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Lanthanum ruthenium indide, La₂₁Ru_{9+x}In_{5-x} ($\chi = 1.2$)

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Key indicators: single-crystal X-ray study; $T = 293$ K; mean $\sigma(\text{La-Ru}) = 0.001$ Å; disorder in main residue; R factor = 0.036; wR factor = 0.062; data-to-parameter ratio = 22.7.

La₂₁Ru_{9+x}In_{5-x} (Pearson symbol *tI140*) is isotypic to the filled Y₃Rh₂-type structure, from which it can be derived through an ordered substitution at two sites. One of the square-prismatic sites (site symmetry *.m*) is occupied by a mixture of Ru and In atoms and one of the square-antiprismatic sites (*4/m..*) is fully occupied by In atoms.

Related literature

For related structures, see: Zaremba *et al.* (2007); Moreau *et al.* (1976). For standardization of crystal structures, see: Gelato & Parthé (1987).

Experimental

Crystal data

La₂₁Ru_{10.16}In_{3.84}

$M_r = 4384.89$

Tetragonal, *I4/mcm*
 $a = 12.1298$ (3) Å
 $c = 25.9820$ (7) Å
 $V = 3822.79$ (17) Å³
 $Z = 4$

Data collection

Nonius KappaCCD diffractometer
Absorption correction: for a sphere
(*WinGX*; Farrugia, 1999)
 $T_{\min} = 0.243$, $T_{\max} = 0.261$

Refinement

$R[F^2 > 2\sigma(F^2)] = 0.036$
 $wR(F^2) = 0.062$
 $S = 1.12$
1202 reflections

Mo $K\alpha$ radiation
 $\mu = 28.98$ mm⁻¹
 $T = 293$ K
 $0.06 \times 0.05 \times 0.05$ mm

22423 measured reflections
1202 independent reflections
927 reflections with $I > 2\sigma(I)$
 $R_{\text{int}} = 0.087$

53 parameters
 $\Delta\rho_{\max} = 2.00$ e Å⁻³
 $\Delta\rho_{\min} = -2.74$ e Å⁻³

Data collection: *COLLECT* (Nonius, 1998); cell refinement: *DENZO* (Otwinowski & Minor, 1997); data reduction: *DENZO*; program(s) used to solve structure: *SHELXS97* (Sheldrick, 2008); program(s) used to refine structure: *SHELXL97* (Sheldrick, 2008); molecular graphics: *DIAMOND* (Brandenburg, 1999); software used to prepare material for publication: *SHELXL97*.

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Supplementary data and figures for this paper are available from the IUCr electronic archives (Reference: MG2098).

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supplementary materials

Acta Cryst. (2010). E66, i40 [doi:10.1107/S1600536810014509]

Lanthanum ruthenium indide, $\text{La}_{21}\text{Ru}_{9+x}\text{In}_{5-x}$ ($x = 1.2$)

A. I. Tursina, S. G. Cherviakov, H. Noël, V. V. Chernyshev and Y. D. Seropegin

Comment

New rare-earth metal-rich indium compounds $\text{RE}_3\text{T}_{2-x}\text{In}_x$ (RE = Gd, Tb, Dy, Ho, Er, Tm; T = Rh, Pd, Ir) have been recently synthesized (Zaremba et al., 2007). They can be regarded as extensions of the parent binaries RE_3T_2 with either the Y_3Rh_2 - (T = Rh, Ir) or U_3Si_2 -type (T = Pd) structures into the ternary RE–T–In systems. In contrast, $\text{La}_{21}\text{Ru}_{9+x}\text{In}_{5-x}$, presented here, is strictly a ternary compound with no corresponding La–Ru binary of the same stoichiometry.

In the Y_3Rh_2 -type structure, six crystallographically independent transition metal sites are available with trigonal prismatic, square prismatic, and square antiprismatic coordination environments (Moreau et al., 1976). The structure of $\text{La}_{21}\text{Ru}_{9+x}\text{In}_{5-x}$ is derived through an ordered substitution at two sites, with the square prismatic site (16l) occupied by a mixture of Ru and In atoms and one of the square antiprismatic sites (4c) occupied fully by In atoms (Fig. 1). This suggests the existence of a solid solution, as confirmed by EDX measurements which revealed a homogeneity range of ca. 3 at.% in $\text{La}_{21}\text{Ru}_{9+x}\text{In}_{5-x}$.

Experimental

The title compound was prepared by arc-melting of the constituent elements (La, 99.8%; Ru, 99.9%, In, 99.999%) under a high purity argon atmosphere on a water-cooled cooper hearth. The arc-melted button, with nominal composition $\text{La}_{59.26}\text{Ru}_{29.63}\text{In}_{11.11}$, was turned over and remelted to ensure its homogeneity. The weight loss was less than 1%. The sample was annealed in an evacuated quartz ampoule at 870 K for 600 h and quenched in cold water. The single crystal was selected from the crushed sample.

EDX analysis of the majority phase in a number of samples revealed that the composition of the new compound ranges from $\text{La}_{58.8}\text{Ru}_{26.2}\text{In}_{15.0}$ to $\text{La}_{61.1}\text{Ru}_{28.3}\text{In}_{10.7}$ with an uncertainty of about 1 at.% for each element. Thus the homogeneity range of the title compound is approximately 3 at.% at 870 K.

Refinement

The atomic parameters were standardized with the program STRUCTURE TIDY (Gelato & Parthé, 1987). The highest peak and the deepest hole in the final difference map are located 0.69 Å from La2 and 0.82 Å, respectively, from Ru1.

Figures

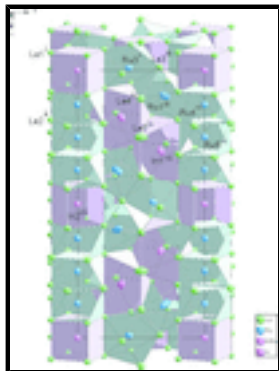


Fig. 1. Structure of the title compound emphasizing the coordination polyhedra, with atom labelling shown and displacement ellipsoids drawn at the 50% probability level.

lanthanum ruthenium indium (21/10.2/3.8)

Crystal data

$\text{La}_{21}\text{Ru}_{10.16}\text{In}_{3.84}$

$M_r = 4384.89$

Tetragonal, $I4/mcm$

Hall symbol: $-I\ 4\ 2c$

$a = 12.1298\ (3)\ \text{\AA}$

$c = 25.9820\ (7)\ \text{\AA}$

$V = 3822.79\ (17)\ \text{\AA}^3$

$Z = 4$

$F(000) = 7329$

$D_x = 7.619\ \text{Mg m}^{-3}$

Mo $K\alpha$ radiation, $\lambda = 0.71073\ \text{\AA}$

Cell parameters from 12585 reflections

$\theta = 2.9\text{--}27.5^\circ$

$\mu = 28.98\ \text{mm}^{-1}$

$T = 293\ \text{K}$

Prism, metallic-dark-grey

$0.06 \times 0.05 \times 0.05\ \text{mm}$

Data collection

Nonius KappaCCD
diffractometer

Radiation source: fine-focus sealed tube
graphite

φ and ω scans

Absorption correction: for a sphere
(WinGX; Farrugia, 1999)

$T_{\min} = 0.243$, $T_{\max} = 0.261$

22423 measured reflections

1202 independent reflections

927 reflections with $I > 2\sigma(I)$

$R_{\text{int}} = 0.087$

$\theta_{\max} = 27.5^\circ$, $\theta_{\min} = 3.7^\circ$

$h = -15 \rightarrow 15$

$k = -15 \rightarrow 15$

$l = -33 \rightarrow 32$

Refinement

Refinement on F^2

Least-squares matrix: full

$R[F^2 > 2\sigma(F^2)] = 0.036$

$wR(F^2) = 0.062$

0 restraints

Primary atom site location: structure-invariant direct methods

Secondary atom site location: difference Fourier map

$w = 1/[\sigma^2(F_o^2) + (0.0131P)^2 + 224.3566P]$

$S = 1.12$
 1202 reflections
 53 parameters

where $P = (F_o^2 + 2F_c^2)/3$
 $(\Delta/\sigma)_{\max} < 0.001$
 $\Delta\rho_{\max} = 2.00 \text{ e } \text{\AA}^{-3}$
 $\Delta\rho_{\min} = -2.74 \text{ e } \text{\AA}^{-3}$

Special details

Geometry. All esds (except the esd in the dihedral angle between two l.s. planes) are estimated using the full covariance matrix. The cell esds are taken into account individually in the estimation of esds in distances, angles and torsion angles; correlations between esds in cell parameters are only used when they are defined by crystal symmetry. An approximate (isotropic) treatment of cell esds is used for estimating esds involving l.s. planes.

Refinement. Refinement of F^2 against ALL reflections. The weighted R -factor wR and goodness of fit S are based on F^2 , conventional R -factors R are based on F , with F set to zero for negative F^2 . The threshold expression of $F^2 > \sigma(F^2)$ is used only for calculating R -factors(gt) etc. and is not relevant to the choice of reflections for refinement. R -factors based on F^2 are statistically about twice as large as those based on F , and R -factors based on ALL data will be even larger.

Fractional atomic coordinates and isotropic or equivalent isotropic displacement parameters (\AA^2)

	x	y	z	$U_{\text{iso}}^*/U_{\text{eq}}$	Occ. (<1)
La1	0.07818 (5)	0.20842 (5)	0.07297 (2)	0.01886 (15)	
La2	0.20391 (6)	0.07950 (6)	0.19170 (2)	0.02653 (17)	
La3	0.85106 (8)	0.35106 (8)	0.0000	0.0208 (3)	
La4	0.0000	0.5000	0.10584 (5)	0.0255 (3)	
La5	0.0000	0.5000	0.2500	0.0615 (8)	
Ru1	0.81308 (11)	0.31308 (11)	0.10986 (6)	0.0429 (4)	
Ru2	0.65628 (8)	0.15628 (8)	0.18661 (5)	0.0287 (4)	0.29 (4)
Ru3	0.59671 (12)	0.09671 (12)	0.0000	0.0247 (4)	
Ru4	0.0000	0.0000	0.12798 (6)	0.0207 (4)	
Ru5	0.0000	0.0000	0.2500	0.0213 (5)	
In1	0.65628 (8)	0.15628 (8)	0.18661 (5)	0.0287 (4)	0.71 (4)
In2	0.0000	0.0000	0.0000	0.0200 (5)	

Atomic displacement parameters (\AA^2)

	U^{11}	U^{22}	U^{33}	U^{12}	U^{13}	U^{23}
La1	0.0226 (3)	0.0185 (3)	0.0154 (3)	-0.0006 (3)	0.0001 (2)	0.0002 (2)
La2	0.0305 (4)	0.0311 (4)	0.0180 (3)	-0.0036 (3)	0.0003 (3)	-0.0001 (3)
La3	0.0218 (4)	0.0218 (4)	0.0188 (6)	0.0021 (6)	0.000	0.000
La4	0.0260 (4)	0.0260 (4)	0.0247 (7)	0.0035 (6)	0.000	0.000
La5	0.0793 (13)	0.0793 (13)	0.0258 (12)	0.000	0.000	0.000
Ru1	0.0471 (6)	0.0471 (6)	0.0345 (8)	0.0213 (8)	-0.0168 (6)	-0.0168 (6)
Ru2	0.0244 (5)	0.0244 (5)	0.0372 (8)	0.0073 (5)	-0.0070 (4)	-0.0070 (4)
Ru3	0.0270 (6)	0.0270 (6)	0.0202 (9)	0.0055 (8)	0.000	0.000
Ru4	0.0195 (5)	0.0195 (5)	0.0232 (9)	0.000	0.000	0.000
Ru5	0.0199 (8)	0.0199 (8)	0.0241 (12)	0.000	0.000	0.000
In1	0.0244 (5)	0.0244 (5)	0.0372 (8)	0.0073 (5)	-0.0070 (4)	-0.0070 (4)
In2	0.0206 (7)	0.0206 (7)	0.0190 (10)	0.000	0.000	0.000

supplementary materials

Geometric parameters (Å, °)

La1—Ru1 ⁱ	3.0174 (15)	La4—La2 ⁱ	4.3365 (10)
La1—Ru3 ⁱⁱ	3.0385 (12)	La5—In1 ^{xxix}	3.1464 (14)
La1—Ru4	3.0550 (10)	La5—Ru2 ^{xxix}	3.1464 (14)
La1—In2	3.2992 (6)	La5—In1 ^{xii}	3.1464 (14)
La1—In1 ⁱ	3.5084 (13)	La5—Ru2 ^{xii}	3.1464 (14)
La1—Ru2 ⁱ	3.5084 (13)	La5—In1 ⁱ	3.1464 (14)
La1—Ru1 ⁱⁱⁱ	3.5875 (11)	La5—In1 ^{xxv}	3.1464 (14)
La1—La2 ^{iv}	3.6299 (9)	La5—Ru2 ⁱ	3.1464 (14)
La1—La1 ^v	3.6607 (13)	La5—Ru2 ^{xxv}	3.1464 (14)
La1—La4	3.7600 (7)	La5—La4 ^{xxx}	3.7457 (13)
La1—La3 ⁱⁱⁱ	3.7653 (7)	La5—La2 ⁱ	4.0154 (7)
La1—La2	3.7798 (9)	La5—La2 ^{iv}	4.0154 (7)
La1—La1 ^{vi}	3.7919 (11)	La5—La2 ^{xxxi}	4.0154 (7)
La1—La1 ^{iv}	3.8185 (9)	La5—La2 ^{xii}	4.0154 (7)
La1—La1 ^{vii}	3.8185 (9)	La5—La2 ^{xxviii}	4.0154 (7)
La1—La3 ⁱⁱ	3.8822 (12)	La5—La2 ^{xxv}	4.0154 (7)
La2—Ru1 ⁱ	2.8235 (14)	La5—La2 ^{xxix}	4.0154 (7)
La2—Ru5	3.0565 (7)	La5—La2 ^x	4.0154 (7)
La2—Ru4	3.1286 (11)	Ru1—La2 ^{xxiii}	2.8235 (14)
La2—In1 ⁱ	3.2592 (13)	Ru1—La2 ^{xxii}	2.8235 (14)
La2—Ru2 ⁱ	3.2592 (13)	Ru1—La1 ^{xxii}	3.0174 (15)
La2—In1 ^{viii}	3.3276 (8)	Ru1—La1 ^{xxiii}	3.0174 (15)
La2—Ru2 ^{viii}	3.3276 (8)	Ru1—La4 ^{xvi}	3.2082 (19)
La2—La2 ^{ix}	3.5915 (13)	Ru1—La1 ^{xvi}	3.5875 (11)
La2—La1 ^{vii}	3.6299 (9)	Ru1—La1 ^{xx}	3.5875 (11)
La2—La2 ^x	3.7060 (13)	Ru2—La5 ^{xii}	3.1464 (14)
La2—In1 ^{xi}	3.7068 (12)	Ru2—La2 ^{xxii}	3.2592 (13)
La2—Ru2 ^{xi}	3.7068 (12)	Ru2—La2 ^{xxiii}	3.2592 (13)
La2—La2 ^v	3.7154 (14)	Ru2—La2 ^v	3.3276 (8)
La2—La2 ^{vii}	3.7544 (10)	Ru2—La2 ^{viii}	3.3276 (8)
La2—La2 ^{iv}	3.7544 (10)	Ru2—La4 ^{xiii}	3.4047 (15)
La2—La5 ^{xii}	4.0154 (7)	Ru2—La1 ^{xxii}	3.5084 (13)
La2—La4 ^{xiii}	4.3365 (10)	Ru2—La1 ^{xxiii}	3.5084 (13)
La3—Ru1 ^{vi}	2.9278 (17)	Ru2—La2 ^{xxxii}	3.7068 (12)
La3—Ru1	2.9278 (17)	Ru2—La2 ^{xi}	3.7068 (12)
La3—Ru3 ^{xiv}	3.0463 (16)	Ru3—La1 ^{xiv}	3.0385 (12)
La3—Ru3 ^{xv}	3.0463 (16)	Ru3—La1 ^{xxii}	3.0385 (12)
La3—La4 ^{xvi}	3.7536 (13)	Ru3—La1 ^{xxiii}	3.0385 (12)

La3—La4 ^{xvii}	3.7536 (13)	Ru3—La1 ^{xxi}	3.0385 (12)
La3—La1 ^{xvi}	3.7653 (7)	Ru3—La2 ⁱⁱ	3.0463 (16)
La3—La1 ^{xviii}	3.7653 (7)	Ru3—La3 ^{xxxiii}	3.0463 (16)
La3—La1 ^{xix}	3.7653 (7)	Ru3—La4 ^{xiv}	3.2115 (15)
La3—La1 ^{xx}	3.7653 (7)	Ru3—La4 ^{xiii}	3.2115 (15)
La3—La1 ^{xiv}	3.8822 (12)	Ru4—La1 ^{xxxiv}	3.0550 (10)
La3—La1 ^{xxi}	3.8822 (12)	Ru4—La1 ^{iv}	3.0550 (10)
La3—La1 ^{xxii}	3.8822 (12)	Ru4—La1 ^{vii}	3.0550 (10)
La3—La1 ^{xxiii}	3.8822 (12)	Ru4—La2 ^{iv}	3.1286 (11)
La4—Ru1 ^{xxiv}	3.2082 (19)	Ru4—La2 ^{xxxiv}	3.1286 (11)
La4—Ru1 ⁱⁱⁱ	3.2082 (19)	Ru4—La2 ^{vii}	3.1286 (11)
La4—Ru3 ^{xxv}	3.2115 (15)	Ru5—La2 ^x	3.0565 (7)
La4—Ru3 ⁱⁱ	3.2115 (15)	Ru5—La2 ^{xxxiv}	3.0565 (7)
La4—In1 ⁱ	3.4047 (15)	Ru5—La2 ^{vii}	3.0565 (7)
La4—In1 ^{xxv}	3.4047 (15)	Ru5—La2 ^{ix}	3.0565 (7)
La4—Ru2 ⁱ	3.4047 (15)	Ru5—La2 ^{xxxv}	3.0565 (7)
La4—Ru2 ^{xxv}	3.4047 (15)	Ru5—La2 ^{xxxvi}	3.0565 (7)
La4—La5	3.7457 (13)	Ru5—La2 ^{iv}	3.0565 (7)
La4—La3 ⁱⁱⁱ	3.7536 (13)	In2—La1 ^{xxxvii}	3.2992 (6)
La4—La3 ^{xvii}	3.7536 (13)	In2—La1 ^{iv}	3.2992 (6)
La4—La1 ^v	3.7600 (7)	In2—La1 ^{xxxiv}	3.2992 (6)
La4—La1 ^{xxvi}	3.7600 (7)	In2—La1 ^{vii}	3.2992 (6)
La4—La1 ^{xxvii}	3.7600 (7)	In2—La1 ^{xxxviii}	3.2992 (6)
La4—La2 ^{xxviii}	4.3365 (10)	In2—La1 ^{vi}	3.2992 (6)
La4—La2 ^{xxv}	4.3365 (10)	In2—La1 ^{xxxix}	3.2992 (6)
La4—La2 ^{iv}	4.3365 (10)		
Ru1 ⁱ —La1—Ru3 ⁱⁱ	101.28 (4)	Ru2 ^{xxv} —La4—La1 ^v	143.53 (3)
Ru1 ⁱ —La1—Ru4	94.19 (3)	La5—La4—La1 ^v	103.13 (2)
Ru3 ⁱⁱ —La1—Ru4	163.46 (3)	La3 ⁱⁱⁱ —La4—La1 ^v	99.50 (3)
Ru1 ⁱ —La1—In2	112.81 (4)	La3 ^{xvii} —La4—La1 ^v	60.151 (15)
Ru3 ⁱⁱ —La1—In2	104.998 (19)	La1—La4—La1 ^v	58.26 (2)
Ru4—La1—In2	62.97 (3)	Ru1 ^{xxiv} —La4—La1 ^{xxvi}	119.600 (14)
Ru1 ⁱ —La1—In1 ⁱ	61.19 (4)	Ru1 ⁱⁱⁱ —La4—La1 ^{xxvi}	61.370 (13)
Ru3 ⁱⁱ —La1—In1 ⁱ	98.12 (2)	Ru3 ^{xxv} —La4—La1 ^{xxvi}	50.94 (3)
Ru4—La1—In1 ⁱ	94.43 (3)	Ru3 ⁱⁱ —La4—La1 ^{xxvi}	103.96 (4)
In2—La1—In1 ⁱ	156.88 (2)	In1 ⁱ —La4—La1 ^{xxvi}	143.53 (3)
Ru1 ⁱ —La1—Ru2 ⁱ	61.19 (4)	In1 ^{xxv} —La4—La1 ^{xxvi}	58.39 (2)
Ru3 ⁱⁱ —La1—Ru2 ⁱ	98.12 (2)	Ru2 ⁱ —La4—La1 ^{xxvi}	143.53 (3)
Ru4—La1—Ru2 ⁱ	94.43 (3)	Ru2 ^{xxv} —La4—La1 ^{xxvi}	58.39 (2)
In2—La1—Ru2 ⁱ	156.88 (2)	La5—La4—La1 ^{xxvi}	103.13 (2)

supplementary materials

In1 ⁱ —La1—Ru2 ⁱ	0.00 (2)	La3 ⁱⁱⁱ —La4—La1 ^{xxvi}	60.151 (15)
Ru1 ⁱ —La1—Ru1 ⁱⁱⁱ	142.38 (5)	La3 ^{xxvii} —La4—La1 ^{xxvi}	99.50 (3)
Ru3 ⁱⁱ —La1—Ru1 ⁱⁱⁱ	87.58 (5)	La1—La4—La1 ^{xxvi}	115.02 (2)
Ru4—La1—Ru1 ⁱⁱⁱ	83.66 (3)	La1 ^v —La4—La1 ^{xxvi}	153.75 (4)
In2—La1—Ru1 ⁱⁱⁱ	99.62 (3)	Ru1 ^{xxiv} —La4—La1 ^{xxvii}	61.370 (13)
In1 ⁱ —La1—Ru1 ⁱⁱⁱ	81.47 (3)	Ru1 ⁱⁱⁱ —La4—La1 ^{xxvii}	119.600 (14)
Ru2 ⁱ —La1—Ru1 ⁱⁱⁱ	81.47 (3)	Ru3 ^{xxv} —La4—La1 ^{xxvii}	50.94 (3)
Ru1 ⁱ —La1—La2 ^{iv}	103.08 (4)	Ru3 ⁱⁱ —La4—La1 ^{xxvii}	103.96 (4)
Ru3 ⁱⁱ —La1—La2 ^{iv}	125.52 (4)	In1 ⁱ —La4—La1 ^{xxvii}	143.53 (3)
Ru4—La1—La2 ^{iv}	55.00 (3)	In1 ^{xxv} —La4—La1 ^{xxvii}	58.39 (2)
In2—La1—La2 ^{iv}	108.99 (2)	Ru2 ⁱ —La4—La1 ^{xxvii}	143.53 (3)
In1 ⁱ —La1—La2 ^{iv}	55.539 (19)	Ru2 ^{xxv} —La4—La1 ^{xxvii}	58.39 (2)
Ru2 ⁱ —La1—La2 ^{iv}	55.539 (19)	La5—La4—La1 ^{xxvii}	103.13 (2)
Ru1 ⁱⁱⁱ —La1—La2 ^{iv}	46.06 (3)	La3 ⁱⁱⁱ —La4—La1 ^{xxvii}	99.50 (3)
Ru1 ⁱ —La1—La1 ^v	52.66 (2)	La3 ^{xxvii} —La4—La1 ^{xxvii}	60.151 (15)
Ru3 ⁱⁱ —La1—La1 ^v	52.959 (19)	La1—La4—La1 ^{xxvii}	153.75 (4)
Ru4—La1—La1 ^v	143.57 (2)	La1 ^v —La4—La1 ^{xxvii}	115.02 (2)
In2—La1—La1 ^v	138.165 (11)	La1 ^{xxvi} —La4—La1 ^{xxvii}	58.26 (2)
In1 ⁱ —La1—La1 ^v	58.553 (15)	Ru1 ^{xxiv} —La4—La2 ^{xxviii}	40.60 (3)
Ru2 ⁱ —La1—La1 ^v	58.553 (15)	Ru1 ⁱⁱⁱ —La4—La2 ^{xxviii}	136.53 (4)
Ru1 ⁱⁱⁱ —La1—La1 ^v	112.56 (3)	Ru3 ^{xxv} —La4—La2 ^{xxviii}	102.66 (2)
La2 ^{iv} —La1—La1 ^v	112.533 (15)	Ru3 ⁱⁱ —La4—La2 ^{xxviii}	131.435 (17)
Ru1 ⁱ —La1—La4	104.32 (3)	In1 ⁱ —La4—La2 ^{xxviii}	91.16 (3)
Ru3 ⁱⁱ —La1—La4	55.15 (3)	In1 ^{xxv} —La4—La2 ^{xxviii}	49.124 (14)
Ru4—La1—La4	126.43 (3)	Ru2 ⁱ —La4—La2 ^{xxviii}	91.16 (3)
In2—La1—La4	141.15 (2)	Ru2 ^{xxv} —La4—La2 ^{xxviii}	49.124 (14)
In1 ⁱ —La1—La4	55.73 (3)	La5—La4—La2 ^{xxviii}	59.041 (17)
Ru2 ⁱ —La1—La4	55.73 (3)	La3 ⁱⁱⁱ —La4—La2 ^{xxviii}	151.947 (19)
Ru1 ⁱⁱⁱ —La1—La4	51.71 (3)	La3 ^{xxvii} —La4—La2 ^{xxviii}	82.601 (16)
La2 ^{iv} —La1—La4	71.84 (2)	La1—La4—La2 ^{xxviii}	147.12 (2)
La1 ^v —La1—La4	60.869 (10)	La1 ^v —La4—La2 ^{xxviii}	96.692 (16)
Ru1 ⁱ —La1—La3 ⁱⁱⁱ	152.94 (3)	La1 ^{xxvi} —La4—La2 ^{xxviii}	96.726 (16)
Ru3 ⁱⁱ —La1—La3 ⁱⁱⁱ	51.86 (3)	La1 ^{xxvii} —La4—La2 ^{xxviii}	52.689 (13)
Ru4—La1—La3 ⁱⁱⁱ	112.87 (3)	Ru1 ^{xxiv} —La4—La2 ^{xxv}	40.60 (3)
In2—La1—La3 ⁱⁱⁱ	81.52 (2)	Ru1 ⁱⁱⁱ —La4—La2 ^{xxv}	136.53 (4)
In1 ⁱ —La1—La3 ⁱⁱⁱ	113.98 (3)	Ru3 ^{xxv} —La4—La2 ^{xxv}	131.435 (17)
Ru2 ⁱ —La1—La3 ⁱⁱⁱ	113.98 (3)	Ru3 ⁱⁱ —La4—La2 ^{xxv}	102.66 (2)
Ru1 ⁱⁱⁱ —La1—La3 ⁱⁱⁱ	46.85 (3)	In1 ⁱ —La4—La2 ^{xxv}	49.124 (14)
La2 ^{iv} —La1—La3 ⁱⁱⁱ	92.826 (19)	In1 ^{xxv} —La4—La2 ^{xxv}	91.16 (3)
La1 ^v —La1—La3 ⁱⁱⁱ	101.09 (2)	Ru2 ⁱ —La4—La2 ^{xxv}	49.124 (14)
La4—La1—La3 ⁱⁱⁱ	59.84 (2)	Ru2 ^{xxv} —La4—La2 ^{xxv}	91.16 (3)

Ru1 ⁱ —La1—La2	47.47 (3)	La5—La4—La2 ^{xxv}	59.041 (17)
Ru3 ⁱⁱ —La1—La2	143.25 (3)	La3 ⁱⁱⁱ —La4—La2 ^{xxv}	151.947 (19)
Ru4—La1—La2	53.21 (3)	La3 ^{xxvii} —La4—La2 ^{xxv}	82.601 (16)
In2—La1—La2	105.542 (19)	La1—La4—La2 ^{xxv}	96.726 (16)
In1 ⁱ —La1—La2	52.97 (2)	La1 ^v —La4—La2 ^{xxv}	52.689 (13)
Ru2 ⁱ —La1—La2	52.97 (2)	La1 ^{xxvi} —La4—La2 ^{xxv}	147.12 (2)
Ru1 ⁱⁱⁱ —La1—La2	106.86 (3)	La1 ^{xxvii} —La4—La2 ^{xxv}	96.692 (16)
La2 ^{iv} —La1—La2	60.85 (2)	La2 ^{xxviii} —La4—La2 ^{xxv}	50.73 (2)
La1 ^v —La1—La2	90.414 (15)	Ru1 ^{xxiv} —La4—La2 ^{iv}	136.53 (4)
La4—La1—La2	107.79 (3)	Ru1 ⁱⁱⁱ —La4—La2 ^{iv}	40.60 (3)
La3 ⁱⁱⁱ —La1—La2	153.67 (2)	Ru3 ^{xxv} —La4—La2 ^{iv}	131.435 (17)
Ru1 ⁱ —La1—La1 ^{vi}	108.52 (3)	Ru3 ⁱⁱ —La4—La2 ^{iv}	102.66 (2)
Ru3 ⁱⁱ —La1—La1 ^{vi}	51.393 (19)	In1 ⁱ —La4—La2 ^{iv}	49.124 (14)
Ru4—La1—La1 ^{vi}	117.89 (3)	In1 ^{xxv} —La4—La2 ^{iv}	91.16 (3)
In2—La1—La1 ^{vi}	54.924 (10)	Ru2 ⁱ —La4—La2 ^{iv}	49.124 (14)
In1 ⁱ —La1—La1 ^{vi}	147.308 (15)	Ru2 ^{xxv} —La4—La2 ^{iv}	91.16 (3)
Ru2 ⁱ —La1—La1 ^{vi}	147.308 (15)	La5—La4—La2 ^{iv}	59.041 (17)
Ru1 ⁱⁱⁱ —La1—La1 ^{vi}	105.49 (3)	La3 ⁱⁱⁱ —La4—La2 ^{iv}	82.601 (16)
La2 ^{iv} —La1—La1 ^{vi}	148.189 (14)	La3 ^{xxvii} —La4—La2 ^{iv}	151.947 (19)
La1 ^v —La1—La1 ^{vi}	90.0	La1—La4—La2 ^{iv}	52.689 (13)
La4—La1—La1 ^{vi}	103.13 (2)	La1 ^v —La4—La2 ^{iv}	96.726 (16)
La3 ⁱⁱⁱ —La1—La1 ^{vi}	59.766 (9)	La1 ^{xxvi} —La4—La2 ^{iv}	96.692 (16)
La2—La1—La1 ^{vi}	144.697 (13)	La1 ^{xxvii} —La4—La2 ^{iv}	147.12 (2)
Ru1 ⁱ —La1—La1 ^{iv}	145.48 (3)	La2 ^{xxviii} —La4—La2 ^{iv}	118.08 (3)
Ru3 ⁱⁱ —La1—La1 ^{iv}	112.90 (3)	La2 ^{xxv} —La4—La2 ^{iv}	95.95 (3)
Ru4—La1—La1 ^{iv}	51.321 (13)	Ru1 ^{xxiv} —La4—La2 ⁱ	136.53 (4)
In2—La1—La1 ^{iv}	54.641 (5)	Ru1 ⁱⁱⁱ —La4—La2 ⁱ	40.60 (3)
In1 ⁱ —La1—La1 ^{iv}	116.06 (2)	Ru3 ^{xxv} —La4—La2 ⁱ	102.66 (2)
Ru2 ⁱ —La1—La1 ^{iv}	116.06 (2)	Ru3 ⁱ —La4—La2 ⁱ	131.435 (17)
Ru1 ⁱⁱⁱ —La1—La1 ^{iv}	47.96 (3)	In1 ⁱ —La4—La2 ⁱ	91.16 (3)
La2 ^{iv} —La1—La1 ^{iv}	60.927 (16)	In1 ⁱ —La4—La2 ⁱ	49.124 (14)
La1 ^v —La1—La1 ^{iv}	159.439 (14)	Ru2 ⁱ —La4—La2 ⁱ	91.16 (3)
La4—La1—La1 ^{iv}	99.18 (2)	Ru2 ⁱ —La4—La2 ⁱ	49.124 (14)
La3 ⁱⁱⁱ —La1—La1 ^{iv}	61.58 (3)	La5—La4—La2 ⁱ	59.041 (17)
La2—La1—La1 ^{iv}	101.314 (14)	La3 ⁱ —La4—La2 ⁱ	82.601 (16)
La1 ^{vi} —La1—La1 ^{iv}	90.0	La3 ⁱ —La4—La2 ⁱ	151.947 (19)
Ru1 ⁱ —La1—La1 ^{vii}	62.01 (3)	La1—La4—La2 ⁱ	96.692 (16)
Ru3 ⁱⁱ —La1—La1 ^{vii}	132.66 (4)	La1 ⁱ —La4—La2 ⁱ	147.12 (2)
Ru4—La1—La1 ^{vii}	51.321 (13)	La1 ⁱ —La4—La2 ⁱ	52.689 (13)
In2—La1—La1 ^{vii}	54.641 (5)	La1 ⁱ —La4—La2 ⁱ	96.726 (16)
In1 ⁱ —La1—La1 ^{vii}	108.31 (3)	La2 ⁱ —La4—La2 ⁱ	95.95 (3)

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Ru2 ⁱ —La1—La1 ^{vii}	108.31 (3)	La2i—La4—La2i	118.08 (3)
Ru1 ⁱⁱⁱ —La1—La1 ^{vii}	133.87 (3)	La2i—La4—La2i	50.73 (2)
La2 ^{iv} —La1—La1 ^{vii}	101.787 (14)	In1i—La5—Ru2i	0.00 (5)
La1 ^v —La1—La1 ^{vii}	110.561 (14)	In1i—La5—In1i	116.87 (4)
La4—La1—La1 ^{vii}	163.89 (2)	Ru2i—La5—In1i	116.87 (4)
La3 ⁱⁱⁱ —La1—La1 ^{vii}	136.140 (19)	In1i—La5—Ru2i	116.87 (4)
La2—La1—La1 ^{vii}	57.072 (15)	Ru2i—La5—Ru2i	116.87 (4)
La1 ^{vi} —La1—La1 ^{vii}	90.0	In1i—La5—Ru2i	0.00 (5)
La1 ^{iv} —La1—La1 ^{vii}	90.0	In1i—La5—In1i	105.90 (2)
Ru1 ⁱ —La1—La3 ⁱⁱ	48.24 (4)	Ru2i—La5—In1i	105.90 (2)
Ru3 ⁱⁱ —La1—La3 ⁱⁱ	77.10 (4)	In1i—La5—In1i	105.90 (2)
Ru4—La1—La3 ⁱⁱ	109.84 (2)	Ru2i—La5—In1i	105.90 (2)
In2—La1—La3 ⁱⁱ	79.748 (13)	In1i—La5—In1i	105.90 (2)
In1 ⁱ —La1—La3 ⁱⁱ	105.53 (2)	Ru2i—La5—In1i	105.90 (2)
Ru2 ⁱ —La1—La3 ⁱⁱ	105.53 (2)	In1i—La5—In1i	105.90 (2)
Ru1 ⁱⁱⁱ —La1—La3 ⁱⁱ	163.83 (3)	Ru2i—La5—In1i	105.90 (2)
La2 ^{iv} —La1—La3 ⁱⁱ	149.48 (2)	In1i—La5—In1i	116.87 (4)
La1 ^v —La1—La3 ⁱⁱ	61.869 (12)	In1i—La5—Ru2i	105.90 (2)
La4—La1—La3 ⁱⁱ	120.05 (2)	Ru2i—La5—Ru2i	105.90 (2)
La3 ⁱⁱⁱ —La1—La3 ⁱⁱ	117.600 (15)	In1i—La5—Ru2i	105.90 (2)
La2—La1—La3 ⁱⁱ	88.72 (2)	Ru2i—La5—Ru2i	105.90 (2)
La1 ^{vi} —La1—La3 ⁱⁱ	60.766 (12)	In1i—La5—Ru2i	0.00 (5)
La1 ^{iv} —La1—La3 ⁱⁱ	134.374 (13)	In1i—La5—Ru2i	116.87 (4)
La1 ^{vii} —La1—La3 ⁱⁱ	58.54 (2)	In1i—La5—Ru2i	105.90 (2)
Ru1 ⁱ —La2—Ru5	153.94 (4)	Ru2i—La5—Ru2i	105.90 (2)
Ru1 ⁱ —La2—Ru4	96.58 (4)	In1i—La5—Ru2i	105.90 (2)
Ru5—La2—Ru4	61.66 (3)	Ru2i—La5—Ru2i	105.90 (2)
Ru1 ⁱ —La2—In1 ⁱ	66.35 (5)	In1i—La5—Ru2i	116.87 (4)
Ru5—La2—In1 ⁱ	100.77 (3)	In1i—La5—Ru2i	0.00 (5)
Ru4—La2—In1 ⁱ	98.14 (2)	Ru2i—La5—Ru2i	116.87 (4)
Ru1 ⁱ —La2—Ru2 ⁱ	66.35 (5)	In1i—La5—La4i	58.44 (2)
Ru5—La2—Ru2 ⁱ	100.77 (3)	Ru2i—La5—La4i	58.44 (2)
Ru4—La2—Ru2 ⁱ	98.14 (2)	In1i—La5—La4i	58.44 (2)
In1 ⁱ —La2—Ru2 ⁱ	0.00 (5)	Ru2i—La5—La4i	58.44 (2)
Ru1 ⁱ —La2—In1 ^{viii}	97.34 (5)	In1i—La5—La4i	121.56 (2)
Ru5—La2—In1 ^{viii}	99.26 (3)	In1i—La5—La4i	121.56 (2)
Ru4—La2—In1 ^{viii}	96.72 (3)	Ru2i—La5—La4i	121.56 (2)
In1 ⁱ —La2—In1 ^{viii}	159.05 (3)	Ru2i—La5—La4i	121.56 (2)
Ru2 ⁱ —La2—In1 ^{viii}	159.05 (3)	In1i—La5—La4	121.56 (2)
Ru1 ⁱ —La2—Ru2 ^{viii}	97.34 (5)	Ru2i—La5—La4	121.56 (2)
Ru5—La2—Ru2 ^{viii}	99.26 (3)	In1i—La5—La4	121.56 (2)

Ru4—La2—Ru2 ^{viii}	96.72 (3)	Ru2i—La5—La4	121.56 (2)
In1 ⁱ —La2—Ru2 ^{viii}	159.05 (3)	In1i—La5—La4	58.44 (2)
Ru2 ⁱ —La2—Ru2 ^{viii}	159.05 (3)	In1i—La5—La4	58.44 (2)
In1 ^{viii} —La2—Ru2 ^{viii}	0.00 (5)	Ru2i—La5—La4	58.44 (2)
Ru1 ⁱ —La2—La2 ^{ix}	152.02 (3)	Ru2i—La5—La4	58.44 (2)
Ru5—La2—La2 ^{ix}	54.020 (13)	La4i—La5—La4	180.0
Ru4—La2—La2 ^{ix}	106.31 (3)	In1i—La5—La2i	151.770 (11)
In1 ⁱ —La2—La2 ^{ix}	124.21 (4)	Ru2i—La5—La2i	151.770 (11)
Ru2 ⁱ —La2—La2 ^{ix}	124.21 (4)	In1i—La5—La2i	60.91 (2)
In1 ^{viii} —La2—La2 ^{ix}	64.66 (3)	Ru2i—La5—La2i	60.91 (2)
Ru2 ^{viii} —La2—La2 ^{ix}	64.66 (3)	In1i—La5—La2i	101.346 (16)
Ru1 ⁱ —La2—La1 ^{vii}	66.18 (3)	In1i—La5—La2i	53.724 (10)
Ru5—La2—La1 ^{vii}	105.49 (2)	Ru2i—La5—La2i	101.346 (16)
Ru4—La2—La1 ^{vii}	53.12 (3)	Ru2i—La5—La2i	53.724 (10)
In1 ⁱ —La2—La1 ^{vii}	119.10 (3)	La4i—La5—La2i	112.164 (9)
Ru2 ⁱ —La2—La1 ^{vii}	119.10 (3)	La4—La5—La2i	67.836 (9)
In1 ^{viii} —La2—La1 ^{vii}	60.38 (3)	In1i—La5—La2i	151.770 (11)
Ru2 ^{viii} —La2—La1 ^{vii}	60.38 (3)	Ru2i—La5—La2i	151.770 (11)
La2 ^{ix} —La2—La1 ^{vii}	115.72 (3)	In1i—La5—La2i	60.91 (2)
Ru1 ⁱ —La2—La2 ^x	128.22 (4)	Ru2i—La5—La2i	60.91 (2)
Ru5—La2—La2 ^x	52.682 (13)	In1i—La5—La2i	53.724 (10)
Ru4—La2—La2 ^x	103.66 (3)	In1i—La5—La2i	101.346 (16)
In1 ⁱ —La2—La2 ^x	63.93 (3)	Ru2i—La5—La2i	53.724 (10)
Ru2 ⁱ —La2—La2 ^x	63.93 (3)	Ru2i—La5—La2i	101.346 (16)
In1 ^{viii} —La2—La2 ^x	126.15 (4)	La4i—La5—La2i	112.164 (9)
Ru2 ^{viii} —La2—La2 ^x	126.15 (4)	La4—La5—La2i	67.836 (9)
La2 ^{ix} —La2—La2 ^x	61.90 (2)	La2i—La5—La2i	55.12 (2)
La1 ^{vii} —La2—La2 ^x	156.27 (2)	In1i—La5—La2i	53.724 (10)
Ru1 ⁱ —La2—In1 ^{xi}	108.17 (3)	Ru2i—La5—La2i	53.724 (10)
Ru5—La2—In1 ^{xi}	91.53 (2)	In1i—La5—La2i	101.346 (16)
Ru4—La2—In1 ^{xi}	152.93 (4)	Ru2i—La5—La2i	101.346 (16)
In1 ⁱ —La2—In1 ^{xi}	82.45 (3)	In1i—La5—La2i	151.770 (11)
Ru2 ⁱ —La2—In1 ^{xi}	82.45 (3)	In1i—La5—La2i	60.91 (2)
In1 ^{viii} —La2—In1 ^{xi}	90.96 (4)	Ru2i—La5—La2i	151.770 (11)
Ru2 ^{viii} —La2—In1 ^{xi}	90.96 (4)	Ru2i—La5—La2i	60.91 (2)
La2 ^{ix} —La2—In1 ^{xi}	54.223 (18)	La4i—La5—La2i	67.836 (9)
La1 ^{vii} —La2—In1 ^{xi}	148.25 (3)	La4—La5—La2i	112.164 (9)
La2 ^x —La2—In1 ^{xi}	52.17 (2)	La2i—La5—La2i	98.183 (7)
Ru1 ⁱ —La2—Ru2 ^{xi}	108.17 (3)	La2i—La5—La2i	152.21 (2)
Ru5—La2—Ru2 ^{xi}	91.53 (2)	In1i—La5—La2i	53.724 (10)
Ru4—La2—Ru2 ^{xi}	152.93 (4)	Ru2i—La5—La2i	53.724 (10)

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In1 ⁱ —La2—Ru2 ^{xi}	82.45 (3)	In1i—La5—La2i	101.346 (16)
Ru2 ⁱ —La2—Ru2 ^{xi}	82.45 (3)	Ru2i—La5—La2i	101.346 (16)
In1 ^{viii} —La2—Ru2 ^{xi}	90.96 (4)	In1i—La5—La2i	60.91 (2)
Ru2 ^{viii} —La2—Ru2 ^{xi}	90.96 (4)	In1i—La5—La2i	151.770 (11)
La2 ^{ix} —La2—Ru2 ^{xi}	54.223 (18)	Ru2i—La5—La2i	60.91 (2)
La1 ^{vii} —La2—Ru2 ^{xi}	148.25 (3)	Ru2i—La5—La2i	151.770 (11)
La2 ^x —La2—Ru2 ^{xi}	52.17 (2)	La4i—La5—La2i	67.836 (9)
In1 ^{xi} —La2—Ru2 ^{xi}	0.00 (2)	La4—La5—La2i	112.164 (9)
Ru1 ⁱ —La2—La2 ^v	48.86 (3)	La2i—La5—La2i	152.21 (2)
Ru5—La2—La2 ^v	142.682 (13)	La2i—La5—La2i	98.183 (7)
Ru4—La2—La2 ^v	140.98 (2)	La2i—La5—La2i	106.69 (2)
In1 ⁱ —La2—La2 ^v	55.251 (18)	In1i—La5—La2i	60.91 (2)
Ru2 ⁱ —La2—La2 ^v	55.251 (18)	Ru2i—La5—La2i	60.91 (2)
In1 ^{viii} —La2—La2 ^v	104.32 (2)	In1i—La5—La2i	151.770 (11)
Ru2 ^{viii} —La2—La2 ^v	104.32 (2)	Ru2i—La5—La2i	151.770 (11)
La2 ^{ix} —La2—La2 ^v	112.316 (14)	In1i—La5—La2i	101.346 (16)
La1 ^{vii} —La2—La2 ^v	111.218 (15)	In1i—La5—La2i	53.724 (10)
La2 ^x —La2—La2 ^v	90.0	Ru2i—La5—La2i	101.346 (16)
In1 ^{xi} —La2—La2 ^v	59.923 (14)	Ru2i—La5—La2i	53.724 (10)
Ru2 ^{xi} —La2—La2 ^v	59.923 (14)	La4i—La5—La2i	112.164 (9)
Ru1 ⁱ —La2—La2 ^{vii}	127.67 (3)	La4—La5—La2i	67.836 (9)
Ru5—La2—La2 ^{vii}	52.110 (5)	La2i—La5—La2i	106.69 (2)
Ru4—La2—La2 ^{vii}	53.130 (14)	La2i—La5—La2i	135.671 (18)
In1 ⁱ —La2—La2 ^{vii}	146.01 (3)	La2i—La5—La2i	53.130 (19)
Ru2 ⁱ —La2—La2 ^{vii}	146.01 (3)	La2i—La5—La2i	98.183 (7)
In1 ^{viii} —La2—La2 ^{vii}	54.40 (3)	In1i—La5—La2i	60.91 (2)
Ru2 ^{viii} —La2—La2 ^{vii}	54.40 (3)	Ru2i—La5—La2i	60.91 (2)
La2 ^{ix} —La2—La2 ^{vii}	60.55 (2)	In1i—La5—La2i	151.770 (11)
La1 ^{vii} —La2—La2 ^{vii}	61.549 (16)	Ru2i—La5—La2i	151.770 (11)
La2 ^x —La2—La2 ^{vii}	102.075 (5)	In1i—La5—La2i	53.724 (10)
In1 ^{xi} —La2—La2 ^{vii}	114.454 (19)	In1i—La5—La2i	101.346 (16)
Ru2 ^{xi} —La2—La2 ^{vii}	114.454 (19)	Ru2i—La5—La2i	53.724 (10)
La2 ^v —La2—La2 ^{vii}	158.701 (16)	Ru2i—La5—La2i	101.346 (16)
Ru1 ⁱ —La2—La2 ^{iv}	104.12 (4)	La4i—La5—La2i	112.164 (9)
Ru5—La2—La2 ^{iv}	52.110 (5)	La4—La5—La2i	67.836 (9)
Ru4—La2—La2 ^{iv}	53.130 (14)	La2i—La5—La2i	135.671 (18)
In1 ⁱ —La2—La2 ^{iv}	56.11 (3)	La2i—La5—La2i	106.69 (2)
Ru2 ⁱ —La2—La2 ^{iv}	56.11 (3)	La2i—La5—La2i	98.183 (7)
In1 ^{viii} —La2—La2 ^{iv}	144.30 (3)	La2i—La5—La2i	53.130 (19)
Ru2 ^{viii} —La2—La2 ^{iv}	144.30 (3)	La2i—La5—La2i	55.12 (2)
La2 ^{ix} —La2—La2 ^{iv}	102.465 (5)	In1i—La5—La2i	101.346 (16)

La1 ^{vii} —La2—La2 ^{iv}	103.037 (14)	Ru2i—La5—La2i	101.346 (16)
La2 ^x —La2—La2 ^{iv}	57.55 (2)	In1i—La5—La2i	53.724 (10)
In1 ^{xi} —La2—La2 ^{iv}	108.54 (3)	Ru2i—La5—La2i	53.724 (10)
Ru2 ^{xi} —La2—La2 ^{iv}	108.54 (3)	In1i—La5—La2i	151.770 (11)
La2 ^v —La2—La2 ^{iv}	111.299 (16)	In1i—La5—La2i	60.91 (2)
La2 ^{vii} —La2—La2 ^{iv}	90.0	Ru2i—La5—La2i	151.770 (11)
Ru1 ⁱ —La2—La1	51.96 (3)	Ru2i—La5—La2i	60.91 (2)
Ru5—La2—La1	102.03 (2)	La4i—La5—La2i	67.836 (9)
Ru4—La2—La1	51.44 (2)	La4—La5—La2i	112.164 (9)
In1 ⁱ —La2—La1	59.24 (3)	La2i—La5—La2i	53.130 (19)
Ru2 ⁱ —La2—La1	59.24 (3)	La2i—La5—La2i	98.183 (7)
In1 ^{viii} —La2—La1	121.93 (3)	La2i—La5—La2i	55.12 (2)
Ru2 ^{viii} —La2—La1	121.93 (3)	La2i—La5—La2i	135.671 (18)
La2 ^{ix} —La2—La1	155.591 (17)	La2i—La5—La2i	98.183 (7)
La1 ^{vii} —La2—La1	62.001 (19)	La2i—La5—La2i	152.21 (2)
La2 ^x —La2—La1	109.54 (3)	In1i—La5—La2i	101.346 (16)
In1 ^{xi} —La2—La1	140.96 (3)	Ru2i—La5—La2i	101.346 (16)
Ru2 ^{xi} —La2—La1	140.96 (3)	In1i—La5—La2i	53.724 (10)
La2 ^v —La2—La1	89.586 (15)	Ru2i—La5—La2i	53.724 (10)
La2 ^{vii} —La2—La1	102.512 (13)	In1i—La5—La2i	60.91 (2)
La2 ^{iv} —La2—La1	57.604 (16)	In1i—La5—La2i	151.770 (11)
Ru1 ⁱ —La2—La5 ^{xii}	88.59 (4)	Ru2i—La5—La2i	60.91 (2)
Ru5—La2—La5 ^{xii}	117.455 (19)	Ru2i—La5—La2i	151.770 (11)
Ru4—La2—La5 ^{xii}	146.38 (2)	La4i—La5—La2i	67.836 (9)
In1 ⁱ —La2—La5 ^{xii}	114.20 (2)	La4—La5—La2i	112.164 (9)
Ru2 ⁱ —La2—La5 ^{xii}	114.20 (2)	La2i—La5—La2i	98.183 (7)
In1 ^{viii} —La2—La5 ^{xii}	49.67 (2)	La2i—La5—La2i	53.130 (19)
Ru2 ^{viii} —La2—La5 ^{xii}	49.67 (2)	La2i—La5—La2i	135.671 (18)
La2 ^{ix} —La2—La5 ^{xii}	63.435 (9)	La2i—La5—La2i	55.12 (2)
La1 ^{vii} —La2—La5 ^{xii}	100.404 (19)	La2i—La5—La2i	152.21 (2)
La2 ^x —La2—La5 ^{xii}	98.84 (2)	La2i—La5—La2i	98.183 (7)
In1 ^{xi} —La2—La5 ^{xii}	47.88 (2)	La2i—La5—La2i	106.69 (2)
Ru2 ^{xi} —La2—La5 ^{xii}	47.88 (2)	La2i—Ru1—La2i	82.28 (5)
La2 ^v —La2—La5 ^{xii}	62.442 (10)	La2i—Ru1—La3	137.34 (3)
La2 ^{vii} —La2—La5 ^{xii}	98.03 (2)	La2i—Ru1—La3	137.34 (3)
La2 ^{iv} —La2—La5 ^{xii}	156.280 (13)	La2i—Ru1—La1i	129.38 (7)
La1—La2—La5 ^{xii}	140.19 (2)	La2i—Ru1—La1i	80.57 (3)
Ru1 ⁱ —La2—La4 ^{xiii}	47.69 (4)	La3—Ru1—La1i	81.52 (4)
Ru5—La2—La4 ^{xiii}	148.76 (2)	La2i—Ru1—La1i	80.57 (3)
Ru4—La2—La4 ^{xiii}	108.30 (3)	La2i—Ru1—La1i	129.38 (7)
In1 ⁱ —La2—La4 ^{xiii}	110.16 (3)	La3—Ru1—La1i	81.52 (4)

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Ru2 ⁱ —La2—La4 ^{xiii}	110.16 (3)	La1i—Ru1—La1i	74.69 (5)
In1 ^{viii} —La2—La4 ^{xiii}	50.68 (2)	La2i—Ru1—La4i	91.71 (5)
Ru2 ^{viii} —La2—La4 ^{xiii}	50.68 (2)	La2i—Ru1—La4i	91.71 (5)
La2 ^{ix} —La2—La4 ^{xiii}	108.33 (2)	La3—Ru1—La4i	75.27 (6)
La1 ^{vii} —La2—La4 ^{xiii}	55.473 (19)	La1i—Ru1—La4i	135.90 (4)
La2 ^x —La2—La4 ^{xiii}	148.03 (2)	La1i—Ru1—La4i	135.90 (4)
In1 ^{xi} —La2—La4 ^{xiii}	96.65 (3)	La2i—Ru1—La1i	67.76 (2)
Ru2 ^{xi} —La2—La4 ^{xiii}	96.65 (3)	La2i—Ru1—La1i	141.71 (5)
La2 ^v —La2—La4 ^{xiii}	64.635 (10)	La3—Ru1—La1i	69.77 (3)
La2 ^{vii} —La2—La4 ^{xiii}	97.43 (2)	La1i—Ru1—La1i	136.97 (5)
La2 ^{iv} —La2—La4 ^{xiii}	147.966 (18)	La1i—Ru1—La1i	70.03 (2)
La1—La2—La4 ^{xiii}	90.36 (2)	La4i—Ru1—La1i	66.92 (3)
La5 ^{xii} —La2—La4 ^{xiii}	53.123 (17)	La2i—Ru1—La1i	141.71 (5)
Ru1 ^{vi} —La3—Ru1	154.28 (9)	La2i—Ru1—La1i	67.76 (2)
Ru1 ^{vi} —La3—Ru3 ^{xiv}	100.76 (4)	La3—Ru1—La1i	69.77 (3)
Ru1—La3—Ru3 ^{xiv}	100.76 (4)	La1i—Ru1—La1i	70.03 (2)
Ru1 ^{vi} —La3—Ru3 ^{xv}	100.76 (4)	La1i—Ru1—La1i	136.97 (5)
Ru1—La3—Ru3 ^{xv}	100.76 (4)	La4i—Ru1—La1i	66.92 (3)
Ru3 ^{xiv} —La3—Ru3 ^{xv}	65.99 (7)	La1i—Ru1—La1i	124.26 (6)
Ru1 ^{vi} —La3—La4 ^{xvi}	149.96 (5)	La5i—Ru2—La2i	132.69 (3)
Ru1—La3—La4 ^{xvi}	55.75 (4)	La5i—Ru2—La2i	132.69 (3)
Ru3 ^{xiv} —La3—La4 ^{xvi}	55.19 (2)	La2i—Ru2—La2i	69.50 (4)
Ru3 ^{xv} —La3—La4 ^{xvi}	55.19 (2)	La5i—Ru2—La2i	76.61 (3)
Ru1 ^{vi} —La3—La4 ^{xvii}	55.75 (4)	La2i—Ru2—La2i	69.49 (3)
Ru1—La3—La4 ^{xvii}	149.96 (5)	La2i—Ru2—La2i	138.87 (3)
Ru3 ^{xiv} —La3—La4 ^{xvii}	55.19 (2)	La5i—Ru2—La2i	76.61 (3)
Ru3 ^{xv} —La3—La4 ^{xvii}	55.19 (2)	La2i—Ru2—La2i	138.87 (3)
La4 ^{xvi} —La3—La4 ^{xvii}	94.21 (4)	La2i—Ru2—La2i	69.49 (3)
Ru1 ^{vi} —La3—La1 ^{xvi}	122.257 (9)	La2i—Ru2—La2i	150.98 (5)
Ru1—La3—La1 ^{xvi}	63.380 (15)	La5i—Ru2—La4i	69.62 (3)
Ru3 ^{xiv} —La3—La1 ^{xvi}	51.68 (3)	La2i—Ru2—La4i	132.16 (3)
Ru3 ^{xv} —La3—La1 ^{xvi}	107.30 (4)	La2i—Ru2—La4i	132.16 (3)
La4 ^{xvi} —La3—La1 ^{xvi}	60.009 (14)	La2i—Ru2—La4i	80.19 (2)
La4 ^{xvii} —La3—La1 ^{xvi}	103.76 (3)	La2i—Ru2—La4i	80.19 (2)
Ru1 ^{vi} —La3—La1 ^{xviii}	63.380 (15)	La5i—Ru2—La1i	124.03 (3)
Ru1—La3—La1 ^{xviii}	122.257 (9)	La2i—Ru2—La1i	67.79 (3)
Ru3 ^{xiv} —La3—La1 ^{xviii}	107.30 (4)	La2i—Ru2—La1i	102.52 (4)
Ru3 ^{xv} —La3—La1 ^{xviii}	51.68 (3)	La2i—Ru2—La1i	64.082 (19)
La4 ^{xvi} —La3—La1 ^{xviii}	103.76 (3)	La2i—Ru2—La1i	124.96 (4)
La4 ^{xvii} —La3—La1 ^{xviii}	60.009 (14)	La4i—Ru2—La1i	65.88 (3)
La1 ^{xvi} —La3—La1 ^{xviii}	157.81 (4)	La5i—Ru2—La1i	124.03 (3)

Ru1 ^{vi} —La3—La1 ^{xix}	63.380 (15)	La2i—Ru2—La1i	102.52 (4)
Ru1—La3—La1 ^{xix}	122.257 (9)	La2i—Ru2—La1i	67.79 (3)
Ru3 ^{xiv} —La3—La1 ^{xix}	51.68 (3)	La2i—Ru2—La1i	124.96 (4)
Ru3 ^{xv} —La3—La1 ^{xix}	107.30 (4)	La2i—Ru2—La1i	64.082 (19)
La4 ^{xvi} —La3—La1 ^{xix}	103.76 (3)	La4i—Ru2—La1i	65.88 (3)
La4 ^{xvii} —La3—La1 ^{xix}	60.009 (14)	La1i—Ru2—La1i	62.89 (3)
La1 ^{xvi} —La3—La1 ^{xix}	60.467 (19)	La5i—Ru2—La2i	71.20 (3)
La1 ^{xviii} —La3—La1 ^{xix}	114.76 (2)	La2i—Ru2—La2i	63.90 (3)
Ru1 ^{vi} —La3—La1 ^{xx}	122.257 (9)	La2i—Ru2—La2i	97.55 (3)
Ru1—La3—La1 ^{xx}	63.380 (15)	La2i—Ru2—La2i	61.12 (2)
Ru3 ^{xiv} —La3—La1 ^{xx}	107.30 (4)	La2i—Ru2—La2i	119.17 (4)
Ru3 ^{xv} —La3—La1 ^{xx}	51.68 (3)	La4i—Ru2—La2i	129.84 (4)
La4 ^{xvi} —La3—La1 ^{xx}	60.009 (14)	La1i—Ru2—La2i	115.849 (17)
La4 ^{xvii} —La3—La1 ^{xx}	103.76 (3)	La1i—Ru2—La2i	163.52 (4)
La1 ^{xvi} —La3—La1 ^{xx}	114.76 (2)	La5i—Ru2—La2i	71.20 (3)
La1 ^{xviii} —La3—La1 ^{xx}	60.467 (19)	La2i—Ru2—La2i	97.55 (3)
La1 ^{xix} —La3—La1 ^{xx}	157.81 (4)	La2i—Ru2—La2i	63.90 (3)
Ru1 ^{vi} —La3—La1 ^{xiv}	50.24 (3)	La2i—Ru2—La2i	119.17 (4)
Ru1—La3—La1 ^{xiv}	108.22 (4)	La2i—Ru2—La2i	61.12 (2)
Ru3 ^{xiv} —La3—La1 ^{xiv}	150.765 (12)	La4i—Ru2—La2i	129.84 (4)
Ru3 ^{xv} —La3—La1 ^{xiv}	111.05 (3)	La1i—Ru2—La2i	163.52 (4)
La4 ^{xvi} —La3—La1 ^{xiv}	149.047 (11)	La1i—Ru2—La2i	115.849 (17)
La4 ^{xvii} —La3—La1 ^{xiv}	98.166 (15)	La2i—Ru2—La2i	60.15 (3)
La1 ^{xvi} —La3—La1 ^{xiv}	141.66 (3)	La1i—Ru3—La1i	77.21 (4)
La1 ^{xviii} —La3—La1 ^{xiv}	59.886 (19)	La1i—Ru3—La1i	120.29 (7)
La1 ^{xix} —La3—La1 ^{xiv}	107.008 (19)	La1i—Ru3—La1i	74.08 (4)
La1 ^{xx} —La3—La1 ^{xiv}	89.43 (2)	La1i—Ru3—La1i	74.08 (4)
Ru1 ^{vi} —La3—La1 ^{xxi}	50.24 (3)	La1i—Ru3—La1i	120.29 (7)
Ru1—La3—La1 ^{xxi}	108.22 (4)	La1i—Ru3—La1i	77.21 (4)
Ru3 ^{xiv} —La3—La1 ^{xxi}	111.04 (3)	La1i—Ru3—La3i	76.459 (16)
Ru3 ^{xv} —La3—La1 ^{xxi}	150.765 (12)	La1i—Ru3—La3i	76.459 (16)
La4 ^{xvi} —La3—La1 ^{xxi}	149.047 (11)	La1i—Ru3—La3i	140.924 (12)
La4 ^{xvii} —La3—La1 ^{xxi}	98.166 (15)	La1i—Ru3—La3i	140.924 (12)
La1 ^{xvi} —La3—La1 ^{xxi}	89.43 (2)	La1i—Ru3—La3i	140.924 (12)
La1 ^{xviii} —La3—La1 ^{xxi}	107.008 (19)	La1i—Ru3—La3i	140.924 (12)
La1 ^{xix} —La3—La1 ^{xxi}	59.886 (19)	La1i—Ru3—La3i	76.459 (16)
La1 ^{xx} —La3—La1 ^{xxi}	141.66 (3)	La1i—Ru3—La3i	76.459 (16)
La1 ^{xiv} —La3—La1 ^{xxi}	56.26 (2)	La3i—Ru3—La3i	114.01 (7)
Ru1 ^{vi} —La3—La1 ^{xxii}	108.22 (4)	La1i—Ru3—La4i	73.911 (15)
Ru1—La3—La1 ^{xxii}	50.24 (3)	La1i—Ru3—La4i	142.318 (12)
Ru3 ^{xiv} —La3—La1 ^{xxii}	150.765 (12)	La1i—Ru3—La4i	142.317 (12)

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Ru3 ^{xv} —La3—La1 ^{xxii}	111.05 (3)	La1i—Ru3—La4i	73.911 (15)
La4 ^{xvi} —La3—La1 ^{xxii}	98.166 (15)	La3i—Ru3—La4i	73.66 (3)
La4 ^{xvii} —La3—La1 ^{xxii}	149.047 (11)	La3i—Ru3—La4i	73.66 (3)
La1 ^{xvi} —La3—La1 ^{xxii}	107.008 (19)	La1i—Ru3—La4i	142.317 (12)
La1 ^{xviii} —La3—La1 ^{xxii}	89.43 (2)	La1i—Ru3—La4i	73.911 (15)
La1 ^{xix} —La3—La1 ^{xxii}	141.66 (3)	La1i—Ru3—La4i	73.911 (15)
La1 ^{xx} —La3—La1 ^{xxii}	59.886 (19)	La1i—Ru3—La4i	142.318 (12)
La1 ^{xiv} —La3—La1 ^{xxii}	58.47 (2)	La3i—Ru3—La4i	73.66 (3)
La1 ^{xxi} —La3—La1 ^{xxii}	85.50 (3)	La3i—Ru3—La4i	73.66 (3)
Ru1 ^{vi} —La3—La1 ^{xxiii}	108.22 (4)	La4i—Ru3—La4i	117.80 (7)
Ru1—La3—La1 ^{xxiii}	50.24 (3)	La1i—Ru4—La1i	77.36 (3)
Ru3 ^{xiv} —La3—La1 ^{xxiii}	111.04 (3)	La1i—Ru4—La1	124.21 (6)
Ru3 ^{xv} —La3—La1 ^{xxiii}	150.765 (12)	La1i—Ru4—La1	77.36 (3)
La4 ^{xvi} —La3—La1 ^{xxiii}	98.166 (15)	La1i—Ru4—La1i	77.36 (3)
La4 ^{xvii} —La3—La1 ^{xxiii}	149.047 (11)	La1i—Ru4—La1i	124.21 (6)
La1 ^{xvi} —La3—La1 ^{xxiii}	59.886 (19)	La1—Ru4—La1i	77.36 (3)
La1 ^{xviii} —La3—La1 ^{xxiii}	141.66 (3)	La1i—Ru4—La2	138.418 (17)
La1 ^{xix} —La3—La1 ^{xxiii}	89.43 (2)	La1i—Ru4—La2	143.716 (18)
La1 ^{xx} —La3—La1 ^{xxiii}	107.008 (19)	La1—Ru4—La2	75.350 (16)
La1 ^{xiv} —La3—La1 ^{xxiii}	85.50 (3)	La1i—Ru4—La2	71.881 (16)
La1 ^{xxi} —La3—La1 ^{xxiii}	58.47 (2)	La1i—Ru4—La2i	143.716 (18)
La1 ^{xxii} —La3—La1 ^{xxiii}	56.26 (2)	La1i—Ru4—La2i	75.350 (16)
Ru1 ^{xxiv} —La4—Ru1 ⁱⁱⁱ	176.27 (8)	La1—Ru4—La2i	71.881 (16)
Ru1 ^{xxiv} —La4—Ru3 ^{xxv}	91.60 (3)	La1i—Ru4—La2i	138.418 (17)
Ru1 ⁱⁱⁱ —La4—Ru3 ^{xxv}	91.60 (3)	La2—Ru4—La2i	73.74 (3)
Ru1 ^{xxiv} —La4—Ru3 ⁱⁱ	91.60 (3)	La1i—Ru4—La2i	75.350 (16)
Ru1 ⁱⁱⁱ —La4—Ru3 ⁱⁱ	91.60 (3)	La1i—Ru4—La2i	71.881 (16)
Ru3 ^{xxv} —La4—Ru3 ⁱⁱ	62.20 (7)	La1—Ru4—La2i	138.418 (17)
Ru1 ^{xxiv} —La4—In1 ⁱ	88.85 (2)	La1i—Ru4—La2i	143.716 (18)
Ru1 ⁱⁱⁱ —La4—In1 ⁱ	88.85 (2)	La2—Ru4—La2i	116.11 (6)
Ru3 ^{xxv} —La4—In1 ⁱ	159.16 (5)	La2i—Ru4—La2i	73.74 (3)
Ru3 ⁱⁱ —La4—In1 ⁱ	96.95 (4)	La1i—Ru4—La2i	71.881 (16)
Ru1 ^{xxiv} —La4—In1 ^{xxv}	88.85 (2)	La1i—Ru4—La2i	138.418 (17)
Ru1 ⁱⁱⁱ —La4—In1 ^{xxv}	88.85 (2)	La1—Ru4—La2i	143.716 (18)
Ru3 ^{xxv} —La4—In1 ^{xxv}	96.95 (4)	La1i—Ru4—La2i	75.350 (16)
Ru3 ⁱⁱ —La4—In1 ^{xxv}	159.16 (5)	La2—Ru4—La2i	73.74 (3)
In1 ⁱ —La4—In1 ^{xxv}	103.89 (6)	La2i—Ru4—La2i	116.11 (6)
Ru1 ^{xxiv} —La4—Ru2 ⁱ	88.85 (2)	La2i—Ru4—La2i	73.74 (3)
Ru1 ⁱⁱⁱ —La4—Ru2 ⁱ	88.85 (2)	La2i—Ru5—La2i	139.13 (3)
Ru3 ^{xxv} —La4—Ru2 ⁱ	159.16 (5)	La2i—Ru5—La2i	143.22 (3)
Ru3 ⁱⁱ —La4—Ru2 ⁱ	96.95 (4)	La2i—Ru5—La2i	75.781 (11)

In1 ⁱ —La4—Ru2 ⁱ	0.00 (4)	La2i—Ru5—La2i	75.781 (11)
In1 ^{xxv} —La4—Ru2 ⁱ	103.89 (6)	La2i—Ru5—La2i	143.22 (3)
Ru1 ^{xxiv} —La4—Ru2 ^{xxv}	88.85 (2)	La2i—Ru5—La2i	74.64 (3)
Ru1 ⁱⁱⁱ —La4—Ru2 ^{xxv}	88.85 (2)	La2i—Ru5—La2i	120.58 (2)
Ru3 ^{xxv} —La4—Ru2 ^{xxv}	96.95 (4)	La2i—Ru5—La2i	74.64 (3)
Ru3 ⁱⁱ —La4—Ru2 ^{xxv}	159.16 (5)	La2i—Ru5—La2i	71.96 (3)
In1 ⁱ —La4—Ru2 ^{xxv}	103.89 (6)	La2i—Ru5—La2i	75.781 (11)
In1 ^{xxv} —La4—Ru2 ^{xxv}	0.00 (4)	La2i—Ru5—La2	74.64 (3)
Ru2 ⁱ —La4—Ru2 ^{xxv}	103.89 (6)	La2i—Ru5—La2	120.58 (2)
Ru1 ^{xxiv} —La4—La5	88.13 (4)	La2i—Ru5—La2	75.781 (11)
Ru1 ⁱⁱⁱ —La4—La5	88.13 (4)	La2i—Ru5—La2	71.96 (3)
Ru3 ^{xxv} —La4—La5	148.90 (3)	La2i—Ru5—La2	139.13 (3)
Ru3 ⁱⁱ —La4—La5	148.90 (3)	La2i—Ru5—La2i	75.781 (11)
In1 ⁱ —La4—La5	51.94 (3)	La2i—Ru5—La2i	71.96 (3)
In1 ^{xxv} —La4—La5	51.94 (3)	La2i—Ru5—La2i	139.13 (3)
Ru2 ⁱ —La4—La5	51.94 (3)	La2i—Ru5—La2i	120.58 (2)
Ru2 ^{xxv} —La4—La5	51.94 (3)	La2i—Ru5—La2i	75.781 (11)
Ru1 ^{xxiv} —La4—La3 ⁱⁱⁱ	134.76 (5)	La2—Ru5—La2i	143.22 (3)
Ru1 ⁱⁱⁱ —La4—La3 ⁱⁱⁱ	48.97 (3)	La2i—Ru5—La2i	71.96 (3)
Ru3 ^{xxv} —La4—La3 ⁱⁱⁱ	51.15 (3)	La2i—Ru5—La2i	75.781 (11)
Ru3 ⁱⁱ —La4—La3 ⁱⁱⁱ	51.15 (3)	La2i—Ru5—La2i	120.58 (2)
In1 ⁱ —La4—La3 ⁱⁱⁱ	116.846 (17)	La2i—Ru5—La2i	139.13 (3)
In1 ^{xxv} —La4—La3 ⁱⁱⁱ	116.845 (17)	La2i—Ru5—La2i	143.22 (3)
Ru2 ⁱ —La4—La3 ⁱⁱⁱ	116.846 (17)	La2—Ru5—La2i	75.781 (11)
Ru2 ^{xxv} —La4—La3 ⁱⁱⁱ	116.845 (17)	La2i—Ru5—La2i	74.64 (3)
La5—La4—La3 ⁱⁱⁱ	137.10 (2)	La1—In2—La1i	180.00 (3)
Ru1 ^{xxiv} —La4—La3 ^{xvii}	48.97 (3)	La1—In2—La1i	70.717 (10)
Ru1 ⁱⁱⁱ —La4—La3 ^{xvii}	134.76 (5)	La1i—In2—La1i	109.283 (10)
Ru3 ^{xxv} —La4—La3 ^{xvii}	51.15 (3)	La1—In2—La1i	109.85 (2)
Ru3 ⁱⁱ —La4—La3 ^{xvii}	51.15 (3)	La1i—In2—La1i	70.15 (2)
In1 ⁱ —La4—La3 ^{xvii}	116.845 (17)	La1i—In2—La1i	70.717 (10)
In1 ^{xxv} —La4—La3 ^{xvii}	116.845 (17)	La1—In2—La1i	70.717 (10)
Ru2 ⁱ —La4—La3 ^{xvii}	116.845 (17)	La1i—In2—La1i	109.283 (10)
Ru2 ^{xxv} —La4—La3 ^{xvii}	116.845 (17)	La1i—In2—La1i	109.85 (2)
La5—La4—La3 ^{xvii}	137.10 (2)	La1i—In2—La1i	70.717 (10)
La3 ⁱⁱⁱ —La4—La3 ^{xvii}	85.79 (4)	La1—In2—La1i	109.283 (10)
Ru1 ^{xxiv} —La4—La1	119.600 (14)	La1i—In2—La1i	70.717 (10)
Ru1 ⁱⁱⁱ —La4—La1	61.370 (13)	La1i—In2—La1i	70.15 (2)
Ru3 ^{xxv} —La4—La1	103.96 (4)	La1i—In2—La1i	109.283 (10)
Ru3 ⁱⁱ —La4—La1	50.94 (3)	La1i—In2—La1i	180.00 (3)
In1 ⁱ —La4—La1	58.39 (2)	La1—In2—La1i	70.15 (2)

supplementary materials

In1 ^{xxv} —La4—La1	143.53 (3)	Lal1—In2—Lal1	109.85 (2)
Ru2 ⁱ —La4—La1	58.39 (2)	Lal1—In2—Lal1	109.283 (10)
Ru2 ^{xxv} —La4—La1	143.53 (3)	Lal1—In2—Lal1	180.00 (2)
La5—La4—La1	103.13 (2)	Lal1—In2—Lal1	109.283 (10)
La3 ⁱⁱⁱ —La4—La1	60.151 (15)	Lal1—In2—Lal1	70.717 (10)
La3 ^{xvii} —La4—La1	99.50 (3)	Lal1—In2—Lal1	109.283 (10)
Ru1 ^{xxiv} —La4—La1 ^v	61.370 (13)	Lal1—In2—Lal1	70.717 (10)
Ru1 ⁱⁱⁱ —La4—La1 ^v	119.600 (14)	Lal1—In2—Lal1	180.00 (2)
Ru3 ^{xxv} —La4—La1 ^v	103.96 (4)	Lal1—In2—Lal1	109.283 (10)
Ru3 ⁱⁱ —La4—La1 ^v	50.94 (3)	Lal1—In2—Lal1	70.15 (2)
In1 ⁱ —La4—La1 ^v	58.39 (2)	Lal1—In2—Lal1	109.85 (2)
In1 ^{xxv} —La4—La1 ^v	143.53 (3)	Lal1—In2—Lal1	70.717 (10)
Ru2 ⁱ —La4—La1 ^v	58.39 (2)		

Symmetry codes: (i) $x-1/2, -y+1/2, z$; (ii) $x-1/2, -y+1/2, -z$; (iii) $x-1, y, z$; (iv) $-y, x, z$; (v) $-y+1/2, -x+1/2, z$; (vi) $x, y, -z$; (vii) $y, -x, z$; (viii) $-x+1, -y, z$; (ix) $x, -y, -z+1/2$; (x) $y, x, -z+1/2$; (xi) $-x+1, y, -z+1/2$; (xii) $-x+1/2, -y+1/2, -z+1/2$; (xiii) $-x+1/2, y-1/2, z$; (xiv) $x+1/2, -y+1/2, -z$; (xv) $-x+3/2, y+1/2, z$; (xvi) $x+1, y, z$; (xvii) $-x+1, -y+1, -z$; (xviii) $y+1/2, x+1/2, -z$; (xix) $x+1, y, -z$; (xx) $y+1/2, x+1/2, z$; (xxi) $-y+1, x, -z$; (xxii) $x+1/2, -y+1/2, z$; (xxiii) $-y+1, x, z$; (xxiv) $-x+1, -y+1, z$; (xxv) $-x+1/2, y+1/2, z$; (xxvi) $y-1/2, x+1/2, z$; (xxvii) $-x, -y+1, z$; (xxviii) $y, -x+1, z$; (xxix) $x-1/2, y+1/2, -z+1/2$; (xxx) $x, -y+1, -z+1/2$; (xxxi) $-y, -x+1, -z+1/2$; (xxxii) $y+1/2, -x+1/2, -z+1/2$; (xxxiii) $-x+3/2, y-1/2, z$; (xxxiv) $-x, -y, z$; (xxxv) $-y, -x, -z+1/2$; (xxxvi) $-x, y, -z+1/2$; (xxxvii) $-x, -y, -z$; (xxxviii) $-y, x, -z$; (xxxix) $y, -x, -z$.

Fig. 1

