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Abstracts of Short Communications and Posters

Section:

11. Mathematical Physics

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Axiomatic theory of the multiple anelastic relaxation in crystalline solids.

An axiomatic theory is developed on the multiple anelastic relaxation in crystalline solids. Mathematically, it is a theory on the ordinary differential equation of two infinitely differentiable functions: here, the stress and strain. The differential equation is, on the other hand, a defining equation of the general linear solid which represents the multiple relaxation of strain after the applied stress. Properties found in the mathematical theory are interpreted from the physical point of view, by putting emphasis on natural correspondence between physical and mathematical properties.