

Wave Dynamics, Mechanics and Physics of Microstructured Metamaterials

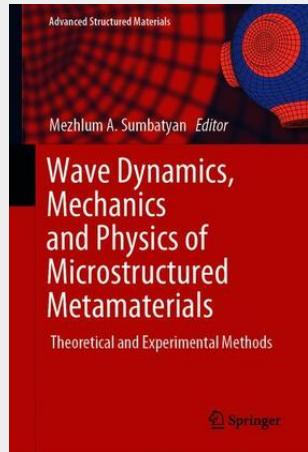
Theoretical and Experimental Methods

This book addresses theoretical and experimental methods for exploring microstructured metamaterials, with a special focus on wave dynamics, mechanics, and related physical properties. The authors use various mathematical and physical approaches to examine the mechanical properties inherent to particular types of metamaterials. These include:

- Boundary value problems in reduced strain gradient elasticity for composite fiber-reinforced metamaterials
- Self-organization of molecules in ferroelectric thin films
- Combined models for surface layers of nanostructures
- Computer simulation at the micro- and nanoscale
- Surface effects with anisotropic properties and imperfect temperature contacts
- Inhomogeneous anisotropic metamaterials with uncoupled and coupled surfaces or interfaces
- Special interface finite elements and other numerical and analytical methods for composite structures

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