

عنوان مقاله:

Size-dependent Nonlinear Forced Vibration Analysis of Viscoelastic/Piezoelectric Nano-beam

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خلاصه مقاله:

In this paper, the nonlinear forced vibration of isotropic viscoelastic/ piezoelectric Euler-Bernoulli nano-beam is investigated. For this purpose, the consistent couple stress theory is utilized for modeling the viscoelastic/piezoelectric nano-beam. Hamilton's principle is also employed to obtain the governing equations of motion. Further, the Galerkin method is used in order to convert the governing partial differential equations to a nonlinear second-order ordinary differential one, and then multiple scale method is used to solve motion equation.

کلمات کلیدی:

Nonlinear forced vibration, Piezoelectric, Viscoelastic, Consistent couple stress theory, Multiple scale method

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