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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 $F^2 > 2\sigma(F^2)$ 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.

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H1B H 0.4781 0.3333 0.6183 0.098 Uiso 1 1 calc R . .
H1C H 0.5656 0.2728 0.6018 0.098 Uiso 1 1 calc R . .
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H2B H 0.1861 0.2170 0.7104 0.153 Uiso 1 1 calc R . .
H2C H 0.1398 0.2966 0.7447 0.153 Uiso 1 1 calc R . .
C3 C 0.46444(17) 0.30661(16) 0.95561(15) 0.0518(6) Uani 1 1 d . . .
C4 C 0.5735(2) 0.3307(3) 0.9464(2) 0.1042(13) Uani 1 1 d . . .
H4A H 0.6235 0.3359 1.0056 0.156 Uiso 1 1 calc R . .
H4B H 0.5681 0.3827 0.9150 0.156 Uiso 1 1 calc R . .
H4C H 0.5983 0.2886 0.9127 0.156 Uiso 1 1 calc R . .
C6 C 0.6455(2) 0.0735(2) 0.58622(17) 0.0788(9) Uani 1 1 d . . .
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H6B H 0.7015 0.1144 0.5953 0.118 Uiso 1 1 calc R . .
H6C H 0.5775 0.1008 0.5780 0.118 Uiso 1 1 calc R . .
C7 C 0.2789(3) 0.14336(17) 0.8589(2) 0.0896(10) Uani 1 1 d . . .
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H7B H 0.3370 0.1365 0.9132 0.134 Uiso 1 1 calc R . .
H7C H 0.3012 0.1248 0.8076 0.134 Uiso 1 1 calc R . .
C9 C 0.8319(3) 0.1762(3) 0.7289(2) 0.1004(11) Uani 1 1 d . . .
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H9B H 0.7774 0.2163 0.7021 0.151 Uiso 1 1 calc R . .
H9C H 0.8338 0.1342 0.6850 0.151 Uiso 1 1 calc R . .
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H10B H 0.6392 0.1034 0.9505 0.140 Uiso 1 1 calc R . .
H10C H 0.7589 0.0748 0.9675 0.140 Uiso 1 1 calc R . .
C11 C 0.3245(2) 0.40084(14) 0.79229(17) 0.0571(6) Uani 1 1 d . . .
C12 C 0.4784(3) 0.2228(2) 1.0037(2) 0.0964(11) Uani 1 1 d . . .
H12A H 0.5277 0.2285 1.0632 0.145 Uiso 1 1 calc R . .
H12B H 0.5062 0.1832 0.9694 0.145 Uiso 1 1 calc R . .
H12C H 0.4100 0.2040 1.0089 0.145 Uiso 1 1 calc R . .
C13 C 0.7958(3) 0.2072(2) 0.8742(3) 0.0965(11) Uani 1 1 d . . .
H13A H 0.8639 0.2347 0.8962 0.145 Uiso 1 1 calc R . .
H13B H 0.7739 0.1856 0.9245 0.145 Uiso 1 1 calc R . .
H13C H 0.7430 0.2461 0.8412 0.145 Uiso 1 1 calc R . .
C14 C 0.1989(2) 0.2595(2) 0.9237(2) 0.0878(10) Uani 1 1 d . . .
H14A H 0.1383 0.2246 0.9220 0.132 Uiso 1 1 calc R . .
H14B H 0.1760 0.3164 0.9161 0.132 Uiso 1 1 calc R . .
H14C H 0.2522 0.2531 0.9812 0.132 Uiso 1 1 calc R . .
C15 C 0.6555(2) 0.01133(17) 0.86426(17) 0.0608(6) Uani 1 1 d . . .
C16 C 0.2711(3) 0.3933(2) 0.6906(2) 0.0947(11) Uani 1 1 d . . .
H16A H 0.2509 0.4475 0.6655 0.142 Uiso 1 1 calc R . .
H16B H 0.2081 0.3591 0.6804 0.142 Uiso 1 1 calc R . .
H16C H 0.3205 0.3686 0.6619 0.142 Uiso 1 1 calc R . .
C17 C 0.24741(18) 0.23469(16) 0.84695(16) 0.0550(6) Uani 1 1 d . . .
C19 C 0.37614(19) 0.15962(16) 0.61174(16) 0.0599(6) Uani 1 1 d . . .
H19A H 0.3436 0.1157 0.6371 0.090 Uiso 1 1 calc R . .
H19B H 0.4080 0.1370 0.5675 0.090 Uiso 1 1 calc R . .
H19C H 0.3223 0.1996 0.5832 0.090 Uiso 1 1 calc R . .
C20 C 0.7199(3) -0.0694(2) 0.8758(2) 0.0926(10) Uani 1 1 d . . .
H20A H 0.7070 -0.1012 0.9245 0.139 Uiso 1 1 calc R . .
H20B H 0.7952 -0.0568 0.8894 0.139 Uiso 1 1 calc R . .
H20C H 0.6981 -0.1010 0.8206 0.139 Uiso 1 1 calc R . .
C22 C 0.2473(3) 0.4458(2) 0.8359(3) 0.1071(13) Uani 1 1 d . . .
H22A H 0.2283 0.4988 0.8071 0.161 Uiso 1 1 calc R . .

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H22B H 0.2818 0.4539 0.8994 0.161 Uiso 1 1 calc R . .
 H22C H 0.1835 0.4130 0.8284 0.161 Uiso 1 1 calc R . .
 C23 C 0.4233(3) 0.45482(18) 0.8022(3) 0.0962(11) Uani 1 1 d . . .
 H23A H 0.4016 0.5081 0.7752 0.144 Uiso 1 1 calc R . .
 H23B H 0.4705 0.4287 0.7723 0.144 Uiso 1 1 calc R . .
 H23C H 0.4601 0.4618 0.8655 0.144 Uiso 1 1 calc R . .
 C24 C 0.7697(3) -0.0333(2) 0.6735(2) 0.0975(11) Uani 1 1 d . . .
 H24A H 0.7599 -0.0643 0.6184 0.146 Uiso 1 1 calc R . .
 H24B H 0.7837 -0.0707 0.7241 0.146 Uiso 1 1 calc R . .
 H24C H 0.8295 0.0040 0.6810 0.146 Uiso 1 1 calc R . .
 C25 C 0.5720(3) -0.0415(2) 0.6494(2) 0.0837(9) Uani 1 1 d . . .
 H25A H 0.5706 -0.0748 0.5972 0.126 Uiso 1 1 calc R . .
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 H25C H 0.5782 -0.0769 0.7010 0.126 Uiso 1 1 calc R . .
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 H26B H 0.3637 0.3542 1.0257 0.133 Uiso 1 1 calc R . .
 H26C H 0.4268 0.4238 0.9909 0.133 Uiso 1 1 calc R . .
 C27 C 0.80611(19) 0.13580(18) 0.81125(19) 0.0656(7) Uani 1 1 d . . .
 C28 C 0.5354(2) -0.0076(2) 0.8459(2) 0.0901(10) Uani 1 1 d . . .
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 H28B H 0.5091 -0.0335 0.7876 0.135 Uiso 1 1 calc R . .
 H28C H 0.4968 0.0432 0.8467 0.135 Uiso 1 1 calc R . .
 C29 C 0.66745(19) 0.01684(16) 0.66874(15) 0.0570(6) Uani 1 1 d . . .
 C30 C 0.9008(2) 0.0814(2) 0.8588(3) 0.0943(11) Uani 1 1 d . . .
 H30A H 0.9649 0.1146 0.8768 0.141 Uiso 1 1 calc R . .
 H30B H 0.9099 0.0385 0.8181 0.141 Uiso 1 1 calc R . .
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 C4 0.0461(14) 0.183(4) 0.074(2) -0.007(2) 0.0015(13) -0.020(2)
 C6 0.0837(19) 0.112(2) 0.0466(14) 0.0038(14) 0.0275(13) 0.0227(17)
 C7 0.116(2) 0.0566(17) 0.110(3) -0.0105(16) 0.054(2) -0.0324(17)
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 C10 0.105(2) 0.134(3) 0.0461(15) 0.0132(17) 0.0282(15) 0.029(2)
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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.

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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 $F^2 > 2\sigma(F^2)$ 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.

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P2 P 0.36548(7) 0.29695(5) 0.83645(6) 0.0408(2) Uani 1 1 d . . .
N1 N 0.5844(3) 0.14506(19) 0.7539(2) 0.0667(9) Uani 1 1 d . . .
N2 N 0.4144(3) 0.2503(2) 0.7737(2) 0.0696(10) Uani 1 1 d . . .
C1 C 0.5371(4) 0.2993(2) 0.6399(3) 0.0766(13) Uani 1 1 d . . .
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H1B H 0.4800 0.3378 0.6106 0.115 Uiso 1 1 calc R . .
H1C H 0.5679 0.2761 0.5941 0.115 Uiso 1 1 calc R . .
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H2B H 0.1808 0.2255 0.7071 0.186 Uiso 1 1 calc R . .
H2C H 0.1360 0.3055 0.7446 0.186 Uiso 1 1 calc R . .
C3 C 0.4615(3) 0.3055(3) 0.9516(3) 0.0615(10) Uani 1 1 d . . .
C4 C 0.5711(4) 0.3287(5) 0.9421(4) 0.133(2) Uani 1 1 d . . .
H4A H 0.6219 0.3341 1.0025 0.199 Uiso 1 1 calc R . .
H4B H 0.5660 0.3812 0.9096 0.199 Uiso 1 1 calc R . .
H4C H 0.5954 0.2857 0.9080 0.199 Uiso 1 1 calc R . .
C6 C 0.6472(4) 0.0729(3) 0.5880(3) 0.0842(14) Uani 1 1 d . . .
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H6B H 0.7043 0.1139 0.5982 0.126 Uiso 1 1 calc R . .
H6C H 0.5788 0.1009 0.5795 0.126 Uiso 1 1 calc R . .
C7 C 0.2688(5) 0.1485(3) 0.8575(5) 0.109(2) Uani 1 1 d . . .
H7A H 0.2059 0.1180 0.8618 0.164 Uiso 1 1 calc R . .
H7B H 0.3270 0.1405 0.9133 0.164 Uiso 1 1 calc R . .
H7C H 0.2906 0.1284 0.8055 0.164 Uiso 1 1 calc R . .
C9 C 0.8331(4) 0.1725(4) 0.7314(4) 0.1000(17) Uani 1 1 d . . .
H9A H 0.9026 0.1997 0.7516 0.150 Uiso 1 1 calc R . .
H9B H 0.7782 0.2132 0.7039 0.150 Uiso 1 1 calc R . .
H9C H 0.8349 0.1300 0.6865 0.150 Uiso 1 1 calc R . .
C10 C 0.6875(5) 0.0553(4) 0.9560(3) 0.1019(17) Uani 1 1 d . . .
H10A H 0.6801 0.0184 1.0043 0.153 Uiso 1 1 calc R . .
H10B H 0.6415 0.1034 0.9527 0.153 Uiso 1 1 calc R . .
H10C H 0.7617 0.0732 0.9691 0.153 Uiso 1 1 calc R . .
C11 C 0.3249(3) 0.4039(2) 0.7928(3) 0.0645(11) Uani 1 1 d . . .
C12 C 0.4763(6) 0.2213(4) 0.9991(4) 0.123(2) Uani 1 1 d . . .
H12A H 0.5265 0.2266 1.0599 0.185 Uiso 1 1 calc R . .
H12B H 0.5044 0.1819 0.9635 0.185 Uiso 1 1 calc R . .
H12C H 0.4076 0.2016 1.0042 0.185 Uiso 1 1 calc R . .
C13 C 0.7990(5) 0.2033(3) 0.8758(5) 0.1048(19) Uani 1 1 d . . .
H13A H 0.8681 0.2309 0.8980 0.157 Uiso 1 1 calc R . .
H13B H 0.7777 0.1815 0.9275 0.157 Uiso 1 1 calc R . .
H13C H 0.7456 0.2429 0.8426 0.157 Uiso 1 1 calc R . .
C14 C 0.1967(5) 0.2667(3) 0.9229(4) 0.1064(19) Uani 1 1 d . . .
H14A H 0.1353 0.2322 0.9226 0.160 Uiso 1 1 calc R . .
H14B H 0.1745 0.3244 0.9144 0.160 Uiso 1 1 calc R . .
H14C H 0.2516 0.2604 0.9811 0.160 Uiso 1 1 calc R . .
C15 C 0.6550(4) 0.0097(3) 0.8653(3) 0.0686(11) Uani 1 1 d . . .
C16 C 0.2696(5) 0.3980(4) 0.6920(4) 0.116(2) Uani 1 1 d . . .
H16A H 0.2495 0.4532 0.6674 0.174 Uiso 1 1 calc R . .
H16B H 0.2055 0.3639 0.6821 0.174 Uiso 1 1 calc R . .
H16C H 0.3179 0.3729 0.6612 0.174 Uiso 1 1 calc R . .

C17 C 0.2420(3) 0.2399(3) 0.8452(3) 0.0643(11) Uani 1 1 d . . .
 C19 C 0.3723(3) 0.1558(2) 0.6021(3) 0.0673(10) Uani 1 1 d . . .
 H19A H 0.3401 0.1116 0.6288 0.101 Uiso 1 1 calc R . .
 H19B H 0.4052 0.1324 0.5579 0.101 Uiso 1 1 calc R . .
 H19C H 0.3171 0.1953 0.5716 0.101 Uiso 1 1 calc R . .
 C20 C 0.7190(5) -0.0711(3) 0.8768(4) 0.107(2) Uani 1 1 d . . .
 H20A H 0.7057 -0.1033 0.9264 0.161 Uiso 1 1 calc R . .
 H20B H 0.7951 -0.0584 0.8910 0.161 Uiso 1 1 calc R . .
 H20C H 0.6968 -0.1028 0.8203 0.161 Uiso 1 1 calc R . .
 C22 C 0.2531(5) 0.4505(3) 0.8383(4) 0.116(2) Uani 1 1 d . . .
 H22A H 0.2343 0.5041 0.8087 0.174 Uiso 1 1 calc R . .
 H22B H 0.2907 0.4589 0.9027 0.174 Uiso 1 1 calc R . .
 H22C H 0.1881 0.4186 0.8329 0.174 Uiso 1 1 calc R . .
 C23 C 0.4258(5) 0.4548(3) 0.7999(5) 0.113(2) Uani 1 1 d . . .
 H23A H 0.4057 0.5092 0.7729 0.169 Uiso 1 1 calc R . .
 H23B H 0.4700 0.4266 0.7675 0.169 Uiso 1 1 calc R . .
 H23C H 0.4661 0.4611 0.8640 0.169 Uiso 1 1 calc R . .
 C24 C 0.7683(4) -0.0361(3) 0.6755(4) 0.0964(17) Uani 1 1 d . . .
 H24A H 0.7576 -0.0676 0.6191 0.145 Uiso 1 1 calc R . .
 H24B H 0.7810 -0.0742 0.7270 0.145 Uiso 1 1 calc R . .
 H24C H 0.8298 0.0004 0.6837 0.145 Uiso 1 1 calc R . .
 C25 C 0.5712(4) -0.0423(3) 0.6497(3) 0.0878(14) Uani 1 1 d . . .
 H25A H 0.5697 -0.0762 0.5966 0.132 Uiso 1 1 calc R . .
 H25B H 0.5057 -0.0097 0.6372 0.132 Uiso 1 1 calc R . .
 H25C H 0.5766 -0.0780 0.7022 0.132 Uiso 1 1 calc R . .
 C26 C 0.4346(4) 0.3665(4) 1.0180(3) 0.1031(17) Uani 1 1 d . . .
 H26A H 0.4908 0.3651 1.0759 0.155 Uiso 1 1 calc R . .
 H26B H 0.3666 0.3512 1.0280 0.155 Uiso 1 1 calc R . .
 H26C H 0.4293 0.4221 0.9924 0.155 Uiso 1 1 calc R . .
 C27 C 0.8077(3) 0.1327(3) 0.8127(3) 0.0695(11) Uani 1 1 d . . .
 C28 C 0.5361(5) -0.0079(4) 0.8461(4) 0.1041(18) Uani 1 1 d . . .
 H28A H 0.5249 -0.0452 0.8927 0.156 Uiso 1 1 calc R . .
 H28B H 0.5093 -0.0337 0.7862 0.156 Uiso 1 1 calc R . .
 H28C H 0.4980 0.0438 0.8471 0.156 Uiso 1 1 calc R . .
 C29 C 0.6680(3) 0.0158(2) 0.6701(3) 0.0590(10) Uani 1 1 d . . .
 C30 C 0.9014(4) 0.0772(3) 0.8616(4) 0.1002(17) Uani 1 1 d . . .
 H30A H 0.9668 0.1100 0.8802 0.150 Uiso 1 1 calc R . .
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 P2 0.0393(5) 0.0436(5) 0.0374(5) -0.0010(3) 0.0079(4) 0.0058(3)
 N1 0.064(2) 0.073(2) 0.059(2) 0.0024(16) 0.0104(17) 0.0356(16)
 N2 0.086(3) 0.071(2) 0.059(2) 0.0016(18) 0.031(2) 0.0284(18)
 C1 0.088(3) 0.073(3) 0.071(3) 0.020(2) 0.027(3) -0.020(2)
 C2 0.070(4) 0.201(6) 0.083(4) -0.023(4) -0.007(3) -0.055(4)
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 C4 0.044(3) 0.236(7) 0.102(5) 0.014(5) -0.006(3) -0.018(4)
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 C7 0.143(5) 0.071(3) 0.127(5) -0.012(3) 0.058(5) -0.036(3)
 C9 0.078(4) 0.119(4) 0.110(5) 0.008(4) 0.039(3) -0.026(3)
 C10 0.112(4) 0.145(5) 0.052(3) 0.012(3) 0.028(3) 0.024(3)

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C13 0.078(4) 0.101(4) 0.125(5) -0.048(3) 0.011(4) -0.021(3)
C14 0.092(4) 0.128(4) 0.123(5) -0.040(4) 0.069(4) -0.044(3)
C15 0.075(3) 0.080(3) 0.055(3) 0.013(2) 0.025(2) 0.010(2)
C16 0.147(6) 0.106(4) 0.078(4) 0.036(3) 0.004(4) 0.044(4)
C17 0.060(3) 0.071(2) 0.065(3) -0.018(2) 0.023(2) -0.0174(18)
C19 0.057(2) 0.081(3) 0.054(3) -0.013(2) -0.001(2) -0.0064(19)
C20 0.148(5) 0.085(3) 0.098(4) 0.045(3) 0.050(4) 0.038(3)
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C24 0.082(3) 0.118(4) 0.085(4) -0.030(3) 0.018(3) 0.046(3)
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C28 0.098(4) 0.134(5) 0.097(4) 0.017(4) 0.053(4) -0.016(3)
C29 0.055(2) 0.073(2) 0.049(2) -0.0090(19) 0.0153(19) 0.0173(18)
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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.
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_cell_length_a 13.1664(3)
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 _cell_angle_alpha 90.00
 _cell_angle_beta 106.5750(10)
 _cell_angle_gamma 90.00
 _cell_volume 3199.94(15)
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_cell_measurement_temperature      293(2)
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_reflns_number_gt                    5153
_reflns_threshold_expression         >2sigma(I)
_computing_structure_solution        'SHELXS-97 (Sheldrick, 1990)'
_computing_structure_refinement      'SHELXL-97 (Sheldrick, 1997)'
_refine_special_details

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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 $F^2 > 2\sigma(F^2)$ 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.

```

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_atom_sites_solution_secondary        difmap
_atom_sites_solution_hydrogens        geom
_refine_ls_hydrogen_treatment         mixed
_refine_ls_extinction_method          none
_refine_ls_number_reflns              5608
_refine_ls_number_parameters          280
_refine_ls_number_restraints          0
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_refine_ls_wR_factor_gt      0.1036
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Sn1 Sn 0.47356(2) 0.212750(15) 0.685893(16) 0.04300(11) Uani 1 1 d . . . .

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P1 P 0.67314(8) 0.07924(7) 0.77544(7) 0.0492(2) Uani 1 1 d . . . .

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P2 P 0.35647(8) 0.30238(6) 0.83292(7) 0.0478(2) Uani 1 1 d . . . .

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N1 N 0.5877(3) 0.1439(3) 0.7565(3) 0.0853(14) Uani 1 1 d . . . .

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N2 N 0.3971(4) 0.2549(3) 0.7660(3) 0.0950(16) Uani 1 1 d . . . .

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C1 C 0.5388(5) 0.3083(4) 0.6251(4) 0.0942(19) Uani 1 1 d . . . .

```

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H1A H 0.5928 0.3360 0.6706 0.141 Uiso 1 1 calc R . .

```

```

H1B H 0.4838 0.3462 0.5966 0.141 Uiso 1 1 calc R . .

```

```

H1C H 0.5690 0.2858 0.5807 0.141 Uiso 1 1 calc R . .

```

```

C2 C 0.1451(6) 0.2633(8) 0.7502(6) 0.179(5) Uani 1 1 d . . . .

```

```

H2A H 0.0824 0.2339 0.7511 0.268 Uiso 1 1 calc R . .

```

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H2B H 0.1713 0.2427 0.7025 0.268 Uiso 1 1 calc R . .

```

```

H2C H 0.1286 0.3201 0.7404 0.268 Uiso 1 1 calc R . .

```

```

C3 C 0.4540(4) 0.3038(4) 0.9483(3) 0.0833(16) Uani 1 1 d . . . .

```

```

C4 C 0.5619(5) 0.3235(9) 0.9398(6) 0.199(6) Uani 1 1 d . . . .

```

```

H4A H 0.6111 0.3285 0.9989 0.298 Uiso 1 1 calc R . .

```

```

H4B H 0.5591 0.3740 0.9078 0.298 Uiso 1 1 calc R . .

```

```

H4C H 0.5847 0.2807 0.9073 0.298 Uiso 1 1 calc R . .

```

```

C6 C 0.6475(5) 0.0671(4) 0.5910(3) 0.0939(18) Uani 1 1 d . . . .

```

```

H6A H 0.6458 0.0345 0.5390 0.141 Uiso 1 1 calc R . .

```

```

H6B H 0.7029 0.1069 0.5999 0.141 Uiso 1 1 calc R . .

```

```

H6C H 0.5806 0.0942 0.5817 0.141 Uiso 1 1 calc R . .

```

```

C7 C 0.2487(8) 0.1611(5) 0.8506(7) 0.161(4) Uani 1 1 d . . . .

```

```

H7A H 0.1852 0.1346 0.8547 0.241 Uiso 1 1 calc R . .

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```

H7B H 0.3053 0.1501 0.9043 0.241 Uiso 1 1 calc R . .

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H7C H 0.2675 0.1409 0.7990 0.241 Uiso 1 1 calc R . .

```

```

C9 C 0.8337(6) 0.1666(5) 0.7315(5) 0.133(3) Uani 1 1 d . . . .

```

```

H9A H 0.9012 0.1934 0.7506 0.199 Uiso 1 1 calc R . .

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H9B H 0.7800 0.2055 0.7033 0.199 Uiso 1 1 calc R . .

```

```

H9C H 0.8359 0.1243 0.6892 0.199 Uiso 1 1 calc R . .

```

```

C10 C 0.6878(6) 0.0584(6) 0.9580(4) 0.133(3) Uani 1 1 d . . . .

```

```

H10A H 0.6811 0.0234 1.0059 0.200 Uiso 1 1 calc R . .

```

```

H10B H 0.6423 0.1048 0.9539 0.200 Uiso 1 1 calc R . .

```

```

H10C H 0.7599 0.0762 0.9703 0.200 Uiso 1 1 calc R . .

```

```

C11 C 0.3253(5) 0.4112(3) 0.7941(4) 0.0846(16) Uani 1 1 d . . . .

```

```

C12 C 0.4632(9) 0.2180(6) 0.9869(6) 0.181(5) Uani 1 1 d . . . .

```

```

H12A H 0.5107 0.2182 1.0469 0.272 Uiso 1 1 calc R . .

```

```

H12B H 0.4900 0.1822 0.9494 0.272 Uiso 1 1 calc R . .

```

```

H12C H 0.3946 0.1995 0.9886 0.272 Uiso 1 1 calc R . .

```

```

C13 C 0.8001(6) 0.2008(4) 0.8755(6) 0.123(3) Uani 1 1 d . . . .

```

```

H13A H 0.8678 0.2271 0.8967 0.185 Uiso 1 1 calc R . .
H13B H 0.7790 0.1806 0.9260 0.185 Uiso 1 1 calc R . .
H13C H 0.7485 0.2393 0.8426 0.185 Uiso 1 1 calc R . .
C14 C 0.1857(6) 0.2815(5) 0.9154(6) 0.145(4) Uani 1 1 d . . .
H14A H 0.1255 0.2489 0.9163 0.218 Uiso 1 1 calc R . .
H14B H 0.1644 0.3374 0.9048 0.218 Uiso 1 1 calc R . .
H14C H 0.2390 0.2769 0.9725 0.218 Uiso 1 1 calc R . .
C15 C 0.6559(5) 0.0116(4) 0.8687(4) 0.0839(16) Uani 1 1 d . . .
C16 C 0.2669(9) 0.4094(6) 0.6940(5) 0.171(4) Uani 1 1 d . . .
H16A H 0.2488 0.4640 0.6728 0.257 Uiso 1 1 calc R . .
H16B H 0.2034 0.3777 0.6844 0.257 Uiso 1 1 calc R . .
H16C H 0.3116 0.3854 0.6615 0.257 Uiso 1 1 calc R . .
C17 C 0.2301(4) 0.2521(4) 0.8411(4) 0.0797(15) Uani 1 1 d . . .
C19 C 0.3599(4) 0.1475(3) 0.5841(3) 0.0777(14) Uani 1 1 d . . .
H19A H 0.3298 0.1048 0.6115 0.116 Uiso 1 1 calc R . .
H19B H 0.3937 0.1241 0.5425 0.116 Uiso 1 1 calc R . .
H19C H 0.3049 0.1840 0.5524 0.116 Uiso 1 1 calc R . .
C20 C 0.7199(7) -0.0686(5) 0.8830(5) 0.144(3) Uani 1 1 d . . .
H20A H 0.7059 -0.0988 0.9315 0.216 Uiso 1 1 calc R . .
H20B H 0.7942 -0.0563 0.8977 0.216 Uiso 1 1 calc R . .
H20C H 0.6995 -0.1004 0.8287 0.216 Uiso 1 1 calc R . .
C22 C 0.2626(8) 0.4596(4) 0.8435(7) 0.159(4) Uani 1 1 d . . .
H22A H 0.2444 0.5115 0.8146 0.238 Uiso 1 1 calc R . .
H22B H 0.3042 0.4676 0.9049 0.238 Uiso 1 1 calc R . .
H22C H 0.1990 0.4305 0.8425 0.238 Uiso 1 1 calc R . .
C23 C 0.4300(7) 0.4552(4) 0.8024(7) 0.156(4) Uani 1 1 d . . .
H23A H 0.4159 0.5092 0.7781 0.234 Uiso 1 1 calc R . .
H23B H 0.4699 0.4256 0.7696 0.234 Uiso 1 1 calc R . .
H23C H 0.4700 0.4584 0.8649 0.234 Uiso 1 1 calc R . .
C24 C 0.7647(5) -0.0408(4) 0.6808(4) 0.108(2) Uani 1 1 d . . .
H24A H 0.7541 -0.0711 0.6259 0.162 Uiso 1 1 calc R . .
H24B H 0.7749 -0.0778 0.7307 0.162 Uiso 1 1 calc R . .
H24C H 0.8262 -0.0067 0.6898 0.162 Uiso 1 1 calc R . .
C25 C 0.5717(5) -0.0436(4) 0.6550(4) 0.0981(19) Uani 1 1 d . . .
H25A H 0.5696 -0.0770 0.6035 0.147 Uiso 1 1 calc R . .
H25B H 0.5085 -0.0111 0.6427 0.147 Uiso 1 1 calc R . .
H25C H 0.5762 -0.0777 0.7064 0.147 Uiso 1 1 calc R . .
C26 C 0.4312(6) 0.3614(6) 1.0160(4) 0.145(3) Uani 1 1 d . . .
H26A H 0.4872 0.3582 1.0715 0.217 Uiso 1 1 calc R . .
H26B H 0.3653 0.3467 1.0268 0.217 Uiso 1 1 calc R . .
H26C H 0.4265 0.4160 0.9929 0.217 Uiso 1 1 calc R . .
C27 C 0.8080(4) 0.1295(4) 0.8132(4) 0.0796(15) Uani 1 1 d . . .
C28 C 0.5380(6) -0.0061(6) 0.8506(5) 0.141(3) Uani 1 1 d . . .
H28A H 0.5275 -0.0420 0.8964 0.212 Uiso 1 1 calc R . .
H28B H 0.5114 -0.0314 0.7925 0.212 Uiso 1 1 calc R . .
H28C H 0.5006 0.0440 0.8516 0.212 Uiso 1 1 calc R . .
C29 C 0.6682(4) 0.0120(3) 0.6747(3) 0.0644(12) Uani 1 1 d . . .
C30 C 0.9011(4) 0.0745(5) 0.8629(5) 0.119(3) Uani 1 1 d . . .
H30A H 0.9650 0.1063 0.8809 0.178 Uiso 1 1 calc R . .
H30B H 0.9095 0.0315 0.8234 0.178 Uiso 1 1 calc R . .
H30C H 0.8870 0.0515 0.9154 0.178 Uiso 1 1 calc R . .

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Sn1 0.04466(16) 0.04716(17) 0.03755(15) -0.00119(11) 0.01231(11) 0.00110(11)

```

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P1 0.0420(5) 0.0593(6) 0.0468(5) -0.0039(5) 0.0137(4) 0.0091(4)
 P2 0.0462(5) 0.0512(6) 0.0467(5) -0.0030(4) 0.0141(4) 0.0098(4)
 N1 0.075(3) 0.097(3) 0.073(3) -0.010(2) 0.004(2) 0.047(2)
 N2 0.111(4) 0.107(4) 0.081(3) -0.008(3) 0.049(3) 0.049(3)
 C1 0.109(5) 0.095(4) 0.083(4) 0.017(3) 0.035(3) -0.032(4)
 C2 0.087(5) 0.281(13) 0.139(8) -0.014(8) -0.015(5) -0.072(7)
 C3 0.064(3) 0.120(5) 0.057(3) -0.010(3) 0.004(2) 0.003(3)
 C4 0.051(4) 0.391(18) 0.137(7) 0.008(10) -0.001(4) -0.018(7)
 C6 0.104(4) 0.125(5) 0.056(3) -0.006(3) 0.027(3) 0.017(4)
 C7 0.217(10) 0.090(5) 0.203(10) -0.025(6) 0.104(8) -0.061(6)
 C9 0.103(5) 0.161(7) 0.147(7) -0.003(6) 0.057(5) -0.056(5)
 C10 0.150(7) 0.198(9) 0.058(3) 0.003(4) 0.041(4) 0.015(6)
 C11 0.107(4) 0.062(3) 0.094(4) 0.009(3) 0.044(3) 0.026(3)
 C12 0.195(10) 0.177(10) 0.120(7) 0.058(7) -0.038(7) 0.037(7)
 C13 0.096(5) 0.112(5) 0.150(7) -0.062(5) 0.018(5) -0.024(4)
 C14 0.119(6) 0.170(8) 0.185(9) -0.065(6) 0.105(6) -0.060(5)
 C15 0.091(4) 0.106(4) 0.064(3) 0.013(3) 0.037(3) 0.009(3)
 C16 0.248(12) 0.142(7) 0.105(6) 0.056(5) 0.017(7) 0.080(8)
 C17 0.072(3) 0.087(4) 0.086(4) -0.026(3) 0.032(3) -0.024(3)
 C19 0.067(3) 0.087(4) 0.066(3) -0.014(3) -0.001(2) -0.011(3)
 C20 0.208(9) 0.108(6) 0.128(6) 0.060(5) 0.067(6) 0.045(6)
 C22 0.226(10) 0.082(5) 0.208(9) 0.016(5) 0.125(8) 0.074(6)
 C23 0.190(9) 0.080(5) 0.233(11) 0.019(6) 0.117(8) -0.029(5)
 C24 0.087(4) 0.129(5) 0.103(4) -0.041(4) 0.019(3) 0.043(4)
 C25 0.085(4) 0.103(5) 0.099(4) -0.037(4) 0.015(3) -0.009(3)
 C26 0.117(6) 0.228(10) 0.074(4) -0.055(5) 0.004(4) 0.001(6)
 C27 0.055(3) 0.090(4) 0.090(4) -0.023(3) 0.016(3) -0.009(3)
 C28 0.134(7) 0.191(9) 0.127(6) 0.006(6) 0.081(5) -0.048(6)
 C29 0.058(3) 0.076(3) 0.061(3) -0.013(2) 0.019(2) 0.013(2)
 C30 0.051(3) 0.158(7) 0.129(6) -0.036(5) -0.005(3) 0.015(4)

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 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
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 P1 C29 1.894(4) . ?
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C3 C26 1.501(9) . ?
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C6 C29 1.537(7) . ?
C7 C17 1.514(10) . ?
C9 C27 1.523(9) . ?
C10 C15 1.529(9) . ?
C11 C22 1.501(8) . ?
C11 C16 1.519(9) . ?
C11 C23 1.528(9) . ?
C13 C27 1.537(8) . ?
C14 C17 1.509(8) . ?
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C27 C30 1.539(8) . ?

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N1 Sn1 C19 113.0(2) . . ?
N2 Sn1 C1 111.6(3) . . ?
N1 Sn1 C1 109.3(2) . . ?
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N1 P1 C15 108.4(3) . . ?
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C4 C3 C26 108.0(7) . . ?
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C23 C11 P2 108.1(4) . . ?
C28 C15 C10 105.3(5) . . ?
C28 C15 C20 110.5(7) . . ?
C10 C15 C20 107.5(6) . . ?
C28 C15 P1 108.1(4) . . ?

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C10 C15 P1 109.4(5) . . ?
 C20 C15 P1 115.5(4) . . ?
 C14 C17 C7 109.1(6) . . ?
 C14 C17 C2 108.6(7) . . ?
 C7 C17 C2 105.2(7) . . ?
 C14 C17 P2 116.8(4) . . ?
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 C2 C17 P2 108.2(5) . . ?
 C9 C27 C13 106.6(6) . . ?
 C9 C27 C30 108.3(6) . . ?
 C13 C27 C30 108.7(5) . . ?
 C9 C27 P1 109.2(4) . . ?
 C13 C27 P1 107.4(4) . . ?
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 '-x, -y, -z'

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_cell_angle_beta        70.378(11)
_cell_angle_gamma       83.628(13)
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_exptl_absorpt_correction_T_max 0.145221
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_refine_special_details

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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 $F^2 > 2\sigma(F^2)$ 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.

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_atom_sites_solution_hydrogens geom

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_refine_ls_hydrogen_treatment    mixed
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P1 P 1.02380(16) 1.25768(12) 0.62539(12) 0.0627(6) Uani 1 1 d . . .
P2 P 0.58103(16) 1.31849(12) 0.71211(12) 0.0652(6) Uani 1 1 d . . .
P3 P 0.44656(17) 0.81443(13) 0.75962(14) 0.0748(7) Uani 1 1 d . . .
P4 P -0.00252(16) 0.76630(12) 0.90833(12) 0.0638(6) Uani 1 1 d . . .
N1 N 0.9120(4) 1.2312(3) 0.6794(3) 0.0717(18) Uani 1 1 d . . .
N2 N 0.6778(4) 1.2714(3) 0.6776(3) 0.0656(17) Uani 1 1 d . . .
N3 N 0.3457(4) 0.7702(3) 0.7794(3) 0.0757(19) Uani 1 1 d . . .
N4 N 0.1093(4) 0.7372(3) 0.8995(3) 0.0695(18) Uani 1 1 d . . .
C1 C 1.1184(6) 1.1741(5) 0.6495(6) 0.081(3) Uani 1 1 d . . .
C2 C 1.0713(7) 1.0959(5) 0.6580(6) 0.127(4) Uani 1 1 d . . .
H2B H 1.1181 1.0528 0.6704 0.191 Uiso 1 1 calc R . .
H2C H 1.0607 1.1011 0.6077 0.191 Uiso 1 1 calc R . .
H2D H 1.0058 1.0852 0.7011 0.191 Uiso 1 1 calc R . .
C3 C 1.1241(7) 1.1593(5) 0.7358(6) 0.125(4) Uani 1 1 d . . .
H3B H 1.1725 1.1175 0.7479 0.187 Uiso 1 1 calc R . .
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H3D H 1.1468 1.2072 0.7375 0.187 Uiso 1 1 calc R . .
C4 C 1.2319(7) 1.1850(5) 0.5909(6) 0.136(4) Uani 1 1 d . . .
H4B H 1.2719 1.1394 0.6102 0.203 Uiso 1 1 calc R . .
H4C H 1.2618 1.2319 0.5887 0.203 Uiso 1 1 calc R . .
H4D H 1.2322 1.1904 0.5373 0.203 Uiso 1 1 calc R . .
C5 C 1.0441(7) 1.2929(6) 0.5132(5) 0.087(3) Uani 1 1 d . . .
C6 C 0.9463(7) 1.3383(6) 0.4980(5) 0.127(4) Uani 1 1 d . . .
H6A H 0.9551 1.3565 0.4407 0.190 Uiso 1 1 calc R . .
H6B H 0.9363 1.3832 0.5163 0.190 Uiso 1 1 calc R . .
H6C H 0.8867 1.3036 0.5274 0.190 Uiso 1 1 calc R . .
C7 C 1.0471(7) 1.2205(6) 0.4853(5) 0.132(4) Uani 1 1 d . . .
H7A H 1.0570 1.2390 0.4278 0.198 Uiso 1 1 calc R . .
H7B H 0.9826 1.1914 0.5144 0.198 Uiso 1 1 calc R . .
H7C H 1.1035 1.1864 0.4963 0.198 Uiso 1 1 calc R . .
C8 C 1.1415(6) 1.3436(5) 0.4557(5) 0.119(4) Uani 1 1 d . . .

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H8A H 1.1427 1.3577 0.4003 0.179 Uiso 1 1 calc R . .
 H8B H 1.2027 1.3138 0.4625 0.179 Uiso 1 1 calc R . .
 H8C H 1.1401 1.3911 0.4684 0.179 Uiso 1 1 calc R . .
 C9 C 1.0559(7) 1.3441(5) 0.6502(6) 0.086(3) Uani 1 1 d . . .
 C10 C 1.1721(7) 1.3650(5) 0.6221(6) 0.121(4) Uani 1 1 d . . .
 H10A H 1.1802 1.4088 0.6379 0.181 Uiso 1 1 calc R . .
 H10B H 1.2001 1.3795 0.5639 0.181 Uiso 1 1 calc R . .
 H10C H 1.2085 1.3197 0.6471 0.181 Uiso 1 1 calc R . .
 C11 C 1.0102(7) 1.3261(5) 0.7426(6) 0.123(4) Uani 1 1 d . . .
 H11A H 1.0252 1.3697 0.7559 0.185 Uiso 1 1 calc R . .
 H11B H 1.0406 1.2784 0.7703 0.185 Uiso 1 1 calc R . .
 H11C H 0.9361 1.3190 0.7594 0.185 Uiso 1 1 calc R . .
 C12 C 0.9989(8) 1.4183(5) 0.6135(6) 0.140(4) Uani 1 1 d . . .
 H12A H 1.0142 1.4616 0.6270 0.210 Uiso 1 1 calc R . .
 H12B H 0.9253 1.4079 0.6351 0.210 Uiso 1 1 calc R . .
 H12C H 1.0213 1.4320 0.5553 0.210 Uiso 1 1 calc R . .
 C13A C 0.4562(16) 1.2497(12) 0.7753(13) 0.113(7) Uiso 0.50 1 d P . .
 C13 C 0.4518(16) 1.2667(12) 0.7069(13) 0.119(7) Uiso 0.50 1 d P . .
 C14 C 0.4909(9) 1.2190(6) 0.8771(7) 0.152(4) Uiso 1 1 d . . .
 C15 C 0.4658(7) 1.1831(6) 0.7429(6) 0.116(3) Uiso 1 1 d . . .
 C16 C 0.3506(9) 1.3006(6) 0.7742(6) 0.150(4) Uiso 1 1 d . . .
 C17A C 0.6253(14) 1.3777(10) 0.7739(10) 0.090(5) Uiso 0.50 1 d P . .
 C17 C 0.5592(14) 1.3118(10) 0.8248(10) 0.093(5) Uiso 0.50 1 d P . .
 C18 C 0.5002(9) 1.3969(6) 0.8366(6) 0.140(4) Uiso 1 1 d . . .
 C19 C 0.6717(7) 1.3175(5) 0.8300(5) 0.098(3) Uiso 1 1 d . . .
 C20 C 0.6935(12) 1.4515(9) 0.7081(9) 0.076(5) Uiso 0.50 1 d P . .
 C21A C 0.5630(14) 1.4066(10) 0.6238(10) 0.089(5) Uiso 0.50 1 d P . .
 C21 C 0.6597(18) 1.4598(13) 0.6576(13) 0.316(11) Uiso 1 1 d . . .
 C22 C 0.6523(8) 1.4312(5) 0.5522(6) 0.113(3) Uiso 1 1 d . . .
 C23 C 0.4844(8) 1.4721(6) 0.6461(6) 0.131(4) Uiso 1 1 d . . .
 C24 C 0.4851(11) 1.3270(8) 0.5977(8) 0.191(5) Uiso 1 1 d . . .
 C25 C 0.7821(6) 1.1210(4) 0.6179(4) 0.058(2) Uiso 1 1 d . . .
 C26 C 0.7424(6) 1.1540(5) 0.5551(5) 0.087(3) Uiso 1 1 d . . .
 H26A H 0.7074 1.2021 0.5500 0.104 Uiso 1 1 calc R . .
 C27 C 0.7537(9) 1.1164(7) 0.4984(5) 0.118(4) Uani 1 1 d . . .
 H27A H 0.7267 1.1398 0.4556 0.142 Uiso 1 1 calc R . .
 C28 C 0.8045(10) 1.0450(7) 0.5054(7) 0.120(4) Uani 1 1 d . . .
 H28A H 0.8153 1.0219 0.4658 0.144 Uiso 1 1 calc R . .
 C29 C 0.8387(8) 1.0087(6) 0.5695(7) 0.112(4) Uani 1 1 d . . .
 H29A H 0.8680 0.9584 0.5767 0.134 Uiso 1 1 calc R . .
 C30 C 0.8300(6) 1.0472(5) 0.6258(5) 0.086(3) Uani 1 1 d . . .
 H30A H 0.8565 1.0229 0.6687 0.103 Uiso 1 1 calc R . .
 C31 C 0.7376(6) 1.1023(4) 0.8214(4) 0.056(2) Uani 1 1 d . . .
 C32 C 0.6632(6) 1.0438(4) 0.8513(5) 0.068(2) Uani 1 1 d . . .
 H32A H 0.6327 1.0354 0.8168 0.082 Uiso 1 1 calc R . .
 C33 C 0.6338(7) 0.9971(5) 0.9338(6) 0.083(3) Uani 1 1 d . . .
 H33A H 0.5835 0.9575 0.9540 0.099 Uiso 1 1 calc R . .
 C34 C 0.6777(8) 1.0089(6) 0.9854(5) 0.087(3) Uani 1 1 d . . .
 H34A H 0.6562 0.9782 1.0405 0.104 Uiso 1 1 calc R . .
 C35 C 0.7509(7) 1.0639(5) 0.9567(5) 0.082(3) Uani 1 1 d . . .
 H35A H 0.7820 1.0704 0.9917 0.098 Uiso 1 1 calc R . .
 C36 C 0.7825(6) 1.1123(4) 0.8750(5) 0.068(2) Uani 1 1 d . . .
 H36A H 0.8334 1.1512 0.8561 0.082 Uiso 1 1 calc R . .
 C37 C 0.5598(8) 0.7705(8) 0.6965(9) 0.146(5) Uani 1 1 d . . .
 C38 C 0.5426(11) 0.7979(10) 0.6093(8) 0.269(10) Uani 1 1 d . . .
 H38A H 0.5957 0.7753 0.5740 0.403 Uiso 1 1 calc R . .
 H38B H 0.5463 0.8549 0.5859 0.403 Uiso 1 1 calc R . .
 H38C H 0.4754 0.7799 0.6158 0.403 Uiso 1 1 calc R . .
 C39 C 0.5486(8) 0.6828(8) 0.7267(8) 0.174(5) Uani 1 1 d . . .
 H39A H 0.6050 0.6609 0.6928 0.262 Uiso 1 1 calc R . .
 H39B H 0.4837 0.6689 0.7249 0.262 Uiso 1 1 calc R . .

H39C H 0.5499 0.6616 0.7818 0.262 Uiso 1 1 calc R . . .
C40 C 0.6695(8) 0.7978(8) 0.6885(9) 0.229(8) Uani 1 1 d . . .
H40A H 0.7228 0.7720 0.6567 0.344 Uiso 1 1 calc R . . .
H40B H 0.6761 0.7836 0.7417 0.344 Uiso 1 1 calc R . . .
H40C H 0.6765 0.8544 0.6620 0.344 Uiso 1 1 calc R . . .
C41 C 0.4308(9) 0.9230(6) 0.7053(8) 0.137(4) Uani 1 1 d . . .
C42 C 0.5363(8) 0.9723(6) 0.6542(7) 0.194(6) Uani 1 1 d . . .
H42A H 0.5208 1.0268 0.6284 0.291 Uiso 1 1 calc R . . .
H42B H 0.5771 0.9502 0.6133 0.291 Uiso 1 1 calc R . . .
H42C H 0.5747 0.9697 0.6900 0.291 Uiso 1 1 calc R . . .
C43 C 0.3550(9) 0.9582(6) 0.7730(8) 0.181(6) Uani 1 1 d . . .
H43A H 0.3431 1.0136 0.7476 0.272 Uiso 1 1 calc R . . .
H43B H 0.3867 0.9521 0.8139 0.272 Uiso 1 1 calc R . . .
H43C H 0.2897 0.9298 0.7980 0.272 Uiso 1 1 calc R . . .
C44 C 0.3764(10) 0.9293(6) 0.6433(6) 0.167(5) Uani 1 1 d . . .
H44A H 0.3661 0.9844 0.6152 0.251 Uiso 1 1 calc R . . .
H44B H 0.3102 0.9024 0.6711 0.251 Uiso 1 1 calc R . . .
H44C H 0.4187 0.9052 0.6046 0.251 Uiso 1 1 calc R . . .
C45 C 0.4819(10) 0.8018(8) 0.8557(7) 0.134(4) Uani 1 1 d . . .
C46 C 0.5261(10) 0.7163(6) 0.8881(8) 0.197(7) Uani 1 1 d . . .
H46A H 0.5419 0.7103 0.9367 0.295 Uiso 1 1 calc R . . .
H46B H 0.5883 0.7093 0.8472 0.295 Uiso 1 1 calc R . . .
H46C H 0.4751 0.6771 0.9003 0.295 Uiso 1 1 calc R . . .
C47 C 0.5613(9) 0.8662(6) 0.8415(7) 0.187(6) Uani 1 1 d . . .
H47A H 0.5744 0.8580 0.8917 0.281 Uiso 1 1 calc R . . .
H47B H 0.5330 0.9182 0.8235 0.281 Uiso 1 1 calc R . . .
H47C H 0.6254 0.8617 0.8008 0.281 Uiso 1 1 calc R . . .
C48 C 0.3755(9) 0.8144(7) 0.9178(6) 0.155(5) Uani 1 1 d . . .
H48A H 0.3858 0.8093 0.9682 0.233 Uiso 1 1 calc R . . .
H48B H 0.3259 0.7751 0.9276 0.233 Uiso 1 1 calc R . . .
H48C H 0.3498 0.8666 0.8955 0.233 Uiso 1 1 calc R . . .
C49 C -0.0224(8) 0.8444(6) 0.9600(7) 0.108(3) Uani 1 1 d . . .
C50 C 0.0341(8) 0.9232(5) 0.8939(7) 0.160(5) Uani 1 1 d . . .
H50A H 0.0265 0.9632 0.9185 0.241 Uiso 1 1 calc R . . .
H50B H 0.0035 0.9414 0.8509 0.241 Uiso 1 1 calc R . . .
H50C H 0.1067 0.9129 0.8718 0.241 Uiso 1 1 calc R . . .
C51 C 0.0326(8) 0.8168(6) 1.0249(6) 0.126(4) Uani 1 1 d . . .
H51A H 0.0233 0.8556 1.0512 0.189 Uiso 1 1 calc R . . .
H51B H 0.1056 0.8107 0.9994 0.189 Uiso 1 1 calc R . . .
H51C H 0.0035 0.7667 1.0646 0.189 Uiso 1 1 calc R . . .
C52 C -0.1379(7) 0.8629(6) 1.0001(6) 0.147(4) Uani 1 1 d . . .
H52A H -0.1406 0.9016 1.0255 0.221 Uiso 1 1 calc R . . .
H52B H -0.1727 0.8150 1.0406 0.221 Uiso 1 1 calc R . . .
H52C H -0.1716 0.8835 0.9591 0.221 Uiso 1 1 calc R . . .
C53 C -0.0297(9) 0.8143(7) 0.8099(6) 0.121(4) Uani 1 1 d . . .
C54 C 0.0662(8) 0.8597(6) 0.7470(5) 0.143(4) Uani 1 1 d . . .
H54A H 0.0531 0.8855 0.6961 0.214 Uiso 1 1 calc R . . .
H54B H 0.1231 0.8235 0.7400 0.214 Uiso 1 1 calc R . . .
H54C H 0.0837 0.8990 0.7649 0.214 Uiso 1 1 calc R . . .
C55 C -0.0412(8) 0.7444(7) 0.7779(6) 0.158(5) Uani 1 1 d . . .
H55A H -0.0544 0.7672 0.7266 0.237 Uiso 1 1 calc R . . .
H55B H -0.0981 0.7098 0.8170 0.237 Uiso 1 1 calc R . . .
H55C H 0.0220 0.7144 0.7709 0.237 Uiso 1 1 calc R . . .
C56 C -0.1292(9) 0.8690(6) 0.8105(6) 0.169(5) Uani 1 1 d . . .
H56A H -0.1333 0.8917 0.7562 0.254 Uiso 1 1 calc R . . .
H56B H -0.1239 0.9109 0.8299 0.254 Uiso 1 1 calc R . . .
H56C H -0.1906 0.8376 0.8458 0.254 Uiso 1 1 calc R . . .
C57 C -0.0996(8) 0.6817(5) 0.9752(7) 0.107(3) Uani 1 1 d . . .
C58 C -0.0994(8) 0.6618(5) 1.0667(5) 0.136(4) Uani 1 1 d . . .
H58A H -0.1470 0.6186 1.1028 0.204 Uiso 1 1 calc R . . .
H58B H -0.1205 0.7079 1.0827 0.204 Uiso 1 1 calc R . . .

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H58C H -0.0306 0.6469 1.0694 0.204 Uiso 1 1 calc R . .
C59 C -0.2128(7) 0.6984(6) 0.9727(6) 0.144(4) Uani 1 1 d . . .
H59A H -0.2554 0.6521 1.0076 0.216 Uiso 1 1 calc R . .
H59B H -0.2131 0.7112 0.9179 0.216 Uiso 1 1 calc R . .
H59C H -0.2398 0.7424 0.9913 0.216 Uiso 1 1 calc R . .
C60 C -0.0596(7) 0.6091(5) 0.9502(6) 0.121(4) Uani 1 1 d . . .
H60A H -0.1078 0.5656 0.9832 0.181 Uiso 1 1 calc R . .
H60B H 0.0070 0.5945 0.9579 0.181 Uiso 1 1 calc R . .
H60C H -0.0527 0.6213 0.8939 0.181 Uiso 1 1 calc R . .
C61 C 0.2260(6) 0.6330(5) 0.7677(5) 0.064(2) Uani 1 1 d . . .
C62 C 0.2597(7) 0.6716(5) 0.6845(5) 0.088(3) Uani 1 1 d . . .
H62A H 0.2919 0.7211 0.6643 0.106 Uiso 1 1 calc R . .
C63 C 0.2482(8) 0.6404(6) 0.6305(6) 0.112(4) Uani 1 1 d . . .
H63A H 0.2706 0.6691 0.5748 0.135 Uiso 1 1 calc R . .
C64 C 0.2046(9) 0.5689(7) 0.6579(6) 0.110(4) Uani 1 1 d . . .
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C65 C 0.1720(8) 0.5272(5) 0.7383(7) 0.113(4) Uani 1 1 d . . .
H65A H 0.1433 0.4766 0.7567 0.136 Uiso 1 1 calc R . .
C66 C 0.1809(8) 0.5586(5) 0.7928(5) 0.104(3) Uani 1 1 d . . .
H66A H 0.1561 0.5295 0.8482 0.125 Uiso 1 1 calc R . .
C67 C 0.2708(6) 0.5984(4) 0.9513(5) 0.063(2) Uani 1 1 d . . .
C68 C 0.2112(7) 0.5954(5) 1.0302(6) 0.084(3) Uani 1 1 d . . .
H68A H 0.1596 0.6330 1.0373 0.101 Uiso 1 1 calc R . .
C69 C 0.2274(9) 0.5378(7) 1.0978(6) 0.116(4) Uani 1 1 d . . .
H69A H 0.1870 0.5375 1.1496 0.139 Uiso 1 1 calc R . .
C70 C 0.3018(11) 0.4811(7) 1.0900(7) 0.122(4) Uani 1 1 d . . .
H70A H 0.3119 0.4422 1.1359 0.147 Uiso 1 1 calc R . .
C71 C 0.3606(8) 0.4826(5) 1.0142(8) 0.106(3) Uani 1 1 d . . .
H71A H 0.4125 0.4450 1.0087 0.128 Uiso 1 1 calc R . .
C72 C 0.3457(7) 0.5384(5) 0.9448(6) 0.082(3) Uani 1 1 d . . .
H72A H 0.3853 0.5364 0.8937 0.098 Uiso 1 1 calc R . .

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loop_

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Sn2 0.0540(4) 0.0549(4) 0.0607(4) -0.0229(3) -0.0147(3) -0.0033(3)
P1 0.0546(15) 0.0527(13) 0.0699(15) -0.0140(11) -0.0112(12) -0.0064(11)
P2 0.0547(15) 0.0764(15) 0.0593(14) -0.0215(12) -0.0136(12) 0.0012(12)
P3 0.0524(15) 0.0781(16) 0.0948(17) -0.0419(14) -0.0079(13) -0.0097(13)
P4 0.0498(15) 0.0582(14) 0.0653(14) -0.0054(11) -0.0117(12) -0.0011(11)
N1 0.050(4) 0.090(5) 0.071(4) -0.026(4) -0.014(4) -0.010(4)
N2 0.047(4) 0.082(4) 0.065(4) -0.030(4) -0.012(3) 0.011(3)
N3 0.064(5) 0.080(5) 0.082(5) -0.027(4) -0.014(4) -0.026(4)
N4 0.051(4) 0.085(5) 0.071(4) -0.027(4) -0.020(4) 0.013(4)
C1 0.059(6) 0.067(6) 0.095(7) -0.016(5) -0.014(5) 0.009(5)
C2 0.119(9) 0.053(6) 0.187(11) -0.028(6) -0.039(8) 0.013(6)
C3 0.104(9) 0.100(8) 0.144(10) 0.002(7) -0.060(8) 0.014(6)
C4 0.069(7) 0.120(8) 0.168(10) -0.031(7) -0.003(7) 0.025(6)
C5 0.076(7) 0.089(7) 0.075(6) -0.014(5) -0.010(6) -0.004(6)
C6 0.091(8) 0.151(9) 0.084(7) 0.022(6) -0.021(6) -0.018(7)
C7 0.123(9) 0.188(11) 0.068(7) -0.040(7) 0.004(6) -0.055(8)
C8 0.085(7) 0.131(8) 0.089(7) 0.002(6) 0.008(6) -0.033(6)
C9 0.079(7) 0.073(6) 0.100(7) -0.034(6) -0.015(6) -0.008(5)
C10 0.090(8) 0.114(8) 0.158(9) -0.047(7) -0.024(7) -0.046(6)
C11 0.124(9) 0.124(8) 0.147(10) -0.082(8) -0.031(8) -0.021(7)

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C12 0.165(11) 0.066(7) 0.187(11) -0.046(7) -0.057(9) 0.023(7)
C27 0.194(12) 0.110(9) 0.076(7) -0.038(7) -0.067(7) 0.001(8)
C28 0.155(12) 0.103(9) 0.078(8) -0.045(7) 0.016(8) -0.026(8)
C29 0.145(10) 0.079(8) 0.104(9) -0.044(7) -0.014(8) -0.009(7)
C30 0.084(7) 0.082(7) 0.090(7) -0.035(6) -0.019(5) 0.000(5)
C31 0.053(5) 0.054(5) 0.059(5) -0.023(4) -0.005(4) -0.014(4)
C32 0.071(6) 0.059(5) 0.073(6) -0.020(5) -0.021(5) -0.011(5)
C33 0.081(7) 0.056(6) 0.092(7) -0.021(6) 0.001(6) -0.025(5)
C34 0.097(8) 0.077(7) 0.072(7) -0.013(6) -0.019(6) -0.009(6)
C35 0.091(8) 0.080(7) 0.074(7) -0.022(5) -0.033(6) 0.012(6)
C36 0.073(6) 0.057(5) 0.072(6) -0.014(5) -0.025(5) -0.012(4)
C37 0.088(9) 0.126(10) 0.217(14) -0.097(10) 0.004(9) -0.007(8)
C38 0.200(16) 0.46(3) 0.127(12) -0.161(16) 0.066(12) -0.097(17)
C39 0.111(10) 0.205(14) 0.240(15) -0.165(13) -0.025(10) 0.075(10)
C40 0.044(8) 0.281(17) 0.35(2) -0.159(15) 0.018(10) -0.019(9)
C41 0.108(9) 0.095(8) 0.180(12) 0.022(8) -0.069(9) -0.047(7)
C42 0.149(11) 0.120(9) 0.267(15) 0.002(10) -0.054(11) -0.084(8)
C43 0.143(12) 0.113(10) 0.322(18) -0.118(11) -0.087(12) 0.060(8)
C44 0.215(14) 0.114(9) 0.147(10) 0.039(7) -0.090(10) -0.077(9)
C45 0.136(10) 0.157(11) 0.164(11) -0.097(10) -0.065(9) -0.016(9)
C46 0.260(16) 0.087(8) 0.319(18) -0.047(10) -0.221(15) 0.033(9)
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C48 0.177(13) 0.190(12) 0.131(9) -0.097(9) -0.051(9) 0.025(10)
C49 0.081(8) 0.092(8) 0.140(9) -0.055(7) -0.012(7) 0.020(6)
C50 0.177(12) 0.068(7) 0.197(11) -0.010(7) -0.034(9) -0.046(7)
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C63 0.194(12) 0.068(7) 0.074(7) -0.006(6) -0.050(7) -0.035(7)
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C67 0.065(6) 0.054(5) 0.078(6) -0.025(5) -0.033(5) 0.014(5)
C68 0.097(7) 0.087(7) 0.074(7) -0.037(6) -0.029(6) 0.016(6)
C69 0.162(12) 0.106(8) 0.072(7) -0.014(7) -0.053(7) 0.023(8)
C70 0.177(14) 0.099(9) 0.114(10) -0.033(8) -0.090(10) 0.032(9)
C71 0.123(10) 0.063(7) 0.160(11) -0.038(8) -0.086(9) 0.030(6)
C72 0.078(7) 0.070(6) 0.096(7) -0.031(6) -0.029(6) 0.019(5)

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geom_special_details

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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.

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P1 C1 1.897(8) . ?
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P2 C21A 1.892(16) . ?
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P2 C17A 2.069(17) . ?
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P2 C21 2.58(2) . ?
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  'P' 'P' 0.1023 0.0942
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  'Sn' 'Sn' -0.6537 1.4246
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  'Cl' 'Cl' 0.1484 0.1585
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_computing_structure_refinement   'SHELXL-97 (Sheldrick, 1997)'
_refine_special_details

```

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 $F^2 > 2\sigma(F^2)$ 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.

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P1 P 0.27829(10) 1.47213(7) 0.10976(6) 0.0531(2) Uani 1 1 d . . .
Cl1 Cl 0.0739(2) 1.96218(10) 0.21362(11) 0.1072(5) Uani 1 1 d . . .
N1 N 0.1980(4) 1.5653(3) 0.1614(2) 0.0597(8) Uani 1 1 d . . .
H1A H 0.1530 1.5310 0.1991 0.072 Uiso 1 1 calc R . .
C2 C 0.2126(7) 1.7277(4) 0.3013(3) 0.0861(14) Uani 1 1 d . . .
H2A H 0.2480 1.6539 0.3102 0.129 Uiso 1 1 calc R . .
H2B H 0.1290 1.7411 0.3348 0.129 Uiso 1 1 calc R . .
H2C H 0.2887 1.7798 0.3139 0.129 Uiso 1 1 calc R . .
C3 C 0.2998(6) 1.8121(4) 0.0942(4) 0.0958(17) Uani 1 1 d . . .
H3A H 0.3508 1.7527 0.0682 0.144 Uiso 1 1 calc R . .
H3B H 0.3693 1.8591 0.1207 0.144 Uiso 1 1 calc R . .
H3C H 0.2466 1.8544 0.0554 0.144 Uiso 1 1 calc R . .
C5 C 0.3138(11) 1.2369(4) 0.1286(5) 0.142(3) Uani 1 1 d . . .
H5A H 0.3124 1.1793 0.1680 0.213 Uiso 1 1 calc R . .
H5B H 0.4085 1.2392 0.1036 0.213 Uiso 1 1 calc R . .
H5C H 0.2400 1.2224 0.0892 0.213 Uiso 1 1 calc R . .
C10 C 0.1710(7) 1.4362(5) 0.0178(3) 0.0885(14) Uani 1 1 d . . .
H10A H 0.2190 1.3731 -0.0081 0.106 Uiso 1 1 calc R . .
C9 C 0.5517(7) 1.5690(6) 0.1430(5) 0.128(3) Uani 1 1 d . . .
H9A H 0.6434 1.5949 0.1219 0.192 Uiso 1 1 calc R . .
H9B H 0.5697 1.5113 0.1811 0.192 Uiso 1 1 calc R . .
H9C H 0.5014 1.6291 0.1686 0.192 Uiso 1 1 calc R . .
C1 C -0.0689(5) 1.7224(5) 0.1429(3) 0.0896(15) Uani 1 1 d . . .
H1B H -0.0818 1.6474 0.1253 0.134 Uiso 1 1 calc R . .
H1C H -0.0913 1.7721 0.1000 0.134 Uiso 1 1 calc R . .
H1D H -0.1333 1.7368 0.1869 0.134 Uiso 1 1 calc R . .
C6 C 0.3826(8) 1.3640(6) 0.2442(3) 0.117(2) Uani 1 1 d . . .
H6A H 0.3863 1.2972 0.2751 0.176 Uiso 1 1 calc R . .
H6B H 0.3410 1.4224 0.2758 0.176 Uiso 1 1 calc R . .
H6C H 0.4801 1.3843 0.2281 0.176 Uiso 1 1 calc R . .
C7 C 0.4530(5) 1.5221(4) 0.0725(3) 0.0805(12) Uani 1 1 d . . .
H7A H 0.4308 1.5852 0.0378 0.097 Uiso 1 1 calc R . .
C12 C 0.0153(7) 1.3983(7) 0.0465(5) 0.141(3) Uani 1 1 d . . .
H12A H -0.0436 1.3790 0.0011 0.212 Uiso 1 1 calc R . .
H12B H -0.0310 1.4575 0.0751 0.212 Uiso 1 1 calc R . .
H12C H 0.0249 1.3351 0.0807 0.212 Uiso 1 1 calc R . .
C11 C 0.1733(9) 1.5344(6) -0.0404(4) 0.126(2) Uani 1 1 d . . .
H11A H 0.1184 1.5158 -0.0873 0.189 Uiso 1 1 calc R . .

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H11B H 0.2729 1.5509 -0.0548 0.189 Uiso 1 1 calc R . .
H11C H 0.1301 1.5980 -0.0153 0.189 Uiso 1 1 calc R . .
C8 C 0.5341(7) 1.4367(5) 0.0202(4) 0.112(2) Uani 1 1 d . . .
H8A H 0.6254 1.4676 0.0023 0.168 Uiso 1 1 calc R . .
H8B H 0.4744 1.4183 -0.0250 0.168 Uiso 1 1 calc R . .
H8C H 0.5530 1.3711 0.0508 0.168 Uiso 1 1 calc R . .
C4 C 0.2838(8) 1.3446(4) 0.1673(3) 0.0908(16) Uani 1 1 d . . .
H4A H 0.1840 1.3369 0.1884 0.109 Uiso 1 1 calc R . .

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P1 0.0574(5) 0.0512(5) 0.0505(5) -0.0036(4) 0.0026(4) -0.0011(4)
C1 0.1345(12) 0.0605(7) 0.1266(11) -0.0082(7) 0.0551(10) 0.0130(7)
N1 0.065(2) 0.0535(17) 0.0609(17) -0.0005(14) 0.0142(16) -0.0016(15)
C2 0.108(4) 0.085(3) 0.065(2) -0.011(2) -0.003(3) -0.006(3)
C3 0.106(4) 0.068(3) 0.113(4) 0.006(3) 0.056(4) -0.002(3)
C5 0.234(9) 0.060(3) 0.132(5) -0.005(3) 0.018(6) 0.016(5)
C10 0.100(4) 0.100(4) 0.065(3) -0.006(3) -0.012(3) 0.001(3)
C9 0.060(3) 0.140(6) 0.184(7) -0.042(5) -0.006(4) -0.019(3)
C1 0.065(3) 0.102(4) 0.102(3) -0.007(3) -0.022(3) 0.020(3)
C6 0.128(5) 0.149(6) 0.075(3) 0.030(4) -0.010(4) 0.034(5)
C7 0.068(3) 0.076(3) 0.097(3) -0.007(2) 0.019(2) -0.001(2)
C12 0.096(4) 0.198(8) 0.129(6) -0.062(6) -0.011(4) -0.053(5)
C11 0.151(6) 0.153(6) 0.075(3) 0.028(4) -0.038(4) -0.003(5)
C8 0.093(4) 0.112(4) 0.131(5) -0.024(4) 0.050(4) 0.000(3)
C4 0.124(4) 0.061(2) 0.087(3) 0.007(2) 0.012(3) 0.015(3)

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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.
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Sn1 C3 2.125(4) . ?
Sn1 C2 2.138(5) . ?
Sn1 N1 2.246(3) . ?
Sn1 C1 2.7650(17) . ?
P1 N1 1.598(3) . ?
P1 C7 1.814(5) . ?
P1 C4 1.820(5) . ?
P1 C10 1.877(5) . ?
C5 C4 1.479(7) . ?
C10 C11 1.537(8) . ?

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*C10 C12 1.567(9) . . ?

C9 C7 1.590(9) . . ?

C6 C4 1.591(8) . . ?

C7 C8 1.543(7) . . ?

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C1 Sn1 C3 117.6(2) . . . ?

C1 Sn1 C2 120.8(2) . . . ?

C3 Sn1 C2 120.9(2) . . . ?

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C3 Sn1 N1 98.85(16) . . . ?

C2 Sn1 N1 88.61(17) . . . ?

C1 Sn1 C1 87.05(15) . . . ?

C3 Sn1 C1 86.96(14) . . . ?

C2 Sn1 C1 87.95(16) . . . ?

N1 Sn1 C1 174.17(9) . . . ?

N1 P1 C7 110.8(2) . . . ?

N1 P1 C4 108.7(2) . . . ?

C7 P1 C4 116.2(3) . . . ?

N1 P1 C10 111.8(2) . . . ?

C7 P1 C10 104.5(3) . . . ?

C4 P1 C10 104.8(3) . . . ?

P1 N1 Sn1 147.7(2) . . . ?

C11 C10 C12 115.7(6) . . . ?

C11 C10 P1 109.7(4) . . . ?

C12 C10 P1 106.7(4) . . . ?

C8 C7 C9 113.0(5) . . . ?

C8 C7 P1 113.2(4) . . . ?

C9 C7 P1 111.0(4) . . . ?

C5 C4 C6 112.4(6) . . . ?

C5 C4 P1 121.1(4) . . . ?

C6 C4 P1 108.7(4) . . . ?

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_computing_structure_refinement 'SHELXL-97 (Sheldrick, 1997)'

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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 $F^2 > 2\sigma(F^2)$ 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.

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_refine_ls_number_parameters 388
_refine_ls_number_restraints 0
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P1 P 0.94759(16) 0.03465(15) 0.25719(8) 0.0517(5) Uani 1 1 d . . .
N1 N 0.8068(4) -0.0270(4) 0.2335(2) 0.0428(9) Uani 1 1 d . . .
Si1 Si 0.65357(17) 0.09958(14) 0.17149(9) 0.0509(5) Uani 1 1 d . . .
C1 C 0.7828(6) -0.2591(5) 0.1672(3) 0.0462(11) Uani 1 1 d . . .
C2 C 0.9011(8) -0.2686(6) 0.1119(3) 0.0609(16) Uani 1 1 d . . .
C3 C 0.9012(12) -0.3128(7) 0.0361(4) 0.089(3) Uani 1 1 d . . .
C4 C 0.7779(14) -0.3535(8) 0.0110(4) 0.099(3) Uani 1 1 d . . .
C5 C 0.6570(11) -0.3485(7) 0.0617(4) 0.083(2) Uani 1 1 d . . .

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C6 C 0.6633(8) -0.3019(6) 0.1376(4) 0.0691(17) Uani 1 1 d . . .
C7 C 0.9473(5) -0.3100(5) 0.3079(3) 0.0400(10) Uani 1 1 d . . .
C8 C 1.0452(6) -0.4535(5) 0.2879(3) 0.0453(12) Uani 1 1 d . . .
C9 C 1.1505(6) -0.5558(5) 0.3395(3) 0.0507(13) Uani 1 1 d . . .
C10 C 1.1630(6) -0.5189(6) 0.4156(3) 0.0529(13) Uani 1 1 d . . .
C11 C 1.0688(6) -0.3804(6) 0.4391(3) 0.0506(13) Uani 1 1 d . . .
C12 C 0.9666(5) -0.2821(5) 0.3863(3) 0.0399(10) Uani 1 1 d . . .
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C14 C 0.6252(6) -0.3239(5) 0.3359(3) 0.0480(12) Uani 1 1 d . . .
C15 C 0.5152(7) -0.3379(7) 0.3906(4) 0.0616(15) Uani 1 1 d . . .
C16 C 0.4249(6) -0.2148(7) 0.4282(3) 0.0613(15) Uani 1 1 d . . .
C17 C 0.4437(6) -0.0796(7) 0.4126(3) 0.0547(13) Uani 1 1 d . . .
C18 C 0.5557(6) -0.0688(5) 0.3575(3) 0.0451(11) Uani 1 1 d . . .
C19 C 0.9983(8) 0.1421(8) 0.1766(3) 0.0697(17) Uani 1 1 d . . .
H19A H 0.9057 0.2230 0.1591 0.105 Uiso 1 1 calc R . .
H19B H 1.0412 0.0778 0.1337 0.105 Uiso 1 1 calc R . .
H19C H 1.0750 0.1826 0.1943 0.105 Uiso 1 1 calc R . .
C20 C 1.1376(7) -0.1041(8) 0.2791(4) 0.0773(19) Uani 1 1 d . . .
H20A H 1.1695 -0.1719 0.2367 0.116 Uiso 1 1 calc R . .
H20B H 1.1316 -0.1597 0.3274 0.116 Uiso 1 1 calc R . .
H20C H 1.2132 -0.0549 0.2849 0.116 Uiso 1 1 calc R . .
C21 C 0.9005(9) 0.1547(8) 0.3393(4) 0.0777(18) Uani 1 1 d . . .
H21A H 0.7997 0.2318 0.3308 0.117 Uiso 1 1 calc R . .
H21B H 0.9793 0.2005 0.3441 0.117 Uiso 1 1 calc R . .
H21C H 0.8974 0.0963 0.3869 0.117 Uiso 1 1 calc R . .
C22 C 0.5950(9) 0.2986(6) 0.2015(5) 0.0756(18) Uani 1 1 d . . .
H22A H 0.5629 0.3040 0.2559 0.113 Uiso 1 1 calc R . .
H22B H 0.5091 0.3612 0.1691 0.113 Uiso 1 1 calc R . .
H22C H 0.6829 0.3330 0.1947 0.113 Uiso 1 1 calc R . .
C23 C 0.7154(9) 0.0880(8) 0.0641(4) 0.0766(18) Uani 1 1 d . . .
H23A H 0.7453 -0.0145 0.0490 0.115 Uiso 1 1 calc R . .
H23B H 0.8032 0.1223 0.0569 0.115 Uiso 1 1 calc R . .
H23C H 0.6292 0.1502 0.0319 0.115 Uiso 1 1 calc R . .
C24 C 0.4639(7) 0.0602(6) 0.1740(4) 0.0655(15) Uani 1 1 d . . .
H24A H 0.4251 0.0643 0.2274 0.098 Uiso 1 1 calc R . .
H24B H 0.4818 -0.0381 0.1550 0.098 Uiso 1 1 calc R . .
H24C H 0.3879 0.1343 0.1410 0.098 Uiso 1 1 calc R . .
F1 F 1.0287(4) -0.2333(4) 0.13204(19) 0.0701(10) Uani 1 1 d . . .
F2 F 1.0193(7) -0.3176(5) -0.0145(2) 0.115(2) Uani 1 1 d . . .
F3 F 0.7758(10) -0.3967(5) -0.0629(3) 0.153(3) Uani 1 1 d . . .
F4 F 0.5377(7) -0.3902(5) 0.0399(3) 0.125(2) Uani 1 1 d . . .
F5 F 0.5348(4) -0.2961(4) 0.1829(2) 0.0749(10) Uani 1 1 d . . .
F6 F 1.0393(4) -0.5061(3) 0.21560(18) 0.0670(10) Uani 1 1 d . . .
F7 F 1.2362(4) -0.6935(4) 0.3148(2) 0.0753(10) Uani 1 1 d . . .
F8 F 1.2617(4) -0.6172(4) 0.4663(2) 0.0779(11) Uani 1 1 d . . .
F9 F 1.0762(4) -0.3418(4) 0.51389(17) 0.0665(9) Uani 1 1 d . . .
F10 F 0.8796(4) -0.1458(3) 0.41324(16) 0.0537(8) Uani 1 1 d . . .
F11 F 0.7144(4) -0.4515(3) 0.30188(19) 0.0607(8) Uani 1 1 d . . .
F12 F 0.4987(5) -0.4737(4) 0.4049(3) 0.0892(12) Uani 1 1 d . . .
F13 F 0.3147(5) -0.2257(6) 0.4808(2) 0.0998(14) Uani 1 1 d . . .
F14 F 0.3542(4) 0.0426(4) 0.4502(2) 0.0775(11) Uani 1 1 d . . .
F15 F 0.5696(4) 0.0687(3) 0.34861(19) 0.0605(9) Uani 1 1 d . . .

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 Si1 0.0567(9) 0.0427(8) 0.0552(9) 0.0029(6) 0.0012(7) -0.0204(6)
 C1 0.068(3) 0.040(2) 0.031(2) -0.0035(19) 0.001(2) -0.018(2)
 C2 0.094(4) 0.047(3) 0.034(3) -0.006(2) 0.015(3) -0.015(3)
 C3 0.145(8) 0.057(4) 0.045(4) -0.002(3) 0.027(5) -0.009(4)
 C4 0.172(9) 0.058(4) 0.040(4) -0.008(3) -0.013(5) -0.004(5)
 C5 0.146(7) 0.054(3) 0.047(4) -0.016(3) -0.037(4) -0.026(4)
 C6 0.089(4) 0.041(3) 0.074(4) -0.002(3) -0.003(3) -0.019(3)
 C7 0.044(2) 0.050(2) 0.030(2) -0.0050(19) 0.0144(18) -0.023(2)
 C8 0.050(3) 0.047(2) 0.037(3) -0.006(2) 0.015(2) -0.015(2)
 C9 0.049(3) 0.050(3) 0.050(3) 0.000(2) 0.013(2) -0.014(2)
 C10 0.047(3) 0.061(3) 0.052(3) 0.016(2) 0.004(2) -0.023(2)
 C11 0.056(3) 0.072(3) 0.035(3) 0.005(2) 0.010(2) -0.038(3)
 C12 0.047(2) 0.051(3) 0.028(2) -0.0077(19) 0.0112(19) -0.026(2)
 C13 0.041(2) 0.045(2) 0.038(3) -0.0029(19) 0.0078(19) -0.0181(19)
 C14 0.050(3) 0.053(3) 0.047(3) 0.000(2) 0.003(2) -0.025(2)
 C15 0.062(3) 0.074(4) 0.061(4) 0.018(3) 0.001(3) -0.043(3)
 C16 0.049(3) 0.096(4) 0.044(3) 0.006(3) 0.012(2) -0.035(3)
 C17 0.040(3) 0.078(3) 0.045(3) -0.010(3) 0.012(2) -0.019(2)
 C18 0.046(3) 0.053(3) 0.042(3) -0.007(2) 0.007(2) -0.024(2)
 C19 0.085(4) 0.094(4) 0.048(3) 0.016(3) -0.003(3) -0.058(4)
 C20 0.055(3) 0.107(5) 0.082(4) 0.028(4) -0.003(3) -0.047(3)
 C21 0.107(5) 0.088(4) 0.065(4) -0.020(3) 0.006(3) -0.067(4)
 C22 0.092(5) 0.046(3) 0.089(5) -0.005(3) -0.005(4) -0.024(3)
 C23 0.097(5) 0.079(4) 0.053(4) 0.018(3) -0.006(3) -0.032(3)
 C24 0.055(3) 0.054(3) 0.086(4) 0.003(3) -0.002(3) -0.019(2)
 F1 0.082(2) 0.079(2) 0.0482(19) -0.0067(15) 0.0307(17) -0.0263(18)
 F2 0.192(5) 0.090(3) 0.034(2) -0.0065(17) 0.046(3) -0.015(3)
 F3 0.275(8) 0.090(3) 0.047(2) -0.022(2) -0.025(3) 0.001(4)
 F4 0.169(5) 0.083(3) 0.132(4) -0.016(3) -0.077(4) -0.046(3)
 F5 0.080(2) 0.073(2) 0.084(3) -0.0028(18) -0.0192(19) -0.0413(18)
 F6 0.087(2) 0.0539(16) 0.0452(18) -0.0146(13) 0.0171(16) -0.0038(15)
 F7 0.072(2) 0.0557(18) 0.079(2) -0.0050(16) 0.0098(18) 0.0025(15)
 F8 0.071(2) 0.087(2) 0.071(2) 0.0293(19) -0.0188(17) -0.0250(18)
 F9 0.086(2) 0.096(2) 0.0328(16) 0.0028(15) 0.0027(14) -0.0513(19)
 F10 0.0685(18) 0.0559(16) 0.0403(16) -0.0170(12) 0.0127(13) -0.0248(14)
 F11 0.076(2) 0.0454(15) 0.068(2) -0.0058(14) 0.0065(16) -0.0301(14)
 F12 0.102(3) 0.094(3) 0.095(3) 0.024(2) 0.007(2) -0.069(2)
 F13 0.082(3) 0.154(4) 0.079(3) 0.007(3) 0.039(2) -0.064(3)
 F14 0.061(2) 0.103(3) 0.062(2) -0.0249(19) 0.0271(17) -0.0174(18)
 F15 0.0686(19) 0.0482(16) 0.066(2) -0.0196(14) 0.0251(16) -0.0205(14)

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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.

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* B1 C1 1.659(7) . ?
B1 C13 1.670(6) . ?
B1 C7 1.672(7) . ?
P1 N1 1.637(4) . ?
P1 C21 1.792(7) . ?
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P1 C19 1.805(5) . ?
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Si1 C22 1.868(6) . ?
Si1 C24 1.876(6) . ?
Si1 C23 1.889(6) . ?
C1 C6 1.389(9) . ?
C1 C2 1.390(8) . ?
C2 F1 1.362(8) . ?
C2 C3 1.370(10) . ?
C3 F2 1.346(9) . ?
C3 C4 1.380(15) . ?
C4 F3 1.339(9) . ?
C4 C5 1.366(14) . ?
C5 F4 1.334(10) . ?
C5 C6 1.388(9) . ?
C6 F5 1.367(8) . ?
C7 C12 1.393(7) . ?
C7 C8 1.397(7) . ?
C8 F6 1.353(6) . ?
C8 C9 1.386(7) . ?
C9 F7 1.350(6) . ?
C9 C10 1.369(8) . ?
C10 F8 1.333(6) . ?
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C11 F9 1.345(6) . ?
C11 C12 1.369(7) . ?
C12 F10 1.356(5) . ?
C13 C18 1.371(7) . ?
C13 C14 1.402(7) . ?
C14 F11 1.350(6) . ?
C14 C15 1.381(7) . ?
C15 C16 1.353(9) . ?
C15 F12 1.355(7) . ?
C16 F13 1.352(6) . ?
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C13 B1 C7 99.0(3) . . ?
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