



## Mechanical Properties of Alloys, 3D Printing Metals, Welding Joints by Small Specimen Technology

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### Message from the Guest Editor

Dear Colleagues,

Minimum specimen technologies, such as the small punch test, indentation test, and in situ SEM/EBSD test, are greatly advantageous in the understanding of mechanical properties when the size of the testing materials is limited; this is especially the case for rare metals, damaged metals, 3D printing metals and welding joints. Minimum specimen technologies have been developed to understand various mechanical properties, including the tensile strength, creep, fatigue, fracture parameters, hydrogen embrittlement and stress corrosion crack. The development of minimum specimen technology provides us not only with a novel testing technique, but also with a multi-scale testing method.

However, there remain some gaps in the knowledge regarding minimum specimen technologies, such as the effect of the material's scale on its mechanical properties, the theoretical correlation formula between the minimum specimen and the standard specimen, the application of minimum specimen technologies on fatigue crack propagation, and fracture analyses, etc.

This Special Issue aims to present the latest developments in minimum specimen technology [...]





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## Message from the Editor-in-Chief

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