PRESS RELEASE

rapid.tech 3D 2025, March 12-13, 2025

Fraunhofer Competence Field Additive Manufacturing at Rapid.Tech 3D 2025

From May 13 to 15, 2025, the Fraunhofer Competence Field Additive Manufacturing of the Fraunhofer-Gesellschaft was represented as an exhibitor at Rapid.Tech 3D in Erfurt. This industry event is regarded as one of the leading events in Europe for industrial additive manufacturing. The focus of the trade fair appearance was a technical deep dive, as well as two high-caliber specialist presentations. **Dipl. Ing. Anne-Katrin Leopold** (Fraunhofer IWS) and **Dr. rer. Wolfdietrich Meyer** (Fraunhofer IAP) presented the latest research results and practical developments in the field of expertise.

In her presentation, **Dipl. Ing. Anne-Katrin Leopold** from the Fraunhofer Institute for Material and Beam Technology **IWS** introduced a methodical approach to significantly shorten the prototype development time in aerospace. As part of the LuFo project FAST, the development time - from powder characterization to Design for Additive Manufacturing (DfAM), production and post-processing through to component testing - is to be reduced from several months to just six weeks.
The central building blocks here are end-to-end digital process chains, simulation-supported process analyses and standardized interfaces and error analyses (PFMEA).

In his speech, **Dr. rer. Wolfdietrich Meyer**, senior scientist at the Fraunhofer Institute for Applied Polymer Research **IAP**, presented pioneering material developments for sustainable and functional applications in additive manufacturing. Under the title *"Green and biomimetic materials for additive manufacturing and functional soft systems",* he presented new, non-isocyanate-based polymers. These were specially developed for light-based 3D printing processes and electrospinning and are characterized by high biocompatibility for medical implants and tissue engineering.

The technical deep dive at the stand of the competence field also enabled a well-founded professional exchange on the topic of **powder characterization using HSI**. Complex powder characterization processes prevent more sustainable powder processing. However, hyperspectral imaging (HSI) can significantly improve the continuous quality assurance of powders using data-based methods. Dipl. Ing. Anne-Katrin Leopold from the Fraunhofer IWS presented initial results for various material classes, including aluminum, titanium and copper alloys.

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With its trade fair appearance, the Fraunhofer Competence Field Additive Manufacturing underlined its role in the development of innovative, application-oriented solutions for key industries such as the aerospace and medical technology sectors.

Further information about the Fraunhofer Competence Field Additive Manufacturing and the exhibition appearance can be found here:

https://www.additiv.fraunhofer.de/

https://www.rapidtech-3d.de/de/p/fraunhofer-kompetenzfeld-additive-fertigung.137136

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impressions from rapid.tech 3D 2025
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Picture 1 *Dr. Uwe Scheinhauer (IKTS, right) at the booth of the competence field*

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Picture 2 *Dipl. Ing. Anne-Katrin Leopold (IWS) at the booth of the competence field*

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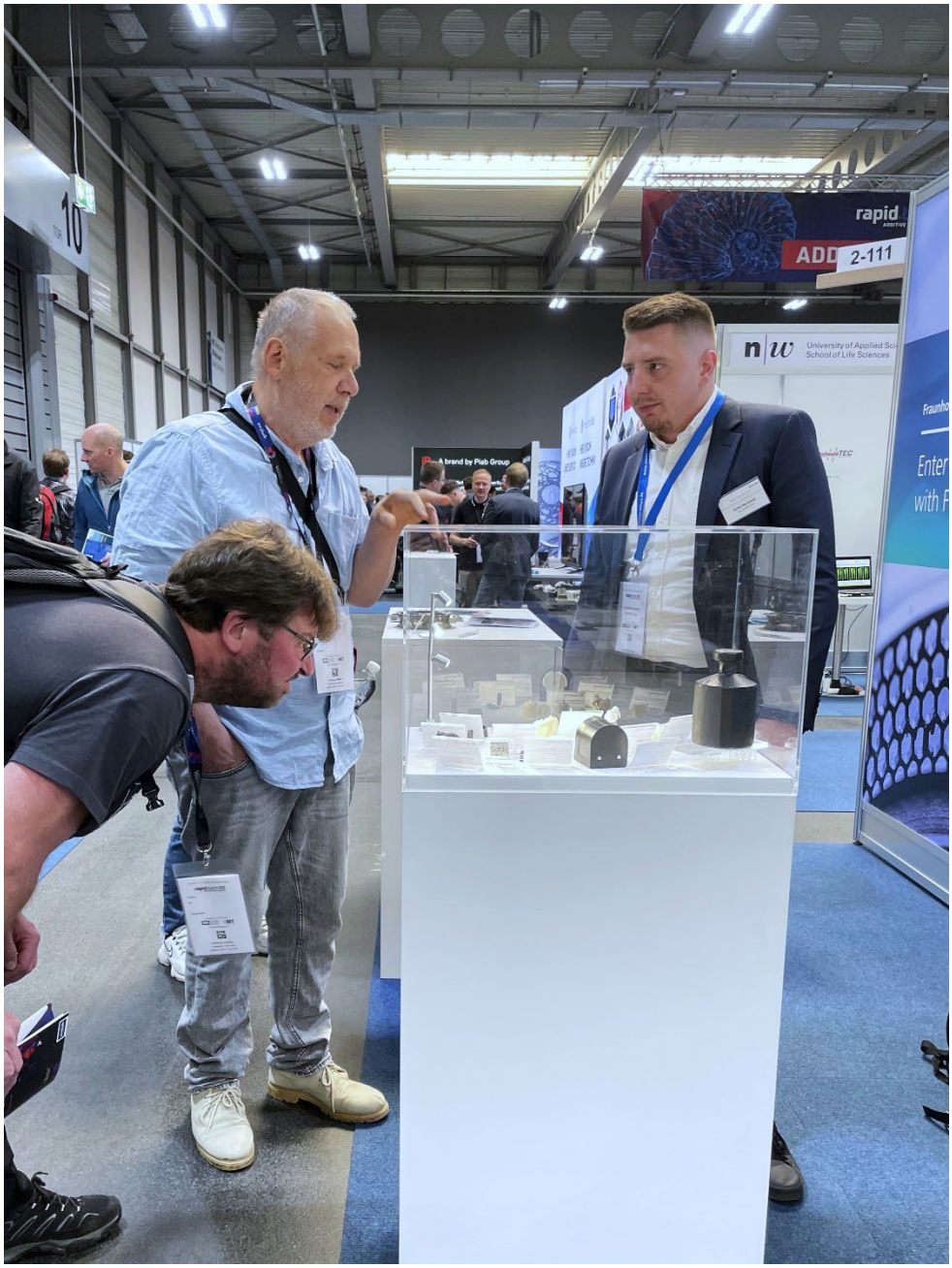

Picture 3 *Rafael Meinhardt (IAPT) in conversation with exhibition visitors*

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Picture 1 *Dr. rer. Wolfdietrich Meyer (IAP) during his presentation "Green and biomimetic materials for additive manufacturing and functional soft systems"*

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