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Functionally Graded Materials: Structures, Properties, and Applications

Guest Editor:

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Message from the Guest Editor

Functionally graded materials (FGMs) are multi-phase composites to be engineered with gradual spatial variations of constituents, which result in smooth variation of thermal, mechanical, electrical, and other properties. The advantages of FGMs to two dissimilar materials joined directly together include smoothing of stress distributions across the layers, minimization or elimination of stress concentrations and singularities at the interface corners and increase in bonding strength. These advantages are achieved by fabricating FGMs with predetermined gradual spatial variations of the volume fractions and microstructures of the material constituents according to functional performance requirements. FGMs have been successfully accepted in a variety of industries such as aerospace, automobile, energy fields and biomedical fields due to their ability to tailor properties gradually and avoid concentrations in properties between two bonded materials.

This Special Issue aims to collect recent studies on properties and applications of structural FGMs. Full papers, communications, and reviews are all welcome.



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Special Issue



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Message from the Editor-in-Chief

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