Spectral properties of the quantum anharmonic oscillator under the influence of a constant force

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It is shown that the effect of a constant force on the quantum anharmonic oscillator leads to a nonlinear shift for all energy levels. The spectrum of the energy loaded anharmonic oscillator, it is shown that at low loads can be limited to a linear approximation for the shift of the energy levels. The results can be used in the description of the thermodynamic characteristics of the macro-and mesoscopic solid and solid nanoparticles.

Keywords: *energy spectrum, quantum anharmonic oscillator, perturbation theory, Lennard – Jones potential.*

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