

**substance:** La<sub>2</sub>Te<sub>3</sub>

**property:** crystal structure, physical properties

**crystal structure** cubic (Th<sub>3</sub>P<sub>4</sub>-defect structure, T<sub>d</sub><sup>6</sup> – I $\bar{4}$  3d)

**lattice parameters,**

$a$	9.627 Å	65F
	9.619(1) Å	65R1
	9.617 (3) Å	73S

**density**

$d$	6.6 g cm <sup>-3</sup>	65H
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**melting point**

$T_m$	1485(5)°C	65R2
	1465(30)°C	73S

**Debye temperature**

$\Theta_D$	190 K	72S
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**electrical conductivity**

$\sigma$	10 <sup>-4</sup> Ω <sup>-1</sup> cm <sup>-1</sup>	n-type	65R2
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**activation energy for conductivity**

$E_A$	0.43 eV	65R2
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*Figures and further references:*

**heat capacity:**Figs.2, 3

**coordination polyhedra:** Fig. 1

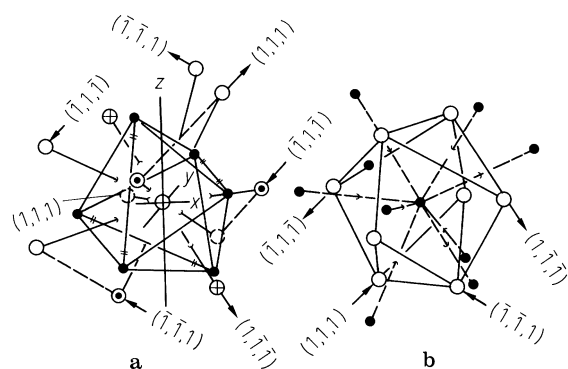
temperature dependence of **conductivity:** Fig. 4, and of **Seebeck coefficient:** Fig. 5

## References:

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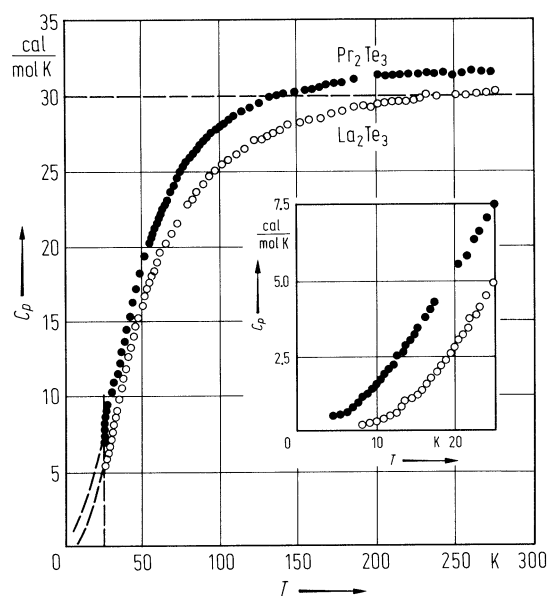
**Fig. 1.**

Th<sub>3</sub>P<sub>4</sub>-type compounds. The coordination polyhedra of the cations and the anions. Full circles: Th- atoms, other circles: P-atoms [66H].



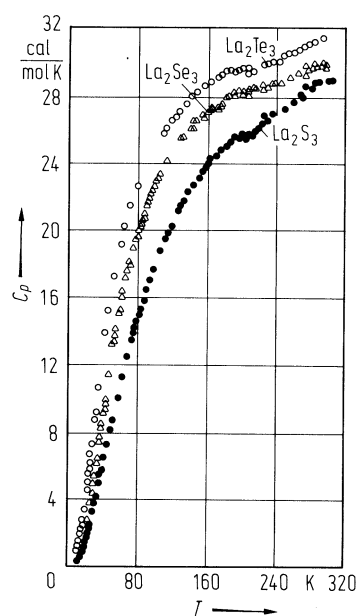
**Fig. 2.**

$\text{La}_2\text{Te}_3$ ,  $\text{Pr}_2\text{Te}_3$ . Molar heat capacity vs. temperature with inserted low temperature region [75M].



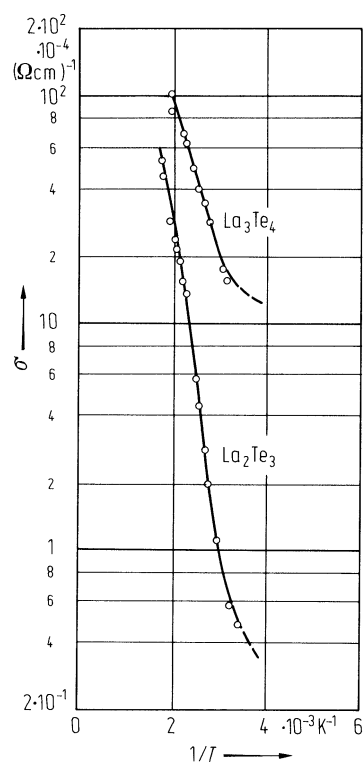
**Fig. 3.**

$\gamma$ - $\text{La}_2\text{S}_3$ ,  $\text{La}_2\text{Se}_3$ ,  $\text{La}_2\text{Te}_3$ . Temperature dependence of the molar heat capacity [72S].



**Fig. 4.**

$\text{La}_2\text{Te}_3$ ,  $\text{La}_3\text{Te}_4$ . Conductivity vs. reciprocal temperature [65R2].



**Fig. 5.**

$\text{La}_2\text{Te}_3$ ,  $\text{La}_3\text{Te}_4$ . Seebeck coefficient vs. temperature [65R2].

