COHERENCE-DETECTED FTMW-IR SPECTROSCOPY OF CH_3OD IN THE OD STRETCH REGION.

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Infrared spectra of the connected rotational levels of jet-cooled CH_3OD are recorded in the OD stretch region. The observed spectra in the range 2710 - 2740 cm^{-1} result from E-species transitions ($3_0 \leftarrow 3_{-1}$,$2_0 \leftarrow 3_1$,$1_0 \leftarrow 1_1$) of CH_3OD. For the available rotational levels ($K' = 0$, $K' = 1$ and $K' = 2$), the reduced torsional energies follow a pattern similar to the ground state. The torsional tunneling splitting in the OD stretch excited state is deduced to be 2.4 cm^{-1} as compared to 2.6 cm^{-1} in the ground state.