

Scientific Keynote

Additive manufacturing of Mg alloys for degradable implants

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Mg alloys are promising for clinical implementation of high-strength, biodegradable implants for e.g. bone fixation. This keynote will highlight recent progress in additive manufacturing of such alloys, including tailoring Mg alloy compositions and process parameters to enhance printability, mechanical integrity, and corrosion performance, while addressing challenges such as vaporization, defect formation, and phase instability. Emerging strategies for achieving predictable degradation, improved biocompatibility, and clinically relevant implant architectures will be discussed. Indeed, while additive manufacturing of Mg alloys through Powder Bed Fusion with Laser Beam (PBF-LB) allows for high-resolution geometries and to some extent microstructural control, the degradation behavior of printed parts still needs significant improvement.



Prof. Dr. Cecilia Persson is a Professor in Materials Science at Uppsala University (<https://katalog.uu.se/profile/?id=N9-1332>) and the past President of the Scandinavian Society of Biomaterials (2019-2023). She currently directs a European research network within the field of AM of biomaterials (MSCA DN Print4Life), as well as a Competence Centre for Additive Manufacturing in the Life Sciences (<https://www.uu.se/en/research/am4life/>). She is also the Scientific Director of a national infrastructure in AM ([WISE Additive](#)).