ANALYSIS OF THE VIBRONIC BANDS IN THE EMISSION SPECTRUM OF p-FLUOROBENZYL RADICAL

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We have employed the technique of corona excited supersonic expansion to generate the jet cooled p-fluorobenzyl radical from p-fluorotoluene. The vibronic emission spectra of the p-fluorobenzyl radical has been recorded with a Fourier transform spectrometer. A full vibronic analysis of the spectra has been performed, allowing for unambiguous assignments of the ground state vibrational frequencies of the p-fluorobenzyl radical. In addition, we observed several weaker satellite sequence bands near each of the strong vibronic bands. The characteristics of the low-frequency sequence bands have been tested by varying the experimental conditions. The results of the vibronic analysis and a discussion of the satellite bands will be presented.