

INFRARED SPECTRUM OF THE  $(\text{CO}_2)_2\text{-N}_2\text{O}$  TRIMER MEASURED IN  $\text{N}_2\text{O}$   $\nu_1$  AND  $\nu_3$  REGIONS.

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Infrared spectra of the  $(\text{CO}_2)_2\text{-N}_2\text{O}$  trimer are observed by exciting the  $\nu_1$  and  $\nu_3$  fundamental stretching vibrations of the  $\text{N}_2\text{O}$  moiety (around  $1285\text{ cm}^{-1}$  and  $2224\text{ cm}^{-1}$  respectively). Spectra are recorded using a pulsed supersonic jet apparatus with a tunable diode laser probe. Ground state parameters were previously determined from a microwave study.<sup>a</sup> Analysis of the infrared spectra reveals information on the vibrational shifts upon complex formation as well as molecular parameters for the excited states. Our cluster calculation program yields a minimum energy structure very similar to that from the Orient program<sup>a</sup> but in slightly better agreement with the experimental structure. Our cluster calculations indicate a close resemblance of the two lowest energy isomers to those of  $(\text{CO}_2)_2\text{-OCS}$ .

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<sup>a</sup>R. A. Peebles, S. A. Peebles, and R. L. Kuczkowski *Mol. Phys.* **96**, 1355 (1999).