

Complementary cavity-enhanced spectrometers to investigate the OH+CH combination band in *trans*-formic acid

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We have used cw-CRDS and femto-FT-CEAS spectrometers to record the spectrum of the weak OH+CH ($\nu_1 + \nu_2$) combination band in *trans*-formic acid, with origin at 6507 cm⁻¹. They respectively allowed resolving and simplifying the rotational structure of the band near its origin, under jet-cooled conditions ($T_{\text{rot}} = 10$ K), and highlighting the overview of the band, under room temperature conditions. The stronger B- and weaker A-type subbands close to the band origin could be assigned, as well as the main B-type Q branches. The high-resolution analysis was hindered by numerous, severe perturbations. Rotational constants are reported with, however, poor physical meaning. The $\nu_1 + \nu_2$ transition moment is estimated from relative intensities to be 24° away from the principal *b*-axis of inertia.