

Table 1. Comparison of the defect structures in VO_x determined from X-ray and electron diffuse scattering

	X-ray studies	Electron scattering
Local ionic arrangements	Composition $x > 1$. Most interstitial cations are surrounded by two–three cation vacancies. There is no correlation between interstitial cations. Composition $x < 1$. The anion and cation vacancies are arranged in rows along $\langle 110 \rangle$ directions with alternating vacancy-rich and vacancy-deficient $\{111\}$ layers.	Composition $x > 1$. Every interstitial cation is surrounded by four cation vacancies, and these form a tetrahedral cluster. There is a strong correlation between interstitial cations (or tetrahedral clusters). Composition $x < 1$. There are small $\{111\}$ sheets of anion vacancies. The arrangements of cation vacancies could not be determined.
Displacement of ions	There are displacement modulations associated with the defect arrangements. In $\text{VO}_{1.17}$, no expansion of nearest-neighbor distance. The distortion parameter ε_{110}^{xy} is negative and is the largest among the displacement parameters. (This represents the average of the product of x and y displacements at the end of interatomic vector $a/2 [110]$.)	There are no special correlations between the displacement parameters and the order parameters. In $\text{VO}_{1.23}$, the expansion of nearest-neighbor distance is large, and may occur in $\text{VO}_{0.9}$ as well. Parameter γ_{110}^x is the largest among the displacement parameters. (This represents the average x displacement at the end of interatomic vector $a/2 [110]$.)
Comparison between ordered and disordered phases	The values of short-range-order parameters for the disordered phase are much smaller than those for the ordered phase. But the change of these values with interatomic distance is similar in both phases.	There is a contradiction in order parameters between both phases. Namely, $(a/2)[211]$ is the nearest-neighbor intercluster vector in the disordered phase, but $(a/2)[221]$ in the ordered phase.

reliable for the quantitative analysis of diffuse scattering and should be employed even if some effort is required to produce a suitable crystal. Electron scattering is perhaps most suitable at the moment for a rapid estimate of the regions in reciprocal space which are of interest.

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References

- ANDERSSON, B. (1979). *Acta Cryst.* **A35**, 718–727.
- ANDERSSON, B., GJÖNNES, J. & FOROUH, A. R. (1978). *J. Less Common Met.* **61**, 273–291.
- ANDERSSON, B., GJÖNNES, J. & TAFTÖ, J. (1974). *Acta Cryst.* **A30**, 216–224.
- MORINAGA, M. (1978). PhD Thesis, Northwestern Univ., Evanston, Illinois 60201, USA.
- MORINAGA, M. & COHEN, J. B. (1979a). *Acta Cryst.* **A35**, 745–756.
- MORINAGA, M. & COHEN, J. B. (1979b). *Acta Cryst.* **A35**, 975–989.

Acta Cryst. (1980). **A36**, 1071

Corrections to Sections 4.3 and 4.4 of the 1969 edition of Volume I of *International Tables for X-ray Crystallography*. By TAKESHI YAO and HIROSHI JINNO, *Department of Industrial Chemistry, Faculty of Engineering, Kyoto University, Sakyo-ku, Kyoto 606, Japan*

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Abstract

Corrections are given to §§ 4.3 and 4.4 of *International Tables for X-ray Crystallography* [Vol. I (1969), Birmingham: Kynoch Press].

(2) § 4.4, Table 4.4.3 TETRAGONAL. *Laue Class* 4/mmm on p. 350

In the first row from the top of the table (diffraction symbol 4/mmmP---), in the column of the point group 42m: Replace the space group P42m by P42m.

Errors have been found in *International Tables for X-ray Crystallography* (1969) in addition to those already pointed out (Yao & Jinno, 1979), and the corrections are given below. No other errors have been found in §§ 4.3 and 4.4.

(1) § 4.3 No. 217 on p. 326

Replace the heading I43m by I43m.

References

- International Tables for X-ray Crystallography* (1969). Vol. I. Birmingham: Kynoch Press.
- YAO, T. & JINNO, H. (1979). *Acta Cryst.* **A35**, 1018.