World Academy of Science, Engineering and Technology
International Journal of Chemical and Materials Engineering
Vol:8, No:12, 2014

The Microwave and Far Infrared Spectra of Acetaldehyde-d1 in vt=2

Authors : A. Larrousi, M. Elkeurti, K. Amara, M. Zemouli, L. H. Coudert, I. R. Medvedev, F. C. De Lucia, Atsuko Maeda, R. W. C. McKellar, D. Appadoo

Abstract : Experimental and theoretical investigations of the microwave and far infrared spectra of CH3COD are reported. Two hundred twelve lines were identified in the far infrared spectrum recorded using the Canadian synchrotron radiation light source. Two thousand one hundred and sixty-eight lines in vt=0,1 and 216 in vt=2 have been measured in the microwave spectrum obtained using the fast scan submillimeter spectroscopic technique. A global analysis of the new data and of already available microwave lines has been carried out and yielded values for rotation–torsion parameters. The unitless weighted standard deviation of the fit is 1.6. 46 parameters and 216 lines were identified.

Keywords : CH3COD, torsion, the microwave spectra, far infrared spectra high resolution
Conference Title : ICCEPS 2014 : International Conference on Chemical Engineering and Physical Sciences
Conference Location : Istanbul, Türkiye
Conference Dates : December 22-23, 2014