

Mean Amplitudes of Vibration of the *trans*-IO₂F₄[−] Anion

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The mean amplitudes of vibration of the *trans*-IO₂F₄[−] anion have been calculated from known spectroscopic data between 0 and 1000 K. Bond peculiarities are discussed in comparison with those of *trans*-IO₂F₅^{2−} and of some other structurally related species.

Key words: IO₂F₄[−]; Mean Amplitudes of Vibration; Bond Properties.

Table 1. Calculated mean amplitudes of vibration (in Å) of *trans*-IO₂F₄[−].

<i>T</i> (K)	<i>u</i> _{I-O}	<i>u</i> _{I-F}	<i>u</i> _{O...O}	<i>u</i> _{F...F}	<i>u</i> _{O...F}
0	0.0372	0.0421	0.051	0.077	0.055
100	0.0372	0.0421	0.051	0.080	0.055
200	0.0373	0.0428	0.051	0.092	0.058
298.16	0.0378	0.0448	0.052	0.106	0.063
300	0.0379	0.0448	0.052	0.106	0.063
400	0.0390	0.0478	0.053	0.119	0.069
500	0.0406	0.0511	0.056	0.132	0.075
600	0.0424	0.0544	0.058	0.143	0.081
700	0.0440	0.0578	0.061	0.154	0.086
800	0.0464	0.0610	0.064	0.164	0.091
900	0.0484	0.0642	0.067	0.174	0.096
1000	0.0504	0.0672	0.070	0.183	0.101

Table 2. Comparison of the mean amplitudes of vibration (in Å and at 298.16 K) of *trans*-IO₂F₄[−] with those of structurally related species.

Species	<i>u</i> _{I-O}	<i>u</i> _{I-F}	<i>u</i> _{F...F}	Reference
IO ₂ F ₄ [−]	0.0378	0.0448	0.106	this paper
IO ₂ F ₅ ^{2−}	0.0388	0.0499	0.103	[1]