Ostfalia
University of
Applied Sciences

3D4Space - TA: Functional polymers and recycling technologies

Project management: Prof. Dr.-Ing. Achim Schmiemann

Summary: Research in Europe is increasingly focussed on enabling cost-effective space exploration through the use of new materials and processes, as well as through the sustainable use of raw materials and on-site energy. The subject of this project is to explore the use of materials found on the moon in the manufacture of products. This so-called in-situ resource utilisation (ISRU) plays an important role in space technology, a field which is always limited by having to use available materials and components. The development and demonstration of sustainable additive manufacturing technologies stand in the foreground of the project, because these efficient technologies – developed for applications in space – offer great potential for use on earth and in energy and resource-conserving manufacturing methods.

In Prof Dr.-Ing. Schmiemann's working group, the sub-projects "Functional polymers for use in space" and "New recycling technologies for highly filled polymer composites" are being explored.

Funding: State-level funding European Regional Development Fund

Duration: 2017 – 2020

Funding amount: 250.676 €

Organisational unit: Faculty of Automotive Engineering

Research areas: Vehicle Construction, Polymers and Materials Science

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