

64. Title: Optically pumped (CD3I)-C-13: new TeraHertz laser transitions

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Abstract: We investigated the (CD3I)-C-13 isotopomer of methyl iodide as a source of TeraHertz laser radiation using the optical pumping technique. We used a pulsed waveguide CO2 laser as the pump laser and an open Fabry-P,rot cavity for new laser line generation. We discovered 18 new laser lines with wavelengths ranging from 308.4 to 1132.7 μm , plus two lines previously assigned to (CD3I)-C-12. All of the lines were characterized in wavelength, pump frequency offset, optimum pressure of operation, and relative polarization and intensity.