Joint session: “Corrosion and corrosion protection of additive manufactured metals for biomedical applications”

chair: Patrik Schmutz of EMPA and Iris De Graeve of VUB

Additive manufacturing (AM) of metals for biomedical applications is by now a well-established concept as the design freedom and patient specific printing of implants is of high value and interest. Products with complex shapes, scaffolds, gradient compositions and structural features and even biodegradable metals can be made by AM, just to mention a few AM advantages. Due to the unique microstructures of the AM metal alloys, properties are however generally quite different than the ones we know from the conventionally produced biometals. One of those is of course the corrosion behaviour in the physiological environment. In this session, we welcome presentations on the corrosion mechanisms of AM materials microstructure and 3D printed component surfaces for applications in the biomedical field as well as their corrosion protection strategies.