INFRARED SPECTRUM OF BIACETYL ADSORBED ON ALKALI HALIDE FILMS

ROY GERNHARDT, RICHARD MORGAN and C. A. BAUMANN , *Department of Chemistry, University of Scranton, Scranton, PA 18510-4626*.

The infrared spectrum of biacetyl ($(CH_3CO)_2$) adsorbed onto sublimated films of alkali halides was observed. The infrared active C-H stretching modes are blue-shifted relative to the gas phase values, while the asymmetric carbonyl stretch is red-shifted. Surface-induced splitting has been observed in the asymmetric methyl rocking mode. Temperature-dependent broadening of the asymmetric methyl vibrations was observed. The vibrational shifts and splittings will be used, along with desorption kinetics, to determine the mode of adsorption for this molecule.