EuroTech Universities

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EuroTechTalk #2

» Green Additive Manufacturing through Innovative Beam Shaping and Process Monitoring «

Within the EuroTechTalk, Prof. Kizel and Prof. Wudy will present the cutting-edge research they would like to conduct with 8 other partners in the newly funded EU project InShaPe. The overall aim of the InShaPe project is to develop and demonstrate in different industrial use cases (energy, aerospace and automotive) a novel first-time-right Powder Bed Fusion Process of Metals using Laser Beam (PBF-LB/M). The novel PBF process will be underpinned by two technical innovations: (i) the flexible adaptation of laser beam shapes tailored to the material/geometry of the printed parts (enabled by a first-of-a-kind optical module for beam shaping enhanced with AI-techniques to determine the right beam shapes) and; (ii) the multispectral in-line process monitoring and control system (enabled by transferring know-how from the multispectral analysis domain into additive manufacturing). InShaPe will disrupt the manufacturing sector by helping to turn PBF-LB/M from a niche

into a mainstream manufacturing technology.



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