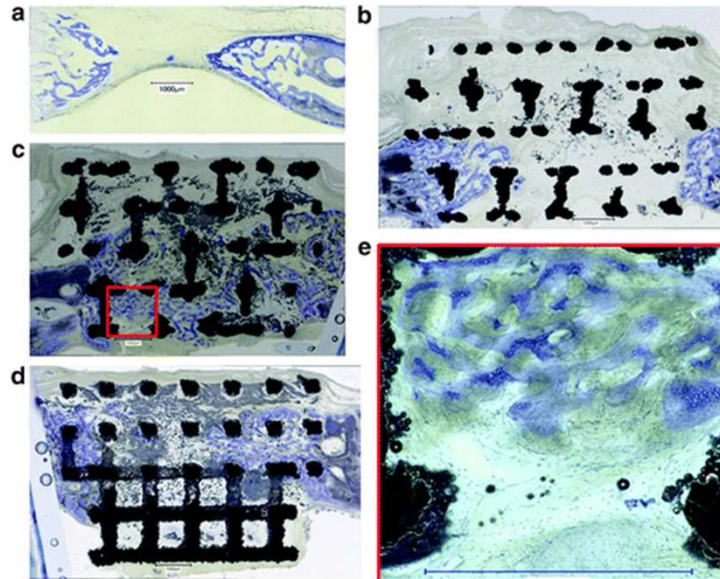
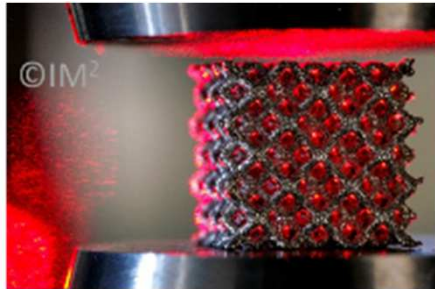
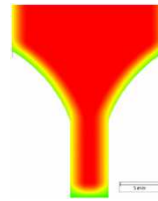
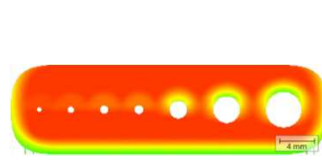
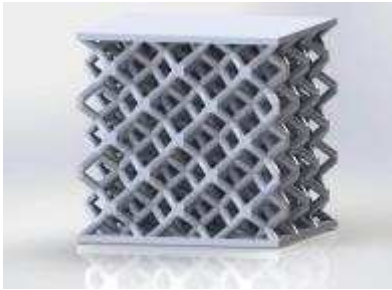
**Adressed challenge(s)/ PPP(s):**

- Advanced Materials
- Advanced manufacturing and processing

**Adressed topic(s) in Work Programme:**

Advanced materials,  
Advanced manufacturing and processing

# Additive Manufacturing



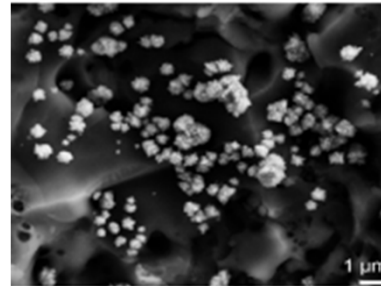
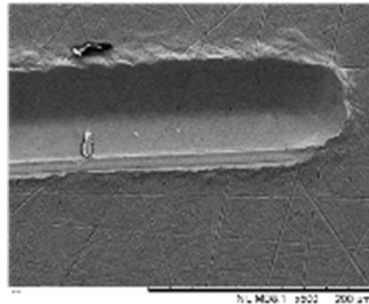
S. Zimmermann et al., BioNanoMat  
15 (S1), S35, (2014).  
27/06/2019 - BE KETs-360

M. de Wild et al., 3D Printing and AM,  
6(1):40-49 (2019).

T. Bormann, et al., Int. J. Mat. Res. (2013).

- **implant development**

software based design, additive manufacturing of biometalls,  
biomechanical validation, surface treatments, ...



- patient-specific implants
- accelerate osseointegration
- prevent biofilm formation
- Increase lifetime

N. Vogt, Curr Dir Biomed Eng 2(1): 31–34 (2016). C. Jung et al, eCM (2015).

- **smart surgical support systems**

extra and intra-corporal sensors,  
surgical navigation, robotics,  
smart instruments, local drug delivery, ...



Dépasser les frontières :  
projet après projet  
Der Oberrhein wächst zusammen,  
mit jedem Projekt



Fonds européen de développement  
régional (FEDER)  
Europäischer Fonds für regionale  
Entwicklung (EFRE)

# Contact details

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## Contact person

Organisation



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