Rh_3P_2 Structure: A2B3_tP5_115_g_ag-001

This structure originally had the label `A2B3_tP5_115_g_ag`. Calls to that address will be redirected here.

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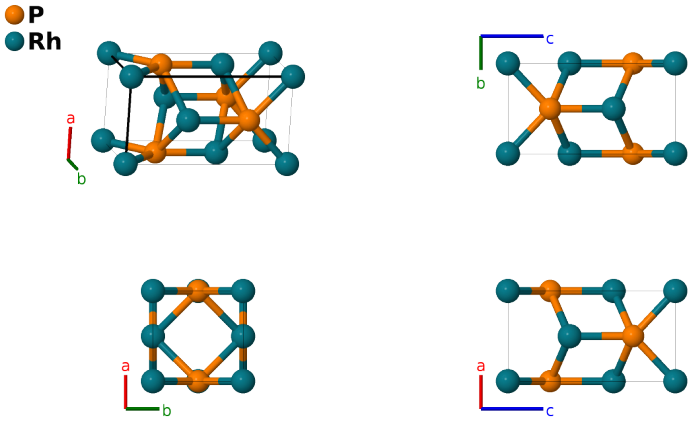
https://aflow.org/p/EXDQ

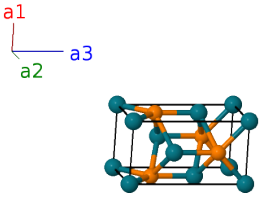
https://aflow.org/p/A2B3_tP5_115_g_ag-001



Prototype	P_2Rh_3
AFLOW prototype label	A2B3_tP5_115_g_ag-001
ICSD	35626
Pearson symbol	tP5
Space group number	115
Space group symbol	$P\bar{4}m2$
AFLOW prototype command	`aflow --proto=A2B3_tP5_115_g_ag-001 --params=`$a, c/a, z_2, z_3$

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)	Rh I
$\mathbf{B_2}$	=	$\frac{1}{2}\,\mathbf{a}_2 + z_2\,\mathbf{a}_3$	=	$\frac{1}{2}a\,\hat{\mathbf{y}} + cz_2\,\hat{\mathbf{z}}$	(2g)	P I
$\mathbf{B_3}$	=	$\frac{1}{2}\,\mathbf{a}_1 - z_2\,\mathbf{a}_3$	=	$\frac{1}{2}a\,\hat{\mathbf{x}} - cz_2\,\hat{\mathbf{z}}$	(2g)	P I
$\mathbf{B_4}$	=	$\frac{1}{2}\,\mathbf{a}_2 + z_3\,\mathbf{a}_3$	=	$\frac{1}{2}a\,\hat{\mathbf{y}} + cz_3\,\hat{\mathbf{z}}$	(2g)	Rh II
$\mathbf{B_5}$	=	$\frac{1}{2}\,\mathbf{a}_1 - z_3\,\mathbf{a}_3$	=	$\frac{1}{2}a\,\hat{\mathbf{x}} - cz_3\,\hat{\mathbf{z}}$	(2g)	Rh II

References

[1] E. H. E. Ghadraoui, R. Guerin, and M. Sergent, *Diphosphure de trirhodium, Rh_3P_2: premier exemple d'une structure lacunaire ordonnée de type anti-PbFCl*, Acta Crystallogr. Sect. C **39**, 1493–1494 (1983), doi:10.1107/S0108270183009002.

Found in

[1] P. Villars and K. Cenzual, *Pearson's Crystal Data – Crystal Structure Database for Inorganic Compounds* (2013). ASM International.