ASSIGNMENT OF VIBRONIC BANDS IN THE EMISSION SPECTRUM OF p-XYLYL RADICAL

SANG K. LEE, *Department of Chemistry, Pusan National University, Pusan 609-735, South Korea*; MYEONG H. SUH and TERRY A. MILLER, *Laser Spectroscopy Facility, Department of Chemistry, The Ohio State University, Columbus OH 43210*.

The p-xyly radical has been generated from p-xylene in a corona excited supersonic expansion. The vibronic emission spectra of the p-xylyl radical have been recorded with a Fourier transform spectrometer at a resolution of 0.1 cm. The rotational contours of the observed vibronic bands have been analyzed using a computer program which includes the torsional motion of the methyl group as well as the standard rotational Hamiltonian for the asymmetric rotor. Comparison of the observed bandshapes with the calculated ones has facilitated the re-assignment of the 6a and 6b bands.