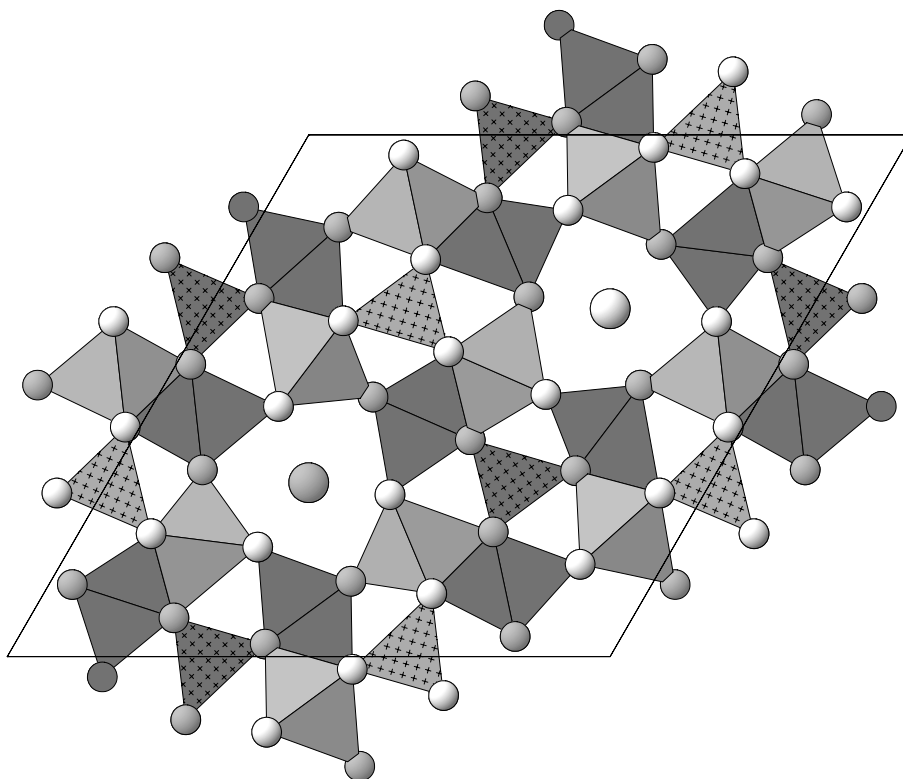


K₂Tm_{23.33}S₃₆ [1]

Structural features: Double infinite chains of edge-linked TmS₆ octahedra and single columns of base-linked TmS₆S monocapped trigonal prisms (partial vacancies ignored) share atoms to form a 3D-framework; K in channels parallel to [001]. See Fig. IV.76.

Fig. IV.76. **K₂Tm_{23.33}S₃₆**

Arrangement of TmS₆ octahedra, TmS₆ trigonal prisms (hatched) (S atoms small) and K atoms (large) viewed along [001]. Light and dark polyhedra are shifted by $c/2$.

Lemoine P. et al. (1989) [1]

KS₁₈Tm_{11.67}

$a = 2.0899$, $c = 0.3863$ nm, $c/a = 0.185$, $V = 1.4612$ nm³, $Z = 2$

site	Wyck.	sym.	x	y	z	occ.	atomic environment
Tm1	6h	$m..$	0.0213	0.3463	$1/4$	0.889	monocapped trigonal prism S ₇
S2	6h	$m..$	0.0242	0.5843	$1/4$		square pyramid Tm ₅
S3	6h	$m..$	0.0388	0.177	$1/4$		non-coplanar triangle Tm ₃
S4	6h	$m..$	0.1446	0.5025	$1/4$		4-vertex polyhedron Tm ₄
Tm5	6h	$m..$	0.2263	0.4366	$1/4$		octahedron S ₆
Tm6	6h	$m..$	0.23367	0.10159	$1/4$		octahedron S ₆
S7	6h	$m..$	0.2391	0.3136	$1/4$		square pyramid Tm ₅
S8	6h	$m..$	0.3564	0.2356	$1/4$		square pyramid Tm ₅
S9	6h	$m..$	0.5204	0.21	$1/4$		non-coplanar triangle Tm ₃

Tm10	$6h$	$m..$	0.545	0.0979	$\frac{1}{4}$	octahedron S_6
K11	$2c$	$-6..$	$\frac{1}{3}$	$\frac{2}{3}$	$\frac{1}{4}$	pseudo Frank-Kasper $S_9K_2Tm_9$

Experimental: single crystal, diffractometer, X-rays, $R = 0.049$, $T = 293\text{ K}$

References: [1] Lemoine P., Tomas A., Carré D., Vovan T., Guittard M. (1989), Acta Crystallogr. C 45, 350-353.