

Minisymposium Title

Mechanics of Multifunctional Composite Materials

Description

Multifunctional materials, many of which are naturally found in biological or man-made materials, possess the capability to respond and adapt to various external stimuli. Composite material, on the other hand, offers an excellent combination of properties which are different from the individual parent materials. Multifunctional composite materials, as a result, have active capabilities and advantages of the composites. Engineers and scientists aim at designing multifunctional composite materials that can incorporate two or more of physical domains. With numerous applications of the multifunctional composite materials, it is then promising to develop robust methodology/models to reveal their behavior prior to designing them.

The aim of this minisymposium is to present recent development in modeling of multifunctional composite materials. Scopes are including but are not restricted to mechanics of multifunctional composite materials, experimental mechanics of composites, micromechanical damage mechanics of heterogeneous materials, microstructure evolution in crystalline materials, crystal plasticity, constitutive modeling, cohesive zone modeling of delamination, modeling method in material design, active materials, metamaterial, and bio-inspired materials.

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