

checkCIF/PLATON report

Structure factors have been supplied for datablock(s) Dy2N4@C81N

THIS REPORT IS FOR GUIDANCE ONLY. IF USED AS PART OF A REVIEW PROCEDURE FOR PUBLICATION, IT SHOULD NOT REPLACE THE EXPERTISE OF AN EXPERIENCED CRYSTALLOGRAPHIC REFEREE.

No syntax errors found. CIF dictionary Interpreting this report

Datablock: Dy2N4@C81N

Bond precision: C-C = 0.0123 Å

Wavelength=0.71073

Cell: a=25.3003(3) b=15.2149(2) c=19.8299(4)
 alpha=90 beta=95.6439(15) gamma=90
Temperature: 173 K

	Calculated	Reported
Volume	7596.4(2)	7596.4(2)
Space group	C 2/m	C 2/m
Hall group	-C 2y	-C 2y
Moiety formula	C82, C36 H44 N4 Ni, Dy2 N4, 2(C3 H3) [+ solvent]	C82 N4 Dy2, C36 H44 N4 Ni, C6 H6
Sum formula	C124 H50 Dy2 N8 Ni [+ solvent]	C124 H50 Dy2 N8 Ni
Mr	2035.35	2035.35
Dx, g cm-3	1.780	1.780
Z	4	4
Mu (mm-1)	2.263	2.262
F000	4039.9	4040.0
F000'	4040.89	
h, k, lmax	32, 19, 25	32, 19, 25
Nref	9048	9045
Tmin, Tmax	0.729, 0.798	0.624, 0.745
Tmin'	0.689	

Correction method= # Reported T Limits: Tmin=0.624 Tmax=0.745
AbsCorr = MULTI-SCAN

Data completeness= 1.000

Theta(max)= 27.484

R(reflections)= 0.1232(7633)

wR2(reflections)= 0.2841(9045)

S = 1.093

Npar= 838

The following ALERTS were generated. Each ALERT has the format

test-name_ALERT_alert-type_alert-level.

Click on the hyperlinks for more details of the test.

● Alert level C

PLAT082_ALERT_2_C	High R1 Value	0.12	Report
PLAT084_ALERT_3_C	High wR2 Value (i.e. > 0.25)	0.28	Report
PLAT215_ALERT_3_C	Disordered C102 has ADP max/min Ratio	3.3	Note
PLAT215_ALERT_3_C	Disordered C104 has ADP max/min Ratio	3.6	Note
PLAT215_ALERT_3_C	Disordered C109 has ADP max/min Ratio	3.1	Note
PLAT215_ALERT_3_C	Disordered C112 has ADP max/min Ratio	3.7	Note
PLAT215_ALERT_3_C	Disordered C131 has ADP max/min Ratio	3.2	Note
PLAT215_ALERT_3_C	Disordered C147 has ADP max/min Ratio	3.1	Note
PLAT215_ALERT_3_C	Disordered C149 has ADP max/min Ratio	3.8	Note
PLAT215_ALERT_3_C	Disordered C157 has ADP max/min Ratio	3.3	Note
PLAT215_ALERT_3_C	Disordered C179 has ADP max/min Ratio	3.4	Note
PLAT234_ALERT_4_C	Large Hirshfeld Difference Dy7 --N202 .	0.16	Ang.
PLAT234_ALERT_4_C	Large Hirshfeld Difference Dy10 --N201 .	0.21	Ang.
PLAT234_ALERT_4_C	Large Hirshfeld Difference Dy11 --N202 .	0.18	Ang.
PLAT234_ALERT_4_C	Large Hirshfeld Difference Dy11 --N201_b .	0.19	Ang.
PLAT234_ALERT_4_C	Large Hirshfeld Difference Dy12 --N201 .	0.18	Ang.
PLAT243_ALERT_4_C	High Solvent Ueq as Compared to Neighbors of	C304	Check
PLAT244_ALERT_4_C	Low Solvent Ueq as Compared to Neighbors of	N201	Check
PLAT244_ALERT_4_C	Low Solvent Ueq as Compared to Neighbors of	C305	Check
PLAT260_ALERT_2_C	Large Average Ueq of Residue Including C101	0.101	Check
PLAT342_ALERT_3_C	Low Bond Precision on C-C Bonds	0.01228	Ang.
PLAT368_ALERT_2_C	Short C(sp2)-C(sp2) Bond C301 - C302 .	1.20	Ang.
PLAT374_ALERT_2_C	Long N - N Bond N201 - N202 .	1.59	Ang.
PLAT906_ALERT_3_C	Large K Value in the Analysis of Variance	4.459	Check
PLAT911_ALERT_3_C	Missing FCF Refl Between Thmin & STh/L= 0.600	2	Report
PLAT918_ALERT_3_C	Reflection(s) with I(obs) much Smaller I(calc) .	28	Check
PLAT977_ALERT_2_C	Check Negative Difference Density on H306	-0.41	eA-3

● Alert level G

PLAT003_ALERT_2_G	Number of Uiso or Uij Restrained non-H Atoms ...	120	Report
PLAT042_ALERT_1_G	Calc. and Reported MoietyFormula Strings Differ		Please Check
PLAT068_ALERT_1_G	Reported F000 Differs from Calcd (or Missing)...		Please Check
PLAT083_ALERT_2_G	SHELXL Second Parameter in WGHT Unusually Large	180.57	Why ?
PLAT178_ALERT_4_G	The CIF-Embedded .res File Contains SIMU Records	4	Report
PLAT231_ALERT_4_G	Hirshfeld Test (Solvent) N201 --N202 .	6.7	s.u.
PLAT233_ALERT_4_G	Hirshfeld (M-X Solvent) Dy1 --N201 .	9.0	s.u.
PLAT233_ALERT_4_G	Hirshfeld (M-X Solvent) Dy1 --N202 .	9.5	s.u.
PLAT233_ALERT_4_G	Hirshfeld (M-X Solvent) Dy1 --N201_b .	12.0	s.u.
PLAT233_ALERT_4_G	Hirshfeld (M-X Solvent) Dy2 --N201 .	6.3	s.u.
PLAT233_ALERT_4_G	Hirshfeld (M-X Solvent) Dy2 --N202 .	5.7	s.u.
PLAT233_ALERT_4_G	Hirshfeld (M-X Solvent) Dy2 --N201_b .	6.0	s.u.
PLAT233_ALERT_4_G	Hirshfeld (M-X Solvent) Dy2 --N202_b .	11.0	s.u.
PLAT233_ALERT_4_G	Hirshfeld (M-X Solvent) Dy4 --N201_b .	7.2	s.u.
PLAT233_ALERT_4_G	Hirshfeld (M-X Solvent) Dy6 --N202 .	6.0	s.u.
PLAT233_ALERT_4_G	Hirshfeld (M-X Solvent) Dy7 --N201 .	12.8	s.u.
PLAT233_ALERT_4_G	Hirshfeld (M-X Solvent) Dy7 --N201_b .	10.2	s.u.
PLAT233_ALERT_4_G	Hirshfeld (M-X Solvent) Dy8 --N201 .	8.3	s.u.
PLAT233_ALERT_4_G	Hirshfeld (M-X Solvent) Dy8 --N201_b .	9.3	s.u.
PLAT233_ALERT_4_G	Hirshfeld (M-X Solvent) Dy11 --N201 .	8.3	s.u.
PLAT300_ALERT_4_G	Atom Site Occupancy of C101 Constrained at	0.5	Check
PLAT300_ALERT_4_G	Atom Site Occupancy of C102 Constrained at	0.5	Check
PLAT300_ALERT_4_G	Atom Site Occupancy of C103 Constrained at	0.5	Check
PLAT300_ALERT_4_G	Atom Site Occupancy of C104 Constrained at	0.5	Check
PLAT300_ALERT_4_G	Atom Site Occupancy of C105 Constrained at	0.5	Check

[illegible]

PLAT300_ALERT_4_G	Atom Site Occupancy of C168	Constrained at	0.5	Check
PLAT300_ALERT_4_G	Atom Site Occupancy of C169	Constrained at	0.5	Check
PLAT300_ALERT_4_G	Atom Site Occupancy of C170	Constrained at	0.5	Check
PLAT300_ALERT_4_G	Atom Site Occupancy of C171	Constrained at	0.5	Check
PLAT300_ALERT_4_G	Atom Site Occupancy of C172	Constrained at	0.5	Check
PLAT300_ALERT_4_G	Atom Site Occupancy of C173	Constrained at	0.5	Check
PLAT300_ALERT_4_G	Atom Site Occupancy of C174	Constrained at	0.5	Check
PLAT300_ALERT_4_G	Atom Site Occupancy of C175	Constrained at	0.5	Check
PLAT300_ALERT_4_G	Atom Site Occupancy of C176	Constrained at	0.5	Check
PLAT300_ALERT_4_G	Atom Site Occupancy of C177	Constrained at	0.5	Check
PLAT300_ALERT_4_G	Atom Site Occupancy of C178	Constrained at	0.5	Check
PLAT300_ALERT_4_G	Atom Site Occupancy of C179	Constrained at	0.5	Check
PLAT300_ALERT_4_G	Atom Site Occupancy of C180	Constrained at	0.5	Check
PLAT300_ALERT_4_G	Atom Site Occupancy of C181	Constrained at	0.5	Check
PLAT300_ALERT_4_G	Atom Site Occupancy of C182	Constrained at	0.5	Check
PLAT300_ALERT_4_G	Atom Site Occupancy of Dy1	Constrained at	0.2647	Check
PLAT300_ALERT_4_G	Atom Site Occupancy of Dy2	Constrained at	0.1848	Check
PLAT300_ALERT_4_G	Atom Site Occupancy of Dy3	Constrained at	0.1572	Check
PLAT300_ALERT_4_G	Atom Site Occupancy of Dy4	Constrained at	0.0838	Check
PLAT300_ALERT_4_G	Atom Site Occupancy of Dy5	Constrained at	0.0792	Check
PLAT300_ALERT_4_G	Atom Site Occupancy of Dy6	Constrained at	0.0739	Check
PLAT300_ALERT_4_G	Atom Site Occupancy of Dy7	Constrained at	0.0737	Check
PLAT300_ALERT_4_G	Atom Site Occupancy of Dy8	Constrained at	0.064	Check
PLAT300_ALERT_4_G	Atom Site Occupancy of Dy9	Constrained at	0.0568	Check
PLAT300_ALERT_4_G	Atom Site Occupancy of Dy10	Constrained at	0.0483	Check
PLAT300_ALERT_4_G	Atom Site Occupancy of Dy11	Constrained at	0.0432	Check
PLAT300_ALERT_4_G	Atom Site Occupancy of Dy12	Constrained at	0.0251	Check
PLAT301_ALERT_3_G	Main Residue Disorder(Resd 1)		100%	Note
PLAT302_ALERT_4_G	Anion/Solvent/Minor-Residue Disorder (Resd 3)		37%	Note
PLAT333_ALERT_2_G	Large Aver C6-Ring C-C Dist C101 -C149 .		1.43	Ang.
PLAT333_ALERT_2_G	Large Aver C6-Ring C-C Dist C102 -C104 .		1.43	Ang.
PLAT333_ALERT_2_G	Large Aver C6-Ring C-C Dist C105 -C120 .		1.45	Ang.
PLAT333_ALERT_2_G	Large Aver C6-Ring C-C Dist C108 -C112 .		1.43	Ang.
PLAT333_ALERT_2_G	Large Aver C6-Ring C-C Dist C109 -C111 .		1.44	Ang.
PLAT333_ALERT_2_G	Large Aver C6-Ring C-C Dist C113 -C130 .		1.43	Ang.
PLAT333_ALERT_2_G	Large Aver C6-Ring C-C Dist C122 -C126 .		1.43	Ang.
PLAT333_ALERT_2_G	Large Aver C6-Ring C-C Dist C123 -C125 .		1.43	Ang.
PLAT335_ALERT_2_G	Check Large C6 Ring C-C Range C118 -C182		0.21	Ang.
PLAT605_ALERT_4_G	Largest Solvent Accessible VOID in the Structure		327	A**3
PLAT764_ALERT_4_G	Overcomplete CIF Bond List Detected (Rep/Expd) .		1.10	Ratio
PLAT779_ALERT_4_G	Suspect or Irrelevant (Bond) Angle(s) in CIF . #		815	Check
	DY8 -N201 -DY3 1.555 1.555 1.555		39.90	Deg.
PLAT779_ALERT_4_G	Suspect or Irrelevant (Bond) Angle(s) in CIF . #		823	Check
	DY1 -N201 -DY4 1.555 1.555 1.555		15.70	Deg.
PLAT779_ALERT_4_G	Suspect or Irrelevant (Bond) Angle(s) in CIF . #		831	Check
	DY1 -N201 -DY6 1.555 1.555 1.555		27.70	Deg.
PLAT779_ALERT_4_G	Suspect or Irrelevant (Bond) Angle(s) in CIF . #		833	Check
	N202 -N201 -DY6 1.555 1.555 1.555		40.20	Deg.
PLAT779_ALERT_4_G	Suspect or Irrelevant (Bond) Angle(s) in CIF . #		837	Check
	DY4 -N201 -DY6 1.555 1.555 1.555		18.10	Deg.
PLAT779_ALERT_4_G	Suspect or Irrelevant (Bond) Angle(s) in CIF . #		841	Check
	N201 -N201 -DY8 6.555 1.555 6.555		31.80	Deg.
PLAT779_ALERT_4_G	Suspect or Irrelevant (Bond) Angle(s) in CIF . #		845	Check
	DY3 -N201 -DY8 1.555 1.555 6.555		32.30	Deg.
PLAT779_ALERT_4_G	Suspect or Irrelevant (Bond) Angle(s) in CIF . #		854	Check
	DY11 -N201 -DY10 1.555 1.555 1.555		34.10	Deg.
PLAT779_ALERT_4_G	Suspect or Irrelevant (Bond) Angle(s) in CIF . #		855	Check
	DY3 -N201 -DY10 1.555 1.555 1.555		34.10	Deg.
PLAT779_ALERT_4_G	Suspect or Irrelevant (Bond) Angle(s) in CIF . #		867	Check
	N201 -N202 -DY7 1.555 1.555 1.555		40.30	Deg.
PLAT779_ALERT_4_G	Suspect or Irrelevant (Bond) Angle(s) in CIF . #		874	Check
	DY9 -N202 -DY2 1.555 1.555 1.555		16.80	Deg.

PLAT779_ALERT_4_G	Suspect or Irrelevant (Bond) Angle(s) in CIF . #	877	Check
DY11 -N202 -DY2	1.555 1.555 1.555	40.60	Deg.
PLAT779_ALERT_4_G	Suspect or Irrelevant (Bond) Angle(s) in CIF . #	881	Check
DY6 -N202 -DY4	1.555 1.555 1.555	21.80	Deg.
PLAT779_ALERT_4_G	Suspect or Irrelevant (Bond) Angle(s) in CIF . #	888	Check
DY6 -N202 -DY5	1.555 1.555 1.555	43.30	Deg.
PLAT779_ALERT_4_G	Suspect or Irrelevant (Bond) Angle(s) in CIF . #	896	Check
DY6 -N202 -DY1	1.555 1.555 1.555	37.40	Deg.
PLAT779_ALERT_4_G	Suspect or Irrelevant (Bond) Angle(s) in CIF . #	902	Check
DY4 -N202 -DY1	1.555 1.555 1.555	19.70	Deg.
PLAT779_ALERT_4_G	Suspect or Irrelevant (Bond) Angle(s) in CIF . #	909	Check
N202 -N202 -DY9	6.555 1.555 6.555	39.30	Deg.
PLAT779_ALERT_4_G	Suspect or Irrelevant (Bond) Angle(s) in CIF . #	910	Check
DY2 -N202 -DY9	1.555 1.555 6.555	41.90	Deg.
PLAT779_ALERT_4_G	Suspect or Irrelevant (Bond) Angle(s) in CIF . #	914	Check
DY9 -N202 -DY2	1.555 1.555 6.555	39.40	Deg.
PLAT779_ALERT_4_G	Suspect or Irrelevant (Bond) Angle(s) in CIF . #	920	Check
DY2 -N202 -DY2	1.555 1.555 6.555	28.60	Deg.
PLAT779_ALERT_4_G	Suspect or Irrelevant (Bond) Angle(s) in CIF . #	924	Check
DY9 -N202 -DY2	6.555 1.555 6.555	15.40	Deg.
PLAT789_ALERT_4_G	Atoms with Negative _atom_site_disorder_group #	82	Check
PLAT811_ALERT_5_G	No ADDSYM Analysis: Too Many Excluded Atoms	!	Info
PLAT860_ALERT_3_G	Number of Least-Squares Restraints	1014	Note
PLAT869_ALERT_4_G	ALERTS Related to the Use of SQUEEZE Suppressed	!	Info
PLAT883_ALERT_1_G	No Info/Value for _atom_sites_solution_primary .	Please Do !	
PLAT910_ALERT_3_G	Missing # of FCF Reflection(s) Below Theta(Min).	3	Note
PLAT978_ALERT_2_G	Number C-C Bonds with Positive Residual Density.	5	Info
PLAT982_ALERT_1_G	The Dy-f' = -0.1318 Deviates from IT-value =	-0.1892	Check
PLAT982_ALERT_1_G	The Ni-f' = 0.3437 Deviates from IT-value =	0.3393	Check
PLAT983_ALERT_1_G	The Dy-f" = 4.4580 Deviates from IT-Value =	4.4098	Check
PLAT983_ALERT_1_G	The Ni-f" = 1.1214 Deviates from IT-Value =	1.1124	Check

0 **ALERT level A** = Most likely a serious problem - resolve or explain
 0 **ALERT level B** = A potentially serious problem, consider carefully
 27 **ALERT level C** = Check. Ensure it is not caused by an omission or oversight
 159 **ALERT level G** = General information/check it is not something unexpected

7 ALERT type 1 CIF construction/syntax error, inconsistent or missing data
 17 ALERT type 2 Indicator that the structure model may be wrong or deficient
 17 ALERT type 3 Indicator that the structure quality may be low
 144 ALERT type 4 Improvement, methodology, query or suggestion
 1 ALERT type 5 Informative message, check

It is advisable to attempt to resolve as many as possible of the alerts in all categories. Often the minor alerts point to easily fixed oversights, errors and omissions in your CIF or refinement strategy, so attention to these fine details can be worthwhile. In order to resolve some of the more serious problems it may be necessary to carry out additional measurements or structure refinements. However, the purpose of your study may justify the reported deviations and the more serious of these should normally be commented upon in the discussion or experimental section of a paper or in the "special_details" fields of the CIF. checkCIF was carefully designed to identify outliers and unusual parameters, but every test has its limitations and alerts that are not important in a particular case may appear. Conversely, the absence of alerts does not guarantee there are no aspects of the results needing attention. It is up to the individual to critically assess their own results and, if necessary, seek expert advice.

Publication of your CIF in IUCr journals

A basic structural check has been run on your CIF. These basic checks will be run on all CIFs submitted for publication in IUCr journals (*Acta Crystallographica*, *Journal of Applied Crystallography*, *Journal of Synchrotron Radiation*); however, if you intend to submit to *Acta Crystallographica Section C* or *E* or *IUCrData*, you should make sure that full publication checks are run on the final version of your CIF prior to submission.

Publication of your CIF in other journals

Please refer to the *Notes for Authors* of the relevant journal for any special instructions relating to CIF submission.

