1968

$C^{12}O_3^{16}$

Nagarajan V., Durig J. R.

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Т. ф.

Спектры комбинационного рассеяния, эффекты сокращения, барьеры заторможенного вращения и термодинамические функции молекулы $C^{12}O^{16}$

(см. $C^{12}O_3^{16}$ III)

CO3

1968

E.Sp.

99304r Mean vibrational amplitudes, the Bastiansen-Morino shrinkage effect, and thermodynamic functions of some isotopically labeled molecules of carbon trioxide. G. Nagarajan and James R. Durig (Univ. of South Carolina, Columbia, S.C.). *Monatsh. Chem.* 99(2), 473–83(1968)(Ger). Mean amplitudes of vibration for the bonded as well as nonbonded atom pairs and Bastiansen-Morino shrinkage effect for the isotopic species of carbon trioxide such as $^{12}C^{16}O_3$, $^{12}C^{18}O_3$, and $^{13}C^{16}O_3$ have been computed at $T = 298$ and $T = 500°K.$ by group theoretical method by using symmetry coordinates. Molar thermodynamic functions have also been calcd. for 200–2000°K. on the basis of a rigid rotator, harmonic oscillator model. Results are briefly discussed. RCQO

C.A. 1968. 68. 22

CO_3^{2-}

1977

87: 173175k Thermodynamic isotope effect of trigonal planar and tetrahedral molecules. Kotaka, Masahiro; Kakihana, Hidetaka (Japan). *Bull. Res. Lab. Nucl. React.* (*Tokyo Inst. Technol.*) 1977, 2, 13–29 (Eng). The reduced partition function ratios of trigonal planar and tetrahedral mols., CO_3^{2-}, NO_3^- SO_3, PO_3, CF_4, CCl_4, CBr_4, CI_4, SO_4^{2-}, SiO_4^{4-}, SiF_4, $SiCl_4$, $SiBr_4$, SiI_4, GeF_4, $GeCl_4$, $GeBr_4$, GeI_4, MnO_4^-, and MnO_4^{2-} were calcd. at 200–2000 K from the spectroscopic data. The contribution of each vibrational frequency to these values was also evaluated. At ≥300 K, to a good approxn., the reduced partition function ratios for central atom in a tetrahedral mol. may be calcd. by using only a normal vibrational frequency ν_3. A linear relationship between the reduced partition function ratios for central atoms in halides and the stretching force consts. exists.

Cyanide no coeff. given

+19

C. A. 1977, 87 N22

CO_3^{2-} | Ом. 20385 | 1984

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S298.15; Chem. Rev., 1984, 84, N2,
Оценка 89-115.

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m. cp.

J. Phys. and Chem. Ref. Data, 1987, 16, N1, 61–89.