LOW TEMPERATURE FTIR SPECTRA OF METHYL SILANE

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The fundamental vibrational bands of methyl silane (CH_3SiH_3) ν_1, ν_2, ν_7, and ν_8 have been recorded at 203K and 77K using both conventional absorption cells and also the RAL collisional cooling cell, at resolutions of up to 0.0017cm-1. In the low temperature spectra, the torsional splitting of the rotational transitions, which is obscured in the room temperature spectra, has been resolved and assigned in the majority of cases. Previously missasignment of the ν_1 Q branch splitting has corrected. Rotation constants of methyl silane and the torsional barrier for the different excited states have been determined

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