**Mini-symposium Title**

Computational Mechanics of Materials with Internal Structure or Energy Source

**Description**

Material properties, such as elastic modulus, Poisson’s ratio, mass density, electric permittivity, magnetic permeability, thermal conductivity, heat capacity or others, are so affected by the internal design of materials. Internal microstructure or micro-process, which may serve as an energy source, may lead to negative characteristics, such as those observed in the non-Hermitian, non-reciprocal systems or active materials. Possible applications of the materials with internal structure or energy source are abundant, such as vibration and noise reduction, cloaking in electromagnetic, acoustical or thermomechanical fields, or unbounded effective material properties in composites. In this minisymposium, all computational aspects in understanding the effects of internal structure and/or internal micro-process on linear or nonlinear material properties are welcome, including machine learning techniques or novel computational methods. Experimental or theoretical studies to correlate numerical results are also welcome.

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