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Up and Away in the Potential Landscape of Diatomic Molecule Potential Energy Curves

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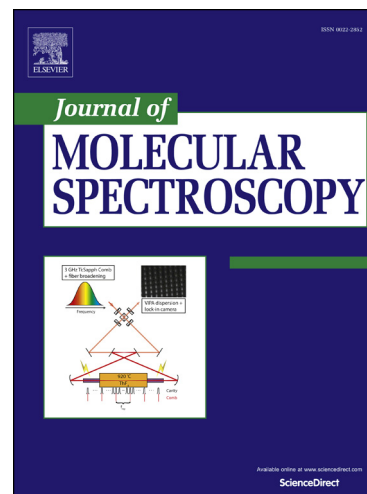
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Abstract

The understanding of the potential curves of a given molecule has expanded in many ways during my last 52 years as an experimental and theoretical molecular chemist/physicist in graduate school in Chemistry at Harvard and in both the Chemistry and Physics Departments at University of Iowa and University of Connecticut. This expansion has been **up** in energy and vibrational and rotational quantum numbers and **away** from R_e to long range as well. It is clear that Prof. Robert Le Roy, who I have known since the late 1960s, has made many important and greatly appreciated contributions to the landscape I describe below from my personal perspective, especially with regard to long range molecules and solution of the radial Schrödinger equations and related calculations.

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