

Structure Data of Free Polyatomic Molecules

299 ED	NO ₂	Nitrogen dioxide		C _{2v} NO ₂
		$\frac{r_e}{\text{N=O}}$	$\frac{\theta_e}{\text{O=N=O}}$	
		$\frac{\text{\AA}^a)}{1.201(3)}$	$\frac{\text{deg}^a)}{133.7(2)}$	

ED experiments were carried out at nozzle temperatures of 294, 480 and 691 K. It was estimated from thermodynamic data that NO₂ was the sole component of the vapor at 480 K. The data at 480 K are listed. The equilibrium bond length $r_e(\text{N=O})$ and bond angle $\theta_e(\text{O=N=O})$ were estimated to be 1.195(3) Å and 133.7(2)°, respectively, by an empirical correction for vibrational anharmonicity.

^{a)} Estimated total error.

Borisenko, K.B., Kolonits, M., Rozsondai, B., Hargittai, I.: J. Mol Struct. **413-414** (1997) 121.

$\frac{r_a}{\text{N=O}}$	$\frac{\text{\AA}^a)}{1.199(1)}$	$\frac{\theta_a}{\text{O=N=O}}$	$\frac{\text{deg}^a)}{134.0(5)}$
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The experimental data were obtained at several nozzle temperatures ranging from 104 to –43 °C. The data analysis of the temperature dependence showed that the molecule exists in monomeric form at 104 °C. The parameters at 104 °C are listed.

^{a)} Twice the estimated standard error.

Shen, Q., Hedberg, K.: J. Phys. Chem. A **102** (1998) 6470.

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