

## عنوان مقاله:

Nonlocal buckling analysis of flexoelectric nanoplates supported on Winkler-Pasternak viscoelastic foundation

## محل انتشار:

اولین کنفرانس ملی میکرو نانو فناوری (سال: 1397)

تعداد صفحات اصل مقاله: 9

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## خلاصه مقاله:

This paper develops a nonlocal plate model for buckling analysis of piezoelectric nanoplates. For more authentic analysis of piezoelectric nanoplate, the proposed theory contains two scale parameters related to the nonlocal and flexoelectric effects. In order to present a model, the material properties of the system are assumed viscoelastic and the Kelvin–Voigt model is applied. Governing equations of a nonlocal smart nanoplate on viscoelastic substrate are derived via Hamilton's principle. Galerkin method is implemented to solve the governing equations. Effects of different factors such as aspect ratio, nonlocal parameter, flexoelectricity, applied voltage and Winkler-Pasternak parameters on buckling are studied

## کلمات کلیدی:

Piezoelectric nanoplate; flexoelectricity; buckling; Nonlocal theory; viscoelastic

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/807793>

