Corrosion Performance of Additive Manufactured Zn as Biomedical Implants

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Abstract Zn alloys are promising biodegradable materials, and additive manufacturing (AM) is a novel fabrication technique. However, AM Zn often experiences structural changes compared to traditionally cast samples, which can subsequently affect their corrosion behavior. This study reviews the AM technologies for biodegradable Zn alloys and summarizes the corrosion-affecting factors from both AM and sample sides. Furthermore, this study summarizes the corrosion behavior of AM-ed Zn and Zn alloys through the comparison with the cast counterparts, aiming to analyze the impact of AM on the corrosion behavior of Zn alloys, and providing a theoretical foundation and technical support for the application of biodegradable Zn alloys.

Keywords Additive manufacturing, Zn, corrosion.

Reference

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