checkCIF/PLATON report

Structure factors have been supplied for datablock(s) ao_of_tbuncaucisp2_1_0m

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.

Datablock: ao_of_tbuncaucisp2_1_0m

```
Bond precision: C-C = 0.0029 A
                                          Wavelength=0.71073
Cell:
               a=11.5335(3)
                                  b=12.0756(3)
                                                   c=16.8745(4)
                                beta=92.093(1)
               alpha=97.930(1)
                                                  gamma=95.669(1)
               180 K
Temperature:
                Calculated
                                           Reported
Volume
               2313.32(10)
                                           2313.32(10)
Space group
               P -1
                                           P -1
                                           -P 1
Hall group
              -P 1
                                          C52 H44 Au P4, B F4
Moiety formula C52 H44 Au P4, B F4
Sum formula
              C52 H44 Au B F4 P4
                                           C52 H44 Au B F4 P4
               1076.53
                                          1076.53
               1.546
                                           1.545
Dx,g cm-3
                2
                                           2
Mu (mm-1)
                3.370
                                           3.370
F000
                1072.0
                                           1072.0
F000'
               1069.25
h,k,lmax
               15,16,22
                                           15,16,22
Nref
                11488
                                           11469
Tmin, Tmax
               0.515,0.603
                                           0.616,0.747
Tmin'
                0.505
Correction method= # Reported T Limits: Tmin=0.616 Tmax=0.747
AbsCorr = MULTI-SCAN
Data completeness= 0.998
                                  Theta(max) = 28.282
                                                     wR2 (reflections) =
R(reflections) = 0.0149(10910)
                                                     0.0379(11469)
S = 1.044
                          Npar= 587
```

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
                                                                B01P Check
PLAT244_ALERT_4_C Low 'Solvent' Ueq as Compared to Neighbors of
PLAT250_ALERT_2_C Large U3/U1 Ratio for <U(i,j) > Tensor(Resd 2)
                                                                 2.2 Note
PLAT911_ALERT_3_C Missing FCF Refl Between Thmin & STh/L= 0.600
             -1 1 0, 1 1 0, 0 2 0, 0 -1 1, -3 0 1, -1 0 1,
                      0 1 1, -1 -2 2, 1 -2 2, 1 -1 2, 0 0 2,
              1 0 1,
             -1 -1 3,
                       1 1 3,
Alert level G
PLAT002_ALERT_2_G Number of Distance or Angle Restraints on AtSite
                                                                    7 Note
PLAT154_ALERT_1_G The s.u.'s on the Cell Angles are Equal ..(Note)
                                                                0.001 Degree
PLAT176_ALERT_4_G The CIF-Embedded .res File Contains SADI Records
                                                                  3 Report
PLAT231_ALERT_4_G Hirshfeld Test (Solvent) F1 --B01P .
                                                                  5.5 s.u.
PLAT231_ALERT_4_G Hirshfeld Test (Solvent)
                                       F00B
                                                --B01P
                                                                  7.6 s.u.
PLAT231_ALERT_4_G Hirshfeld Test (Solvent) F0
PLAT232_ALERT_2_G Hirshfeld Test Diff (M-X) Au01
                                                --B01P
                                                                  7.0 s.u.
                                              --P003
                                                                  5.8 s.u.
                                                          .
PLAT302_ALERT_4_G Anion/Solvent/Minor-Residue Disorder (Resd
                                                                  60% Note
                                                         2)
PLAT720_ALERT_4_G Number of Unusual/Non-Standard Labels .....
                                                                  108 Note
            A1101
                   P002
                          P003 P004
                                       P005 F006 C007
                                                             н007
            C008
                   H008
                         C009
                                COOA
                                       F00B
                                              COOC
                                                      H00C
                                                             COOD
            HOOD
                  COOE
                         COOF COOG
                                       COOH HOOH COOI
                                                             COOJ
            HOOJ
                 C00K
                        HOOK COOL
                                       HOOL COOM HOOM
            HOON
                 C000
                         H000 C00P
                                       HOOP COOQ COOR
                                                             H00R
                                                     HOOV
            C00S
                 HOOS
                        COOT HOOT COOU COOV
                                                             COOW
            HOOW COOX HOOX COOY HOOY COOZ HOOZ
                                                              C010
                   C011
                        H011 C012
            H010
                                         H012 C013 H013
                                                              C014
                               C016
                                              C017
                         H015
                   C015
                                         H016
            H014
                                                       H017
                                                              F018
            C019
                   H019
                          C01A
                                 H01A
                                         C01B
                                                H01B
                                                       C01C
                                                               H01C
            C01D
                   H01D
                          C01E
                                  H01E
                                         C01F
                                                H01F
                                                       C01G
                                                               H01G
            C01H
                   H01H
                           C01I
                                  H01I
                                         C01J
                                                H01J
                                                       C01K
                                                               H01K
            C01L
                   H01L
                          C01M
                                 H01M
                                         C01N
                                                H01N
                                                       C010
                                                               H010
                          F01R
            B01P
                   F01Q
                                 F0
PLAT860_ALERT_3_G Number of Least-Squares Restraints .....
                                                                    3 Note
PLAT910_ALERT_3_G Missing # of FCF Reflection(s) Below Theta(Min).
                                                                    2 Note
             0 1 0, 0 0 1,
PLAT912_ALERT_4_G Missing # of FCF Reflections Above STh/L= 0.600
                                                                    3 Note
PLAT913_ALERT_3_G Missing # of Very Strong Reflections in FCF ....
                                                                    1 Note
             -3 0 1,
PLAT933_ALERT_2_G Number of HKL-OMIT Records in Embedded .res File
                                                                    4 Note
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0 0 1, 0 1 0, 1 1 0, 1 1 3, PLAT969_ALERT_5_G The 'Henn et al.' R-Factor-gap value

PLAT978_ALERT_2_G Number C-C Bonds with Positive Residual Density.

Predicted wR2: Based on SigI**2 1.49 or SHELX Weight 3.72

2.53 Note

7 Info

⁰ ALERT level A = Most likely a serious problem - resolve or explain

⁰ ALERT level B = A potentially serious problem, consider carefully

³ ALERT level C = Check. Ensure it is not caused by an omission or oversight

¹⁶ **ALERT level G** = General information/check it is not something unexpected

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1 ALERT type 1 CIF construction/syntax error, inconsistent or missing data 5 ALERT type 2 Indicator that the structure model may be wrong or deficient 4 ALERT type 3 Indicator that the structure quality may be low 8 ALERT type 4 Improvement, methodology, query or suggestion 1 ALERT type 5 Informative message, check
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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.

PLATON version of 06/01/2024; check.def file version of 05/01/2024

