

VIBRATIONAL DEPENDENCE OF EXCITED STATE INTRAMOLECULAR PROTON TRANSFER IN 2-(2'-PYRIDYL)PYRROLE IN THE GAS PHASE VIA HIGH RESOLUTION ELECTRONIC SPECTROSCOPY.<sup>a,b</sup>

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Rotationally resolved fluorescence excitation spectra of the  $S_1 \leftarrow S_0$  origin band and +144  $\text{cm}^{-1}$  vibrational band transitions of 2-(2'-Pyridyl)pyrrole (2PP) have been recorded in the collision free environment of a molecular beam. Analyses of these data provide new information about the changes in geometry that occur when 2PP absorbs light. Additionally, significant line broadening is observed in both spectra, which we attribute to an excited state intramolecular proton transfer (ESIPT) reaction. The dynamics and vibrational mode dependence of ESIPT in 2PP will be discussed.

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