



STRUCTURAL  
CHEMISTRY

**Volume 76 (2020)**

**Supporting information for article:**

**Assembly of two novel coordination polymers by selecting ditopic or chelating auxiliary ligands with naphthalene-2,6-dicarboxylic acid: synthesis, structure and luminescence sensing**

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**Table S1** Selected geometric parameters (Å, °) of compound **1**

Zn1—O2 <sup>i</sup>	1.9522 (16)	C7—H7	0.9300
Zn1—O4	1.9460 (16)	C8—H8	0.9300
Zn1—N1	2.0017 (17)	C8—C9	1.364 (3)
Zn1—N3 <sup>ii</sup>	2.0361 (17)	C9—H9	0.9300
O1—C1	1.231 (3)	C9—C10	1.415 (3)
O2—C1	1.281 (3)	C10—C11	1.365 (3)
O3—C12	1.229 (3)	C10—C12	1.501 (3)
O4—C12	1.273 (3)	C11—H11	0.9300
N1—C13	1.340 (3)	C13—H13	0.9300
N1—C17	1.347 (3)	C13—C14	1.369 (3)
N2—H2	0.8600	C14—H14	0.9300
N2—C15	1.373 (3)	C14—C15	1.393 (3)
N2—C18	1.384 (2)	C15—C16	1.397 (3)
N3—C20	1.341 (3)	C16—H16	0.9300
N3—C21	1.342 (3)	C16—C17	1.368 (3)
C1—C2	1.500 (3)	C17—H17	0.9300
C2—C3	1.413 (3)	C18—C19	1.393 (3)
C2—C7	1.364 (3)	C18—C22	1.386 (3)
C3—H3	0.9300	C19—H19	0.9300
C3—C4	1.366 (3)	C19—C20	1.370 (3)
C4—H4	0.9300	C20—H20	0.9300
C4—C5	1.412 (3)	C21—H21	0.9300
C5—C6	1.420 (3)	C21—C22	1.373 (3)
C5—C11	1.418 (3)	C22—H22	0.9300
C6—C7	1.417 (3)	O5—H5A	0.8497
C6—C8	1.417 (3)	O5—H5B	0.8508
O2 <sup>i</sup> —Zn1—N1	116.96 (7)	C8—C9—C10	120.4 (2)
O2 <sup>i</sup> —Zn1—N3 <sup>ii</sup>	96.52 (7)	C10—C9—H9	119.8
O4—Zn1—O2 <sup>i</sup>	108.17 (8)	C9—C10—C12	120.6 (2)
O4—Zn1—N1	111.29 (7)	C11—C10—C9	120.1 (2)
O4—Zn1—N3 <sup>ii</sup>	105.13 (7)	C11—C10—C12	119.2 (2)

N1—Zn1—N3 <sup>ii</sup>	117.27 (7)	C5—C11—H11	119.4
C1—O2—Zn1 <sup>iii</sup>	112.89 (14)	C10—C11—C5	121.2 (2)
C12—O4—Zn1	123.10 (15)	C10—C11—H11	119.4
C13—N1—Zn1	117.59 (14)	O3—C12—O4	125.6 (2)
C13—N1—C17	116.01 (18)	O3—C12—C10	119.8 (2)
C17—N1—Zn1	126.20 (14)	O4—C12—C10	114.5 (2)
C15—N2—H2	115.6	N1—C13—H13	117.8
C15—N2—C18	128.79 (18)	N1—C13—C14	124.4 (2)
C18—N2—H2	115.6	C14—C13—H13	117.8
C20—N3—Zn1 <sup>iv</sup>	126.74 (14)	C13—C14—H14	120.3
C20—N3—C21	116.61 (17)	C13—C14—C15	119.34 (19)
C21—N3—Zn1 <sup>iv</sup>	115.26 (14)	C15—C14—H14	120.3
O1—C1—O2	124.0 (2)	N2—C15—C14	125.25 (19)
O1—C1—C2	119.7 (2)	N2—C15—C16	117.95 (19)
O2—C1—C2	116.22 (19)	C14—C15—C16	116.77 (19)
C3—C2—C1	118.71 (19)	C15—C16—H16	120.1
C7—C2—C1	121.5 (2)	C17—C16—C15	119.8 (2)
C7—C2—C3	119.8 (2)	C17—C16—H16	120.1
C2—C3—H3	119.7	N1—C17—C16	123.6 (2)
C4—C3—C2	120.5 (2)	N1—C17—H17	118.2
C4—C3—H3	119.8	C16—C17—H17	118.2
C3—C4—H4	119.7	N2—C18—C19	118.10 (19)
C3—C4—C5	120.6 (2)	N2—C18—C22	124.66 (18)
C5—C4—H4	119.7	C22—C18—C19	117.24 (18)
C4—C5—C6	119.3 (2)	C18—C19—H19	120.2
C4—C5—C11	122.3 (2)	C20—C19—C18	119.5 (2)
C11—C5—C6	118.4 (2)	C20—C19—H19	120.2
C7—C6—C5	118.36 (19)	N3—C20—C19	123.40 (19)
C7—C6—C8	122.31 (19)	N3—C20—H20	118.3
C8—C6—C5	119.32 (19)	C19—C20—H20	118.3
C2—C7—C6	121.4 (2)	N3—C21—H21	118.1
C2—C7—H7	119.3	N3—C21—C22	123.74 (19)
C6—C7—H7	119.3	C22—C21—H21	118.1
C6—C8—H8	119.7	C18—C22—H22	120.4

C9—C8—C6	120.6 (2)	C21—C22—C18	119.27 (19)
C9—C8—H8	119.7	C21—C22—H22	120.4
C8—C9—H9	119.8	H5A—O5—H5B	104.5

Symmetry code(s): (i)  $x+1/2, -y+1/2, z+1/2$ ; (ii)  $x+1, y, z$ ; (iii)  $x-1/2, -y+1/2, z-1/2$ ; (iv)  $x-1, y, z$ .

**Table S2** Selected geometric parameters (Å, °) of compound **2**

Cu1—O1	2.3321 (14)	C14—C15	1.360 (3)
Cu1—O3	1.9354 (13)	C14—C16	1.422 (3)
Cu1—O5	1.9616 (12)	C15—H15	0.9500
Cu1—N1	2.0168 (15)	C15—C18 <sup>i</sup>	1.424 (3)
Cu1—N2	1.9975 (15)	C16—H16	0.9500
O1—C13	1.229 (2)	C16—C17	1.375 (3)
O2—H2	0.8400	C17—H17	0.9500
O2—C13	1.303 (2)	C17—C18	1.407 (3)
O3—C19	1.274 (2)	C18—C18 <sup>i</sup>	1.422 (4)
O4—C19	1.250 (2)	C19—C20	1.505 (3)
O5—C25	1.278 (2)	C20—C21	1.373 (3)
O6—C25	1.233 (2)	C20—C23	1.417 (3)
N1—C1	1.337 (2)	C21—H21	0.9500
N1—C5	1.347 (2)	C21—C22	1.407 (3)
N2—C6	1.355 (2)	C22—C22 <sup>ii</sup>	1.425 (4)
N2—C10	1.341 (2)	C22—C24 <sup>ii</sup>	1.422 (3)
C1—H1	0.9500	C23—H23	0.9500
C1—C2	1.388 (3)	C23—C24	1.364 (3)
C2—H2A	0.9500	C24—H24	0.9500
C2—C3	1.387 (3)	C25—C26	1.495 (9)
C3—C4	1.391 (2)	C25—C26A	1.514 (3)
C3—C11	1.513 (2)	C26—C27	1.343 (5)
C4—H4	0.9500	C26—C28	1.374 (6)
C4—C5	1.389 (2)	C27—H27	0.9500

C5—C6	1.483 (2)	C27—C30 <sup>iii</sup>	1.313 (6)
C6—C7	1.380 (3)	C28—H28	0.9500
C7—H7	0.9500	C28—C29	1.396 (6)
C7—C8	1.389 (2)	C29—H29	0.9500
C8—C9	1.398 (3)	C29—C30	1.405 (6)
C8—C12	1.501 (3)	C30—C30 <sup>iii</sup>	1.321 (9)
C9—H9	0.9500	C26A—C27A	1.368 (3)
C9—C10	1.375 (3)	C26A—C28A	1.414 (3)
C10—H10	0.9500	C27A—H27A	0.9500
C11—H11A	0.9800	C27A—C30A <sup>iii</sup>	1.446 (3)
C11—H11B	0.9800	C28A—H28A	0.9500
C11—H11C	0.9800	C28A—C29A	1.383 (3)
C12—H12A	0.9800	C29A—H29A	0.9500
C12—H12B	0.9800	C29A—C30A	1.397 (2)
C12—H12C	0.9800	C30A—C30A <sup>iii</sup>	1.410 (4)
C13—C14	1.497 (3)		
O3—Cu1—O1	101.35 (6)	C15—C14—C13	118.94 (18)
O3—Cu1—O5	92.58 (6)	C15—C14—C16	120.59 (19)
O3—Cu1—N1	90.27 (6)	C16—C14—C13	120.47 (19)
O3—Cu1—N2	171.04 (6)	C14—C15—H15	119.4
O5—Cu1—O1	93.44 (5)	C14—C15—C18 <sup>i</sup>	121.12 (18)
O5—Cu1—N1	162.14 (6)	C18 <sup>i</sup> —C15—H15	119.4
O5—Cu1—N2	95.26 (6)	C14—C16—H16	120.3
N1—Cu1—O1	103.28 (6)	C17—C16—C14	119.4 (2)
N2—Cu1—O1	82.53 (6)	C17—C16—H16	120.3
N2—Cu1—N1	80.95 (6)	C16—C17—H17	119.4
C13—O1—Cu1	119.56 (14)	C16—C17—C18	121.10 (19)
C13—O2—H2	109.5	C18—C17—H17	119.5
C19—O3—Cu1	127.72 (13)	C17—C18—C15 <sup>i</sup>	122.25 (18)
C25—O5—Cu1	109.76 (11)	C17—C18—C18 <sup>i</sup>	119.6 (2)
C1—N1—Cu1	126.84 (14)	C18 <sup>i</sup> —C18—C15 <sup>i</sup>	118.2 (2)
C1—N1—C5	118.48 (16)	O3—C19—C20	116.49 (17)
C5—N1—Cu1	114.37 (11)	O4—C19—O3	126.62 (18)
C6—N2—Cu1	115.22 (12)	O4—C19—C20	116.88 (17)

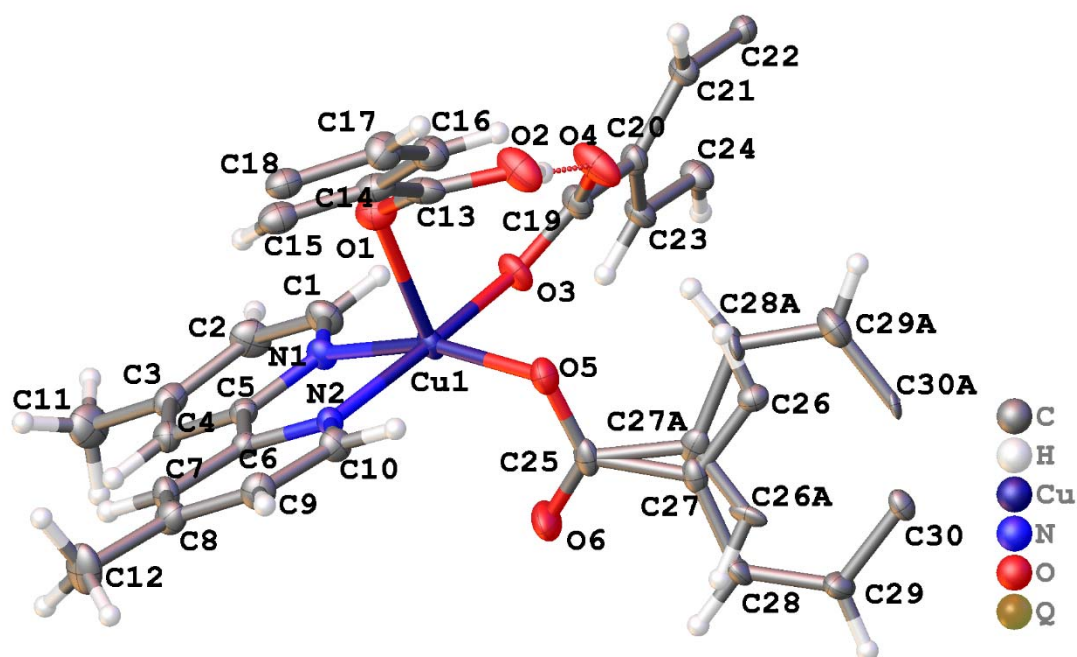
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C10—N2—Cu1	126.58 (13)	C21—C20—C19	118.88 (17)
C10—N2—C6	117.98 (16)	C21—C20—C23	119.48 (18)
N1—C1—H1	118.9	C23—C20—C19	121.61 (17)
N1—C1—C2	122.29 (19)	C20—C21—H21	119.0
C2—C1—H1	118.9	C20—C21—C22	121.95 (18)
C1—C2—H2A	120.1	C22—C21—H21	119.0
C3—C2—C1	119.77 (18)	C21—C22—C22 <sup>ii</sup>	118.4 (2)
C3—C2—H2A	120.1	C21—C22—C24 <sup>ii</sup>	122.85 (17)
C2—C3—C4	117.77 (17)	C24 <sup>ii</sup> —C22—C22 <sup>ii</sup>	118.7 (2)
C2—C3—C11	121.69 (18)	C20—C23—H23	119.9
C4—C3—C11	120.54 (19)	C24—C23—C20	120.16 (18)
C3—C4—H4	120.2	C24—C23—H23	119.9
C5—C4—C3	119.52 (18)	C22 <sup>ii</sup> —C24—H24	119.4
C5—C4—H4	120.2	C23—C24—C22 <sup>ii</sup>	121.22 (18)
N1—C5—C4	122.15 (17)	C23—C24—H24	119.4
N1—C5—C6	114.72 (15)	O5—C25—C26	115.2 (8)
C4—C5—C6	123.12 (17)	O5—C25—C26A	117.49 (17)
N2—C6—C5	114.18 (16)	O6—C25—O5	124.95 (17)
N2—C6—C7	121.77 (16)	O6—C25—C26	119.8 (8)
C7—C6—C5	124.03 (16)	O6—C25—C26A	117.52 (19)
C6—C7—H7	119.8	C27—C26—C25	128 (3)
C6—C7—C8	120.44 (17)	C27—C26—C28	118.3 (6)
C8—C7—H7	119.8	C28—C26—C25	114 (3)
C7—C8—C9	117.16 (18)	C26—C27—H27	116.0
C7—C8—C12	120.37 (18)	C30 <sup>iii</sup> —C27—C26	127.9 (8)
C9—C8—C12	122.48 (17)	C30 <sup>iii</sup> —C27—H27	116.0
C8—C9—H9	120.2	C26—C28—H28	125.7
C10—C9—C8	119.55 (17)	C26—C28—C29	108.7 (7)
C10—C9—H9	120.2	C29—C28—H28	125.7
N2—C10—C9	123.07 (17)	C28—C29—H29	112.7
N2—C10—H10	118.5	C28—C29—C30	134.6 (9)
C9—C10—H10	118.5	C30—C29—H29	112.7
C3—C11—H11A	109.5	C27 <sup>iii</sup> —C30—C29	129.3 (9)
C3—C11—H11B	109.5	C27 <sup>iii</sup> —C30—C30 <sup>iii</sup>	121.6 (8)

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C3—C11—H11C	109.5	C30 <sup>iii</sup> —C30—C29	107.7 (8)
H11A—C11—H11B	109.5	C27A—C26A—C25	120.47 (19)
H11A—C11—H11C	109.5	C27A—C26A—C28A	120.25 (19)
H11B—C11—H11C	109.5	C28A—C26A—C25	119.00 (17)
C8—C12—H12A	109.5	C26A—C27A—H27A	120.0
C8—C12—H12B	109.5	C30A <sup>iii</sup> —C27A—H27A	120.0
C8—C12—H12C	109.5	C26A—C28A—H28A	119.5
H12A—C12—H12B	109.5	C29A—C28A—C26A	121.09 (19)
H12A—C12—H12C	109.5	C29A—C28A—H28A	119.5
H12B—C12—H12C	109.5	C28A—C29A—H29A	120.3
O1—C13—O2	124.40 (19)	C28A—C29A—C30A	119.4 (2)
O1—C13—C14	121.7 (2)	C30A—C29A—H29A	120.3
O2—C13—C14	113.85 (17)		

Symmetry code(s): (i)  $-x+2, -y, -z+2$ ; (ii)  $-x+1, -y+2, -z+2$ ; (iii)  $-x+2, -y+2, -z+1$ .



**Figure S1.** The disordered naphthyl ring in compound **2**.