

Abstract Submitted
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Intensity Calculations of CO₂ Molecule using Schwenke PES

KAUSAR YASMIN, University of Pennsylvania at California — Due to its strong opacity in the IR region, CO₂ has a major impact of the Earth's atmosphere and the climate. Spectroscopic investigation of CO₂ will enable scientists develop an understanding of the impact of human induced and natural changes on the Earth's atmosphere. Results will aid the prediction of weather and climate changes and help inhibit the development of Greenhouse effect. Computations of line intensity of CO₂ were carried out using the Schwenke potential energy surface¹ and dipole moment surface². Computations were done using the SCF³ and the CCSDT⁴ models. Results were compared with the data listed in Hitran96⁵.

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