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Approximate Eigensolutions of the Schrödinger Equation of a Particle in the Field of the Frost-Musulin Energy Potential Model and its Application to Diatomic Molecules by J. O. A. Idiodi and C. A. Onate (pages 305-316)

The approximate analytical bound state solutions of the Schrödinger equation for the Frost-Musulin potential is found by using a suitable approximation scheme to the orbital centrifugal barrier via parametric Nikiforov-Uvarov method and supersymmetric approach. We have also calculated some expectation values. The ro-vibrational energy states for some diatomic molecules are calculated for arbitrary quantum numbers and with the model values of some parameters. The present results are in excellent agreement with the previous result obtained by Adepoju and Eweh.

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