anglefinder

version 0.11 based on pymatgen version 2019.9.16

Search criteria:

```
d atom: Cu
ligand: 0
maximal distance between a d atom and a ligand: 2.100
maximal distance between d atoms: 3.100
minimal number of common ligands: 2
minimal d-lingand-d angle: 90.00
maximal d-lingand-d angle: 95.00
```

compound	cif file d-ligand-d angles
$V_4 Fe_{1.12} Cu_4 H_2 Pb_{2.88} O_{19.6}$	072457.cif 92.33 99.14
$CaCu_2O_3$	291025.cif 91.83
$La_8Cu_7O_{19}$	051339.cif 88.36 93.17 95.11
$Cu_2BH_5O_6$	054883.cif 93.98 97.17 97.37 99.59
$UCu_2(PO_5)_2$	059598.cif 94.60 94.64
$ZnCu_2PH_7O_9$	188023.cif 94.43 97.75 99.22
$Sr_2Cu_3(BrO_2)_2$	029040.cif 90.00
$Cu_{36.576}S_{1.6}N_{0.4}Cl_{7.998}O_{77.6082}$	022049.cif 94.09 99.79
$TaNbCu_3O_8$	072284.cif 94.57 97.09
$SrCu_2O_3$	416902.cif 91.61
$V_2Cu_3O_8$	027310.cif 92.29 95.83
$La_2Cu_2O_5$	071061.cif 89.94 92.02 92.85
$Sr_{3.72}Nd_{0.28}Cu_{4}O_{8}$	075842.cif 93.87
$K_2Cu_3Ge_5O_{14}$	410828.cif 90.12 92.84 93.58
$Er_2Cu_2O_5$	079430.cif 90.33 95.16
$Na_2Cu_5(W_2O_{13})_6$	420587.cif 93.99
$Al_{5.08}Fe_{2.92}Cu_8As_8O_{48}$	158357.cif 91.80 92.43 93.91 95.29

	cif file	d-ligand-d angles
$V_{1.84}Cu_{16}As_{2.16}Cl_4O_{24}$	050575.cif	92.56 94.75 98.39
$V_4Cu_{13}(O_{13}F_2)_2$	428791.cif	89.34 93.34 97.06 97.24 97.79 98.10
		100.01
$Rb_2V_6CdCu_9O_{26}$	406788.cif	93.45 93.99 96.78 100.80
$Na(CuO)_2$	067558.cif	94.74 96.03
$Cu_3(BO_3)_2$	035201.cif	89.48 92.07 93.05 95.08 95.28 96.45
		96.56 99.46 101.54 102.94
$Ca_{1\cdot 73}Cu_{4\cdot 27}O_{5\cdot 8652}$	051595.cif	91.85
$CuSiO_3$	089669.cif	93.73
$Cu_7Te_2H_6(SO_{10})_2$	243538.cif	89.48 94.93 95.48 97.52
$In_2Cu_2O_5$	002201.cif	93.23 95.20
Cu_2AsO_5	001112.cif	94.67 98.30 98.42
$V_2Cu_3H_6O_{11}$	068995.cif	91.40 101.00
$K_2Cu_3S_3O_{13}$	071792.cif	91.39 92.43
$Cu_4As_2O_9$	239833.cif	94.19 95.45 101.08 101.37
$K_2Cu_3S_3O_{13}$	243544.cif	92.44 92.85
$Sr_{3.828}Ca_{0.172}Cu_6O_{10}$	085004.cif	90.39
$Fe_2Cu_8P_4O_{21}$	425001.cif	89.34 90.66 92.59 93.23 94.70 95.81
		97.31 99.90
$Y_2Cu_2O_5$	189773.cif	91.39 92.42
$Cu_{15}(SO_{11})_4$	063249.cif	92.66 92.95 98.39 98.95
$K_2Cu_5TeS_3O_{19}$	239167.cif	88.00 92.17 101.01 102.74
$CeCu_6(PO_7)_3$	005095.cif	94.30 98.86 100.30 104.22
$V_4Cu_9(ClO_9)_2$	190682.cif	88.96 91.92 92.68 93.36 93.63 93.78
		95.31
$Ca_2 \cdot 128 Y_1 \cdot 152 Cu_4 O_8$	050780.cif	92.01
VCu_2BiO_6	051091 cif	90.21 92.38 93.54 96.60

compound	cif file	d-ligand-d angles
$BaCu_3O_4$	089232.cif	88.50 91.50
$SrVCuHO_5$	252669.cif	91.02 101.08
$NaCu_5Se_2Cl_3O_8$	188376.cif	91.25 94.44 99.45 99.85
$Ce_{1.414}Cu_{12}As_{6}O_{42}$	031255.cif	93.56 97.35 99.59 102.61
Cu_2SO_5	061513.cif	93.63
$Ca_8Cu_{36}As_{16}S_{2.08}O_{148.72}$	291509.cif	94.18 96.45 99.44 103.80
$Li(CuO)_2$	069051.cif	92.62 92.67
$KCu_5Se_2Cl_3O_8$	264482.cif	93.20 95.87 101.46 114.91
$BaV_2(CuO_4)_2$	033804.cif	93.67
$Al_{5.08}Fe_{2.92}Cu_{8}As_{8}O_{48}$	005030.cif	91.80 92.43 93.91 95.29
$Cu_5(PO_6)_2$	018200.cif	94.16 95.11 95.17
$Na_5(CuO_2)_3$	185337.cif	93.12 93.66 94.12 94.38 95.67 97.20
$Sr_{3\cdot612}Ca_{0\cdot388}Cu_{4}O_{8}$	077290.cif	92.54
Cu_2CO_5	262803.cif	93.10 98.80
$Ba_2Cu_3(BrO_2)_2$	036128.cif	90.00
$Ca_{1\cdot 2}Mg_{0\cdot 4}Cu_{4\cdot 4}O_{6}$	154922.cif	91.18
Li_2CuO_2	025001.cif	93.43
$Sr_{1.708}Ca_{2.292}Cu_4O_8$	077287.cif	91.84
$TlCuHSO_5$	036581.cif	91.94 101.50
$Mg_{1.6}Cu_{4.4}O_6$	056367.cif	90.64
$Cu_{12}Bi_2As_6O_{41.9994}$	050061.cif	92.55 97.64 98.28 101.88
$YCu_6(AsO_7)_3$	036476.cif	93.22 96.55 98.87 102.32
Cu_2BiAsO_6	088111.cif	94.55
$Cu_9P_4(HO_{10})_2$	080104.cif	90.95 94.43 98.40 101.24
$V_2Cu_3H_6O_{11}$	162805.cif	92.25 93.59 97.90 101.22
$Cu(SbO_2)_2$	190731.cif	94.29
$K_{12}Cu_{20}P_8W_{48}ClO_{242}$	415126.cif	91.92 92.26

compound	cif file d-ligand-d angles
$CuPbSO_6$	015915.cif 94.28 94.53
$Mg_{1.76}Cu_{4.24}O_{6}$	056366.cif 90.70
CuO	069757.cif 93.26 98.17
$KV_3Cu_5O_{13}$	400802.cif 93.04 93.06 96.50 99.63
$Cu_3Mo_2O_9$	190444.cif 93.24 94.72 97.84
$K_3FeCu_7(AsO_5)_4$	257353.cif 93.98 96.59 96.82 98.49
$Na(CuO)_2$	169713.cif 94.51 96.04
$K_2V_6Cd_{1\cdot 34}Cu_{8\cdot 66}O_{26}$	406787.cif 93.50 94.21 97.27 100.64
$La_2Cu_2O_5$	080600.cif 90.09 93.25 93.35
$Cu_4As_2O_9$	404850.cif 93.51 94.21 95.26 98.05 100.30
$Cu_3H_{23}C_7S_3N_3O_{14}$	248824.cif 93.00
$Cu_7Te_2(SO_{10})_2$	065201.cif 91.23 94.87 95.52 97.72
$Rb_2Cu_3H_2S_3O_{14}$	096215.cif 93.38 96.60
$Na_2Cu_2TeO_6$	170637.cif 91.27
Cu_3NO_{10}	030997.cif 94.69 95.60
$SrCuO_2$	077293.cif 92.55
$Yb_2Cu_2O_5$	079432.cif 92.02 93.58
$Cu_5(AsO_5)_2$	239837.cif 88.37 90.59 93.25 97.80 99.87
VCu_2BiO_6	153176.cif 89.20 93.04 93.17 96.62
$Cu_{10}As_4SO_{34}$	151482.cif 94.08 94.78 94.94 95.66 100.04 100.26
Cu_3TePbO_8	164134.cif 91.84 97.50
$Y_2Cu_2O_5$	202877.cif 92.54 93.65
CuH_2PbSO_6	164673.cif 92.08 94.95
$Cr_4Cu_{11}O_{30}$	004212.cif 94.47 98.90 100.14 104.26
$Ca_{9.2592}Nd_{6.7408}Cu_{20}O_{40}$	080618.cif 93.30
$TlCuHSeO_5$	036582.cif 94.01 102.55
$Cu_3Ag_2P_2O_9$	425975.cif 94.21 94.46 96.55 98.06

compound	cif file d-	-ligand-d angles
$SrCuO_2$	083051.cif 92	2.96
$V_2(CuO_2)_5$	002557.cif 91	1.91 92.39 93.68 96.20 99.42
Li_2CuO_2	067151.cif 93	3.74
$Cu_3NiP_2O_9$	425977.cif 93	3.76 100.16
$Tl_2V_6CdCu_9O_{26}$	406789.cif 93	3.28 94.15 96.97 100.83
$Cu_3As_2H_2PbO_{10}$	008268.cif 91	1.76 101.04
$Cu_4P_2O_9$	001666.cif 91	1.11 93.45 94.03 97.45 100.42
$Sr_{2.392}Ca_{1.452}Cu_{4}O_{8}$	086214.cif 92	2.38
$V_2(CuO_3)_3$	065768.cif 92	2.83 102.04
$Na_{15}Cu_2Si_2W_{16}O_{111}$	194725.cif 9 4	4.35
$Cu_5Bi_2(B_2O_7)_2$	260046.cif 92	2.00 93.36 95.07 95.60
$Ca_{1.5}Mg_{0.3}Cu_{4.2}O_6$	154921.cif 91	1.53
$Ca_2Cu_2Si(WO_7)_8$	249629.cif 93	3.81 99.29
$Li(CuO)_2$	071221.cif 92	2.24 92.47
Cu_2PO_5	015977.cif 91	1.49 92.18
$K_3Cu_{16}Si_4(W_{16}O_{83})_2$	418999.cif 92	2.51 94.90 95.96 97.05 97.43 101.84
$CuGeO_3$	056878.cif 92	2.16 98.03 101.63 104.45
$Ba_2Cu_3(ClO_2)_2$	163502.cif 89	9.64 90.36
$V_2Cu_3H_2O_{11}$	262959.cif 92	2.75 99.89
Li_2CuO_2	067204.cif 93	3.97
$SrCu_2O_3$	416903.cif 91	1.49
$Sr_2Cu_3(BrO_2)_2$	075575.cif 92	2.29
$V_4Cd_4Cu_4H_4O_{19.52}$	252671.cif 92	2.12 99.71
$BaCu_3O_4$	087251.cif 9 0	0.47 91.52
$Cu_{20}H_{40}Pb_{21}(Cl_{21}O_{23})_2$	157067.cif 94	4.85 96.51
$Ca_{9.6}Pr_{6.4}Cu_{20}O_{40}$	099569.cif 86	6.87 87.45 89.89 92.33 93.87 93.89
	93	3.93 96.13 98.37 98.62

$\begin{array}{llllllllllllllllllllllllllllllllllll$	compound	cif file	d-ligand-d angles
$CaEu_2(CuO_3)_2$ 172828.cif 91.13 $Na_2Cu_5TeS_3O_{19}$ 239168.cif 87.32 91.13 100.40 101.31 $Ca_{0.9}Co_{1.1}Cu_4O_6$ 033997.cif 91.61 $KCu_2AAg_9H_{48}Pb_{26}(Cl_{31}O_{24})_2$ 056964.cif 94.65 $CuPbSO_6$ 068173.cif 91.23 94.26 $Cu_4Se_3O_{10}$ 060654.cif 92.22 92.52 93.76 93.93 99.76 100.36 100.47 101.74 101.78 102.20 103.04 105.53 $CuPb_3(ClO_2)_2$ 164137.cif 92.30 93.01 Li_2CuO_2 291072.cif 94.04 $LiCuSbO_4$ 424633.cif 89.75 91.99 95.01 96.83 $BaCu_3O_4$ 083079.cif 90.47 91.52 $Sr_2Cu_3O_5$ 050089.cif 92.49 $V_2Cu_2O_5$ 063306.cif 90.10 95.85 $Ho_2Cu_2O_5$ 079428.cif 92.14 93.78 $LiVCuO_4$ 026992.cif 91.58 $K_{0.56}Na_{15.44}Cu_{24}S_{24}O_{104}$ 432023.cif 92.21 Li_2CuO_2 238945.cif 94.04 $NaCu_5As_2W_{18}ClO_{93}$ 423754.cif 92.67 $Cu_{10}As_{3.6}P_{0.4}H_8O_{24}$ 089035.cif 94.09 95.26 96.78 $Cu_3Mo_9(N_3O_{20})_2$ 015551.cif 94.89 $Cu_4As_2O_9$ 066929.cif 94.77 95.98 99.46 100.31 $V_{1.284}Cu_8Bi_4P_{2.716}O_{24}$ 249210.cif 92.02	$V_6Cu_{11}O_{26}$	201626.cif	91.51 95.82 96.47 97.75
$Na_2Cu_5TeS_3O_{19}$ 239168.cif 87.32 91.13 100.40 101.31 $Ca_{0.9}Co_{1.1}Cu_4O_6$ 033997.cif 91.61 $Ca_{0.9}Co_{1.1}Cu_4O_6$ 068173.cif 91.23 94.26 Cu_PbSO_6 068173.cif 91.23 94.26 $Cu_4Se_3O_{10}$ 060654.cif 92.22 92.52 93.76 93.93 99.76 100.36 $Cu_4Se_3O_{10}$ 164137.cif 92.30 93.01 $Cu_2Cu_2O_2$ 164137.cif 92.30 93.01 $Cu_2Cu_2O_2$ 1642633.cif 99.47 91.52 $Cu_2Cu_2O_3$ 165089.cif 92.49 $Cu_2Cu_2O_3$ 165089.cif 92.49 $Cu_2Cu_2O_3$ 165089.cif 92.14 93.78 $Cu_2Cu_2O_3$ 179.58 $Cu_2Cu_2O_3$ 179.59 Cu_2	$La_8Cu_7O_{19}$	055084.cif	90.43 91.85 93.47
$\begin{array}{llllllllllllllllllllllllllllllllllll$	$CaEu_2(CuO_3)_2$	172828.cif	91.13
$KCu_{24}Ag_9H_{48}Pb_{26}(Cl_{31}O_{24})_2 \qquad 056964.cif \qquad \textbf{94.65}$ $CuPbSO_6 \qquad 068173.cif \qquad \textbf{91.23 94.26}$ $Cu_4Se_3O_{10} \qquad 060654.cif \qquad \textbf{92.22 92.52 93.76 93.93 99.76 100.36}$ $100.47 101.74 101.78 102.20 103.04 105.53$ $CuPb_3(ClO_2)_2 \qquad 164137.cif \qquad \textbf{92.30 93.01}$ $Li_2CuO_2 \qquad 291072.cif \qquad \textbf{94.04}$ $LiCuSbO_4 \qquad 424633.cif \qquad 89.75 \textbf{91.99 95.01 96.83}$ $BaCu_3O_4 \qquad 083079.cif \qquad \textbf{90.47 91.52}$ $Sr_2Cu_3O_5 \qquad 050089.cif \qquad \textbf{92.49}$ $Y_2Cu_2O_5 \qquad 063306.cif \qquad \textbf{90.10 95.85}$ $Ho_2Cu_2O_5 \qquad 079428.cif \qquad \textbf{92.14 93.78}$ $LiVCuO_4 \qquad 026992.cif \qquad \textbf{91.58}$ $K_{0.56}Na_{15.44}Cu_{24}S_{24}O_{104} \qquad 32023.cif \qquad \textbf{92.46 93.09}$ $Sr_{2.472}Ca_{1.528}Cu_4O_8 \qquad 077288.cif \qquad \textbf{92.21}$ $Li_2CuO_2 \qquad 238945.cif \qquad \textbf{94.04}$ $NaCu_5As_2W_{18}ClO_{93} \qquad 423754.cif \qquad \textbf{92.67}$ $Cu_{10}As_3.eP_{0.4}H_8O_{24} \qquad 089035.cif \qquad \textbf{94.09 95.26 96.78}$ $CuSiMo_9(N_3O_{20})_2 \qquad 015551.cif \qquad \textbf{94.89}$ $Cu_4As_2O_9 \qquad 066929.cif \qquad \textbf{94.77 95.98 99.46 100.31}$ $V_{1.284}Cu_8Bi_4P_{2.716}O_{24} \qquad 249210.cif \qquad \textbf{92.02}$	$Na_2Cu_5TeS_3O_{19}$	239168.cif	87.32 91.13 100.40 101.31
$CuPbSO_6 \\ Cu_4Se_3O_{10} \\ 060654.cif \\ 92.22 92.52 93.76 93.93 99.76 100.36 \\ 100.47 101.74 101.78 102.20 103.04 105.53 \\ CuPb_3(ClO_2)_2 \\ 164137.cif \\ 92.30 93.01 \\ 291072.cif \\ 94.04 \\ 24633.cif \\ 89.75 91.99 95.01 96.83 \\ 8aCu_3O_4 \\ 083079.cif \\ 90.47 91.52 \\ Sr_2Cu_3O_5 \\ V_2Cu_2O_5 \\ 105089.cif \\ 92.49 \\ V_2Cu_2O_5 \\ 1079428.cif \\ 92.14 93.78 \\ 2010 1095.85 \\ 1079428.cif \\ 92.14 93.78 \\ 1079428.cif \\ 92.14 93.09 \\ 1079288.cif \\ 92.14 93.09 \\ 1079288.cif \\ 92.14 93.09 \\ 1079288.cif \\ 94.04 \\ 1079288.cif \\ 94.09 95.26 96.78 \\ 10792888.cif \\ 94.09 95.26 96.78 \\ 10792888888888888888888888888888888888888$	$Ca_{0.9}Co_{1.1}Cu_4O_6$	033997.cif	91.61
$Cu_4Se_3O_{10} \\ Cu_4Se_3O_{10} \\ Double (Cu_2)e_2 \\ Double (Cu_2)e_$	$KCu_{24}Ag_9H_{48}Pb_{26}(Cl_{31}O_{24})_2$	056964.cif	94.65
$CuPb_3(ClO_2)_2 \\ 164137.cif \\ 29.30 \ 93.01 \\ 291072.cif \\ 94.04 \\ 24633.cif \\ 89.75 \ 91.99 \ 95.01 \ 96.83 \\ 8aCu_3O_4 \\ 2572Cu_3O_5 \\ 2572Cu_3O_5 \\ 2572Cu_2O_5 \\ 25$	$CuPbSO_6$	068173.cif	91.23 94.26
$CuPb_3(ClO_2)_2$ 164137.cif 92.30 93.01 Li_2CuO_2 291072.cif 94.04 $LiCuSbO_4$ 424633.cif 89.75 91.99 95.01 96.83 $BaCu_3O_4$ 083079.cif 90.47 91.52 $Sr_2Cu_3O_5$ 050089.cif 92.49 $Y_2Cu_2O_5$ 063306.cif 90.10 95.85 $Ho_2Cu_2O_5$ 079428.cif 92.14 93.78 $LiVCuO_4$ 026992.cif 91.58 $K_{0.56}Na_{15.44}Cu_{24}S_{24}O_{104}$ 432023.cif 92.46 93.09 $Sr_{2.472}Ca_{1.528}Cu_4O_8$ 077288.cif 92.21 Li_2CuO_2 238945.cif 94.04 $NaCu_5As_2W_{18}ClO_{93}$ 423754.cif 92.67 $Cu_{10}As_3.6P_{0.4}H_8O_{24}$ 089035.cif 94.09 95.26 96.78 $CuSiMo_9(N_3O_{20})_2$ 015551.cif 94.89 $Cu_4As_2O_9$ 066929.cif 94.78 101.50 $Cu_7Se_2(Cl_3O_4)_2$ 291487.cif 92.02	$Cu_4Se_3O_{10}$	060654.cif	92.22 92.52 93.76 93.93 99.76 100.36
Li_2CuO_2 291072.cif 94.04 $LiCuSbO_4$ 424633.cif 89.75 91.99 95.01 96.83 $BaCu_3O_4$ 083079.cif 90.47 91.52 $Sr_2Cu_3O_5$ 050089.cif 92.49 $Y_2Cu_2O_5$ 063306.cif 90.10 95.85 $Ho_2Cu_2O_5$ 079428.cif 92.14 93.78 $LiVCuO_4$ 026992.cif 91.58 $K_{0\cdot56}Na_{15\cdot44}Cu_{24}S_{24}O_{104}$ 432023.cif 92.46 93.09 $Sr_{2\cdot472}Ca_{1\cdot528}Cu_4O_8$ 077288.cif 92.21 Li_2CuO_2 238945.cif 94.04 $NaCu_5As_2W_{18}ClO_{93}$ 423754.cif 92.67 $Cu_{10}As_3\cdot6P_{0\cdot4}H_8O_{24}$ 089035.cif 94.09 95.26 96.78 $CuSiMo_9(N_3O_{20})_2$ 015551.cif 94.89 $Cu_4As_2O_9$ 066929.cif 94.78 101.50 $Cu_7Se_2(Cl_3O_4)_2$ 291487.cif 94.77 95.98 99.46 100.31 $V_{1\cdot284}Cu_8Bi_4P_{2\cdot716}O_{24}$ 249210.cif 92.02			100.47 101.74 101.78 102.20 103.04 105.53
$LiCuSbO_4$ 424633.cif 89.75 91.99 95.01 96.83 $BaCu_3O_4$ 083079.cif 90.47 91.52 $Sr_2Cu_3O_5$ 050089.cif 92.49 $Y_2Cu_2O_5$ 063306.cif 90.10 95.85 $Ho_2Cu_2O_5$ 079428.cif 92.14 93.78 $LiVCuO_4$ 026992.cif 91.58 $K_{0\cdot56}Na_{15\cdot44}Cu_{24}S_{24}O_{104}$ 432023.cif 92.46 93.09 $Sr_{2\cdot472}Ca_{1\cdot528}Cu_4O_8$ 077288.cif 92.21 Li_2CuO_2 238945.cif 94.04 $NaCu_5As_2W_{18}ClO_{93}$ 423754.cif 92.67 $Cu_{10}As_3\cdot6P_{0\cdot4}H_8O_{24}$ 089035.cif 94.09 95.26 96.78 $CuSiMo_9(N_3O_{20})_2$ 015551.cif 94.89 $Cu_4As_2O_9$ 066929.cif 94.78 101.50 $Cu_7Se_2(Cl_3O_4)_2$ 291487.cif 94.77 95.98 99.46 100.31 $V_{1\cdot284}Cu_8Bi_4P_{2\cdot716}O_{24}$ 249210.cif 92.02	$CuPb_3(ClO_2)_2$	164137.cif	92.30 93.01
$BaCu_3O_4$ 083079.cif 90.47 91.52 $Sr_2Cu_3O_5$ 050089.cif 92.49 $Y_2Cu_2O_5$ 063306.cif 90.10 95.85 $Ho_2Cu_2O_5$ 079428.cif 92.14 93.78 $LiVCuO_4$ 026992.cif 91.58 $K_{0\cdot56}Na_{15\cdot44}Cu_24S_{24}O_{104}$ 432023.cif 92.46 93.09 $Sr_{2\cdot472}Ca_{1\cdot528}Cu_4O_8$ 077288.cif 94.04 $NaCu_5As_2W_{18}ClO_{93}$ 423754.cif 94.09 95.26 96.78 $Cu_1O_4As_3O_9(N_3O_{20})_2$ 015551.cif 94.89 $Cu_4As_2O_9$ 066929.cif 94.78 101.50 $Cu_7Se_2(Cl_3O_4)_2$ 291487.cif 92.02	Li_2CuO_2	291072.cif	94.04
$Sr_2Cu_3O_5$ 050089.cif 92.49 $Y_2Cu_2O_5$ 063306.cif 90.10 95.85 $Ho_2Cu_2O_5$ 079428.cif 92.14 93.78 $LiVCuO_4$ 026992.cif 91.58 $K_{0\cdot56}Na_{15\cdot44}Cu_{24}S_{24}O_{104}$ 432023.cif 92.46 93.09 $Sr_{2\cdot472}Ca_{1\cdot528}Cu_4O_8$ 077288.cif 92.21 Li_2CuO_2 238945.cif 94.04 $NaCu_5As_2W_{18}ClO_{93}$ 423754.cif 92.67 $Cu_{10}As_{3\cdot6}P_{0\cdot4}H_8O_{24}$ 089035.cif 94.09 95.26 96.78 $CuSiMo_9(N_3O_{20})_2$ 015551.cif 94.89 $Cu_4As_2O_9$ 066929.cif 94.78 101.50 $Cu_7Se_2(Cl_3O_4)_2$ 291487.cif 94.77 95.98 99.46 100.31 $V_{1\cdot284}Cu_8Bi_4P_{2\cdot716}O_{24}$ 249210.cif 92.02	$LiCuSbO_4$	424633.cif	89.75 91.99 95.01 96.83
$Y_2Cu_2O_5$ 063306.cif 90.10 95.85 $Ho_2Cu_2O_5$ 079428.cif 92.14 93.78 $LiVCuO_4$ 026992.cif 91.58 $K_{0.56}Na_{15.44}Cu_{24}S_{24}O_{104}$ 432023.cif 92.46 93.09 $Sr_{2.472}Ca_{1.528}Cu_4O_8$ 077288.cif 92.21 Li_2CuO_2 238945.cif 94.04 $NaCu_5As_2W_{18}ClO_{93}$ 423754.cif 92.67 $Cu_{10}As_{3.6}P_{0.4}H_8O_{24}$ 089035.cif 94.09 95.26 96.78 $CuSiMo_9(N_3O_{20})_2$ 015551.cif 94.89 $Cu_4As_2O_9$ 066929.cif 94.78 101.50 $Cu_7Se_2(Cl_3O_4)_2$ 291487.cif 94.77 95.98 99.46 100.31 $V_{1.284}Cu_8Bi_4P_{2.716}O_{24}$ 249210.cif 92.02	$BaCu_3O_4$	083079.cif	90.47 91.52
$Ho_2Cu_2O_5$ 079428.cif 92.14 93.78 $LiVCuO_4$ 026992.cif 91.58 $K_{0.56}Na_{15.44}Cu_{24}S_{24}O_{104}$ 432023.cif 92.46 93.09 $Sr_{2.472}Ca_{1.528}Cu_4O_8$ 077288.cif 92.21 Li_2CuO_2 238945.cif 94.04 $NaCu_5As_2W_{18}ClO_{93}$ 423754.cif 92.67 $Cu_{10}As_{3.6}P_{0.4}H_8O_{24}$ 089035.cif 94.09 95.26 96.78 $CuSiMo_9(N_3O_{20})_2$ 015551.cif 94.89 $Cu_4As_2O_9$ 066929.cif 94.78 101.50 $Cu_7Se_2(Cl_3O_4)_2$ 291487.cif 94.77 95.98 99.46 100.31 $V_{1.284}Cu_8Bi_4P_{2.716}O_{24}$ 249210.cif 92.02	$Sr_2Cu_3O_5$	050089.cif	92.49
$LiVCuO_4$ 026992.cif 91.58 $K_{0.56}Na_{15.44}Cu_{24}S_{24}O_{104}$ 432023.cif 92.46 93.09 $Sr_{2.472}Ca_{1.528}Cu_4O_8$ 077288.cif 92.21 Li_2CuO_2 238945.cif 94.04 $NaCu_5As_2W_{18}ClO_{93}$ 423754.cif 92.67 $Cu_{10}As_{3.6}P_{0.4}H_8O_{24}$ 089035.cif 94.09 95.26 96.78 $CuSiMo_9(N_3O_{20})_2$ 015551.cif 94.89 $Cu_4As_2O_9$ 066929.cif 94.78 101.50 $Cu_7Se_2(Cl_3O_4)_2$ 291487.cif 94.77 95.98 99.46 100.31 $V_{1.284}Cu_8Bi_4P_{2.716}O_{24}$ 249210.cif 92.02	$Y_2Cu_2O_5$	063306.cif	90.10 95.85
$K_{0.56}Na_{15.44}Cu_{24}S_{24}O_{104}$ 432023.cif 92.46 93.09 077288.cif 92.21 238945.cif 94.04 $NaCu_5As_2W_{18}ClO_{93}$ 423754.cif 92.67 $Cu_{10}As_{3.6}P_{0.4}H_8O_{24}$ 089035.cif 94.09 95.26 96.78 $CuSiMo_9(N_3O_{20})_2$ 015551.cif 94.89 $Cu_4As_2O_9$ 066929.cif 94.78 101.50 $Cu_7Se_2(Cl_3O_4)_2$ 291487.cif 92.02 249210.cif 92.02	$Ho_2Cu_2O_5$	079428.cif	92.14 93.78
$Sr_{2.472}Ca_{1.528}Cu_4O_8$ 077288.cif 92.21 Li_2CuO_2 238945.cif 94.04 $NaCu_5As_2W_{18}ClO_{93}$ 423754.cif 92.67 $Cu_{10}As_{3.6}P_{0.4}H_8O_{24}$ 089035.cif 94.09 95.26 96.78 $CuSiMo_9(N_3O_{20})_2$ 015551.cif 94.89 $Cu_4As_2O_9$ 066929.cif 94.78 101.50 $Cu_7Se_2(Cl_3O_4)_2$ 291487.cif 94.77 95.98 99.46 100.31 $V_{1.284}Cu_8Bi_4P_{2.716}O_{24}$ 249210.cif 92.02	$LiVCuO_4$	026992.cif	91.58
Li_2CuO_2 238945.cif 94.04 $NaCu_5As_2W_{18}ClO_{93}$ 423754.cif 92.67 $Cu_{10}As_{3\cdot6}P_{0\cdot4}H_8O_{24}$ 089035.cif 94.09 95.26 96.78 $CuSiMo_9(N_3O_{20})_2$ 015551.cif 94.89 $Cu_4As_2O_9$ 066929.cif 94.78 101.50 $Cu_7Se_2(Cl_3O_4)_2$ 291487.cif 94.77 95.98 99.46 100.31 $V_{1\cdot284}Cu_8Bi_4P_{2\cdot716}O_{24}$ 249210.cif 92.02	$K_{0.56}Na_{15.44}Cu_{24}S_{24}O_{104}$	432023.cif	92.46 93.09
$NaCu_5As_2W_{18}ClO_{93}$ 423754.cif 92.67 $Cu_{10}As_{3\cdot 6}P_{0\cdot 4}H_8O_{24}$ 089035.cif 94.09 95.26 96.78 $CuSiMo_9(N_3O_{20})_2$ 015551.cif 94.89 $Cu_4As_2O_9$ 066929.cif 94.78 101.50 $Cu_7Se_2(Cl_3O_4)_2$ 291487.cif 94.77 95.98 99.46 100.31 $V_{1\cdot 284}Cu_8Bi_4P_{2\cdot 716}O_{24}$ 249210.cif 92.02	$Sr_{2.472}Ca_{1.528}Cu_{4}O_{8}$	077288.cif	92.21
$Cu_{10}As_{3.6}P_{0.4}H_8O_{24}$ 089035.cif 94.09 95.26 96.78 $CuSiMo_9(N_3O_{20})_2$ 015551.cif 94.89 $Cu_4As_2O_9$ 066929.cif 94.78 101.50 $Cu_7Se_2(Cl_3O_4)_2$ 291487.cif 94.77 95.98 99.46 100.31 $V_{1\cdot284}Cu_8Bi_4P_{2\cdot716}O_{24}$ 249210.cif 92.02	Li_2CuO_2	238945.cif	94.04
$CuSiMo_9(N_3O_{20})_2$ 015551.cif 94.89 $Cu_4As_2O_9$ 066929.cif 94.78 101.50 $Cu_7Se_2(Cl_3O_4)_2$ 291487.cif 94.77 95.98 99.46 100.31 $V_{1\cdot 284}Cu_8Bi_4P_{2\cdot 716}O_{24}$ 249210.cif 92.02	$NaCu_5As_2W_{18}ClO_{93}$	423754.cif	92.67
$Cu_4As_2O_9$ 066929.cif 94.78 101.50 $Cu_7Se_2(Cl_3O_4)_2$ 291487.cif 94.77 95.98 99.46 100.31 $V_{1\cdot 284}Cu_8Bi_4P_{2\cdot 716}O_{24}$ 249210.cif 92.02	$Cu_{10}As_{3.6}P_{0.4}H_8O_{24}$	089035.cif	94.09 95.26 96.78
$Cu_7Se_2(Cl_3O_4)_2$ 291487.cif 94.77 95.98 99.46 100.31 $V_{1\cdot 284}Cu_8Bi_4P_{2\cdot 716}O_{24}$ 249210.cif 92.02	$CuSiMo_9(N_3O_{20})_2$	015551.cif	94.89
$V_{1.284}Cu_{8}Bi_{4}P_{2.716}O_{24}$ 249210.cif 92.02	$Cu_4As_2O_9$	066929.cif	94.78 101.50
	$Cu_7Se_2(Cl_3O_4)_2$	291487.cif	94.77 95.98 99.46 100.31
$Cu_5(PO_6)_2$ 100019.cif 91.83 98.33 101.94	$V_{1.284}Cu_8Bi_4P_{2.716}O_{24}$	249210.cif	92.02
	$Cu_5(PO_6)_2$	100019.cif	91.83 98.33 101.94

$SrCu_2O_3$ 099041.cif 91.38 $KMgV_3Cu_4O_{13}$ 067816.cif 93.43 94.04 96.41 100.03 $K_2Cu_5H_8(Cl_4O_3)_2$ 055096.cif 93.78 95.60 $Cu_4As_2O_9$ 081295.cif 94.78 101.50 CuO 069758.cif 94.59 96.75 $V_2Cu_5(HO_3)_4$ 054831.cif 93.66 99.84 101.78 $KCu_4(PO_4)_3$ 065123.cif 93.89 99.59 $Cu_5(AsO_6)_2$ 030683.cif 94.88 99.95 101.24 $Sr_{3.856}Cu_{3.8}O_{7.68}$ 150112.cif 92.53 Cu_2GeO_4 100796.cif 91.75 Cu_2CuO_2 047106.cif 94.12 $Cu_3(AsO_6)_2$ 090026.cif 94.80 99.90 $Cu(CuO)_2$ 036535.cif 90.69 Cu_3AsO_7 068456.cif 93.61 99.93 $Cu_4P_2O_9$ 001667.cif 90.81 $Cu_4P_2O_9$ 001667.cif 90.88 93.50 94.38 97.32 100.74 $Cu_4P_2O_9$ 001667.cif 92.61 $Cu_4P_2O_9$ 001667.cif 92.61 $Cu_4P_2O_9$ 001667.cif 92.61 $Cu_4P_2O_9$ 001667.cif 92.61 $SrCuO_2$ 20292.cif 92.34 $SrCuO_2$ 077291.cif 92.52 $Sr_{62.88}Cu_{40}Bi_{32}O_{152.48}$ 071794.cif 86.27 93.04 $Cu_5(PO_6)_2$ 081196.cif 90.00 $CuPb_3(ClO_2)_2$ 081196.cif 90.00 $CuPb_3(ClO_2)_2$ 081196.cif 90.00 $CuPb_3(ClO_2)_2$ 081196.cif 90.00	compound	cif file	d-ligand-d angles
$KMgV_3Cu_4O_{13}$ 067816.cif 93.43 94.04 96.41 100.03 $K_2Cu_5H_8(Cl_4O_3)_2$ 055096.cif 93.78 95.60 $Cu_4As_2O_9$ 081295.cif 94.78 101.50 CuO 069758.cif 94.59 96.75 $V_2Cu_5(HO_3)_4$ 054831.cif 93.66 99.84 101.78 $KCu_4(PO_4)_3$ 065123.cif 93.89 99.59 $Cu_5(AsO_6)_2$ 030683.cif 94.88 99.95 101.24 $Cu_5(AsO_6)_2$ 030683.cif 94.88 99.95 101.24 $Cu_5(AsO_6)_2$ 047106.cif 94.12 $Cu_3(AsO_6)_2$ 047106.cif 94.12 $Cu_3(AsO_6)_2$ 090026.cif 94.80 99.90 $Cu_3(AsO_6)_2$ 090026.cif 94.80 99.90 $Cu_3(AsO_6)_2$ 068456.cif 93.61 99.93 $Cu_3(AsO_6)_2$ 09088 93.50 94.38 97.32 100.74 $Cu_3(AsO_6)_2$ 09088 93.50 94.38 97.32 100.74 $Cu_3(AsO_6)_2$ 077291.cif 92.53 $Cu_3(AsO_6)_2$ 077291.cif 92.54 $Cu_3(AsO_6)_2$ 077291.cif 92.54 $Cu_3(AsO_6)_2$ 077291.cif 92.54 $Cu_3(AsO_6)_2$ 077291.cif 92.54 $Cu_3(AsO_6)_2$ 077291.cif 92.55 $Cu_3(AsO_6)_2$ 077291.cif 92.52 $Cu_3(AsO_6)_2$ 077291.cif 92.52 $Cu_3(AsO_6)_2$ 0710418.cif 93.64 95.45 96.68 $Cu_3(ClO_2)_2$ 081196.cif 90.00 $Cu_3(ClO_2)_2$ 081196.cif 90.00 $Cu_3(ClO_2)_2$ 081196.cif 90.00 $Cu_3(ClO_2)_2$ 09123.cif 92.29 93.07	$Ca_2Eu(CuO_3)_2$	172827.cif	92.64
$K_2Cu_5H_8(Cl_4O_3)_2 \qquad 055096.cif \textbf{93.78} 95.60$ $Cu_4As_2O_9 \qquad 069758.cif \textbf{94.78} 101.50$ $CuO \qquad 069758.cif \textbf{94.59} 96.75$ $V_2Cu_5(HO_3)_4 \qquad 054831.cif \textbf{93.66} 99.84 101.78$ $KCu_4(PO_4)_3 \qquad 065123.cif \textbf{93.89} 99.59$ $Cu_5(AsO_6)_2 \qquad 030683.cif \textbf{94.88} 99.95 101.24$ $Sr_3.856Cu_3.8O_7.68 \qquad 150112.cif \textbf{92.53}$ $Cu_2GeO_4 \qquad 100796.cif \textbf{91.75}$ $Li_2CuO_2 \qquad 047106.cif \textbf{94.12}$ $Cu_3(AsO_6)_2 \qquad 036535.cif \textbf{90.69}$ $Cu_3AsO_7 \qquad 068456.cif \textbf{93.61} 99.93$ $Ca_{0.4}Mg_{1.2}Cu_{4.4}O_6 \qquad 154923.cif \textbf{90.79} 93.60 95.87 101.41$ $Cu_4P_2O_9 \qquad 001667.cif \textbf{90.88} 93.50 \textbf{94.38} 97.32 100.74$ $BaSrV_4(CuO_4)_4 \qquad 036610.cif \textbf{92.61}$ $SrCuO_2 \qquad 077291.cif \textbf{92.52}$ $Sr_{62.88}Cu_{40}Bi_{32}O_{152.48} \qquad 071794.cif \textbf{86.27} \textbf{93.04}$ $Cu_5(PO_6)_2 \qquad 0010418.cif \textbf{90.00}$ $CuPb_3(ClO_2)_2 \qquad 081196.cif \textbf{90.00}$ $CuPb_3(ClO_2)_2 \qquad 081196.cif \textbf{90.00}$	$SrCu_2O_3$	099041.cif	91.38
$\begin{array}{c} Cu_4As_2O_9 \\ CuO \\ CuO \\ CuO \\ O69758.cif \\ 94.59 96.75 \\ V_2Cu_5(HO_3)_4 \\ KCu_4(PO_4)_3 \\ K_4Cu_4Si_2W_{16}O_{81} \\ Cu_5(AsO_6)_2 \\ Sr_{3.856}Cu_{3.8}O_{7.68} \\ Cu_2GeO_4 \\ Cu_3(AsO_6)_2 \\ O90026.cif \\ O$	$KMgV_3Cu_4O_{13}$	067816.cif	93.43 94.04 96.41 100.03
$CuO \qquad \qquad 069758.cif \qquad \textbf{94.59} \ 96.75 \\ V_2Cu_5(HO_3)_4 \qquad \qquad 054831.cif \qquad \textbf{93.66} \ 99.84 \ 101.78 \\ KCu_4(PO_4)_3 \qquad \qquad 065123.cif \qquad \textbf{93.93} \ 97.25 \\ K_4Cu_4Si_2W_{16}O_{81} \qquad \qquad 159481.cif \qquad \textbf{93.89} \ 99.59 \\ Cu_5(AsO_6)_2 \qquad \qquad 030683.cif \qquad \textbf{94.88} \ 99.95 \ 101.24 \\ Sr_{3.856}Cu_{3.8}O_{7.68} \qquad \qquad 150112.cif \qquad \textbf{92.53} \\ Cu_2GeO_4 \qquad \qquad 100796.cif \qquad \textbf{91.75} \\ Li_2CuO_2 \qquad \qquad 047106.cif \qquad \textbf{94.12} \\ Cu_3(AsO_6)_2 \qquad \qquad 090026.cif \qquad \textbf{94.80} \ 99.90 \\ Tl(CuO)_2 \qquad \qquad 036535.cif \qquad \textbf{90.69} \\ Cu_3AsO_7 \qquad \qquad 068456.cif \qquad \textbf{93.61} \ 99.93 \\ Ca_{0.4}Mg_{1.2}Cu_{4.4}O_6 \qquad \qquad 154923.cif \qquad \textbf{90.81} \\ NaCu_5Se_2Cl_3O_8 \qquad \qquad 264483.cif \qquad \textbf{90.79} \ \textbf{93.60} \ 95.87 \ 101.41 \\ Cu_4P_2O_9 \qquad \qquad 001667.cif \qquad \textbf{90.88} \ \textbf{93.50} \ \textbf{94.38} \ \textbf{97.32} \ 100.74 \\ BaSrV_4(CuO_4)_4 \qquad \qquad 036610.cif \qquad \textbf{92.61} \\ SrCuO_2 \qquad \qquad 202992.cif \qquad \textbf{92.34} \\ SrCuO_2 \qquad \qquad 2077291.cif \qquad \textbf{92.52} \\ Sr_{62.88}Cu_{40}Bi_{32}O_{152.48} \qquad 071794.cif \qquad \textbf{96.27} \ \textbf{93.04} \\ Cu_5(PO_6)_2 \qquad \qquad 010418.cif \qquad \textbf{93.64} \ 95.45 \ 96.68 \\ Ba_2Cu_3(ClO_2)_2 \qquad \qquad 081196.cif \qquad \textbf{90.00} \\ CuPb_3(ClO_2)_2 \qquad \qquad 200123.cif \qquad \textbf{92.29} \ \textbf{93.07} \\ \end{cases}$	$K_2Cu_5H_8(Cl_4O_3)_2$	055096.cif	93.78 95.60
$V_2Cu_5(HO_3)_4$ 054831.cif 93.66 99.84 101.78 $KCu_4(PO_4)_3$ 065123.cif 93.89 99.59 $K_4Cu_4Si_2W_{16}O_{81}$ 159481.cif 93.89 99.59 $Cu_5(AsO_6)_2$ 030683.cif 94.88 99.95 101.24 $Sr_{3.856}Cu_{3.8}O_{7.68}$ 150112.cif 92.53 Cu_2GeO_4 100796.cif 91.75 Li_2CuO_2 047106.cif 94.12 $Cu_3(AsO_6)_2$ 090026.cif 94.80 99.90 $Tl(CuO)_2$ 036535.cif 90.69 Cu_3AsO_7 068456.cif 93.61 99.93 Cu_3AsO_7 068456.cif 90.81 $Cu_4P_2O_9$ 001667.cif 90.88 93.50 94.38 97.32 100.74 $Cu_4P_2O_9$ 001667.cif 92.61 $Cu_4P_2O_9$ 001667.cif 92.61 $Cu_4P_2O_2$ 077291.cif 92.52 $Cu_2Sr_{62.88}Cu_{40}Bi_{32}O_{152.48}$ 071794.cif 86.27 93.04 $Cu_5(PO_6)_2$ 081196.cif 90.00 $CuPb_3(ClO_2)_2$ 081196.cif 90.00 $CuPb_3(ClO_2)_2$ 081196.cif 90.00 $CuPb_3(ClO_2)_2$ 09123.cif 92.29 93.07	$Cu_4As_2O_9$	081295.cif	94.78 101.50
$KCu_4(PO_4)_3$ 065123.cif 93.93 97.25 $K_4Cu_4Si_2W_{16}O_{81}$ 159481.cif 93.89 99.59 $Cu_5(AsO_6)_2$ 030683.cif 94.88 99.95 101.24 $Sr_{3.856}Cu_{3.8}O_{7.68}$ 150112.cif 92.53 Cu_2GeO_4 100796.cif 91.75 Li_2CuO_2 047106.cif 94.12 $Cu_3(AsO_6)_2$ 090026.cif 94.80 99.90 $Tl(CuO)_2$ 036535.cif 90.69 Cu_3AsO_7 068456.cif 93.61 99.93 $Ca_{0.4}Mg_{1.2}Cu_{4.4}O_6$ 154923.cif 90.81 $NaCu_5Se_2Cl_3O_8$ 264483.cif 90.79 93.60 95.87 101.41 $Cu_4P_2O_9$ 001667.cif 90.88 93.50 94.38 97.32 100.74 $BaSrV_4(CuO_4)_4$ 036610.cif 92.61 $SrCuO_2$ 202992.cif 92.34 $SrCuO_2$ 077291.cif 92.52 $Sr_{62.88}Cu_{40}Bi_{32}O_{152.48}$ 071794.cif 86.27 93.04 $Cu_5(PO_6)_2$ 010418.cif 93.64 95.45 96.68 $Ba_2Cu_3(ClO_2)_2$ 081196.cif 90.00 $CuPb_3(ClO_2)_2$ 081196.cif 90.00	CuO	069758.cif	94.59 96.75
$K_4Cu_4Si_2W_{16}O_{81}$ 159481.cif 93.89 99.59 $Cu_5(AsO_6)_2$ 030683.cif 94.88 99.95 101.24 $Sr_{3.856}Cu_{3.8}O_{7.68}$ 150112.cif 92.53 Cu_2GeO_4 100796.cif 91.75 Li_2CuO_2 047106.cif 94.12 $Cu_3(AsO_6)_2$ 090026.cif 94.80 99.90 $Tl(CuO)_2$ 036535.cif 90.69 Cu_3AsO_7 068456.cif 93.61 99.93 $Ca_{0.4}Mg_{1.2}Cu_{4.4}O_6$ 154923.cif 90.81 $NaCu_5Se_2Cl_3O_8$ 264483.cif 90.79 93.60 95.87 101.41 $Cu_4P_2O_9$ 001667.cif 90.88 93.50 94.38 97.32 100.74 $BaSrV_4(CuO_4)_4$ 036610.cif 92.61 $SrCuO_2$ 202992.cif 92.34 $SrCuO_2$ 077291.cif 92.52 $Sr_{62.88}Cu_{40}Bi_{32}O_{152.48}$ 071794.cif 86.27 93.04 $Cu_5(PO_6)_2$ 010418.cif 93.64 95.45 96.68 $Ba_2Cu_3(ClO_2)_2$ 081196.cif 90.00 $CuPb_3(ClO_2)_2$ 081196.cif 90.00	$V_2Cu_5(HO_3)_4$	054831.cif	93.66 99.84 101.78
$Cu_5(AsO_6)_2$ 030683.cif 94.88 99.95 101.24 $Sr_{3.856}Cu_{3.8}O_{7.68}$ 150112.cif 92.53 Cu_2GeO_4 100796.cif 91.75 Li_2CuO_2 047106.cif 94.12 $Cu_3(AsO_6)_2$ 090026.cif 94.80 99.90 $Tl(CuO)_2$ 036535.cif 90.69 Cu_3AsO_7 068456.cif 93.61 99.93 $Ca_{0.4}Mg_{1.2}Cu_{4.4}O_6$ 154923.cif 90.81 $NaCu_5Se_2Cl_3O_8$ 264483.cif 90.79 93.60 95.87 101.41 $Cu_4P_2O_9$ 001667.cif 90.88 93.50 94.38 97.32 100.74 $BaSrV_4(CuO_4)_4$ 036610.cif 92.61 $SrCuO_2$ 202992.cif 92.34 $SrCuO_2$ 077291.cif 92.52 $Sr_{62.88}Cu_{40}Bi_{32}O_{152.48}$ 071794.cif 86.27 93.04 $Cu_5(PO_6)_2$ 010418.cif 93.64 95.45 96.68 $Ba_2Cu_3(ClO_2)_2$ 081196.cif 90.00 $CuPb_3(ClO_2)_2$ 200123.cif 92.29 93.07	$KCu_4(PO_4)_3$	065123.cif	93.93 97.25
$Sr_{3.856}Cu_{3.8}O_{7.68}$ 150112.cif 92.53 Cu_2GeO_4 100796.cif 91.75 Li_2CuO_2 047106.cif 94.12 $Cu_3(AsO_6)_2$ 090026.cif 94.80 99.90 $Tl(CuO)_2$ 036535.cif 90.69 Cu_3AsO_7 068456.cif 93.61 99.93 $Ca_{0.4}Mg_{1.2}Cu_{4.4}O_6$ 154923.cif 90.81 $NaCu_5Se_2Cl_3O_8$ 264483.cif 90.79 93.60 95.87 101.41 $Cu_4P_2O_9$ 001667.cif 90.88 93.50 94.38 97.32 100.74 $BaSrV_4(CuO_4)_4$ 036610.cif 92.61 $SrCuO_2$ 202992.cif 92.34 $SrCuO_2$ 077291.cif 92.52 $Sr_{62.88}Cu_{40}Bi_{32}O_{152.48}$ 071794.cif 86.27 93.04 $Cu_5(PO_6)_2$ 08196.cif 90.00 $CuPb_3(ClO_2)_2$ 081196.cif 90.00 $CuPb_3(ClO_2)_2$ 081196.cif 90.00	$K_4Cu_4Si_2W_{16}O_{81}$	159481.cif	93.89 99.59
Cu_2GeO_4 100796.cif 91.75 Li_2CuO_2 047106.cif 94.12 $Cu_3(AsO_6)_2$ 090026.cif 94.80 99.90 $Tl(CuO)_2$ 036535.cif 90.69 Cu_3AsO_7 068456.cif 93.61 99.93 $Ca_{0\cdot4}Mg_{1\cdot2}Cu_{4\cdot4}O_6$ 154923.cif 90.81 $NaCu_5Se_2Cl_3O_8$ 264483.cif 90.79 93.60 95.87 101.41 $Cu_4P_2O_9$ 001667.cif 90.88 93.50 94.38 97.32 100.74 $BaSrV_4(CuO_4)_4$ 036610.cif 92.61 $SrCuO_2$ 202992.cif 92.34 $SrCuO_2$ 077291.cif 92.52 $Sr_{62\cdot88}Cu_{40}Bi_{32}O_{152\cdot48}$ 071794.cif 86.27 93.04 $Cu_5(PO_6)_2$ 071794.cif 93.64 95.45 96.68 $Ba_2Cu_3(ClO_2)_2$ 081196.cif 90.00 $CuPb_3(ClO_2)_2$ 200123.cif 92.29 93.07	$Cu_5(AsO_6)_2$	030683.cif	94.88 99.95 101.24
Li_2CuO_2 047106.cif 94.12 $Cu_3(AsO_6)_2$ 090026.cif 94.80 99.90 $Tl(CuO)_2$ 036535.cif 90.69 Cu_3AsO_7 068456.cif 93.61 99.93 $Ca_{0\cdot4}Mg_{1\cdot2}Cu_{4\cdot4}O_6$ 154923.cif 90.81 $NaCu_5Se_2Cl_3O_8$ 264483.cif 90.79 93.60 95.87 101.41 $Cu_4P_2O_9$ 001667.cif 90.88 93.50 94.38 97.32 100.74 $BaSrV_4(CuO_4)_4$ 036610.cif 92.61 $SrCuO_2$ 202992.cif 92.34 $SrCuO_2$ 077291.cif 92.52 $Sr_{62\cdot88}Cu_{40}Bi_{32}O_{152\cdot48}$ 071794.cif 86.27 93.04 $Cu_5(PO_6)_2$ 071794.cif 93.64 95.45 96.68 $Ba_2Cu_3(ClO_2)_2$ 081196.cif 90.00 $CuPb_3(ClO_2)_2$ 200123.cif 92.29 93.07	$Sr_{3.856}Cu_{3.8}O_{7.68}$	150112.cif	92.53
$Cu_3(AsO_6)_2$ 090026.cif 94.80 99.90 $Tl(CuO)_2$ 036535.cif 90.69 Cu_3AsO_7 068456.cif 93.61 99.93 $Ca_{0.4}Mg_{1.2}Cu_{4.4}O_6$ 154923.cif 90.81 $NaCu_5Se_2Cl_3O_8$ 264483.cif 90.79 93.60 95.87 101.41 $Cu_4P_2O_9$ 001667.cif 90.88 93.50 94.38 97.32 100.74 $SrCuO_2$ 202992.cif 92.34 $SrCuO_2$ 202992.cif 92.34 $SrCuO_2$ 077291.cif 92.52 $Sr_{62.88}Cu_{40}Bi_{32}O_{152.48}$ 071794.cif 86.27 93.04 $Cu_5(PO_6)_2$ 010418.cif 93.64 95.45 96.68 $Ba_2Cu_3(ClO_2)_2$ 081196.cif 90.00 $CuPb_3(ClO_2)_2$ 200123.cif 92.29 93.07	Cu_2GeO_4	100796.cif	91.75
$Tl(CuO)_2$ 036535.cif 90.69 Cu_3AsO_7 068456.cif 93.61 99.93 $Ca_{0.4}Mg_{1.2}Cu_{4.4}O_6$ 154923.cif 90.81 $NaCu_5Se_2Cl_3O_8$ 264483.cif 90.79 93.60 95.87 101.41 $Cu_4P_2O_9$ 001667.cif 90.88 93.50 94.38 97.32 100.74 $BaSrV_4(CuO_4)_4$ 036610.cif 92.61 $SrCuO_2$ 202992.cif 92.34 $SrCuO_2$ 077291.cif 92.52 $Sr_{62.88}Cu_{40}Bi_{32}O_{152.48}$ 071794.cif 86.27 93.04 $Cu_5(PO_6)_2$ 010418.cif 93.64 95.45 96.68 $Ba_2Cu_3(ClO_2)_2$ 081196.cif 90.00 $CuPb_3(ClO_2)_2$ 200123.cif 92.29 93.07	Li_2CuO_2	047106.cif	94.12
Cu_3AsO_7 068456.cif 93.61 99.93 $Ca_{0.4}Mg_{1.2}Cu_{4.4}O_6$ 154923.cif 90.81 $NaCu_5Se_2Cl_3O_8$ 264483.cif 90.79 93.60 95.87 101.41 $Cu_4P_2O_9$ 001667.cif 90.88 93.50 94.38 97.32 100.74 $BaSrV_4(CuO_4)_4$ 036610.cif 92.61 $SrCuO_2$ 202992.cif 92.34 $SrCuO_2$ 077291.cif 92.52 $Sr_{62.88}Cu_{40}Bi_{32}O_{152.48}$ 071794.cif 86.27 93.04 $Cu_5(PO_6)_2$ 010418.cif 93.64 95.45 96.68 $Ba_2Cu_3(ClO_2)_2$ 081196.cif 90.00 $CuPb_3(ClO_2)_2$ 200123.cif 92.29 93.07	$Cu_3(AsO_6)_2$	090026.cif	94.80 99.90
$Ca_{0.4}Mg_{1.2}Cu_{4.4}O_6$ 154923.cif 90.81 $NaCu_5Se_2Cl_3O_8$ 264483.cif 90.79 93.60 95.87 101.41 $Cu_4P_2O_9$ 001667.cif 90.88 93.50 94.38 97.32 100.74 $BaSrV_4(CuO_4)_4$ 036610.cif 92.61 $SrCuO_2$ 202992.cif 92.34 $SrCuO_2$ 077291.cif 92.52 $Sr_{62.88}Cu_{40}Bi_{32}O_{152.48}$ 071794.cif 86.27 93.04 $Cu_5(PO_6)_2$ 010418.cif 93.64 95.45 96.68 $Ba_2Cu_3(ClO_2)_2$ 081196.cif 90.00 $CuPb_3(ClO_2)_2$ 200123.cif 92.29 93.07	$Tl(CuO)_2$	036535.cif	90.69
$NaCu_5Se_2Cl_3O_8$ 264483.cif 90.79 93.60 95.87 101.41 $Cu_4P_2O_9$ 001667.cif 90.88 93.50 94.38 97.32 100.74 $BaSrV_4(CuO_4)_4$ 036610.cif 92.61 $SrCuO_2$ 202992.cif 92.34 $SrCuO_2$ 077291.cif 92.52 $Sr_{62\cdot88}Cu_{40}Bi_{32}O_{152\cdot48}$ 071794.cif 86.27 93.04 $Cu_5(PO_6)_2$ 010418.cif 93.64 95.45 96.68 $Ba_2Cu_3(ClO_2)_2$ 081196.cif 90.00 $CuPb_3(ClO_2)_2$ 200123.cif 92.29 93.07	Cu_3AsO_7	068456.cif	93.61 99.93
$Cu_4P_2O_9$ 001667.cif 90.88 93.50 94.38 97.32 100.74 $BaSrV_4(CuO_4)_4$ 036610.cif 92.61 $SrCuO_2$ 202992.cif 92.34 $SrCuO_2$ 077291.cif 92.52 $Sr_{62 \cdot 88}Cu_{40}Bi_{32}O_{152 \cdot 48}$ 071794.cif 86.27 93.04 $Cu_5(PO_6)_2$ 010418.cif 93.64 95.45 96.68 $Ba_2Cu_3(ClO_2)_2$ 081196.cif 90.00 $CuPb_3(ClO_2)_2$ 200123.cif 92.29 93.07	$Ca_{0.4}Mg_{1.2}Cu_{4.4}O_6$	154923.cif	90.81
$BaSrV_4(CuO_4)_4$ 036610.cif 92.61 $SrCuO_2$ 202992.cif 92.34 $SrCuO_2$ 077291.cif 92.52 $Sr_{62 \cdot 88}Cu_{40}Bi_{32}O_{152 \cdot 48}$ 071794.cif 86.27 93.04 $Cu_5(PO_6)_2$ 010418.cif 93.64 95.45 96.68 $Ba_2Cu_3(ClO_2)_2$ 081196.cif 90.00 $CuPb_3(ClO_2)_2$ 200123.cif 92.29 93.07	$NaCu_5Se_2Cl_3O_8$	264483.cif	90.79 93.60 95.87 101.41
$SrCuO_2$ 202992.cif 92.34 $SrCuO_2$ 077291.cif 92.52 $Sr_{62.88}Cu_{40}Bi_{32}O_{152.48}$ 071794.cif 86.27 93.04 $Cu_5(PO_6)_2$ 010418.cif 93.64 95.45 96.68 $Ba_2Cu_3(ClO_2)_2$ 081196.cif 90.00 $CuPb_3(ClO_2)_2$ 200123.cif 92.29 93.07	$Cu_4P_2O_9$	001667.cif	90.88 93.50 94.38 97.32 100.74
$SrCuO_2$ 077291.cif 92.52 $Sr_{62.88}Cu_{40}Bi_{32}O_{152.48}$ 071794.cif 86.27 93.04 $Cu_5(PO_6)_2$ 010418.cif 93.64 95.45 96.68 $Ba_2Cu_3(ClO_2)_2$ 081196.cif 90.00 $CuPb_3(ClO_2)_2$ 200123.cif 92.29 93.07	$BaSrV_4(CuO_4)_4$	036610.cif	92.61
$Sr_{62\cdot88}Cu_{40}Bi_{32}O_{152\cdot48}$ 071794.cif 86.27 93.04 $Cu_5(PO_6)_2$ 010418.cif 93.64 95.45 96.68 $Ba_2Cu_3(ClO_2)_2$ 081196.cif 90.00 $CuPb_3(ClO_2)_2$ 200123.cif 92.29 93.07	$SrCuO_2$	202992.cif	92.34
$Cu_5(PO_6)_2$ 010418.cif 93.64 95.45 96.68 $Ba_2Cu_3(ClO_2)_2$ 081196.cif 90.00 $CuPb_3(ClO_2)_2$ 200123.cif 92.29 93.07	$SrCuO_2$	077291.cif	92.52
$Ba_2Cu_3(ClO_2)_2$ 081196.cif 90.00 $CuPb_3(ClO_2)_2$ 200123.cif 92.29 93.07	$Sr_{62.88}Cu_{40}Bi_{32}O_{152.48}$	071794.cif	86.27 93.04
$CuPb_3(ClO_2)_2$ 200123.cif 92.29 93.07	$Cu_5(PO_6)_2$	010418.cif	93.64 95.45 96.68
	$Ba_2Cu_3(ClO_2)_2$	081196.cif	90.00
$LiV(CuO_3)_2$ 151924.cif 94.96 96.61 97.51 99.19	$CuPb_3(ClO_2)_2$	200123.cif	92.29 93.07
	$LiV(CuO_3)_2$	151924.cif	94.96 96.61 97.51 99.19

$\begin{array}{cccccccccccccccccccccccccccccccccccc$	compound	cif file d-ligand-d angles
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	Cu_3TePbO_8	081604.cif 88.88 90.50 94.48 95.36
$Na_{30}Cu_{28}Si_8W_{64}O_{329}$ 417921.cif 93.09 93.40 97.02 99.28 $Li_{3\cdot6}V_4Cu_{3\cdot996}O_{16}$ 072847.cif 93.84 $Ca_{10}Pr_4Cu_{24}O_{41}$ 099568.cif 68.82 86.85 87.53 88.00 89.14 89.80 90.24 90.39 90.95 93.76 $Ca_8Cu_{36}As_{16}S_{2\cdot08}O_{148\cdot72}$ 005406.cif 91.29 93.03 94.34 101.32 $CoCu_{2}O_{3}$ 033996.cif 91.63 $SrCuO_{2}$ 016217.cif 92.86 $Ca_{0\cdot872}Ce_{1\cdot128}Cu_{12}P_6O_{42}$ 258261.cif 90.99 95.58 98.95 103.86 $Ca_{2}Cu_{2}Si_{3}(HO_{3})_{4}$ 015185.cif 91.41 94.07 $Mg_{2}Cu_{2}CO_{11}$ 016731.cif 92.26 $CeCu_{6}(PO_{7})_{3}$ 005094.cif 94.68 99.23 100.67 104.58 $CeCu_{6}(PO_{7})_{3}$ 005094.cif 93.96 95.04 $Cu_{2}Cu_{2}Si_{3}(Ha_{18}O_{16}F_{2\cdot92})$ 083815.cif 93.52 97.94 $Cu_{2}Cu_{2}Si_{3}(Ho_{3})_{4}$ 249211.cif 92.35 $Cu_{2}Cu_{2}Si_{3}(Ho_{3})_{4}$ 054900.cif 86.87 87.45 89.89 92.33 93.87 93.85 93.93 96.13 98.37 98.62 $Cu_{3}Sn(BO_{5})_{2}$ 400602.cif 94.20 96.02 99.72 100.79 $Cu_{2}Cu_{2}Ci_{3}$ 072058.cif 91.43 94.72 $Cu_{4}As_{2}O_{9}$ 239832.cif 18.47 18.70 19.13 92.81 93.69 93.72 94.04 95.23 98.24 100.47	Cu_2CO_5	262802.cif 93.68 98.12
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$Zn_4Cu_5(TeO_6)_3$	056851.cif 92.65
$Ca_{10}Pr_4Cu_{24}O_{41} \qquad \qquad 099568. \text{cif} 68.82\ 86.85\ 87.53\ 88.00\ 89.14\ 89.80 \\ \qquad $	$Na_{30}Cu_{28}Si_8W_{64}O_{329}$	417921.cif 93.09 93.40 97.02 99.28
$\begin{array}{c} 90.2490.3990.9593.76 \\ Ca_8Cu_{36}As_{16}S_{2\cdot08}O_{148\cdot72} & 005406.\mathrm{cif} & 91.2993.0394.34101.32 \\ CoCu_{2}O_{3} & 033996.\mathrm{cif} & 91.63 \\ SrCuO_{2} & 016217.\mathrm{cif} & 92.86 \\ Ca_{0\cdot872}Ce_{1\cdot128}Cu_{12}P_{6}O_{42} & 258261.\mathrm{cif} & 90.9995.5898.95103.86 \\ Ca_{2}Cu_{2}Si_{3}(HO_{3})_{4} & 015185.\mathrm{cif} & 91.4194.07 \\ Mg_{2}Cu_{2}CO_{11} & 016731.\mathrm{cif} & 92.26 \\ Cu_{2}CO_{5} & 262801.\mathrm{cif} & 94.2498.85 \\ CeCu_{6}(PO_{7})_{3} & 005094.\mathrm{cif} & 94.6899.23100.67104.58 \\ Ca_{4}Cu_{4}As_{1\cdot8}P_{2\cdot2}O_{20} & 247659.\mathrm{cif} & 93.9695.04 \\ Al_{2\cdot98}Cu_{4}H_{18}O_{16}F_{2\cdot92} & 083815.\mathrm{cif} & 93.5297.94 \\ V_{2\cdot4}Cu_{8}Bi_{4}P_{1\cdot6}O_{24} & 249211.\mathrm{cif} & 92.35 \\ LiCuBiO_{4} & 257025.\mathrm{cif} & 94.70101.28 \\ Ca_{9\cdot6}Pr_{6\cdot4}Cu_{20}O_{40} & 054900.\mathrm{cif} & 86.8787.4589.8992.3393.8793.89 \\ 93.9396.1398.3798.62 \\ Cu_{5}Sn(BO_{5})_{2} & 400602.\mathrm{cif} & 94.2096.0299.72100.79 \\ K_{24}Cu_{40}P_{16}W_{96}I_{2}O_{450\cdot4} & 249962.\mathrm{cif} & 91.5891.74 \\ Y_{2}Cu_{2}O_{5} & 072058.\mathrm{cif} & 91.4394.72 \\ Cu_{4}As_{2}O_{9} & 239832.\mathrm{cif} & 18.4718.7019.1392.8193.6993.72 \\ 94.0495.2398.24100.47 \\ \end{array}$	$Li_{3\cdot 6}V_4Cu_{3\cdot 996}O_{16}$	072847.cif 93.84
$Ca_8Cu_3_6As_{16}S_{2\cdot08}O_{148\cdot72}$ 005406.cif 91.29 93.03 94.34 101.32 $CoCu_2O_3$ 033996.cif 91.63 $SrCuO_2$ 016217.cif 92.86 $Ca_{0\cdot872}Ce_{1\cdot128}Cu_{12}P_6O_{42}$ 258261.cif 90.99 95.58 98.95 103.86 $Ca_2Cu_2Si_3(HO_3)_4$ 015185.cif 91.41 94.07 $Mg_2Cu_2CO_{11}$ 016731.cif 92.26 $Ca_2Cu_2CO_{11}$ 016731.cif 94.24 98.85 $CeCu_6(PO_7)_3$ 005094.cif 94.68 99.23 100.67 104.58 $Ca_4Cu_4As_1.8P_{2\cdot2}O_{20}$ 247659.cif 93.96 95.04 $Ca_4Cu_4As_1.8P_{2\cdot2}O_{20}$ 247659.cif 93.95 95.04 $Ca_4Cu_4Bi_4P_{1\cdot6}O_{2\cdot4}$ 249211.cif 92.35 $Ca_4Cu_4Bi_4P_{1\cdot6}O_{2\cdot4}$ 249211.cif 92.35 $Ca_3Cu_3Cu_3Cu_3Cu_3Cu_3Cu_3Cu_3Cu_3Cu_3Cu$	$Ca_{10}Pr_4Cu_{24}O_{41}$	099568.cif 68.82 86.85 87.53 88.00 89.14 89.80
$CoCu_2O_3 \\ SrCuO_2 \\ O16217.cif \\ 92.86 \\ Ca_{0.872}Ce_{1.128}Cu_{12}P_6O_{42} \\ Ca_{0.872}Ce_{1.128}Cu_{12}P_6O_{42} \\ Ca_{2}Cu_2Si_3(HO_3)_4 \\ O15185.cif \\ 91.41 \ 94.07 \\ Mg_2Cu_2CO_{11} \\ O16731.cif \\ 92.26 \\ Ca_2Cu_6(PO_7)_3 \\ Ca_4Cu_4As_{1.8}P_{2.2}O_{20} \\ Al_{2.98}Cu_4H_{18}O_{16}F_{2.92} \\ V_{2.4}Cu_8Bi_4P_{1.6}O_{24} \\ LiCuBiO_4 \\ Ca_{9.6}Pr_{6.4}Cu_{20}O_{40} \\ Cu_5Sn(BO_5)_2 \\ K_{24}Cu_4O_{16}W_{96}I_2O_{450.4} \\ V_{2}Cu_2O_5 \\ Cu_4As_2O_9 \\ O239832.cif \\ 18.47 \ 18.70 \ 19.13 \ 92.81 \ 93.69 \ 93.72 \\ 94.04 \ 95.23 \ 98.24 \ 100.47 \\ 94.04 \ 95.23 \ 98.24 \ 100.47$		90.24 90.39 90.95 93.76
$SrCuO_2$ 016217.cif 92.86 $Ca_{0.872}Ce_{1.128}Cu_{12}P_6O_{42}$ 258261.cif 90.99 95.58 98.95 103.86 $Ca_2Cu_2Si_3(HO_3)_4$ 015185.cif 91.41 94.07 $Mg_2Cu_2CO_{11}$ 016731.cif 92.26 Cu_2CO_5 262801.cif 94.24 98.85 $CeCu_6(PO_7)_3$ 005094.cif 94.68 99.23 100.67 104.58 $Ca_4Cu_4As_{1.8}P_{2.2}O_{20}$ 247659.cif 93.96 95.04 $Al_{2.98}Cu_4H_{18}O_{16}F_{2.92}$ 083815.cif 93.52 97.94 $V_{2.4}Cu_8Bi_4P_{1.6}O_{24}$ 249211.cif 92.35 $LiCuBiO_4$ 257025.cif 94.70 101.28 $Ca_{9.6}Pr_{6.4}Cu_{20}O_{40}$ 054900.cif 86.87 87.45 89.89 92.33 93.87 93.89 93.93 96.13 98.37 98.62 $Cu_5Sn(BO_5)_2$ 400602.cif 94.20 96.02 99.72 100.79 $K_{24}Cu_4O_{16}W_{96}I_2O_{450.4}$ 249962.cif 91.58 91.74 $Y_2Cu_2O_5$ 072058.cif 91.43 94.72 $Cu_4As_2O_9$ 239832.cif 18.47 18.70 19.13 92.81 93.69 93.72 94.04 95.23 98.24 100.47	$Ca_8Cu_{36}As_{16}S_{2\cdot08}O_{148\cdot72}$	005406.cif 91.29 93.03 94.34 101.32
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$CoCu_2O_3$	033996.cif 91.63
$Ca_2Cu_2Si_3(HO_3)_4$ 015185.cif 91.41 94.07 $Mg_2Cu_2CO_{11}$ 016731.cif 92.26 Cu_2CO_5 262801.cif 94.24 98.85 $CeCu_6(PO_7)_3$ 005094.cif 94.68 99.23 100.67 104.58 $Ca_4Cu_4As_{1\cdot8}P_{2\cdot2}O_{20}$ 247659.cif 93.96 95.04 $Al_{2\cdot98}Cu_4H_{18}O_{16}F_{2\cdot92}$ 083815.cif 92.35 $V_{2\cdot4}Cu_8Bi_4P_{1\cdot6}O_{24}$ 249211.cif 92.35 $LiCuBiO_4$ 257025.cif 94.70 101.28 $Ca_{9\cdot6}Pr_{6\cdot4}Cu_{20}O_{40}$ 054900.cif 86.87 87.45 89.89 92.33 93.87 93.89 93.93 96.13 98.37 98.62 $Cu_5Sn(BO_5)_2$ 400602.cif 94.20 96.02 99.72 100.79 $K_{24}Cu_4O_{16}W_{96}I_2O_{450\cdot4}$ 249962.cif 91.58 91.74 $Y_2Cu_2O_5$ 072058.cif 91.43 94.72 $Cu_4As_2O_9$ 239832.cif 18.47 18.70 19.13 92.81 93.69 93.72 94.04 95.23 98.24 100.47	$SrCuO_2$	016217.cif 92.86
$Mg_2Cu_2CO_{11}$ 016731.cif 92.26 Cu_2CO_5 262801.cif 94.24 98.85 $CeCu_6(PO_7)_3$ 005094.cif 94.68 99.23 100.67 104.58 $Ca_4Cu_4As_{1\cdot8}P_{2\cdot2}O_{20}$ 247659.cif 93.96 95.04 $Al_{2\cdot98}Cu_4H_{18}O_{16}F_{2\cdot92}$ 083815.cif 92.35 $V_{2\cdot4}Cu_8Bi_4P_{1\cdot6}O_{24}$ 249211.cif 92.35 $LiCuBiO_4$ 257025.cif 94.70 101.28 $Ca_{9\cdot6}Pr_{6\cdot4}Cu_{20}O_{40}$ 054900.cif 86.87 87.45 89.89 92.33 93.87 93.89 93.93 96.13 98.37 98.62 $Cu_5Sn(BO_5)_2$ 400602.cif 94.20 96.02 99.72 100.79 $K_{24}Cu_4O_{16}W_{96}I_2O_{450\cdot4}$ 249962.cif 91.58 91.74 $Y_2Cu_2O_5$ 072058.cif 91.43 94.72 $Cu_4As_2O_9$ 239832.cif 18.47 18.70 19.13 92.81 93.69 93.72 94.04 95.23 98.24 100.47	$Ca_{0.872}Ce_{1.128}Cu_{12}P_6O_{42}$	258261.cif 90.99 95.58 98.95 103.86
Cu_2CO_5 262801.cif 94.24 98.85 $CeCu_6(PO_7)_3$ 005094.cif 94.68 99.23 100.67 104.58 $Ca_4Cu_4As_{1\cdot8}P_{2\cdot2}O_{20}$ 247659.cif 93.96 95.04 $Al_{2\cdot98}Cu_4H_{18}O_{16}F_{2\cdot92}$ 083815.cif 93.52 97.94 $V_{2\cdot4}Cu_8Bi_4P_{1\cdot6}O_{24}$ 249211.cif 92.35 $LiCuBiO_4$ 257025.cif 94.70 101.28 $Ca_{9\cdot6}Pr_{6\cdot4}Cu_{20}O_{40}$ 054900.cif 86.87 87.45 89.89 92.33 93.87 93.89 93.93 96.13 98.37 98.62 $Cu_5Sn(BO_5)_2$ 400602.cif 94.20 96.02 99.72 100.79 $K_{24}Cu_4O_{16}W_{96}I_2O_{450\cdot4}$ 249962.cif 91.58 91.74 $Y_2Cu_2O_5$ 072058.cif 91.43 94.72 $Cu_4As_2O_9$ 239832.cif 18.47 18.70 19.13 92.81 93.69 93.72 94.04 95.23 98.24 100.47	$Ca_2Cu_2Si_3(HO_3)_4$	015185.cif 91.41 94.07
$CeCu_6(PO_7)_3$ 005094.cif 94.68 99.23 100.67 104.58 $Ca_4Cu_4As_{1\cdot8}P_{2\cdot2}O_{20}$ 247659.cif 93.96 95.04 $Al_{2\cdot98}Cu_4H_{18}O_{16}F_{2\cdot92}$ 083815.cif 93.52 97.94 $V_{2\cdot4}Cu_8Bi_4P_{1\cdot6}O_{24}$ 249211.cif 92.35 $LiCuBiO_4$ 257025.cif 94.70 101.28 $Ca_{9\cdot6}Pr_{6\cdot4}Cu_{20}O_{40}$ 054900.cif 86.87 87.45 89.89 92.33 93.87 93.89 93.93 96.13 98.37 98.62 $Cu_5Sn(BO_5)_2$ 400602.cif 94.20 96.02 99.72 100.79 $K_{24}Cu_4O_{16}W_{96}I_2O_{450\cdot4}$ 249962.cif 91.58 91.74 $Y_2Cu_2O_5$ 072058.cif 91.43 94.72 $Cu_4As_2O_9$ 239832.cif 18.47 18.70 19.13 92.81 93.69 93.72 94.04 95.23 98.24 100.47	$Mg_2Cu_2CO_{11}$	016731.cif 92.26
$Ca_4Cu_4As_{1.8}P_{2.2}O_{20}$ 247659.cif 93.96 95.04 $Al_{2.98}Cu_4H_{18}O_{16}F_{2.92}$ 083815.cif 93.52 97.94 $V_{2.4}Cu_8Bi_4P_{1.6}O_{24}$ 249211.cif 92.35 $LiCuBiO_4$ 257025.cif 94.70 101.28 $Ca_{9.6}Pr_{6.4}Cu_{20}O_{40}$ 054900.cif 86.87 87.45 89.89 92.33 93.87 93.89 93.93 96.13 98.37 98.62 $Cu_5Sn(BO_5)_2$ 400602.cif 94.20 96.02 99.72 100.79 $K_{24}Cu_4O_{16}W_{96}I_2O_{450\cdot 4}$ 249962.cif 91.58 91.74 $Y_2Cu_2O_5$ 072058.cif 91.43 94.72 $Cu_4As_2O_9$ 239832.cif 18.47 18.70 19.13 92.81 93.69 93.72 94.04 95.23 98.24 100.47	Cu_2CO_5	262801.cif 94.24 98.85
$Al_{2\cdot98}Cu_4H_{18}O_{16}F_{2\cdot92}$ 083815.cif 93.52 97.94 $V_{2\cdot4}Cu_8Bi_4P_{1\cdot6}O_{24}$ 249211.cif 92.35 $LiCuBiO_4$ 257025.cif 94.70 101.28 $Ca_{9\cdot6}Pr_{6\cdot4}Cu_{20}O_{40}$ 054900.cif 86.87 87.45 89.89 92.33 93.87 93.89 93.93 96.13 98.37 98.62 $Cu_5Sn(BO_5)_2$ 400602.cif 94.20 96.02 99.72 100.79 $K_{24}Cu_4O_{16}W_{96}I_2O_{450\cdot4}$ 249962.cif 91.58 91.74 $Y_2Cu_2O_5$ 072058.cif 91.43 94.72 $Cu_4As_2O_9$ 239832.cif 18.47 18.70 19.13 92.81 93.69 93.72 94.04 95.23 98.24 100.47	$CeCu_6(PO_7)_3$	005094.cif 94.68 99.23 100.67 104.58
$V_{2.4}Cu_8Bi_4P_{1.6}O_{24}$ 249211.cif 92.35 $LiCuBiO_4$ 257025.cif 94.70 101.28 $Ca_{9.6}Pr_{6.4}Cu_{20}O_{40}$ 054900.cif 86.87 87.45 89.89 92.33 93.87 93.89 93.93 96.13 98.37 98.62 $Cu_5Sn(BO_5)_2$ 400602.cif 94.20 96.02 99.72 100.79 $K_{24}Cu_{40}P_{16}W_{96}I_2O_{450\cdot4}$ 249962.cif 91.58 91.74 $Y_2Cu_2O_5$ 072058.cif 91.43 94.72 $Cu_4As_2O_9$ 239832.cif 18.47 18.70 19.13 92.81 93.69 93.72 94.04 95.23 98.24 100.47	$Ca_4Cu_4As_{1\cdot 8}P_{2\cdot 2}O_{20}$	247659.cif 93.96 95.04
$LiCuBiO_4$ 257025.cif 94.70 101.28 $Ca_{9\cdot 6}Pr_{6\cdot 4}Cu_{20}O_{40}$ 054900.cif 86.87 87.45 89.89 92.33 93.87 93.89 93.93 96.13 98.37 98.62 $Cu_5Sn(BO_5)_2$ 400602.cif 94.20 96.02 99.72 100.79 $K_{24}Cu_{40}P_{16}W_{96}I_2O_{450\cdot 4}$ 249962.cif 91.58 91.74 $Y_2Cu_2O_5$ 072058.cif 91.43 94.72 $Cu_4As_2O_9$ 239832.cif 18.47 18.70 19.13 92.81 93.69 93.72 94.04 95.23 98.24 100.47	$Al_{2.98}Cu_4H_{18}O_{16}F_{2.92}$	083815.cif 93.52 97.94
$Ca_{9\cdot 6}Pr_{6\cdot 4}Cu_{20}O_{40}$ 054900.cif 86.87 87.45 89.89 92.33 93.87 93.89 93.93 96.13 98.37 98.62 400602.cif 94.20 96.02 99.72 100.79 $K_{24}Cu_{40}P_{16}W_{96}I_{2}O_{450\cdot 4}$ 249962.cif 91.58 91.74 $Y_{2}Cu_{2}O_{5}$ 072058.cif 91.43 94.72 239832.cif 18.47 18.70 19.13 92.81 93.69 93.72 94.04 95.23 98.24 100.47	$V_{2\cdot 4}Cu_8Bi_4P_{1\cdot 6}O_{24}$	249211.cif 92.35
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$LiCuBiO_4$	257025.cif 94.70 101.28
$Cu_5Sn(BO_5)_2$ 400602.cif 94.20 96.02 99.72 100.79 $K_{24}Cu_{40}P_{16}W_{96}I_2O_{450\cdot4}$ 249962.cif 91.58 91.74 $Y_2Cu_2O_5$ 072058.cif 91.43 94.72 $Cu_4As_2O_9$ 239832.cif 18.47 18.70 19.13 92.81 93.69 93.72 94.04 95.23 98.24 100.47	$Ca_{9.6}Pr_{6.4}Cu_{20}O_{40}$	054900.cif 86.87 87.45 89.89 92.33 93.87 93.89
$K_{24}Cu_{40}P_{16}W_{96}I_{2}O_{450.4}$ 249962.cif 91.58 91.74 $Y_{2}Cu_{2}O_{5}$ 072058.cif 91.43 94.72 $Cu_{4}As_{2}O_{9}$ 239832.cif 18.47 18.70 19.13 92.81 93.69 93.72 94.04 95.23 98.24 100.47		93.93 96.13 98.37 98.62
$Y_2Cu_2O_5$ 072058.cif 91.43 94.72 239832.cif 18.47 18.70 19.13 92.81 93.69 93.72 94.04 95.23 98.24 100.47	$Cu_5Sn(BO_5)_2$	400602.cif 94.20 96.02 99.72 100.79
$Cu_4As_2O_9$ 239832.cif 18.47 18.70 19.13 92.81 93.69 93.72 94.04 95.23 98.24 100.47	$K_{24}Cu_{40}P_{16}W_{96}I_2O_{450.4}$	249962.cif 91.58 91.74
94.04 95.23 98.24 100.47	$Y_2Cu_2O_5$	072058.cif 91.43 94.72
	$Cu_4As_2O_9$	239832.cif 18.47 18.70 19.13 92.81 93.69 93.72
Cu_3AsO_7 018178.cif 94.73 101.42		94.04 95.23 98.24 100.47
	Cu_3AsO_7	018178.cif 94.73 101.42

compound	cif file	d-ligand-d angles
Li_2CuO_2	067150.cif	94.37
$Ba_2Cu_3BrClO_4$	041856.cif	90.00
$BaCu_2Ge_3(HO_5)_2$	424818.cif	88.57 93.40
$BaCu_3O_4$	065881.cif	90.75 91.37
$CaCu_2O_3$	015094.cif	92.40
$Ca_{35.28}La_{20.72}Cu_{96}O_{164}$	202776.cif	85.96 87.04 88.51 88.81 89.08 89.31
		89.44 89.96 90.26 90.75 91.60 93.23
$Y_2Cu_2O_5$	079429.cif	92.25 94.39
$LiVCuO_4$	261517.cif	94.71
$Sr_{2.572}Ca_{1.428}Cu_{4}O_{8}$	077289.cif	92.19
$Cu_{27}P_6H_{163}W_{60.5}C_{42}N_{38}O_{270}$	238771.cif	93.91 94.28 94.35 96.93 98.16 100.02
Li_2CuO_2	202996.cif	93.89
$LiVCuO_4$	290738.cif	94.88
$Ca_{1.968}Y_{1.312}Cu_{4}O_{8}$	050781.cif	91.64
$Ho_2Cu_2O_5$	001063.cif	91.39 92.95
$CuMoO_4$	190443.cif	93.79 96.66
$Na(CuO)_2$	169714.cif	94.52 96.01
$MgCu_2O_3$	004202.cif	90.43
$Sr_{2.28}Ca_{1.72}Cu_{4}O_{8}$	166592.cif	91.91
$In_2Cu_2O_5$	029275.cif	91.87 94.66
$V_2Cu_3H_6O_{11}$	068994.cif	91.37 100.30
$Na_4Cu_2SiW_8O_{45}$	249631.cif	93.57 99.50
$Cu_3NiP_2O_9$	380494.cif	93.75 100.17
$Cu_{3.788}H_8Pb_{3.868}Se_{1.7}S_{2.3}O_{22}$	182701.cif	92.70 93.77 94.60 95.48
$Sc_2Cu_2O_5$	100090.cif	90.81 94.34
$Cu_9Se_4(Cl_3O_7)_2$	091804.cif	93.77 94.57 97.25 98.81
Cu_2SO_5	034649.cif	93.05

compound	cif file	d-ligand-d angles
$\overline{Ba_2Cu_3(BrO_2)_2}$	075576.cif	92.29
$Cu_{12}Bi_2As_6O_{37.9998}$	050062.cif	93.77 97.49 100.60 101.98
$Cu_6H_{10}IClO_{13}$	241338.cif	88.22 92.79
$KCu_{24}Ag_9H_{48}Pb_{26}(Cl_{31}O_{24})_2$	166507.cif	94.65
Cu_2BiPO_6	075387.cif	91.96
$Tm_2Cu_2O_5$	069329.cif	92.30 93.95
Cu_2SO_5	027408.cif	91.82
$TlV_3Cu_5O_{13}$	092445.cif	92.48 93.21 97.38 100.12
Cu_2GeO_4	434507.cif	91.57
$CuPbSO_6$	025714.cif	92.40 94.32
$Zn_4Cu_5(TeO_6)_3$	407956.cif	91.69 96.04
$Ba_2Cu_3(ClO_2)_2$	000355.cif	90.00
$Cu(AsO_2)_2$	004287.cif	91.50
$Sr_2Cu_3(ClO_2)_2$	000427.cif	90.00
$Sr_{11.7}Ca_{27.7}Nd_{14.64}Y_{5.36}Cu_{92.6}O_{164}$	039941.cif	59.45 70.27 74.63 78.41 79.82 80.53
		85.04 85.74 87.52 87.99 88.37 89.02
		89.10 89.26 89.69 90.05 91.35 93.82
		97.29 97.83 110.10 114.20
$Cu(AsO_2)_2$	016829.cif	92.26
$Ca_{0.68}Cu_{12}Bi_{1.32}As_6O_{42}$	070117.cif	93.11 97.58 99.16 102.92
Li_2CuO_2	067205.cif	93.96
$Cu_3H_{30}C_{10}S_3N_4O_{15}$	248823.cif	93.93
$Ca_{1.856}Y_{1.424}Cu_{4}O_{8}$	050782.cif	91.32
$Sr_2Cu_3(IO_2)_2$	055711.cif	90.07
$Na_5(CuO_2)_3$	422413.cif	93.13 93.68 94.13 94.43 95.68 97.22
$Ba_2Cu_3(ClO_2)_2$	163501.cif	90.00
$K_2CaCu_6(As_2O_9)_2$	257356.cif	92.14 96.12

compound	cif file d-ligand-d angles	
$K_{19}Cu_{20}P_8W_{48}BrO_{250}$	249961.cif 90.97 91.74 91.84 92.0	0
$ZnCu_2PO_8$	188025.cif 93.63 97.10 98.08	
$CaCuAsO_5$	064694.cif 90.07 97.09	
Cu_2BO_6	047162.cif 94.26 98.10 98.37 99.08	3
$MnCu_4H_{14}(SO_9)_2$	030797.cif 93.91 102.04	
$Sr_{1.708}Ca_{2.292}Cu_{4}O_{8}$	077286.cif 91.79	
Cu_3AsO_7	087869.cif 93.74 96.38 96.47 97.04	
$CdCuAsHO_5$	252666.cif 91.56 101.76	
$Cu_2Pb_2Se_2O_{11}$	068172.cif 92.43 92.64 93.71 94.6	6
$Ca_4Cu_{18}As_8C_{1\cdot 52}O_{74}$	156568.cif 94.82 96.30 99.36 102.3	39
$Cu_5(PO_6)_2$	100744.cif 94.87 96.03 96.17	
$NaCuMoO_5$	061262.cif 91.97 103.65	
$Cu_9Se_4(Cl_3O_7)_2$	050576.cif 94.72 98.02	
$KNaCu_3S_3O_{13}$	069451.cif 92.31 92.87	
$LiVCuO_4$	065677.cif 94.96	
$Cu_4Se_3O_{10}$	060655.cif 92.49 98.03 100.39	
$V_2Cu_3H_6O_{11}$	063282.cif 92.43 99.47	
$Cu_5Si_4(HO_7)_2$	100072.cif 87.59 90.68 99.45 100.0	8
$Ca_{3.96}Nd_{8.04}Cu_{16}O_{32}$	040585.cif 92.35	
$BaMg_2V_6(Cu_4O_{13})_2$	040848.cif 92.30 94.69 97.70 100.1	0
$CuPbSO_6$	015435.cif 90.78 94.14	
$Al_3Cu_4O_{16}F_3$	164675.cif 93.51 98.04	
$Tm_2Cu_2O_5$	079431.cif 92.30 93.59	
$Cu_{22.8}Te_8Cl_{14.8}O_{28}$	431559.cif 91.45 96.42 101.71	
$Yb_2Cu_2O_5$	069328.cif 92.36 92.76	
$Mg_{0.3718}Cu_{7.6282}As_{2.812}P_{1.188}O_{18}$	404154.cif 93.29 97.56	

Searching in a pool of 719 cif files.

Warnings:

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Structure 158337.cif is corrupt. Structure 158336.cif is corrupt. Structure 071825.cif is corrupt. Structure 068662.cif is corrupt. Structure 085128.cif is corrupt. Structure 158338.cif is corrupt.
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