

K₂PtCl₄ (*H*1₅) Structure: A4B2C_tP7_123_j_e_a-001

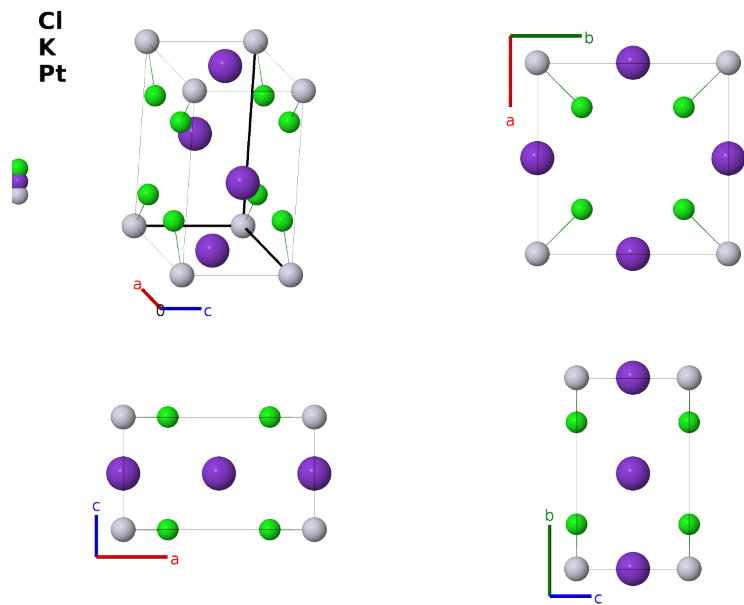
This structure previously used the label(s) **A4B2C_tP7_123_j_e_a**. Calls to these addresses will be redirected here.

Cite this page as:

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<https://aflow.org/prototype-encyclopedia/3SRH>

https://aflow.org/prototype-encyclopedia/A4B2C_tP7_123_j_e_a-001



Prototype	Cl ₄ K ₂ Pt
AFLOW prototype label	A4B2C_tP7_123_j_e_a-001
<i>Strukturbericht</i> designation	<i>H</i> 1 ₅
ICSD	2722
CCDC	1592532
Pearson symbol	tP7
Space group number	123
Space group symbol	<i>P</i> 4/ <i>mmm</i>
AFLOW prototype command	<code>aflow --proto=A4B2C_tP7_123_j_e_a-001 --params=<i>a</i>, <i>c/a</i>, <i>x</i>₃</code>

Other compounds with this structure

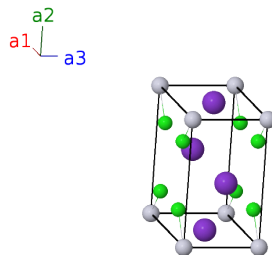
K_2PdCl_4

Simple Tetragonal primitive vectors

$$\mathbf{a}_1 = a \hat{\mathbf{x}}$$

$$\mathbf{a}_2 = a \hat{\mathbf{y}}$$

$$\mathbf{a}_3 = c \hat{\mathbf{z}}$$



Basis vectors

	Lattice coordinates		Cartesian coordinates	Wyckoff position	Atom type
$\mathbf{B}_1$	$=$	0	$=$	0	$(1a)$ Pt I
$\mathbf{B}_2$	$=$	$\frac{1}{2} \mathbf{a}_2 + \frac{1}{2} \mathbf{a}_3$	$=$	$\frac{1}{2} a \hat{\mathbf{y}} + \frac{1}{2} c \hat{\mathbf{z}}$	$(2e)$ K I
$\mathbf{B}_3$	$=$	$\frac{1}{2} \mathbf{a}_1 + \frac{1}{2} \mathbf{a}_3$	$=$	$\frac{1}{2} a \hat{\mathbf{x}} + \frac{1}{2} c \hat{\mathbf{z}}$	$(2e)$ K I
$\mathbf{B}_4$	$=$	$x_3 \mathbf{a}_1 + x_3 \mathbf{a}_2$	$=$	$ax_3 \hat{\mathbf{x}} + ax_3 \hat{\mathbf{y}}$	$(4j)$ Cl I
$\mathbf{B}_5$	$=$	$-x_3 \mathbf{a}_1 - x_3 \mathbf{a}_2$	$=$	$-ax_3 \hat{\mathbf{x}} - ax_3 \hat{\mathbf{y}}$	$(4j)$ Cl I
$\mathbf{B}_6$	$=$	$-x_3 \mathbf{a}_1 + x_3 \mathbf{a}_2$	$=$	$-ax_3 \hat{\mathbf{x}} + ax_3 \hat{\mathbf{y}}$	$(4j)$ Cl I
$\mathbf{B}_7$	$=$	$x_3 \mathbf{a}_1 - x_3 \mathbf{a}_2$	$=$	$ax_3 \hat{\mathbf{x}} - ax_3 \hat{\mathbf{y}}$	$(4j)$ Cl I

References

- [1] R. H. B. Mais, P. G. Owston, and A. Wood, *The crystal structure of K_2PtCl_4 and K_2PdCl_4 with estimates of the factors affecting accuracy*, Acta Crystallogr. Sect. B **28**, 393–399 (1972), doi:10.1107/S0567740872002468.

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