Shape Memory and Superelasticity

Advances in Science and Technology
Editor: H. Sehitoglu

- Presents original papers on shape memory materials in physics, crystallography, material science, thermomechanical testing and more
- Covers uses in micromechanics, constitutive modelling, mathematics and microstructures, smart materials, and multiferroics
- A publication of the International Organization on Shape Memory and Superelastic Technologies (SMST), an affiliate of ASM International

The Shape Memory and Superelasticity journal invites original peer-reviewed papers that focus on shape memory materials research with contributions from materials science, materials engineering, experimental and theoretical mechanics, mathematics and physics. Of particular interest is to understand the response of these materials to external stimuli such as force, displacement, temperature, magnetic fields, irradiation, corrosive media and so on in pursuit of uncovering new phenomenon, new materials and new applications as follows: (i) the journal papers will examine these materials utilizing the principles of continuum mechanics, micromechanics, microstructurally informed constitutive modeling, atomistic models, mathematics of microstructures and other methodologies. (ii) the development and use of advanced experimental techniques to expose and understand the shape memory response including thermal and mechanical cycling, application of magnetic and other external fields; (iii) the exploration and further understanding of shape memory materials due to fatigue, fracture and environmental factors are of significant interest; (iv) novel applications of the materials will be explored in all areas including bio-medical devices, actuators, thin films, robotics, mechanical and aerospace engineering components, civil engineering structures, and micro-electromechanical systems (MEMS)

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