

Unified Treatment of Screening Coulomb and Anharmonic Oscillator Potentials in Arbitrary Dimensions

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Abstract: A mapping is obtained relating radial screened Coulomb systems with low screening parameters to radial anharmonic oscillators in N-dimensional space. Using the formalism of supersymmetric quantum mechanics, it is shown that exact solutions of these potentials exist when the parameters satisfy certain constraints.

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Key words: supersymmetric quantum mechanics, screening Coulomb, N-dimensional space

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