

## PIECES OF THE PROPELLANE PUZZLE: AN INVESTIGATION OF ROVIBRATIONAL COUPLING

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[1.1.1] Propellane ( $C_5H_6$ ) is a small ring  $D_{3h}$  molecule with an axial bond that continues to be a topic of debate. Recently propellane was subjected to high resolution spectroscopic scrutiny for the first time, and its  $\nu, l, J, K$  structure is being determined. It was found that  $\nu_{15}$ , the axial antisymmetric C-C stretching mode that has a remarkably high dipole derivative, and the  $\nu_{12}$  H wagging modes are rotationally coupled.