

THE ROTATIONAL SPECTRA OF 1-NONENE AND 1-DECENE

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Fourier transform rotational spectroscopy has been used to record the pure rotational spectra of 1-nonene and 1-decene. Spectra have been measured up to 26 GHz. For both molecules one conformer dominates the observed spectra. For the 1-nonene extended conformer $B+C = 733.637$ (20) MHz. For 1-decene the extended conformer has $B+C = 535.162$ (29) MHz. Our new low frequency spectrometer has been used to measure low lying $\Delta J = +1$ transitions. Molecular dynamics calculations have been used to examine the conformational space of these molecules and results will be presented.