

ARBITRARY L -STATE SOLUTION OF SHIFTED DENG-FAN POTENTIAL BY INTERPOLATING WAVELET COLLOCATION METHOD

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The Solution of D -Dimensional Radial Schrödinger Equation with Shifted Deng-Fan (sDF) Potential has been Investigated by Interpolating Wavelet Collocation Method. The Wavelet Based Interpolating Collocation Scheme Can Extract the Bound State Spectrum of sDF Potential Efficiently without any Pekeris Type of Approximation of the Centrifugal term and it gives most Accurate Results in Bound State Eigen Solution. As an Application, Bound State Eigen-Energies of some Diatomic Molecules (H_2 , LiH, HCl, and CO) are Presented in Low and High-Lying States for any Arbitrary Values of $\{l, n\}$ and Compared with Existing best Results to show the Superiority of the Scheme.
