

substance: (transition metal)-V-VI compounds**property: crystallographic data for ternary marcasite-type semiconductors**

(RT values)

Compound	a [Å]	b [Å]	c [Å]	d_X [g cm ⁻³]	Ref.
"CoAsS" ^{a)}	4.661	5.603	3.411	5.95	76S
CoSbS ^{*)} ^{b)}	4.873	5.852	3.608	6.87	75R
(r?) ^{*)} ^{b)}	4.868	5.838	3.603		70C
CoAsSe (h)	4.751	5.753	3.584	7.22	75H
^{**)}	4.7562	5.7514	3.5628		79K
CoSbSe	5.056	6.031	3.686	7.68	75H
CoSbTe	≈ 5.24	≈ 6.26	≈ 3.54	8.13	75A
	5.257	6.248	3.844	8.11	76Y

^{*)} Ordered, space group $C_{2v}^7 - Pn2_1m$. ^{**)} Disordered, space group $D_{2h}^{12} - Pnmm$.

^{a)} Mineral alloclasite of composition $Co_{0.68}Fe_{0.19}Ni_{0.025}As_{1.01}S_{0.99}$, monoclinic, space group $C_2^2 - P2_1$, $\beta = 90.03^\circ$.

^{b)} Mineral costibite $Co_{0.96}Fe_{0.02}Ni_{0.01}As_{0.01}SbS$.

References:

- 70C Cabri, L. J., Harris, D. C., Stewart, J. M.: Amer. Mineral. 55 (1970) 10.
- 75A Abrikosov, N. Kh., Petrova, L. I.: Izv. Akad. Nauk SSSR Neorg. Mater. 14 (1978) 457 (translation: Inorg. Mater. 14 (1978) 346).
- 75H Henry, R., Steger, J., Nahigian, H., Wold, A.: Inorg. Chem 14 (1975) 2915.
- 75R Rowland, J. F., Gabe, E. J., Hall, S. R.: Can. Mineralogist 13 (1975) 188.
- 76S Scott, J. D., Nowacki, W.: Can. Mineralogist 14 (1976) 561.
- 76Y Yamaguchi, G., Shimada, M., Koizumi, M.: J. Solid State Chem. 19 (1976) 63.
- 79K Kjekshus, A., Rakke, T.: Acta Chem. Scand. A33 (1979) 609.