electrochem

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Electrochemical Additive Manufacturing: Challenges and Opportunities

Guest Editor:

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Message from the Guest Editor

The importance of the size scale is given by the application the metamaterial is designed for.

In the microscale, subtractive methods with the necessary resolution become rare and the available methods such as focused Ion beam milling (FIB milling), are directional and the degree of freedom is limited. Electrochemical additive manufacture methods are an interesting alternative to others as they allow to reach the microscale as well as their relatively cheap as most are operated at ambient or slightly elevated temperature and ambient pressure. While the technique is mainly used to create thin films with the following methods it is possible to create elaborate 3D structures. Nevertheless, Technical challenges arise from the multistep production method and electrodeposition challenges from influence of the template on the electrodeposition.

The present special issue is devoted to gather these efforts of the research community worldwide and present the most relevant technologies allowing the use of the template assisted electrodeposition for diverse research communities.