



Functionally Graded Materials

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Message from the Guest Editor

Dear Colleagues,

Functionally graded materials are advanced materials with gradual transitions in the microstructure and composition in certain directions, which lead to specific variation in the functional performance with the advantages of smooth transition in thermal stresses and low stress concentration at the interface between dissimilar materials.

A specific behavior in a FGM structure can be obtained through the adequate variation of volume fractions of the constituent materials. FGM structures can be efficiently designed to obtain a specific performance or function by changing the spatial gradation in composition, allowing the designer to tailor the required physical and mechanical properties and the corresponding structural behavior. Development of accurate models and efficient optimization techniques applied to the design of FGM structures are important topics of research. The challenges in the development of manufacturing process and materials selection of FGM are major topics of research.

Under this perspective, the Special Issue wants to contribute to the field, presenting the most relevant advances in all aspects of this research area.





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Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal *Applied Sciences* has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

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