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Advances in Titanium Matrix Composites

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Message from the Guest Editors

Dear Colleagues,

This Special Issue is devoted to the current state of the art in titanium matrix composites (TMCs). As one of the most important metal matrix composites (MMCs), TMCs exhibit high specific strength, elastic modulus, temperature durability, wear resistance, and formability. Recent innovative research has shown that tailoring a reinforcement network distribution that is completely different from the conventional homogeneous distribution can not only improve the strengthening effect but can also resolve the issue of poor tensile ductility in TMCs. In addition to microstructural tailoring, advanced fabrication methods have also been developed to produce TMCs with high mechanical performance, for instance, laser additive manufacturing and spark plasma sintering.

This Special Issue particularly welcomes work related to the fabrication, hot processing, microstructure design and evolution, mechanical behavior, simulation, heat treatment, advanced characterization, and atomic-scale interface study of TMCs. We hope that the high-quality research papers presented in this Special Issue will play a positive role in promoting the rapid development of TMCs.



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Special Issue



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Message from the Editor-in-Chief

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