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ABSTRACT

Standard Cauchy continua are not suitable to describe all kind of deformable bodies.
In order to generalize Cauchy model a major theoretical effort is needed, based on a variational formulation of the basic principles of mechanics . Indeed the concepts of stress, strain and contact interactions need to be generalized.In this way the range of applicability of continuum mechanics is enlarged and the description of a larger class of novel metamaterials is made possible