

Wroclaw University of Science and Technology

Faculty of Electronics, Photonics and Microsystems

3D printing task

Topic: „Hybrid-material composite for actuation“

Goal: The goal is to design, print and confirm the actuation of the 3D printed structures, which are composed of two or more different materials. The results might be used for the vibrating components for actuators in so-called 4D printing.

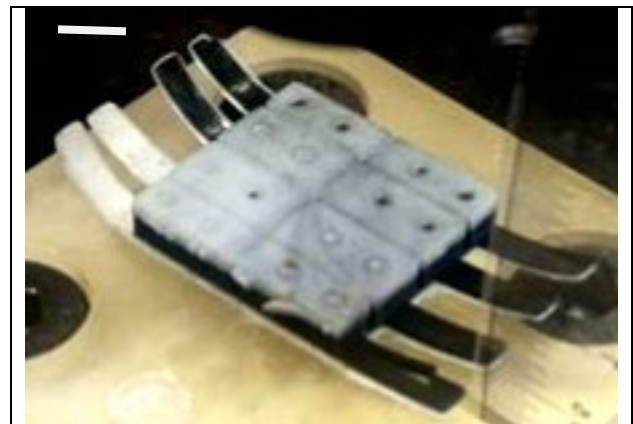


Figure 1. Photography: example of the hybrid printed structure using the graphene-based composite. The scale bar equals to 3 mm.

The following sub tasks will be due:

- Defining the design based on the catalogue of materials
- Creating a 3D model using CAD software (Autodesk Inventor, Autodesk Fusion, Blender, SolidWorks, ...)
- Selecting appropriate 3D printing methods and materials
- Printing and inspection of the master model
- Measurement and data analysis

What will you learn and what skills you might gain?

3D printing – stereolithography or filament fused deposition, actuation aspects and evaluation of microstructures, process optimization through physical inspection and data analysis,

Responsible

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