

Table 1. Crystal data and structure refinement

Compound	$[(\text{HgI}_2)_2(\text{TPyP})] \cdot 2(\text{TCE})$
Color / Shape	violet / parallelepiped
Empirical formula	$\text{C}_{44}\text{H}_{30}\text{Cl}_8\text{Hg}_2\text{I}_4\text{N}_8$
Formula weight	1863.14
Temperature	173(2) K
Crystal system	Triclinic
Space group	$\bar{P}1$
Unit cell dimensions (4277 reflections, in full θ range)	$a = 10.0350(7) \text{ \AA}$ $\alpha = 98.935(1)^\circ$ $b = 11.9656(8) \text{ \AA}$ $\beta = 101.752(1)^\circ$ $c = 12.9198(8) \text{ \AA}$ $\gamma = 113.669(1)^\circ$
Volume	$1341.6(2) \text{ \AA}^3$
Z	1
Density (calculated)	2.306 Mg/m^3
Absorption coefficient	8.455 mm^{-1}
Diffractometer / scan	Siemens SMART / CCD area detector
Radiation / wavelength	$\text{MoK}\alpha$ (graphite monochrom.) / $0.71073 \text{ \AA}$
F(000)	858
Crystal size	$0.38 \times 0.20 \times 0.18 \text{ mm}$
θ range for data collection	1.67 to 27.91°
Index ranges	$-10 \leq h \leq 13$, $-15 \leq k \leq 15$, $-16 \leq l \leq 15$
Reflections collected	8612
Independent / observed refls.	$5987(R_{\text{int}} = 0.0294)$ / $4397([I > 2\sigma(I)])$
Absorption correction	SADABS
Refinement method	Full-matrix least-squares on F^2
Computing	SHELXTL, Ver. 5 ²
Data / restraints / parameters	5981 / 0 / 299
Goodness-of-fit on F^2	0.960
SHELX-93 weight parameters	0.0723, 0.000
Final R indices $[I > 2\sigma(I)]$	$R1 = 0.0516$, $wR2 = 0.1206$
R indices (all data)	$R1 = 0.0719$, $wR2 = 0.1303$
Extinction coefficient	$0.0000(2)$
Largest diff. peak and hole	3.461 and $-3.134 \text{ e\AA}^{-3}$

Table 2. Atomic Coordinates [$\times 10^4$] and Equivalent Isotropic Displacement Parameters [$\text{\AA}^2 \times 10^3$] for $[(\text{HgI}_2)_2(\text{TPyP})] \cdot 2(\text{TCE})$

Atom	x/a	y/b	z/c	U(eq)
Hg	8222(1)	9272(1)	3174(1)	25(1)
I(1)	5693(1)	7992(1)	3655(1)	43(1)
I(2)	10357(1)	11507(1)	3258(1)	35(1)
Cl(1)	3396(8)	9681(4)	12040(4)	126(2)
Cl(2)	483(4)	7352(4)	11214(2)	70(1)
Cl(3)	2115(7)	8388(5)	9369(4)	110(2)
Cl(4)	2087(4)	6087(4)	9888(3)	67(1)
N(1)	15695(8)	3939(7)	4076(5)	22(2)
N(2)	13307(9)	4801(7)	3649(5)	23(2)
N(3)	12576(9)	1804(7)	-1178(6)	28(2)
N(4)	9636(8)	8122(7)	3701(5)	23(2)
C(1)	16764(10)	3529(8)	4396(6)	21(2)
C(2)	16879(11)	2762(9)	3462(6)	28(2)
C(3)	15860(11)	2709(9)	2561(7)	26(2)
C(4)	15137(10)	3443(8)	2945(7)	24(2)
C(5)	13922(10)	3542(9)	2256(6)	24(2)
C(6)	13105(10)	4174(8)	2587(7)	23(2)
C(7)	11925(11)	4322(9)	1898(6)	28(2)
C(8)	11460(11)	5034(8)	2503(6)	26(2)
C(9)	12347(10)	5356(8)	3616(6)	22(2)
C(10)	12319(10)	6164(8)	4523(6)	20(2)
C(11)	13447(10)	2928(8)	1066(6)	23(2)
C(12)	12217(13)	1794(10)	604(8)	42(3)
C(13)	11797(13)	1244(10)	-546(8)	41(3)
C(14)	13780(13)	2898(11)	-718(8)	46(3)
C(15)	14255(14)	3470(11)	391(8)	49(3)
C(16)	11345(10)	6822(8)	4266(6)	22(2)
C(17)	9765(10)	6199(9)	3919(7)	27(2)
C(18)	8940(10)	6869(10)	3643(7)	29(2)
C(19)	11143(10)	8718(8)	4061(6)	24(2)
C(20)	12043(10)	8110(9)	4361(7)	25(2)

C(21)	2462 (22)	7972 (18)	11389 (14)	97 (6)
C(22)	2911 (23)	7826 (20)	10454 (17)	106 (7)

$U(eq)$ is defined as one third of the trace of the orthogonalized U_{ij} tensor.

Table 3. Bond Lengths [Å] and Angles [°] for [(HgI₂)₂(TPyP)]·2(TCE)

Hg-N(4)	2.416(7)	Hg-N(3)#1	2.500(7)
Hg-I(2)	2.6401(8)	Hg-I(1)	2.6429(8)
Cl(1)-C(21)	1.84(2)	Cl(2)-C(21)	1.77(2)
Cl(3)-C(22)	1.82(2)	Cl(4)-C(22)	1.86(2)
N(1)-C(1)	1.367(10)	N(1)-C(4)	1.390(10)
N(2)-C(9)	1.370(10)	N(2)-C(6)	1.389(10)
N(3)-C(14)	1.312(13)	N(3)-C(13)	1.318(12)
N(3)-Hg#1	2.500(7)	N(4)-C(19)	1.325(11)
N(4)-C(18)	1.357(12)	C(1)-C(10)#2	1.406(10)
C(1)-C(2)	1.452(11)	C(2)-C(3)	1.358(11)
C(3)-C(4)	1.437(12)	C(4)-C(5)	1.414(11)
C(5)-C(6)	1.403(12)	C(5)-C(11)	1.484(10)
C(6)-C(7)	1.419(11)	C(7)-C(8)	1.348(12)
C(8)-C(9)	1.427(10)	C(9)-C(10)	1.412(11)
C(10)-C(1)#2	1.406(10)	C(10)-C(16)	1.501(11)
C(11)-C(12)	1.350(14)	C(11)-C(15)	1.371(14)
C(12)-C(13)	1.426(13)	C(14)-C(15)	1.379(13)
C(16)-C(20)	1.386(12)	C(16)-C(17)	1.389(13)
C(17)-C(18)	1.399(12)	C(19)-C(20)	1.403(12)
C(21)-C(22)	1.38(2)		
N(4)-Hg-N(3)#1	93.7(2)	N(4)-Hg-I(2)	103.5(2)
N(3)#1-Hg-I(2)	100.8(2)	N(4)-Hg-I(1)	100.2(2)
N(3)#1-Hg-I(1)	99.8(2)	I(2)-Hg-I(1)	147.27(3)
C(1)-N(1)-C(4)	104.5(6)	C(9)-N(2)-C(6)	108.8(7)
C(14)-N(3)-C(13)	118.0(8)	C(14)-N(3)-Hg#1	122.5(6)
C(13)-N(3)-Hg#1	119.5(6)	C(19)-N(4)-C(18)	118.0(7)
C(19)-N(4)-Hg	119.7(6)	C(18)-N(4)-Hg	122.2(6)
N(1)-C(1)-C(10)#2	125.1(7)	N(1)-C(1)-C(2)	111.1(7)
C(10)#2-C(1)-C(2)	123.7(7)	C(3)-C(2)-C(1)	106.8(7)
C(2)-C(3)-C(4)	106.2(7)	N(1)-C(4)-C(5)	125.1(8)
N(1)-C(4)-C(3)	111.4(7)	C(5)-C(4)-C(3)	123.3(7)
C(6)-C(5)-C(4)	126.3(7)	C(6)-C(5)-C(11)	115.8(7)
C(4)-C(5)-C(11)	117.9(8)	N(2)-C(6)-C(5)	127.0(7)
N(2)-C(6)-C(7)	106.3(7)	C(5)-C(6)-C(7)	126.7(8)
C(8)-C(7)-C(6)	109.7(7)	C(7)-C(8)-C(9)	107.0(7)

N(2)-C(9)-C(10)	125.2(7)	N(2)-C(9)-C(8)	108.1(7)
C(10)-C(9)-C(8)	126.6(7)	C(1)#2-C(10)-C(9)	124.6(7)
C(1)#2-C(10)-C(16)	119.2(7)	C(9)-C(10)-C(16)	115.9(7)
C(12)-C(11)-C(15)	117.0(8)	C(12)-C(11)-C(5)	121.3(9)
C(15)-C(11)-C(5)	121.6(8)	C(11)-C(12)-C(13)	119.4(10)
N(3)-C(13)-C(12)	122.1(9)	N(3)-C(14)-C(15)	122.6(10)
C(11)-C(15)-C(14)	120.8(10)	C(20)-C(16)-C(17)	117.8(8)
C(20)-C(16)-C(10)	119.0(8)	C(17)-C(16)-C(10)	123.2(8)
C(16)-C(17)-C(18)	119.7(9)	N(4)-C(18)-C(17)	122.0(8)
N(4)-C(19)-C(20)	123.0(8)	C(16)-C(20)-C(19)	119.4(8)
C(22)-C(21)-Cl(2)	117(2)	C(22)-C(21)-Cl(1)	105.9(14)
Cl(2)-C(21)-Cl(1)	109.9(11)	C(21)-C(22)-Cl(3)	114.9(14)
C(21)-C(22)-Cl(4)	104.6(13)	Cl(3)-C(22)-Cl(4)	105.2(11)

Symmetry transformations used to generate equivalent atoms:

#1 -x+2,-y+1,-z #2 -x+3,-y+1,-z+1

Table 4. Anisotropic Displacement Parameters [$\text{\AA}^2 \times 10^3$] for
 $[(\text{HgI}_2)_2(\text{TPyP})] \cdot 2(\text{TCE})$

Atom	U11	U22	U33	U23	U13	U12
Hg	25 (1)	34 (1)	17 (1)	4 (1)	2 (1)	16 (1)
I (1)	25 (1)	59 (1)	35 (1)	7 (1)	9 (1)	13 (1)
I (2)	44 (1)	31 (1)	27 (1)	6 (1)	9 (1)	14 (1)
Cl (1)	174 (6)	63 (3)	96 (3)	14 (3)	8 (4)	27 (3)
Cl (2)	70 (2)	114 (3)	34 (2)	15 (2)	9 (2)	53 (2)
Cl (3)	181 (5)	118 (4)	76 (3)	58 (3)	61 (3)	88 (4)
Cl (4)	65 (2)	79 (2)	58 (2)	16 (2)	12 (2)	38 (2)
N (1)	28 (4)	33 (4)	11 (3)	3 (3)	-1 (3)	22 (4)
N (2)	32 (4)	30 (4)	16 (3)	7 (3)	2 (3)	24 (4)
N (3)	37 (5)	34 (5)	14 (3)	3 (3)	2 (3)	20 (4)
N (4)	24 (4)	30 (4)	14 (3)	1 (3)	1 (3)	14 (3)
C (1)	25 (5)	26 (5)	14 (4)	2 (3)	0 (3)	17 (4)
C (2)	38 (6)	40 (6)	13 (4)	2 (4)	3 (4)	28 (5)
C (3)	31 (5)	31 (5)	17 (4)	1 (4)	1 (4)	19 (4)
C (4)	27 (5)	28 (5)	14 (4)	0 (3)	-1 (4)	16 (4)
C (5)	29 (5)	35 (5)	7 (4)	4 (3)	0 (3)	16 (4)
C (6)	27 (5)	23 (5)	18 (4)	3 (3)	-3 (4)	14 (4)
C (7)	39 (6)	38 (6)	8 (4)	1 (4)	-6 (4)	27 (5)
C (8)	34 (5)	33 (5)	11 (4)	0 (4)	-7 (4)	23 (5)
C (9)	23 (5)	33 (5)	15 (4)	7 (4)	-1 (3)	19 (4)
C (10)	21 (4)	27 (5)	11 (4)	3 (3)	0 (3)	14 (4)
C (11)	32 (5)	28 (5)	9 (4)	0 (3)	-2 (3)	19 (4)
C (12)	45 (7)	41 (6)	18 (5)	2 (4)	6 (4)	2 (5)
C (13)	41 (6)	40 (6)	19 (5)	-5 (4)	8 (4)	0 (5)
C (14)	48 (7)	50 (7)	20 (5)	9 (5)	11 (5)	4 (6)
C (15)	47 (7)	43 (7)	19 (5)	-4 (5)	-1 (5)	-5 (6)
C (16)	30 (5)	27 (5)	13 (4)	7 (3)	5 (3)	16 (4)
C (17)	24 (5)	30 (5)	28 (5)	7 (4)	4 (4)	15 (4)
C (18)	18 (5)	45 (6)	23 (4)	5 (4)	2 (4)	15 (5)
C (19)	27 (5)	23 (5)	17 (4)	2 (4)	1 (4)	9 (4)
C (20)	19 (4)	36 (5)	20 (4)	5 (4)	3 (4)	16 (4)
C (21)	103 (14)	119 (16)	81 (12)	56 (11)	20 (11)	54 (13)
C (22)	106 (15)	135 (18)	134 (18)	86 (15)	67 (14)	75 (14)

The anisotropic displacement factor exponent takes the form:

$$-2\pi^2 [(h a^*)^2 U_{11} + \dots + 2h k a^* b^* U_{12}] .$$

Table 5. Hydrogen Coordinates ($\times 10^4$) and Isotropic Displacement Parameters ($\text{\AA}^2 \times 10^3$) for $[(\text{HgI}_2)_2(\text{TPyP})] \cdot 2(\text{TCE})$

Atom	x	y	z	U(eq)
H(2B)	13956(9)	4832(7)	4260(5)	27
H(2A)	17540(11)	2373(9)	3478(6)	34
H(3A)	15665(11)	2275(9)	1825(7)	40
H(7A)	11524(11)	3973(9)	1126(6)	34
H(8A)	10687(11)	5275(8)	2240(6)	32
H(12A)	11636(13)	1368(10)	1040(8)	50
H(13A)	10928(13)	448(10)	-866(8)	50
H(14A)	14347(13)	3312(11)	-1166(8)	55
H(15A)	15153(14)	4249(11)	691(8)	58
H(17A)	9247(10)	5322(9)	3870(7)	33
H(18A)	7860(10)	6434(10)	3407(7)	35
H(19A)	11637(10)	9599(8)	4119(6)	29
H(20A)	13120(10)	8577(9)	4627(7)	30
H(21A)	2882(22)	7560(18)	11893(14)	116
H(22A)	4046(23)	8223(20)	10640(17)	127

Table 1. Crystal data and structure refinement

Compound	$[(\text{HgI}_2)_2(\text{TPyP})_{0.25}(\text{ZnTPyP})_{0.75}] \cdot 2(\text{TCE})$
Color / Shape	violet / parallelepiped
Empirical formula	$\text{C}_{44}\text{H}_{28.5}\text{Cl}_8\text{Hg}_2\text{I}_4\text{N}_8\text{Zn}_{0.75}$
Formula weight	1910.15
Temperature	173(2) K
Crystal system	Triclinic
Space group	$P\bar{1}$
Unit cell dimensions (2983 reflections in full θ range)	$a = 10.1734(6) \text{ \AA}$ $\alpha = 97.884(1)^\circ$ $b = 11.7880(7) \text{ \AA}$ $\beta = 102.216(1)^\circ$ $c = 12.8166(6) \text{ \AA}$ $\gamma = 113.594(2)^\circ$
Volume	$1333.73(13) \text{ \AA}^3$
Z	1
Density (calculated)	2.378 Mg/m^3
Absorption coefficient	8.834 mm^{-1}
Diffractometer / scan	Siemens SMART / CCD area detector
Radiation / wavelength	$\text{MoK}\alpha$ (graphite monochrom.) / $0.71073 \text{ \AA}$
F(000)	879
Crystal size	$0.12 \times 0.20 \times 0.22 \text{ mm}$
θ range for data collection	1.68 to 27.89°
Index ranges	$-10 \leq h \leq 13$, $-15 \leq k \leq 10$, $-16 \leq l \leq 16$
Reflections collected	8374
Independent / observed refls.	5834 ($R_{\text{int}} = 0.0565$) / 3540 ($[I > 2\sigma(I)]$)
Absorption correction	SADABS ¹
Refinement method	Full-matrix least-squares on F^2
Computing	SHELXTL, Ver. 5 ²
Data / restraints / parameters	5831 / 0 / 285
Goodness-of-fit on F^2	1.051
SHELX-93 weight parameters	0.0358, 32.3472
Final R indices $[I > 2\sigma(I)]$	$R_1 = 0.0873$, $wR_2 = 0.1487$
R indices (all data)	$R_1 = 0.1584$, $wR_2 = 0.1975$
Extinction coefficient	$0.0000(2)$
Largest diff. peak and hole	2.484 and $-2.210 \text{ e\AA}^{-3}$

Table 2. Atomic Coordinates [$\times 10^4$] and Equivalent Isotropic Displacement Parameters [$\text{\AA}^2 \times 10^3$] for $[(\text{HgI}_2)_2 (\text{TPyP})_{0.25} (\text{ZnTPyP})_{0.75}] \cdot 2 (\text{TCE})$

Atom	x/a	y/b	z/c	U(eq)
Hg	8224 (1)	9258 (1)	3198 (1)	25 (1)
I (1)	5754 (1)	7946 (2)	3704 (1)	43 (1)
I (2)	10293 (2)	11528 (1)	3263 (1)	35 (1)
Zn	15000	5000	5000	28 (1)
Cl (1)	3464 (11)	9663 (8)	12071 (7)	105 (3)
Cl (2)	565 (7)	7407 (8)	11213 (5)	66 (2)
Cl (3)	2272 (13)	8454 (10)	9380 (7)	118 (4)
Cl (4)	2120 (8)	6090 (7)	9858 (5)	65 (2)
N (1)	15671 (15)	3945 (13)	4060 (11)	20 (3)
N (2)	13331 (16)	4784 (15)	3667 (11)	28 (4)
N (3)	12565 (17)	1816 (14)	-1194 (12)	27 (4)
N (4)	9626 (16)	8068 (15)	3680 (10)	25 (3)
C (1)	16759 (19)	3548 (16)	4411 (13)	21 (4)
C (2)	16875 (19)	2799 (17)	3481 (13)	24 (4)
C (3)	15869 (19)	2744 (19)	2563 (13)	28 (5)
C (4)	15099 (18)	3434 (15)	2927 (11)	16 (3)
C (5)	13913 (19)	3529 (17)	2249 (14)	25 (4)
C (6)	13099 (20)	4187 (17)	2595 (13)	29 (4)
C (7)	11911 (22)	4292 (19)	1889 (14)	34 (5)
C (8)	11474 (23)	5006 (20)	2504 (15)	38 (5)
C (9)	12360 (17)	5322 (15)	3600 (12)	14 (3)
C (10)	12354 (16)	6142 (16)	4518 (12)	16 (4)
C (11)	13435 (19)	2896 (17)	1047 (12)	21 (4)
C (12)	12198 (22)	1772 (18)	574 (13)	33 (5)
C (13)	11809 (23)	1191 (21)	-532 (14)	38 (5)
C (14)	13810 (23)	2855 (21)	-734 (14)	36 (5)
C (15)	14300 (20)	3457 (19)	375 (13)	31 (5)
C (16)	11381 (20)	6816 (20)	4273 (12)	29 (5)
C (17)	9806 (19)	6149 (18)	3903 (13)	26 (4)
C (18)	8996 (20)	6831 (20)	3644 (15)	34 (5)

C(19)	11140(20)	8694(18)	4011(13)	27(4)
C(20)	12019(18)	8116(17)	4343(13)	23(4)
C(21)	2450(28)	7990(29)	11400(22)	69(8)
C(22)	2895(40)	7774(43)	10419(28)	116(15)

$U(eq)$ is defined as one third of the trace of the orthogonalized U_{ij} tensor.

Table 3. Bond Lengths [Å] and Angles [°] for
 $[(\text{HgI}_2)_2(\text{TPyP})_{0.25}(\text{ZnTPyP})_{0.75}] \cdot 2(\text{TCE})$

Hg-N(4)	2.42(2)	Hg-N(3)#1	2.503(14)
Hg-I(2)	2.636(2)	Hg-I(1)	2.643(2)
Zn-N(1)	2.020(14)	Zn-N(1)#2	2.020(14)
Zn-N(2)#2	2.043(14)	Zn-N(2)	2.043(14)
Cl(1)-C(21)	1.80(3)	Cl(2)-C(21)	1.71(3)
Cl(3)-C(22)	1.78(3)	Cl(4)-C(22)	1.79(5)
N(1)-C(1)	1.38(2)	N(1)-C(4)	1.39(2)
N(2)-C(9)	1.37(2)	N(2)-C(6)	1.38(2)
N(3)-C(14)	1.30(2)	N(3)-C(13)	1.36(2)
N(3)-Hg#1	2.503(14)	N(4)-C(18)	1.33(2)
N(4)-C(19)	1.35(2)	C(1)-C(10)#2	1.38(2)
C(1)-C(2)	1.44(2)	C(2)-C(3)	1.36(2)
C(3)-C(4)	1.43(2)	C(4)-C(5)	1.38(2)
C(5)-C(6)	1.44(3)	C(5)-C(11)	1.50(2)
C(6)-C(7)	1.41(2)	C(7)-C(8)	1.34(3)
C(8)-C(9)	1.41(2)	C(9)-C(10)	1.42(2)
C(10)-C(1)#2	1.38(2)	C(10)-C(16)	1.51(2)
C(11)-C(12)	1.35(2)	C(11)-C(15)	1.40(2)
C(12)-C(13)	1.38(2)	C(14)-C(15)	1.38(2)
C(16)-C(20)	1.39(3)	C(16)-C(17)	1.41(2)
C(17)-C(18)	1.39(3)	C(19)-C(20)	1.36(2)
C(21)-C(22)	1.45(4)		
N(4)-Hg-N(3)#1	91.8(5)	N(4)-Hg-I(2)	104.1(4)
N(3)#1-Hg-I(2)	100.9(4)	N(4)-Hg-I(1)	100.4(3)
N(3)#1-Hg-I(1)	100.0(4)	I(2)-Hg-I(1)	147.02(6)
N(1)-Zn-N(1)#2	180.000(4)	N(1)-Zn-N(2)#2	88.9(6)
N(1)#2-Zn-N(2)#2	91.1(6)	N(1)-Zn-N(2)	91.1(6)
N(1)#2-Zn-N(2)	88.9(6)	N(2)#2-Zn-N(2)	180.000(2)
C(1)-N(1)-C(4)	105.7(14)	C(1)-N(1)-Zn	127.3(10)
C(4)-N(1)-Zn	127.0(11)	C(9)-N(2)-C(6)	105(2)
C(9)-N(2)-Zn	128.8(11)	C(6)-N(2)-Zn	125.4(13)
C(14)-N(3)-C(13)	118(2)	C(14)-N(3)-Hg#1	121.9(12)
C(13)-N(3)-Hg#1	118.8(12)	C(18)-N(4)-C(19)	118(2)
C(18)-N(4)-Hg	123.9(12)	C(19)-N(4)-Hg	118.5(13)

C(10)#2-C(1)-N(1)	126(2)	C(10)#2-C(1)-C(2)	125(2)
N(1)-C(1)-C(2)	109.6(14)	C(3)-C(2)-C(1)	108(2)
C(2)-C(3)-C(4)	106.5(14)	C(5)-C(4)-N(1)	125(2)
C(5)-C(4)-C(3)	124.5(14)	N(1)-C(4)-C(3)	110.4(14)
C(4)-C(5)-C(6)	126(2)	C(4)-C(5)-C(11)	118(2)
C(6)-C(5)-C(11)	117(2)	N(2)-C(6)-C(7)	110(2)
N(2)-C(6)-C(5)	126(2)	C(7)-C(6)-C(5)	125(2)
C(8)-C(7)-C(6)	108(2)	C(7)-C(8)-C(9)	107(2)
N(2)-C(9)-C(8)	110(2)	N(2)-C(9)-C(10)	123.0(14)
C(8)-C(9)-C(10)	127(2)	C(1)#2-C(10)-C(9)	126(2)
C(1)#2-C(10)-C(16)	118(2)	C(9)-C(10)-C(16)	116.3(13)
C(12)-C(11)-C(15)	118(2)	C(12)-C(11)-C(5)	122(2)
C(15)-C(11)-C(5)	120(2)	C(11)-C(12)-C(13)	121(2)
N(3)-C(13)-C(12)	120(2)	N(3)-C(14)-C(15)	124(2)
C(14)-C(15)-C(11)	118(2)	C(20)-C(16)-C(17)	117(2)
C(20)-C(16)-C(10)	121(2)	C(17)-C(16)-C(10)	122(2)
C(18)-C(17)-C(16)	118(2)	N(4)-C(18)-C(17)	124(2)
N(4)-C(19)-C(20)	123(2)	C(19)-C(20)-C(16)	120(2)
C(22)-C(21)-Cl(2)	116(2)	C(22)-C(21)-Cl(1)	108(3)
Cl(2)-C(21)-Cl(1)	113(2)	C(21)-C(22)-Cl(3)	114(2)
C(21)-C(22)-Cl(4)	109(3)	Cl(3)-C(22)-Cl(4)	108(2)

Symmetry transformations used to generate equivalent atoms:

#1 -x+2, -y+1, -z #2 -x+3, -y+1, -z+1

Table 4. Anisotropic Displacement Parameters [$\text{\AA}^2 \times 10^3$] for
 $[(\text{HgI}_2)_2(\text{TPyP})_{0.25}(\text{ZnTPyP})_{0.75}] \cdot 2(\text{TCE})$

Atom	U11	U22	U33	U23	U13	U12
Hg	24 (1)	30 (1)	19 (1)	1 (1)	3 (1)	14 (1)
I (1)	27 (1)	56 (1)	37 (1)	6 (1)	11 (1)	12 (1)
I (2)	41 (1)	30 (1)	28 (1)	3 (1)	11 (1)	12 (1)
Zn	34 (2)	33 (3)	19 (2)	-1 (2)	5 (2)	22 (2)
Cl (1)	133 (8)	60 (6)	82 (6)	6 (4)	8 (5)	19 (5)
Cl (2)	57 (4)	106 (6)	39 (3)	5 (3)	9 (3)	46 (4)
Cl (3)	212 (11)	152 (9)	81 (5)	77 (6)	84 (7)	132 (9)
Cl (4)	71 (4)	70 (5)	57 (4)	9 (4)	17 (3)	37 (4)
N (2)	26 (8)	32 (10)	22 (7)	-7 (7)	3 (6)	14 (7)
N (3)	29 (8)	21 (9)	27 (8)	-5 (7)	-4 (7)	15 (7)
N (4)	25 (8)	33 (10)	11 (6)	0 (6)	5 (6)	9 (7)
C (1)	28 (9)	20 (10)	23 (9)	2 (7)	9 (7)	20 (8)
C (3)	34 (10)	55 (14)	5 (7)	-2 (8)	5 (7)	34 (10)
C (4)	28 (9)	15 (9)	3 (6)	-2 (6)	1 (6)	9 (7)
C (6)	34 (11)	20 (10)	15 (8)	-16 (7)	-6 (8)	6 (9)
C (7)	51 (13)	36 (12)	19 (9)	11 (9)	-4 (9)	29 (10)
C (8)	45 (12)	50 (14)	31 (10)	0 (10)	2 (9)	40 (11)
C (10)	8 (7)	27 (10)	15 (8)	11 (7)	4 (6)	8 (7)
C (11)	32 (10)	24 (10)	10 (8)	1 (7)	-1 (7)	18 (8)
C (12)	51 (13)	21 (11)	11 (8)	1 (8)	-5 (8)	8 (10)
C (13)	41 (12)	44 (14)	13 (8)	0 (9)	2 (8)	7 (10)
C (14)	45 (12)	56 (15)	19 (9)	17 (10)	17 (9)	28 (12)
C (15)	31 (10)	32 (12)	17 (8)	-3 (8)	12 (8)	0 (9)
C (16)	28 (10)	50 (14)	6 (7)	1 (8)	0 (7)	18 (10)
C (17)	27 (10)	23 (11)	22 (9)	0 (8)	6 (8)	8 (8)
C (18)	17 (9)	39 (13)	31 (10)	-1 (9)	-3 (8)	6 (9)
C (19)	28 (10)	27 (11)	16 (8)	1 (8)	-4 (7)	10 (9)
C (20)	12 (8)	22 (10)	21 (9)	-1 (8)	1 (7)	-3 (7)
C (21)	59 (17)	91 (23)	58 (16)	26 (16)	19 (14)	30 (16)
C (22)	107 (27)	226 (49)	97 (25)	89 (30)	46 (22)	130 (32)

The anisotropic displacement factor exponent takes the form:

$$-2\pi^2 [(ha^*)^2 U_{11} + \dots + 2hka^*b^* U_{12}] .$$

Table 5. Hydrogen Coordinates ($\times 10^4$) and Isotropic Displacement Parameters ($\text{\AA}^2 \times 10^3$) for $[(\text{HgI}_2)_2(\text{TPyP})_{0.25}(\text{ZnTPyP})_{0.75}] \cdot 2(\text{TCE})$

Atom	x	y	z	U(eq)
H(2A)	17536(19)	2412(17)	3504(13)	26
H(3A)	15709(19)	2329(19)	1826(13)	33
H(7A)	11495(22)	3923(19)	1118(14)	41
H(8A)	10707(23)	5254(20)	2247(15)	46
H(12A)	11586(22)	1374(18)	1009(13)	40
H(13A)	11012(23)	354(21)	-830(14)	46
H(14A)	14414(23)	3218(21)	-1185(14)	43
H(15A)	15199(20)	4231(19)	673(13)	37
H(17A)	9310(19)	5255(18)	3833(13)	31
H(18A)	7932(20)	6388(20)	3429(15)	41
H(19A)	11609(20)	9572(18)	4012(13)	32
H(20A)	13076(18)	8607(17)	4623(13)	28
H(21A)	2815(28)	7535(29)	11907(22)	83
H(22A)	4015(40)	8144(43)	10627(28)	139

Table 1. Crystal data and structure refinement

Compound	$[(\text{HgI}_2)_2(\text{ZnTPyP})_{0.3}(\text{TPyP})_{0.7}]^*4(\text{TCE})$
Color / Shape	violet / fragment
Empirical formula	$\text{C}_{48}\text{H}_{33.4}\text{Cl}_{16}\text{Hg}_2\text{I}_4\text{N}_8\text{Zn}_{0.30}$
Formula weight	2216.41
Temperature	173(2) K
Crystal system	Triclinic
Space group	$\bar{P}1$
Unit cell dimensions	$a = 14.6129(5) \text{ \AA}$ $\alpha = 62.053(1)^\circ$
(6091 reflections	$b = 16.2090(5) \text{ \AA}$ $\beta = 80.372(1)^\circ$
in full θ range)	$c = 16.3263(5) \text{ \AA}$ $\gamma = 73.281(1)^\circ$
Volume	$3269.3(2) \text{ \AA}^3$
Z	2
Density (calculated)	2.252 Mg/m^3
Absorption coefficient	7.381 mm^{-1}
Diffractometer / scan	Siemens SMART / CCD area detector
Radiation / wavelength	MoK α (graphite monochrom.) / $0.71073 \text{ \AA}$
F(000)	2058
Crystal size	$0.10 \times 0.20 \times 0.20 \text{ mm}$
θ range for data collection	1.41 to 27.99°
Index ranges	$-18 \leq h \leq 18$, $-21 \leq k \leq 21$, $-20 \leq l \leq 21$
Reflections collected	20627
Independent / observed refls.	14427 ($R_{\text{int}} = 0.0352$) / 8155 ($[I > 2\sigma(I)]$)
Absorption correction	SADABS ¹
Refinement method	Full-matrix least-squares on F^2
Computing	SHELXTL, Ver. 5 ²
Data / restraints / parameters	14423 / 0 / 712
Goodness-of-fit on F^2	0.935
SHELX-93 weight parameters	0.0458, 0.0000
Final R indices $[I > 2\sigma(I)]$	$R1 = 0.0496$, $wR2 = 0.0958$
R indices (all data)	$R1 = 0.1092$, $wR2 = 0.1290$
Largest diff. peak and hole	1.796 and $-2.363 \text{ e\AA}^{-3}$

Table 2. Atomic Coordinates [$\times 10^4$] and Equivalent Isotropic Displacement Parameters [$\text{\AA}^2 \times 10^3$] for $[(\text{HgI}_2)_2(\text{ZnTPyP})_{0.3}(\text{TPyP})_{0.7}] \cdot 4(\text{TCE})$

Atom	x/a	y/b	z/c	U(eq)
Hg(1)	8835(1)	9309(1)	2914(1)	25(1)
Hg(2)	-3998(1)	18157(1)	3332(1)	26(1)
I(1)	8892(1)	7978(1)	4655(1)	41(1)
I(2)	9262(1)	9561(1)	1183(1)	39(1)
I(3)	-4090(1)	19529(1)	1615(1)	33(1)
I(4)	-4290(1)	17752(1)	5095(1)	42(1)
Zn	2447(3)	13788(4)	2936(4)	53(1)
Cl(1)	2226(2)	7984(2)	6465(2)	52(1)
Cl(2)	2894(2)	9153(3)	4618(3)	77(1)
Cl(3)	1507(2)	7728(3)	4822(2)	64(1)
Cl(4)	3004(2)	6140(3)	5936(2)	62(1)
Cl(5)	5306(3)	7856(3)	-48(3)	82(1)
Cl(6)	5935(2)	5941(3)	117(3)	79(1)
Cl(7)	8148(3)	6256(3)	-222(3)	92(1)
Cl(8)	7046(3)	6318(4)	1417(3)	126(2)
Cl(9)	1872(2)	-872(3)	2312(2)	71(1)
Cl(10)	2673(3)	-1640(3)	977(4)	99(2)
Cl(11)	3520(2)	89(3)	906(3)	80(1)
Cl(12)	1590(2)	1279(3)	480(3)	70(1)
Cl(13)	8973(3)	2565(3)	9601(3)	74(1)
Cl(14)	9562(2)	4234(3)	9432(3)	79(1)
Cl(15)	6778(2)	3818(3)	9516(2)	60(1)
Cl(16)	7910(2)	3523(3)	11001(2)	55(1)
N(1)	1006(4)	13853(5)	2910(5)	18(2)
N(2)	2814(5)	12618(6)	2722(5)	23(2)
N(3)	3833(4)	13926(5)	2666(5)	20(2)
N(4)	2033(5)	15055(6)	3045(5)	24(2)
N(5)	-363(5)	10453(6)	2903(6)	24(2)
N(6)	7281(5)	10405(6)	2754(6)	25(2)
N(7)	5153(5)	17081(6)	3252(6)	29(2)

N(8)	-2439(5)	17102(6)	3333(6)	27(2)
C(1)	234(6)	14531(7)	3021(7)	26(2)
C(2)	-600(6)	14299(8)	2951(8)	35(3)
C(3)	-354(6)	13484(7)	2846(7)	27(2)
C(4)	659(6)	13192(7)	2832(6)	22(2)
C(5)	1208(6)	12371(7)	2776(6)	22(2)
C(6)	2222(6)	12106(7)	2729(6)	22(2)
C(7)	2766(6)	11217(6)	2678(6)	20(2)
C(8)	3692(6)	11227(7)	2633(7)	26(2)
C(9)	3716(6)	12103(7)	2653(6)	21(2)
C(10)	4564(5)	12395(7)	2568(6)	20(2)
C(11)	4610(6)	13267(7)	2519(6)	20(2)
C(12)	5438(6)	13600(7)	2422(6)	24(2)
C(13)	5179(6)	14411(7)	2534(6)	25(2)
C(14)	4167(6)	14607(7)	2712(6)	21(2)
C(15)	3629(6)	15331(7)	2939(6)	22(2)
C(16)	2635(6)	15539(6)	3112(7)	22(2)
C(17)	2094(6)	16300(7)	3350(7)	27(2)
C(18)	1165(6)	16306(7)	3392(7)	29(2)
C(19)	1134(6)	15525(7)	3205(6)	21(2)
C(20)	291(6)	15303(6)	3162(6)	21(2)
C(21)	673(5)	11684(6)	2812(7)	20(2)
C(22)	630(6)	10863(7)	3614(7)	25(2)
C(23)	112(6)	10248(7)	3641(7)	29(2)
C(24)	-317(6)	11227(7)	2152(7)	28(2)
C(25)	173(6)	11890(7)	2056(7)	27(2)
C(26)	5500(6)	11693(7)	2603(7)	22(2)
C(27)	6143(6)	11857(7)	1865(7)	22(2)
C(28)	7025(6)	11209(7)	1955(7)	26(2)
C(29)	6658(6)	10244(7)	3467(7)	25(2)
C(30)	5761(6)	10864(7)	3418(7)	25(2)
C(31)	4162(6)	15945(7)	3032(7)	24(2)
C(32)	4524(9)	16622(8)	2311(8)	58(4)
C(33)	4978(9)	17203(9)	2410(9)	59(4)
C(34)	4843(8)	16415(9)	3953(9)	59(4)
C(35)	4345(9)	15824(9)	3898(8)	60(4)
C(36)	-652(6)	15946(7)	3245(7)	23(2)
C(37)	-987(6)	16801(7)	2502(7)	33(3)
C(38)	-1890(6)	17349(7)	2585(7)	32(2)

C(39)	-2103 (7)	16278 (8)	4066 (8)	41 (3)
C(40)	-1219 (7)	15659 (8)	4048 (8)	41 (3)
C(41)	2969 (7)	7957 (8)	5511 (8)	46 (3)
C(42)	2727 (8)	7380 (10)	5122 (9)	57 (4)
C(43)	6273 (8)	6998 (9)	-239 (9)	61 (4)
C(44)	7160 (10)	6895 (11)	182 (11)	88 (5)
C(45)	1974 (8)	-612 (9)	1130 (9)	54 (4)
C(46)	2404 (7)	202 (10)	538 (9)	52 (3)
C(47)	8597 (9)	3782 (11)	9294 (10)	74 (4)
C(48)	7789 (8)	4080 (10)	9794 (9)	63 (4)

$U(eq)$ is defined as one third of the trace of the orthogonalized U_{ij} tensor.

Table 3. Bond Lengths [Å] and Angles [°] for
 $[(\text{HgI}_2)_2(\text{ZnTPyP})_{0.3}(\text{TPyP})_{0.7}] \cdot 4(\text{TCE})$

Hg(1)-N(6)	2.413(7)	Hg(1)-N(5)#1	2.454(7)
Hg(1)-I(1)	2.6395(9)	Hg(1)-I(2)	2.6503(8)
Hg(2)-N(8)	2.424(7)	Hg(2)-N(7)#2	2.472(8)
Hg(2)-I(4)	2.6220(8)	Hg(2)-I(3)	2.6337(9)
Zn-N(2)	1.996(8)	Zn-N(4)	2.051(8)
Zn-N(3)	2.053(8)	Zn-N(1)	2.084(8)
Cl(1)-C(41)	1.754(11)	Cl(2)-C(41)	1.783(12)
Cl(3)-C(42)	1.786(11)	Cl(4)-C(42)	1.783(14)
Cl(5)-C(43)	1.776(13)	Cl(6)-C(43)	1.724(13)
Cl(7)-C(44)	1.75(2)	Cl(8)-C(44)	1.78(2)
Cl(9)-C(45)	1.761(13)	Cl(10)-C(45)	1.790(11)
Cl(11)-C(46)	1.763(11)	Cl(12)-C(46)	1.778(12)
Cl(13)-C(47)	1.73(2)	Cl(14)-C(47)	1.852(14)
Cl(15)-C(48)	1.826(13)	Cl(16)-C(48)	1.758(13)
N(1)-C(4)	1.373(10)	N(1)-C(1)	1.385(11)
N(2)-C(6)	1.356(10)	N(2)-C(9)	1.361(10)
N(3)-C(14)	1.365(10)	N(3)-C(11)	1.392(10)
N(4)-C(19)	1.367(10)	N(4)-C(16)	1.383(10)
N(5)-C(24)	1.289(12)	N(5)-C(23)	1.348(11)
N(5)-Hg(1)#2	2.454(7)	N(6)-C(29)	1.322(11)
N(6)-C(28)	1.352(12)	N(7)-C(34)	1.278(14)
N(7)-C(33)	1.352(13)	N(7)-Hg(2)#1	2.472(8)
N(8)-C(38)	1.301(11)	N(8)-C(39)	1.333(13)
C(1)-C(20)	1.400(12)	C(1)-C(2)	1.412(11)
C(2)-C(3)	1.350(12)	C(3)-C(4)	1.419(11)
C(4)-C(5)	1.378(12)	C(5)-C(6)	1.418(11)
C(5)-C(21)	1.509(11)	C(6)-C(7)	1.465(11)
C(7)-C(8)	1.347(11)	C(8)-C(9)	1.446(12)
C(9)-C(10)	1.415(11)	C(10)-C(11)	1.398(12)
C(10)-C(26)	1.497(11)	C(11)-C(12)	1.417(11)
C(12)-C(13)	1.350(12)	C(13)-C(14)	1.430(10)
C(14)-C(15)	1.383(11)	C(15)-C(16)	1.404(11)
C(15)-C(31)	1.500(12)	C(16)-C(17)	1.443(11)
C(17)-C(18)	1.346(12)	C(18)-C(19)	1.447(12)
C(19)-C(20)	1.401(11)	C(20)-C(36)	1.500(11)

C(21) - C(22)	1.370 (13)	C(21) - C(25)	1.395 (12)
C(22) - C(23)	1.395 (12)	C(24) - C(25)	1.393 (12)
C(26) - C(27)	1.367 (12)	C(26) - C(30)	1.385 (13)
C(27) - C(28)	1.388 (11)	C(29) - C(30)	1.393 (11)
C(31) - C(32)	1.335 (14)	C(31) - C(35)	1.396 (14)
C(32) - C(33)	1.375 (14)	C(34) - C(35)	1.399 (14)
C(36) - C(37)	1.365 (14)	C(36) - C(40)	1.382 (13)
C(37) - C(38)	1.389 (12)	C(39) - C(40)	1.395 (13)
C(41) - C(42)	1.49 (2)	C(43) - C(44)	1.50 (2)
C(45) - C(46)	1.47 (2)	C(47) - C(48)	1.42 (2)
N(6) - Hg(1) - N(5) #1	92.5 (2)	N(6) - Hg(1) - I(1)	106.1 (2)
N(5) #1 - Hg(1) - I(1)	104.3 (2)	N(6) - Hg(1) - I(2)	101.3 (2)
N(5) #1 - Hg(1) - I(2)	99.0 (2)	I(1) - Hg(1) - I(2)	142.90 (3)
N(8) - Hg(2) - N(7) #2	93.1 (2)	N(8) - Hg(2) - I(4)	101.6 (2)
N(7) #2 - Hg(2) - I(4)	100.3 (2)	N(8) - Hg(2) - I(3)	102.7 (2)
N(7) #2 - Hg(2) - I(3)	101.8 (2)	I(4) - Hg(2) - I(3)	145.96 (3)
N(2) - Zn - N(4)	175.3 (4)	N(2) - Zn - N(3)	90.8 (3)
N(4) - Zn - N(3)	89.9 (3)	N(2) - Zn - N(1)	90.1 (3)
N(4) - Zn - N(1)	88.2 (3)	N(3) - Zn - N(1)	167.7 (4)
C(4) - N(1) - C(1)	108.1 (6)	C(4) - N(1) - Zn	125.4 (5)
C(1) - N(1) - Zn	126.5 (6)	C(6) - N(2) - C(9)	105.7 (7)
C(6) - N(2) - Zn	127.0 (6)	C(9) - N(2) - Zn	126.9 (5)
C(14) - N(3) - C(11)	108.4 (6)	C(14) - N(3) - Zn	125.9 (5)
C(11) - N(3) - Zn	125.3 (6)	C(19) - N(4) - C(16)	104.8 (7)
C(19) - N(4) - Zn	128.6 (6)	C(16) - N(4) - Zn	126.0 (6)
C(24) - N(5) - C(23)	118.7 (8)	C(24) - N(5) - Hg(1) #2	119.7 (6)
C(23) - N(5) - Hg(1) #2	121.3 (7)	C(29) - N(6) - C(28)	117.8 (8)
C(29) - N(6) - Hg(1)	120.2 (7)	C(28) - N(6) - Hg(1)	122.0 (6)
C(34) - N(7) - C(33)	116.1 (9)	C(34) - N(7) - Hg(2) #1	125.0 (7)
C(33) - N(7) - Hg(2) #1	118.9 (7)	C(38) - N(8) - C(39)	117.7 (8)
C(38) - N(8) - Hg(2)	118.8 (7)	C(39) - N(8) - Hg(2)	123.5 (6)
N(1) - C(1) - C(20)	125.5 (7)	N(1) - C(1) - C(2)	107.0 (8)
C(20) - C(1) - C(2)	127.4 (8)	C(3) - C(2) - C(1)	109.4 (8)
C(2) - C(3) - C(4)	106.9 (8)	N(1) - C(4) - C(5)	125.4 (7)
N(1) - C(4) - C(3)	108.5 (7)	C(5) - C(4) - C(3)	126.1 (8)
C(4) - C(5) - C(6)	125.4 (8)	C(4) - C(5) - C(21)	116.3 (7)
C(6) - C(5) - C(21)	118.2 (8)	N(2) - C(6) - C(5)	126.1 (8)
N(2) - C(6) - C(7)	111.1 (7)	C(5) - C(6) - C(7)	122.9 (8)

C(8)-C(7)-C(6)	105.3(8)	C(7)-C(8)-C(9)	107.3(8)
N(2)-C(9)-C(10)	125.2(8)	N(2)-C(9)-C(8)	110.6(7)
C(10)-C(9)-C(8)	124.1(8)	C(11)-C(10)-C(9)	125.6(8)
C(11)-C(10)-C(26)	116.3(7)	C(9)-C(10)-C(26)	118.0(8)
N(3)-C(11)-C(10)	124.7(7)	N(3)-C(11)-C(12)	107.1(7)
C(10)-C(11)-C(12)	127.8(8)	C(13)-C(12)-C(11)	108.8(7)
C(12)-C(13)-C(14)	107.4(8)	N(3)-C(14)-C(15)	126.0(7)
N(3)-C(14)-C(13)	108.1(7)	C(15)-C(14)-C(13)	125.8(8)
C(14)-C(15)-C(16)	126.8(8)	C(14)-C(15)-C(31)	116.8(7)
C(16)-C(15)-C(31)	116.4(7)	N(4)-C(16)-C(17)	124.1(8)
N(4)-C(16)-C(17)	110.4(7)	C(15)-C(16)-C(17)	125.4(8)
C(18)-C(17)-C(16)	107.1(8)	C(17)-C(18)-C(19)	106.3(8)
N(4)-C(19)-C(20)	124.4(8)	N(4)-C(19)-C(18)	111.2(7)
C(20)-C(19)-C(18)	124.3(7)	C(1)-C(20)-C(19)	125.9(8)
C(1)-C(20)-C(36)	115.1(7)	C(19)-C(20)-C(36)	119.0(7)
C(22)-C(21)-C(25)	118.5(8)	C(22)-C(21)-C(5)	120.1(8)
C(25)-C(21)-C(5)	121.3(9)	C(21)-C(22)-C(23)	119.3(9)
N(5)-C(23)-C(22)	121.6(10)	N(5)-C(24)-C(25)	124.2(9)
C(24)-C(25)-C(21)	117.7(9)	C(27)-C(26)-C(30)	117.7(8)
C(27)-C(26)-C(10)	122.3(9)	C(30)-C(26)-C(10)	119.9(8)
C(26)-C(27)-C(28)	119.8(9)	N(6)-C(28)-C(27)	122.4(8)
N(6)-C(29)-C(30)	122.5(9)	C(26)-C(30)-C(29)	119.8(9)
C(32)-C(31)-C(35)	114.6(9)	C(32)-C(31)-C(15)	123.8(9)
C(35)-C(31)-C(15)	121.6(9)	C(31)-C(32)-C(33)	122.8(11)
N(7)-C(33)-C(32)	122.1(11)	N(7)-C(34)-C(35)	124.4(12)
C(31)-C(35)-C(34)	119.8(11)	C(37)-C(36)-C(40)	119.2(8)
C(37)-C(36)-C(20)	119.9(9)	C(40)-C(36)-C(20)	120.8(9)
C(36)-C(37)-C(38)	118.3(10)	N(8)-C(38)-C(37)	124.0(10)
N(8)-C(39)-C(40)	123.0(10)	C(36)-C(40)-C(39)	117.8(10)
C(42)-C(41)-Cl(1)	113.2(8)	C(42)-C(41)-Cl(2)	108.8(8)
Cl(1)-C(41)-Cl(2)	109.7(6)	C(41)-C(42)-Cl(4)	109.4(8)
C(41)-C(42)-Cl(3)	114.4(8)	Cl(4)-C(42)-Cl(3)	108.8(7)
C(44)-C(43)-Cl(6)	115.1(10)	C(44)-C(43)-Cl(5)	110.5(10)
Cl(6)-C(43)-Cl(5)	109.9(7)	C(43)-C(44)-Cl(7)	109.5(10)
C(43)-C(44)-Cl(8)	110.7(10)	Cl(7)-C(44)-Cl(8)	111.1(8)
C(46)-C(45)-Cl(9)	113.6(8)	C(46)-C(45)-Cl(10)	108.2(8)
Cl(9)-C(45)-Cl(10)	110.5(8)	C(45)-C(46)-Cl(11)	113.8(9)
C(45)-C(46)-Cl(12)	108.9(7)	Cl(11)-C(46)-Cl(12)	110.2(6)
C(48)-C(47)-Cl(13)	117.0(11)	C(48)-C(47)-Cl(14)	105.5(10)

Cl(13)-C(47)-Cl(14)	110.8(7)	C(47)-C(48)-Cl(16)	114.4(10)
C(47)-C(48)-Cl(15)	106.4(10)	Cl(16)-C(48)-Cl(15)	110.3(7)

Symmetry transformations used to generate equivalent atoms:

#1 $x+1, y, z$ #2 $x-1, y, z$

Table 4. Anisotropic Displacement Parameters [$\text{\AA}^2 \times 10^3$] for $[(\text{HgI}_2)_2(\text{ZnTPyP})_{0.3}(\text{TPyP})_{0.7}] \cdot 4(\text{TCE})$

Atom	U11	U22	U33	U23	U13	U12
Hg (1)	19 (1)	29 (1)	35 (1)	-20 (1)	1 (1)	-7 (1)
Hg (2)	20 (1)	31 (1)	35 (1)	-21 (1)	3 (1)	-8 (1)
I (1)	42 (1)	39 (1)	39 (1)	-10 (1)	-8 (1)	-16 (1)
I (2)	32 (1)	62 (1)	42 (1)	-37 (1)	11 (1)	-21 (1)
I (3)	29 (1)	33 (1)	38 (1)	-15 (1)	-1 (1)	-9 (1)
I (4)	40 (1)	61 (1)	35 (1)	-29 (1)	9 (1)	-20 (1)
Zn	43 (3)	47 (3)	81 (4)	-39 (3)	4 (3)	-14 (2)
Cl (1)	32 (2)	75 (2)	65 (2)	-45 (2)	5 (1)	-17 (2)
Cl (2)	63 (2)	59 (3)	78 (3)	-1 (2)	-13 (2)	-14 (2)
Cl (3)	47 (2)	84 (3)	73 (2)	-47 (2)	-25 (2)	3 (2)
Cl (4)	47 (2)	58 (2)	77 (2)	-29 (2)	-9 (2)	-5 (2)
Cl (5)	87 (3)	54 (3)	88 (3)	-16 (2)	-29 (2)	-6 (2)
Cl (6)	57 (2)	77 (3)	123 (4)	-55 (3)	-1 (2)	-26 (2)
Cl (7)	59 (2)	100 (4)	121 (4)	-42 (3)	3 (2)	-38 (2)
Cl (8)	110 (4)	171 (5)	109 (4)	-77 (4)	-67 (3)	7 (4)
Cl (9)	59 (2)	91 (3)	65 (2)	-38 (2)	11 (2)	-23 (2)
Cl (10)	77 (3)	94 (3)	161 (5)	-95 (4)	-2 (3)	-4 (2)
Cl (11)	48 (2)	151 (4)	68 (2)	-58 (3)	8 (2)	-51 (2)
Cl (12)	64 (2)	77 (3)	95 (3)	-60 (2)	10 (2)	-24 (2)
Cl (13)	77 (2)	78 (3)	71 (3)	-46 (2)	-4 (2)	0 (2)
Cl (14)	52 (2)	111 (3)	67 (2)	-22 (2)	1 (2)	-43 (2)
Cl (15)	49 (2)	72 (3)	54 (2)	-12 (2)	-14 (2)	-26 (2)
Cl (16)	45 (2)	77 (3)	36 (2)	-21 (2)	2 (1)	-13 (2)
N (1)	11 (3)	16 (4)	26 (4)	-9 (4)	1 (3)	-4 (3)
N (2)	14 (4)	31 (5)	36 (5)	-24 (4)	-2 (3)	-6 (4)
N (3)	9 (3)	19 (4)	33 (5)	-14 (4)	-7 (3)	5 (3)
N (4)	20 (4)	29 (5)	37 (5)	-24 (4)	1 (4)	-10 (4)
N (5)	17 (4)	29 (5)	36 (5)	-21 (5)	-2 (4)	-6 (4)
N (6)	17 (4)	34 (5)	31 (5)	-22 (4)	1 (4)	-6 (4)
N (7)	30 (5)	25 (5)	36 (5)	-13 (4)	0 (4)	-13 (4)
N (8)	16 (4)	34 (6)	38 (5)	-23 (5)	3 (4)	-6 (4)
C (1)	16 (5)	36 (6)	31 (6)	-16 (5)	-1 (4)	-13 (4)
C (2)	8 (4)	39 (7)	65 (8)	-33 (6)	-1 (5)	0 (4)

C(3)	12(4)	27(6)	50(7)	-24(5)	-4(4)	-2(4)
C(4)	11(4)	27(6)	31(6)	-17(5)	1(4)	-2(4)
C(5)	15(4)	29(6)	28(6)	-14(5)	-2(4)	-9(4)
C(6)	21(5)	21(6)	25(5)	-11(5)	-5(4)	-5(4)
C(7)	21(5)	16(5)	27(5)	-12(4)	-6(4)	-3(4)
C(8)	10(4)	33(6)	41(6)	-26(5)	-1(4)	-1(4)
C(9)	14(4)	25(6)	30(6)	-15(5)	0(4)	-10(4)
C(10)	11(4)	30(6)	23(5)	-14(5)	-2(4)	-4(4)
C(11)	15(4)	24(6)	24(5)	-11(5)	0(4)	-10(4)
C(12)	13(4)	25(6)	38(6)	-20(5)	7(4)	-4(4)
C(13)	12(4)	28(6)	37(6)	-15(5)	8(4)	-10(4)
C(14)	14(4)	29(6)	31(6)	-21(5)	6(4)	-10(4)
C(15)	27(5)	16(5)	24(5)	-9(4)	-4(4)	-5(4)
C(16)	19(5)	13(5)	39(6)	-12(5)	-3(4)	-8(4)
C(17)	25(5)	22(6)	43(6)	-22(5)	2(5)	-8(4)
C(18)	28(5)	26(6)	42(7)	-25(5)	-3(5)	-2(5)
C(19)	10(4)	23(6)	33(6)	-16(5)	2(4)	-1(4)
C(20)	17(4)	15(5)	25(5)	-6(4)	1(4)	-4(4)
C(21)	10(4)	15(5)	37(6)	-14(5)	1(4)	-2(4)
C(22)	22(5)	33(6)	31(6)	-19(5)	2(4)	-14(5)
C(23)	30(5)	29(6)	28(6)	-13(5)	-4(5)	-6(5)
C(24)	29(5)	31(7)	32(6)	-16(5)	-5(5)	-11(5)
C(25)	30(5)	19(6)	32(6)	-8(5)	-7(5)	-7(4)
C(26)	13(4)	24(6)	34(6)	-20(5)	-3(4)	-1(4)
C(27)	18(5)	20(6)	28(6)	-8(5)	-5(4)	-9(4)
C(28)	13(5)	36(7)	35(6)	-23(6)	7(4)	-9(4)
C(29)	23(5)	29(6)	28(6)	-15(5)	-3(4)	-7(5)
C(30)	19(5)	26(6)	31(6)	-14(5)	2(4)	-7(4)
C(31)	23(5)	13(5)	36(6)	-12(5)	-6(4)	1(4)
C(32)	102(10)	38(8)	43(8)	0(6)	-25(7)	-47(8)
C(33)	98(10)	58(9)	42(8)	-16(7)	1(7)	-61(8)
C(34)	69(9)	60(10)	62(9)	-23(8)	-24(7)	-32(8)
C(35)	96(10)	55(9)	41(8)	-10(7)	-5(7)	-55(8)
C(36)	15(4)	22(6)	39(6)	-20(5)	0(4)	-2(4)
C(37)	24(5)	28(6)	35(6)	-7(5)	4(5)	-1(5)
C(38)	22(5)	25(6)	37(6)	-9(5)	-4(5)	6(5)
C(39)	25(6)	47(8)	39(7)	-22(6)	11(5)	4(5)
C(40)	34(6)	36(7)	42(7)	-13(6)	9(5)	-4(5)
C(41)	28(6)	45(8)	39(7)	-3(6)	-4(5)	1(6)

C(42)	43(7)	78(11)	52(8)	-36(8)	7(6)	-13(7)
C(43)	55(8)	58(10)	49(8)	-4(7)	-11(7)	-13(7)
C(44)	85(11)	60(11)	126(15)	-26(10)	-52(10)	-28(9)
C(45)	33(6)	68(10)	84(10)	-52(9)	6(6)	-18(6)
C(46)	34(6)	84(11)	58(9)	-49(8)	1(6)	-14(7)
C(47)	73(10)	75(12)	55(9)	-14(8)	-14(8)	-10(9)
C(48)	49(8)	56(10)	57(9)	-11(8)	-2(7)	-2(7)

The anisotropic displacement factor exponent takes the form:

$$-2\pi^2 [(ha^*)^2 U_{11} + \dots + 2hka^* b^* U_{12}] .$$

Table 5. Hydrogen Coordinates ($\times 10^4$) and Isotropic Displacement Parameters ($\text{\AA}^2 \times 10^3$) for $[(\text{HgI}_2)_2(\text{ZnTPyP})_{0.3}(\text{TPyP})_{0.7}] \cdot 4(\text{TCE})$

Atom	x	y	z	U(eq)
H(2A)	-1236 (6)	14659 (8)	2975 (8)	42
H(3A)	-779 (6)	13166 (7)	2791 (7)	32
H(7A)	2518 (6)	10736 (6)	2676 (6)	24
H(8A)	4229 (6)	10747 (7)	2595 (7)	31
H(12A)	6071 (6)	13301 (7)	2298 (6)	29
H(13A)	5593 (6)	14784 (7)	2501 (6)	30
H(17A)	2347 (6)	16717 (7)	3458 (7)	32
H(18A)	634 (6)	16738 (7)	3518 (7)	34
H(22A)	948 (6)	10713 (7)	4146 (7)	30
H(23A)	95 (6)	9671 (7)	4193 (7)	35
H(24A)	-639 (6)	11354 (7)	1631 (7)	34
H(25A)	168 (6)	12462 (7)	1494 (7)	33
H(27A)	5987 (6)	12414 (7)	1293 (7)	26
H(28A)	7464 (6)	11333 (7)	1436 (7)	31
H(29A)	6829 (6)	9683 (7)	4033 (7)	30
H(30A)	5328 (6)	10720 (7)	3941 (7)	30
H(32A)	4466 (9)	16704 (8)	1705 (8)	70
H(33A)	5174 (9)	17707 (9)	1869 (9)	71
H(34A)	4958 (8)	16314 (9)	4553 (9)	71
H(35A)	4132 (9)	15343 (9)	4449 (8)	72
H(37A)	-611 (6)	17016 (7)	1942 (7)	40
H(38A)	-2122 (6)	17941 (7)	2064 (7)	38
H(39A)	-2483 (7)	16106 (8)	4626 (8)	49
H(40A)	-1014 (7)	15060 (8)	4571 (8)	49
H(41A)	3643 (7)	7668 (8)	5715 (8)	55
H(42A)	3138 (8)	7455 (10)	4548 (9)	68
H(43A)	6405 (8)	7261 (9)	-925 (9)	73
H(44A)	7252 (10)	7552 (11)	-19 (11)	105
H(45A)	1317 (8)	-454 (9)	911 (9)	65
H(46A)	2501 (7)	248 (10)	-102 (9)	63
H(47A)	8444 (9)	4123 (11)	8623 (10)	89

H (48A)

7665 (8)

4792 (10)

9561 (9)

75

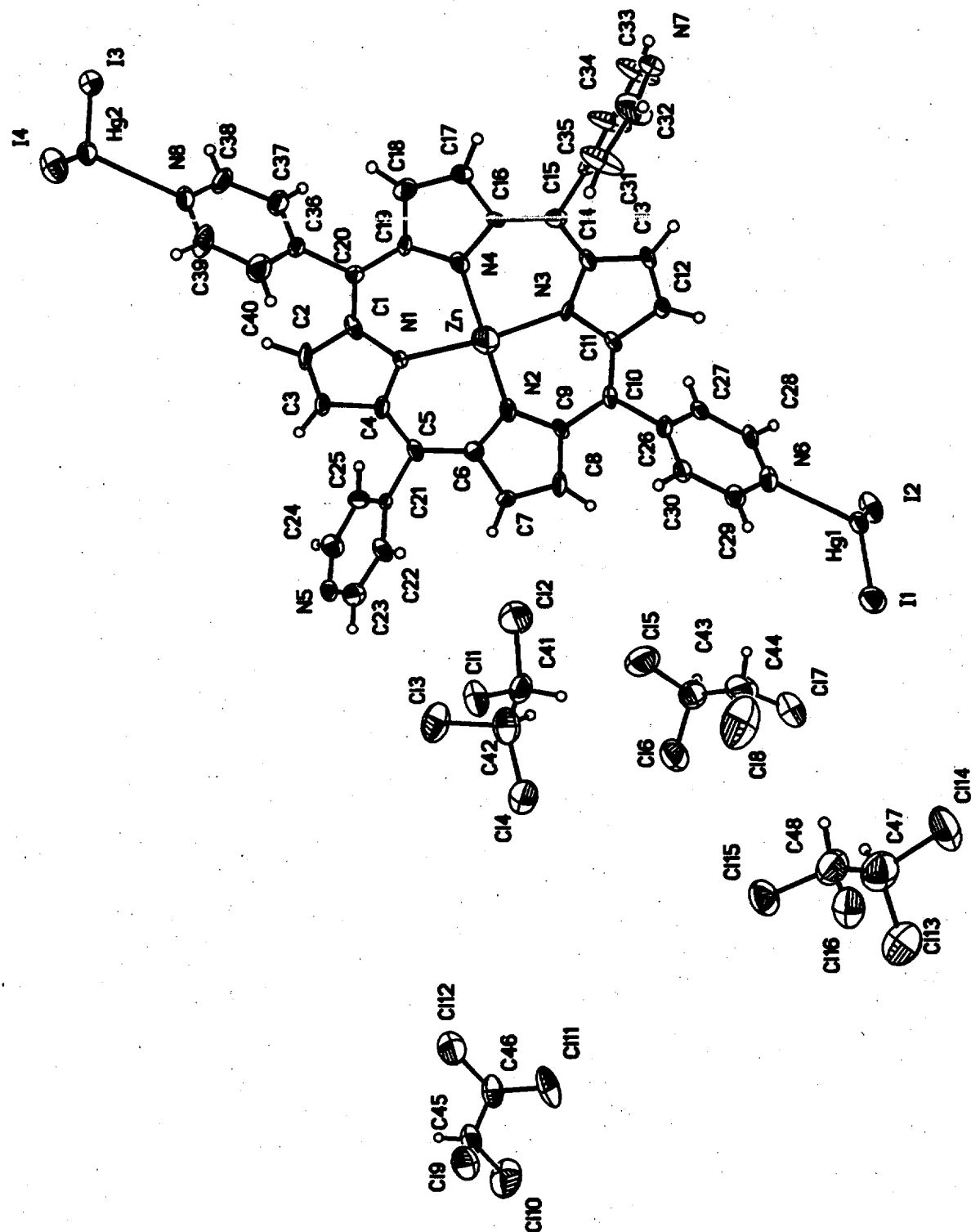


Table 1. Crystal data and structure refinement

Compound	$[(\text{HgBr}_2)_2(\text{TPyP})] \cdot 6(\text{TCE})$
Color / Shape	purple / parallelepiped
Empirical formula	$\text{C}_{52}\text{H}_{38}\text{Br}_4\text{Cl}_{24}\text{Hg}_2\text{N}_8$
Formula weight	2346.52
Temperature	173(2) K
Crystal system	Triclinic
Space group	$\text{P}\bar{1}$
Unit cell dimensions (3235 reflections in full θ range)	$a = 10.8167(6) \text{ \AA}$ $\alpha = 104.591(1)^\circ$ $b = 11.6757(7) \text{ \AA}$ $\beta = 95.899(2)^\circ$ $c = 16.1584(9) \text{ \AA}$ $\gamma = 101.073(1)^\circ$
Volume	$1913.4(2) \text{ \AA}^3$
Z	1
Density (calculated)	2.036 Mg/m^3
Absorption coefficient	6.975 mm^{-1}
Diffractometer / scan	Siemens SMART / CCD area detector
Radiation / wavelength	$\text{MoK}\alpha$ (graphite monochrom.) / $0.71073 \text{ \AA}$
F(000)	1114
Crystal size	$0.25 \times 0.30 \times 0.45 \text{ mm}$
θ range for data collection	1.32 to 27.94°
Index ranges	$-14 \leq h \leq 13$, $-15 \leq k \leq 14$, $-10 \leq l \leq 20$
Reflections collected	12316
Independent / observed refls.	8543 ($R_{\text{int}} = 0.0604$) / 4095 ($[I > 2\sigma(I)]$)
Absorption correction	SADABS ¹
Refinement method	Full-matrix least-squares on F^2
Computing	SHELXTL, Ver. 5 ²
Data / restraints / parameters	8535 / 0 / 407
Goodness-of-fit on F^2	0.851
SHELX-93 weight parameters	0.0575, 0.0000
Final R indices $[I > 2\sigma(I)]$	$R1 = 0.0655$, $wR2 = 0.1249$
R indices (all data)	$R1 = 0.1420$, $wR2 = 0.1563$
Extinction coefficient	$0.0001(2)$
Largest diff. peak and hole	2.243 and $-3.064 \text{ e\AA}^{-3}$

Table 2. Atomic Coordinates [$\times 10^4$] and Equivalent Isotropic Displacement Parameters [$\text{\AA}^2 \times 10^3$] for $[(\text{HgBr}_2)_2(\text{TPyP})] \cdot 6(\text{TCE})$

Atom	x/a	y/b	z/c	U(eq)
Hg	8270 (1)	8739 (1)	412 (1)	33 (1)
Br (1)	6606 (1)	9784 (1)	43 (1)	60 (1)
Br (2)	9501 (1)	7261 (1)	-238 (1)	45 (1)
Cl (1)	5112 (3)	3628 (3)	53 (3)	76 (1)
Cl (2)	7147 (4)	3234 (3)	1226 (3)	77 (1)
Cl (3)	7935 (3)	4207 (3)	-445 (3)	76 (1)
Cl (4)	6267 (4)	1900 (3)	-1503 (3)	77 (1)
Cl (5)	10494 (7)	8085 (5)	3058 (6)	204 (4)
Cl (6)	13068 (4)	8018 (5)	3685 (3)	130 (2)
Cl (7)	10735 (7)	6022 (7)	3998 (4)	205 (4)
Cl (8)	10043 (4)	5147 (4)	2159 (3)	96 (2)
Cl (9)	7730 (4)	3803 (4)	3673 (3)	96 (2)
Cl (10)	7940 (3)	1369 (3)	3983 (3)	79 (1)
Cl (11)	5680 (4)	1522 (4)	2527 (3)	87 (1)
Cl (12)	5059 (4)	1003 (4)	4202 (3)	93 (1)
N (1)	6443 (7)	6495 (7)	5033 (6)	30 (2)
N (2)	4451 (7)	4765 (7)	3708 (6)	31 (2)
N (3)	7531 (8)	7969 (8)	1574 (6)	41 (3)
N (4)	-155 (8)	310 (8)	1439 (6)	29 (2)
C (1)	7290 (9)	7193 (9)	5771 (7)	31 (3)
C (2)	8100 (10)	8106 (10)	5500 (8)	43 (3)
C (3)	7772 (10)	7946 (10)	4666 (8)	44 (3)
C (4)	6692 (9)	6914 (9)	4341 (7)	33 (3)
C (5)	6035 (9)	6436 (9)	3484 (7)	31 (3)
C (6)	4992 (10)	5423 (9)	3216 (7)	31 (3)
C (7)	4288 (10)	4991 (10)	2344 (7)	39 (3)
C (8)	3378 (10)	4033 (9)	2307 (7)	34 (3)
C (9)	3471 (9)	3891 (9)	3160 (7)	32 (3)
C (10)	2647 (9)	2967 (9)	3404 (7)	29 (3)
C (11)	6565 (9)	7000 (9)	2836 (7)	34 (3)
C (12)	7105 (12)	6348 (11)	2210 (8)	49 (3)

C(13)	7595(11)	6841(10)	1607(8)	44(3)
C(14)	6991(10)	8614(10)	2196(8)	40(3)
C(15)	6511(10)	8167(11)	2811(7)	39(3)
C(16)	1684(9)	2073(9)	2699(7)	28(3)
C(17)	1983(10)	1087(11)	2167(8)	49(4)
C(18)	1040(11)	230(10)	1545(8)	43(3)
C(19)	-442(10)	1263(10)	1941(8)	40(3)
C(20)	424(10)	2155(10)	2565(8)	46(3)
C(21)	6208(12)	2726(11)	174(10)	71(5)
C(22)	7122(12)	2744(11)	-479(10)	63(4)
C(23)	11643(16)	7282(18)	2905(12)	121(8)
C(24)	11245(14)	5991(13)	3033(12)	86(6)
C(25)	6872(19)	2346(19)	4180(14)	148(11)
C(26)	5903(18)	2256(18)	3612(12)	117(8)

U_{eq} is defined as one third of the trace of the orthogonalized U_{ij} tensor.

Table 3. Bond Lengths [Å] and Angles [°] for [(HgBr₂)₂(TPyP)]*6(TCE)

Hg-N(4) #1	2.389(8)	Hg-N(3)	2.419(10)
Hg-Br(1)	2.4647(13)	Hg-Br(2)	2.4719(12)
Cl(1)-C(21)	1.757(13)	Cl(2)-C(21)	1.78(2)
Cl(3)-C(22)	1.749(12)	Cl(4)-C(22)	1.75(2)
Cl(5)-C(23)	1.70(2)	Cl(6)-C(23)	1.80(2)
Cl(7)-C(24)	1.70(2)	Cl(8)-C(24)	1.76(2)
Cl(9)-C(25)	2.16(3)	Cl(10)-C(25)	1.77(2)
Cl(11)-C(26)	1.72(2)	Cl(12)-C(26)	2.06(2)
N(1)-C(4)	1.359(13)	N(1)-C(1)	1.388(12)
N(2)-C(6)	1.341(13)	N(2)-C(9)	1.373(12)
N(3)-C(13)	1.346(14)	N(3)-C(14)	1.351(13)
N(4)-C(18)	1.311(12)	N(4)-C(19)	1.311(13)
N(4)-Hg#2	2.389(8)	C(1)-C(10) #3	1.390(14)
C(1)-C(2)	1.432(14)	C(2)-C(3)	1.31(2)
C(3)-C(4)	1.451(13)	C(4)-C(5)	1.411(14)
C(5)-C(6)	1.409(13)	C(5)-C(11)	1.479(14)
C(6)-C(7)	1.446(14)	C(7)-C(8)	1.325(14)
C(8)-C(9)	1.42(2)	C(9)-C(10)	1.424(14)
C(10)-C(1) #3	1.390(14)	C(10)-C(16)	1.487(13)
C(11)-C(12)	1.36(2)	C(11)-C(15)	1.38(2)
C(12)-C(13)	1.35(2)	C(14)-C(15)	1.34(2)
C(16)-C(17)	1.368(14)	C(16)-C(20)	1.383(13)
C(17)-C(18)	1.393(14)	C(19)-C(20)	1.371(14)
C(21)-C(22)	1.52(2)	C(23)-C(24)	1.56(2)
C(25)-C(26)	1.29(2)		
N(4) #1-Hg-N(3)	90.0(3)	N(4) #1-Hg-Br(1)	103.8(2)
N(3)-Hg-Br(1)	102.8(2)	N(4) #1-Hg-Br(2)	103.5(2)
N(3)-Hg-Br(2)	102.4(2)	Br(1)-Hg-Br(2)	142.49(5)
C(4)-N(1)-C(1)	110.5(8)	C(6)-N(2)-C(9)	105.6(9)
C(13)-N(3)-C(14)	116.7(10)	C(13)-N(3)-Hg	120.7(8)
C(14)-N(3)-Hg	122.5(8)	C(18)-N(4)-C(19)	117.0(9)
C(18)-N(4)-Hg#2	120.7(7)	C(19)-N(4)-Hg#2	122.3(7)
N(1)-C(1)-C(10) #3	127.4(9)	N(1)-C(1)-C(2)	105.4(9)
C(10) #3-C(1)-C(2)	127.2(9)	C(3)-C(2)-C(1)	109.6(10)
C(2)-C(3)-C(4)	108.6(11)	N(1)-C(4)-C(5)	126.8(9)

N(1)-C(4)-C(3)	105.9(10)	C(5)-C(4)-C(3)	127.3(10)
C(6)-C(5)-C(4)	124.1(10)	C(6)-C(5)-C(11)	119.7(10)
C(4)-C(5)-C(11)	116.0(8)	N(2)-C(6)-C(5)	127.2(10)
N(2)-C(6)-C(7)	109.6(9)	C(5)-C(6)-C(7)	123.1(10)
C(8)-C(7)-C(6)	107.9(10)	C(7)-C(8)-C(9)	106.0(10)
N(2)-C(9)-C(10)	125.1(10)	N(2)-C(9)-C(8)	110.8(10)
C(10)-C(9)-C(8)	124.1(9)	C(1)#3-C(10)-C(9)	125.5(9)
C(1)#3-C(10)-C(16)	118.0(9)	C(9)-C(10)-C(16)	116.5(9)
C(12)-C(11)-C(15)	117.0(11)	C(12)-C(11)-C(5)	119.5(10)
C(15)-C(11)-C(5)	123.4(10)	C(13)-C(12)-C(11)	120.8(11)
N(3)-C(13)-C(12)	122.3(11)	C(15)-C(14)-N(3)	122.9(11)
C(14)-C(15)-C(11)	120.2(11)	C(17)-C(16)-C(20)	115.9(10)
C(17)-C(16)-C(10)	121.7(9)	C(20)-C(16)-C(10)	122.3(9)
C(16)-C(17)-C(18)	120.2(10)	N(4)-C(18)-C(17)	123.0(10)
N(4)-C(19)-C(20)	124.0(10)	C(19)-C(20)-C(16)	119.9(10)
C(22)-C(21)-Cl(1)	111.2(11)	C(22)-C(21)-Cl(2)	107.3(9)
Cl(1)-C(21)-Cl(2)	112.1(8)	C(21)-C(22)-Cl(3)	113.6(9)
C(21)-C(22)-Cl(4)	107.8(9)	Cl(3)-C(22)-Cl(4)	113.8(8)
C(24)-C(23)-Cl(5)	112.8(11)	C(24)-C(23)-Cl(6)	105(2)
Cl(5)-C(23)-Cl(6)	111.1(10)	C(23)-C(24)-Cl(7)	112.7(11)
C(23)-C(24)-Cl(8)	106.4(13)	Cl(7)-C(24)-Cl(8)	111.4(8)
C(26)-C(25)-Cl(10)	122(2)	C(26)-C(25)-Cl(9)	83(2)
Cl(10)-C(25)-Cl(9)	101.3(11)	C(25)-C(26)-Cl(11)	127(2)
C(25)-C(26)-Cl(12)	82(2)	Cl(11)-C(26)-Cl(12)	106.3(10)

Symmetry transformations used to generate equivalent atoms:

#1 x+1,y+1,z #2 x-1,y-1,z #3 -x+1,-y+1,-z+1

Table 4. Anisotropic Displacement Parameters [$\text{\AA}^2 \times 10^3$] for
 $[(\text{HgBr}_2)_2(\text{TPyP})] \cdot 6(\text{TCE})$

Atom	U11	U22	U33	U23	U13	U12
Hg	32 (1)	29 (1)	36 (1)	14 (1)	0 (1)	-2 (1)
Br (1)	38 (1)	45 (1)	105 (1)	40 (1)	3 (1)	9 (1)
Br (2)	45 (1)	35 (1)	53 (1)	9 (1)	10 (1)	6 (1)
Cl (1)	56 (2)	43 (2)	124 (4)	21 (2)	-5 (2)	16 (2)
Cl (2)	114 (3)	53 (2)	55 (3)	10 (2)	-21 (2)	19 (2)
Cl (3)	66 (2)	47 (2)	118 (4)	42 (2)	12 (2)	-6 (2)
Cl (4)	87 (3)	72 (3)	61 (3)	24 (2)	-10 (2)	-8 (2)
Cl (5)	175 (6)	73 (4)	313 (11)	28 (5)	-91 (7)	7 (4)
Cl (6)	99 (3)	145 (5)	95 (4)	7 (3)	15 (3)	-56 (3)
Cl (7)	238 (7)	195 (7)	93 (5)	32 (5)	-8 (5)	-136 (6)
Cl (8)	77 (3)	77 (3)	101 (4)	-19 (3)	8 (3)	-2 (2)
Cl (9)	93 (3)	57 (2)	140 (4)	39 (3)	36 (3)	-1 (2)
Cl (10)	70 (2)	73 (3)	90 (3)	11 (2)	-5 (2)	29 (2)
Cl (11)	78 (3)	91 (3)	82 (3)	20 (3)	-13 (2)	16 (2)
Cl (12)	75 (3)	69 (3)	131 (4)	34 (3)	37 (3)	-8 (2)
N (1)	34 (5)	21 (5)	28 (6)	7 (4)	-1 (4)	-8 (4)
N (2)	35 (5)	20 (5)	32 (6)	11 (4)	0 (4)	-10 (4)
N (3)	38 (5)	32 (6)	47 (7)	16 (5)	6 (5)	-14 (4)
N (4)	27 (5)	27 (5)	27 (6)	7 (4)	4 (4)	-8 (4)
C (1)	35 (6)	21 (6)	33 (7)	16 (5)	2 (5)	-15 (5)
C (2)	45 (7)	39 (7)	30 (8)	5 (6)	7 (6)	-23 (5)
C (3)	44 (7)	42 (7)	31 (8)	7 (6)	-4 (6)	-17 (5)
C (4)	39 (6)	25 (6)	31 (7)	16 (5)	9 (5)	-13 (5)
C (5)	40 (6)	26 (6)	20 (7)	4 (5)	4 (5)	-6 (5)
C (6)	38 (6)	23 (6)	29 (7)	7 (5)	6 (5)	-2 (5)
C (7)	45 (7)	40 (7)	24 (7)	12 (6)	-4 (6)	-5 (6)
C (8)	48 (7)	28 (6)	18 (7)	8 (5)	-1 (5)	-4 (5)
C (9)	26 (5)	32 (6)	32 (7)	11 (5)	-5 (5)	-6 (5)
C (10)	27 (5)	29 (6)	25 (7)	9 (5)	-9 (5)	-2 (5)
C (11)	30 (6)	26 (6)	39 (8)	13 (6)	7 (5)	-16 (5)
C (12)	88 (10)	25 (7)	37 (8)	8 (6)	26 (7)	12 (6)
C (13)	57 (8)	31 (7)	42 (9)	9 (6)	20 (6)	2 (6)
C (14)	46 (7)	32 (7)	45 (9)	9 (6)	12 (6)	15 (6)

C(15)	47(7)	47(8)	26(7)	15(6)	15(6)	6(6)
C(16)	34(6)	22(6)	26(7)	11(5)	6(5)	-4(5)
C(17)	25(6)	50(8)	63(10)	9(7)	-2(6)	1(6)
C(18)	48(7)	25(6)	46(9)	-2(6)	0(6)	3(5)
C(19)	28(6)	41(7)	42(8)	13(6)	-14(6)	-6(5)
C(20)	39(7)	31(6)	56(9)	-3(6)	-15(6)	10(5)
C(21)	57(9)	33(7)	117(14)	28(8)	-11(9)	1(6)
C(22)	56(8)	33(7)	111(14)	33(8)	27(9)	12(6)
C(23)	88(13)	130(17)	93(15)	-12(13)	45(11)	-56(12)
C(24)	65(10)	45(9)	126(16)	-10(10)	28(10)	0(7)
C(25)	143(18)	174(22)	107(19)	-37(16)	-25(15)	115(17)
C(26)	128(15)	136(17)	71(14)	-28(12)	-24(12)	90(14)

The anisotropic displacement factor exponent takes the form:

$$-2\pi^2 [(ha^*)^2 U_{11} + \dots + 2hka^* b^* U_{12}] .$$

Table 5. Hydrogen Coordinates ($\times 10^4$) and Isotropic Displacement Parameters ($\text{\AA}^2 \times 10^3$) for $[(\text{HgBr}_2)_2(\text{TPyP})] \cdot 6(\text{TCE})$

Atom	x	y	z	U(eq)
H(1)	5875(7)	5761(7)	4975(6)	45
H(2A)	8772(10)	8731(10)	5867(8)	52
H(3A)	8174(10)	8425(10)	4331(8)	53
H(7A)	4448(10)	5334(10)	1881(7)	46
H(8A)	2784(10)	3541(9)	1813(7)	40
H(12A)	7138(12)	5536(11)	2195(8)	59
H(13A)	7999(11)	6375(10)	1192(8)	53
H(14A)	6949(10)	9419(10)	2196(8)	48
H(15A)	6133(10)	8652(11)	3232(7)	47
H(17A)	2835(10)	985(11)	2221(8)	59
H(18A)	1274(11)	-443(10)	1180(8)	52
H(19A)	-1302(10)	1339(10)	1867(8)	48
H(20A)	159(10)	2828(10)	2905(8)	56
H(21A)	5726(12)	1870(11)	79(10)	85
H(22A)	7779(12)	2301(11)	-329(10)	75
H(23A)	11851(16)	7206(18)	2307(12)	145
H(24A)	11996(14)	5607(13)	3004(12)	103
H(25A)	6737(19)	2607(19)	4796(14)	177
H(26A)	5552(18)	3003(18)	3731(12)	140

Table 1. Crystal data and structure refinement

Compound	$[(\text{CdI}_2)(\text{TPyP})] \cdot 4(\text{TCE})$
Color / Shape	violet / fragment
Empirical formula	$\text{C}_{48}\text{H}_{34}\text{CdCl}_{16}\text{I}_2\text{N}_8$
Formula weight	1656.23
Temperature	173(2) K
Crystal system	Monoclinic
Space group	C2/c
Unit cell dimensions	$a = 20.467(2) \text{ \AA}$ $\alpha = 90^\circ$
(3440 reflections	$b = 20.406(2) \text{ \AA}$ $\beta = 112.787(1)^\circ$
in full θ range)	$c = 15.167(1) \text{ \AA}$ $\gamma = 90^\circ$
Volume	$5839.9(8) \text{ \AA}^3$
Z	4
Density (calculated)	1.884 Mg/m^3
Absorption coefficient	2.207 mm^{-1}
Diffractometer / scan	Siemens SMART / CCD area detector
Radiation / wavelength	MoK α (graphite monochrom.) / $0.71073 \text{ \AA}$
F(000)	3216
Crystal size	$0.08 \times 0.18 \times 0.30 \text{ mm}$
θ range for data collection	1.47 to 27.92°
Index ranges	$-22 \leq h \leq 26$, $-26 \leq k \leq 26$, $-19 \leq l \leq 15$
Reflections collected	18403
Independent / observed refls.	$6782(R_{\text{int}} = 0.1554)$ / $3151([I > 2\sigma(I)])$
Absorption correction	SADABS
Refinement method	Full-matrix least-squares on F^2
Computing	SHELXTL, Ver. 5 ²
Data / restraints / parameters	6779 / 0 / 336
Goodness-of-fit on F^2	0.965
SHELX-93 weight parameters	0.1289, 0.0000
Final R indices $[I > 2\sigma(I)]$	$R_1 = 0.1029$, $wR_2 = 0.2225$
R indices (all data)	$R_1 = 0.2013$, $wR_2 = 0.2731$
Extinction coefficient	$0.00000(8)$
Largest diff. peak and hole	2.794 and $-2.174 \text{ e\AA}^{-3}$

Table 2. Atomic Coordinates [$\times 10^4$] and Equivalent Isotropic Displacement Parameters [$\text{\AA}^2 \times 10^3$] for $[(\text{CdI}_2)(\text{TPyP})] \cdot 4(\text{TCE})$

Atom	x/a	y/b	z/c	U(eq)
I	5500(1)	8094(1)	9597(1)	27(1)
Cd	5000	8090(1)	7500	22(1)
Cl(1)	3461(4)	7436(4)	10126(4)	126(3)
Cl(2)	3175(4)	6038(6)	10015(5)	201(6)
Cl(3)	4753(4)	5832(3)	10024(4)	98(2)
Cl(4)	3726(2)	6627(2)	8465(3)	40(1)
Cl(5)	1380(3)	5546(3)	9958(4)	83(2)
Cl(6)	1887(3)	4718(3)	11619(4)	90(2)
Cl(7)	2669(3)	3829(2)	10605(4)	82(2)
Cl(8)	2014(3)	4625(2)	8870(4)	66(1)
N(1)	676(5)	7390(4)	7407(7)	17(2)
N(2)	683(5)	8810(5)	7411(8)	23(2)
N(3)	0	4296(6)	7500	26(4)
N(4)	3744(5)	8109(5)	7374(8)	23(2)
N(5)	0	11888(7)	7500	27(4)
C(1)	623(6)	6726(5)	7545(10)	22(3)
C(2)	1284(6)	6412(6)	7688(10)	28(3)
C(3)	1716(6)	6867(6)	7600(10)	28(3)
C(4)	1363(6)	7499(6)	7440(9)	22(3)
C(5)	1629(6)	8107(6)	7332(9)	23(3)
C(6)	1308(6)	8703(6)	7279(9)	24(3)
C(7)	1581(6)	9330(6)	7163(9)	25(3)
C(8)	1140(7)	9798(6)	7240(10)	27(3)
C(9)	570(5)	9475(6)	7373(9)	19(3)
C(10)	0	9789(7)	7500	19(4)
C(11)	0	6413(9)	7500	29(4)
C(12)	0	5666(9)	7500	27(4)
C(13)	160(6)	5324(6)	6828(11)	33(3)
C(14)	155(6)	4647(6)	6865(11)	33(3)
C(15)	2359(5)	8109(6)	7319(9)	21(3)
C(16)	2520(6)	7833(6)	6584(9)	25(3)

C(17)	3203 (6)	7830 (6)	6621 (10)	30 (3)
C(18)	3594 (6)	8363 (6)	8076 (10)	25 (3)
C(19)	2919 (6)	8370 (6)	8068 (9)	24 (3)
C(20)	0	10509 (7)	7500	26 (4)
C(21)	-474 (6)	10876 (6)	6731 (9)	25 (3)
C(22)	-443 (7)	11547 (6)	6764 (10)	27 (3)
C(23)	3824 (12)	6664 (13)	10284 (19)	106 (9)
C(24)	4208 (10)	6631 (8)	9722 (12)	57 (5)
C(25)	2031 (9)	4958 (9)	10575 (13)	55 (5)
C(26)	1974 (8)	4390 (8)	9979 (14)	62 (5)

U_{eq} is defined as one third of the trace of the orthogonalized U_{ij} tensor.