

Lu₃CoGa₅*hP9*(189) *P-62m* – gfd**Lu₃CoGa₅** [1]

Structural features: Infinite columns of base-linked GaLu₆ trigonal prisms share edges to form a 3D-framework; single columns of base-linked CoGa₆ trigonal prisms in channels parallel to [001] (capping atoms ignored). Ordering variant of Fe₂P.

Gladyshevskii R.E. (1983) [1]

CoGa₅Lu₃ $a = 0.6755$, $c = 0.4142$ nm, $c/a = 0.613$, $V = 0.1637$ nm³, $Z = 1$

site	Wyck.	sym.	<i>x</i>	<i>y</i>	<i>z</i>	occ.	atomic environment
Ga1	3 <i>g</i>	<i>m2m</i>	0.232	0	$\frac{1}{2}$		cuboctahedron Co ₂ Ga ₄ Lu ₆
Lu2	3 <i>f</i>	<i>m2m</i>	0.59	0	0		pseudo Frank-Kasper Co ₂ Ga ₁₀ Lu ₆
Ga3	2 <i>d</i>	-6..	$\frac{1}{3}$	$\frac{2}{3}$	$\frac{1}{2}$		tricapped trigonal prism Ga ₃ Lu ₆
Co4	1 <i>a</i>	-62 <i>m</i>	0	0	0		tricapped trigonal prism Ga ₆ Lu ₃

Transformation from published data: origin shift 0 0 $\frac{1}{2}$

Experimental: single crystal, diffractometer, X-rays, R = 0.084

Remarks: The same data are also reported in [2].

References: [1] Gladyshevskii R.E. (1983), Vses. Konf. Kristallokhim. Intermet. Soeden., 4th, L'vov 1983, Coll. Abstr. pp. 48-49. [2] Vasylenko L.O., Hladyshevsky R.E., Hryn Y.N. (1988), Visn. L'viv. Derzh. Univ., Ser. Khim. 29, 23-25.