MINERALOGICAL NOTES

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Mineral nomenclature: berndtite polytypes

BERNDTITE, SnS_2, has a CdI_2 structure-type. Two naturally occurring polytypes with *a* 3.65, *c* 5.9 Å in space-group $P\bar{3}m1$ (trigonal), and *a* 3.65, *c* 11.8 Å in space-group $P6_3mc$ (hexagonal) have been described. Clark (1972) stated 'A convenient nomenclature for the two forms would be berndtite-*C*6 and berndtite-*c*27, respectively' with the now almost forgotten Structure Reports notation.

Nickel and Mandarino (1987) state that the simplified system for polytype symbols first proposed by Ramsdell (1947) is commonly used. The alphabetical character recommended by the International Union of Crystallography (Guinier *et al.* 1984) and also by the International Mineralogical Association Commission on New Minerals and Mineral Names (CNMMN) for hexagonal is *H* and for trigonal is *T*.

Bailey *et al.* (1977) first described the two naturally occurring polytypes with symbols *2T* and *4H*. The basic polytypes of SnS_2 are given by Palosz *et al.* (1986 *a,b*) as *2H, 4H,* and *18R*. In 1989, CNMMN approved a proposal to rename berndtite-*C*6 as berndtite-*2T* and berndtite-*c*27 as berndtite-*4H*.

References

Bailey, S. W., Frank-Kamenetskii, V. A., Goldsztaub, S., Kato, A., Pabst, A., Schulz, H., Taylor, H. F. W., Fleischer, M. and Wilson, A. J. C. (1977) *Acta Crystallogr.* **A33,** 681–4.

Clark, A. H. (1972) Naturwiss. **59,** 361.

Guinier, A., Bokij, G. B., Boll-Dornberger, K., Cowley, J. M, Ďurovič, S., Jagodzinski, H., Krishna, P., de Wolff, P. M., Zvyagin, B. B., Cox, D. E. Goodman, P., Hahn, Th., Kuchitsu, K. and Abrahams, S. C. (1984) *Acta Crystallogr.* **A40,** 399–404.

Nickel, E. H. and Mandarino, J. A. (1987) *Mineral. Mag.* **52,** 275–92.

Palosz, B., Palosz, W. and Gierlotka, S. (1986*a*) *Bull. Mineral.* **109,** 143–7.

—— (1986*b*) *Acta. Crystallogr.* **C42**, 653–7.

Ramsdell, L. S. (1947) *Am. Mineral.* 32, 64–82.

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