

## Retraction of articles

This article reports the retraction of 39 articles published in *Acta Crystallographica Section E* between 2004 and 2009.

After thorough investigation (see Harrison *et al.*, 2010), 39 additional articles are retracted as a result of problems with the data sets or incorrect atom assignments. Full details of all the articles are given in Table 1.

Table 1

Details of articles to be retracted, in order of publication.

Title	Reference	Retracted by	DOI	Refcode
<i>trans</i> -Bis[1-[3-(cyclohexylamino)propyliminomethyl]-2-naphtholato]copper(II) dichloride dihydrate	Zhang (2004)	Journal	10.1107/S1600536804028296	BIPDUA
Bis(4-bromo-2-formylphenolato- $\kappa^2 O, O'$ )copper(II)	Sun & Gao (2005)	Author	10.1107/S160053680500187X	FEYSUY
Bis(salicylaldehydo)zinc(II)	Xiong & Liu (2005)	Journal	10.1107/S1600536805010913	GAMDUU
Bis(4-bromo-2-formylphenolato- $\kappa^2 O, O'$ )zinc(II)	Chen (2006)	Journal	10.1107/S1600536805040432	SAZCUS
Bis(2-formylphenolato- $\kappa^2 O, O'$ )nickel(II)	Li & Chen (2006)	Journal	10.1107/S1600536806012931	IDAZAP
Bis(2-formylphenolato)cobalt(II)	Qiu (2006)	Journal	10.1107/S1600536806015704	GEJDUV
Bis(2-formylphenolato- $\kappa^2 O, O'$ )manganese(II)	Wang & Fang (2006)	Journal	10.1107/S1600536806021039	IDOVED
Tetraaqua(1,10-phenanthroline- $\kappa^2 N, N'$ )copper(II) naphthalene-1,5-disulfonate dihydrate	Liu <i>et al.</i> (2006)	Author	10.1107/S1600536806030637	GENYOO
Tetraaqua(1,10-phenanthroline- $\kappa^2 N, N'$ )nickel(II) naphthalene-1,5-disulfonate dihydrate	Liu & Fan (2006)	Author	10.1107/S1600536806035410	KERBEP
{6,6'-Diethoxy-2,2'-[ethane-1,2-diylbis(nitrilomethylidyne)]diphenolato}-trinitratolutetium(III)copper(II)	Sui <i>et al.</i> (2006)	Journal	10.1107/S160053680604565X	HESPEP
Bis(2-formylphenolato- $\kappa^2 O, O'$ )iron(II)	Yang <i>et al.</i> (2007)	Author	10.1107/S1600536807021721	PIFCAJ
2,6-Dimethoxybenzohydrazide	Qadeer <i>et al.</i> (2007a)	Journal	10.1107/S1600536807022593	PIFHES
2-(2,4-Dichlorophenylsulfanyl)acetohydrazide	Qadeer <i>et al.</i> (2007b)	Journal	10.1107/S1600536807022891	YIFSOW
{6,6'-Diethoxy-2,2'-[ethane-1,2-diylbis(nitrilomethylidyne)]diphenolato}-trinitratoeuropium(III)zinc(II)	Hu <i>et al.</i> (2007)	Author	10.1107/S1600536807031121	WIHKEE
{ $\mu$ -6,6'-Diethoxy-2,2'-[ethane-1,2-diylbis(nitrilomethylidyne)]diphenolato}-trinitratocerium(III)zinc(II)	Sui, Zhang, Hu & Yin (2007)	Author	10.1107/S1600536807032564	WIHREL
{ $\mu$ -6,6'-Diethoxy-2,2'-[ethane-1,2-diylbis(nitrilomethylidyne)]diphenolato}-trinitratopraseodymium(III)zinc(II)	Chen <i>et al.</i> (2007)	Author	10.1107/S1600536807032540	WIHRIP
{ $\mu$ -6,6'-Diethoxy-2,2'-[ethane-1,2-diylbis(nitrilomethylidyne)]diphenolato}-trinitratopraseodymium(III)nickel(II)	Sui, Li <i>et al.</i> (2007)	Author	10.1107/S1600536807032618	UFACUA
{6,6'-Dimethoxy-2,2'-[ethane-1,2-diylbis(nitrilomethylidyne)]diphenolato-1 $\kappa^4 O^1, O^2, O^3, O^4, O^5, O^6, O^7, O^8, O^9, O^{10}, O^{11}, O^{12}, O^{13}, O^{14}, O^{15}, O^{16}, O^{17}, O^{18}, O^{19}, O^{20}, O^{21}, O^{22}, O^{23}, O^{24}, O^{25}, O^{26}, O^{27}, O^{28}, O^{29}, O^{30}$ }(methanol-1 $\kappa O$ )- $\mu$ -nitrate-1:2 $\kappa^2 O:O'$ -dinitrato-1 $\kappa^4 O, O'$ -cerium(III)zinc(II)	Sui, Fang, Hu & Lin (2007)	Author	10.1107/S1600536807033314	UDUYIC
{6,6'-Dimethoxy-2,2'-[ethane-1,2-diylbis(nitrilomethylidyne)]diphenolato}-methanol- $\mu$ -nitrate-dinitratosamarium(III)nickel(II)	Sui, Zhang, Hu & Jiang (2007)	Author	10.1107/S1600536807037130	AFECEU
{6,6'-Dimethoxy-2,2'-[ethane-1,2-diylbis(nitrilomethylidyne)]diphenolato}-methanol- $\mu$ -nitrate-dinitratopraseodymium(III)zinc(II)	Sui, Fang & Yuan (2007)	Author	10.1107/S1600536807037488	AFICEY
{6,6'-Dimethoxy-2,2'-[ethane-1,2-diylbis(nitrilomethylidyne)]diphenolato}-methanol- $\mu$ -nitrate-dinitratolutetium(III)zinc(II)	Sui, Sui <i>et al.</i> (2007)	Author	10.1107/S1600536807037737	AFEFOH
catena-Poly[[chloridonickel(II)]-di- $\mu$ -chlorido-[chloridonickel(II)]- $\mu$ -4,4'-methylenebis(3,5-dimethylpyrazole)- $\kappa^2 N^2, N^2$ ]	Huang & Chen (2007)	Author	10.1107/S1600536807039384	VIJYOD
[2,2'-[o-Phenylenebis(nitrilomethylidyne)]diphenolato]zinc(II)	Liu <i>et al.</i> (2007a)	Author	10.1107/S1600536807040640	DIKYUS
<i>trans</i> -Bis(ethylenediamine- $\kappa^2 N, N'$ )bis(nitrate- $\kappa O$ )zinc(II)	Liu, Zeng & Chen (2007)	Author	10.1107/S1600536807042390	XIKYEW
[N,N'-(o-Phenylene)bis(picolinamido)- $\kappa^2 N, N', N'', N'''$ ]cobalt(II)	Liu & Zeng (2007a)	Author	10.1107/S1600536807044571	XILFII
[N,N'-(o-Phenylene)dipicolinamide- $\kappa^2 N$ ]nickel(II)	Liu & Zeng (2007b)	Author	10.1107/S1600536807048386	WINWEW
[2,2'-[o-Phenylenebis(nitrilomethylidyne)]diphenolato]manganese(II)	Liu <i>et al.</i> (2007b)	Author	10.1107/S1600536807052993	VIQPIV
N-(2-Amino-3-pyridyl)urea monohydrate	Li <i>et al.</i> (2007)	Author	10.1107/S1600536807047526	SIMFEA
N-(2-Fluorophenyl)carbamic acid monohydrate	Yang (2007)	Author	10.1107/S1600536807052464	WINMOW
Aqua(dimethylglyoxime- $\kappa^2 N, N'$ )(3,5-dinitro-2-oxidobenzooato- $\kappa^2 O^1, O^2$ )-copper(II)	Liu & Wen (2007)	Author	10.1107/S1600536807054244	HIQCAM
$\mu$ -Acetato-tri- $\mu$ -ferrocenecarboxylatobis[(N,N-dimethylformamide)-copper(II)]	Liu, Lin <i>et al.</i> (2007)	Journal	10.1107/S1600536807059041	HIQQEE

**Table 1 (continued)**

Title	Reference	Retracted by	DOI	Refcode
{ $\mu$ -6,6'-Dimethoxy-2,2'-[ethane-1,2-diylbis(nitrilomethylidyne)]diphenolato}- $\mu$ -nitrate-dinitratoeuropium(III)zinc(II)	Hu <i>et al.</i> (2008)	Author	10.1107/S160053680706151X	MIRPAF
Bis(4-chloro-2-formylphenolato)nickel(II)	Li <i>et al.</i> (2008)	Author	10.1107/S1600536807056309	RISTET
{ $\mu$ -6,6'-Dimethoxy-2,2'-[ethane-1,2-diylbis(nitrilomethylidyne)]diphenolato}- $\mu$ -nitrate-dinitratoerbium(III)zinc(II)	Chen <i>et al.</i> (2008)	Author	10.1107/S1600536808006958	QIXHIP
Bis(2-ethoxy-6-formylphenolato- $\kappa^2 O^1, O^6$ )nickel(II)	Han (2008)	Journal	10.1107/S160053680800809X	QIXLIT
{ $\mu$ -6,6'-Dimethoxy-2,2'-[ethane-1,2-diylbis(nitrilomethylidyne)]diphenolato}- $\mu$ -nitrate-dinitratoholmium(III)zinc(II)	Xiao, Sui <i>et al.</i> (2008)	Author	10.1107/S1600536808013743	BIZTUA
{ $\mu$ -6,6'-Diethoxy-2,2'-[ethane-1,2-diylbis(nitrilomethylidyne)]diphenolato}-trinitratoholmium(III)nickel(II)	Xiao, Fu <i>et al.</i> (2008)	Author	10.1107/S1600536808013755	BIZVAI
Hydrogen-bonding patterns in the cocrystal terephthalic acid-4,4'-bipyridine (2I)	Wang <i>et al.</i> (2009)	Journal	10.1107/S160053680903236X	DUCZEH
{6,6'-Dimethoxy-2,2'-[ethane-1,2-diylbis(nitrilomethylidyne)]diphenolato-1 $\kappa^4 O^1, O^1, O^6, O^6$ :2 $\kappa^4 O^1, N, N', O^1$ } (ethanol-1 $\kappa O$ )- $\mu$ -nitrate-1:2 $\kappa^2 O$ :O'-dinitrato-1 $\kappa^4 O, O'$ -samarium(III)zinc(II)	Huang <i>et al.</i> (2009)	Journal	10.1107/S1600536809033558	YUCWAV

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Tetraaqua(1,10-phenanthroline- $\kappa^2N,N'$ )nickel(II)  
naphthalene-1,5-disulfonate dihydrate

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The title compound,  $[\text{Ni}(\text{C}_{12}\text{H}_8\text{N}_2)(\text{H}_2\text{O})_4](\text{C}_{10}\text{H}_6\text{S}_2\text{O}_6)\cdot 2\text{H}_2\text{O}$ , is isostructural with a copper(II) analog, whose structure has been reported recently [Liu, Fan & Li (2006). *Acta Cryst.* E62, m2165–m2166]. The cation lies on a crystallographic twofold rotation axis and the anion lies on a centre of inversion. The  $\text{Ni}^{\text{II}}$  atom is in a distorted octahedral geometry.

Received 24 August 2006  
Accepted 2 September 2006

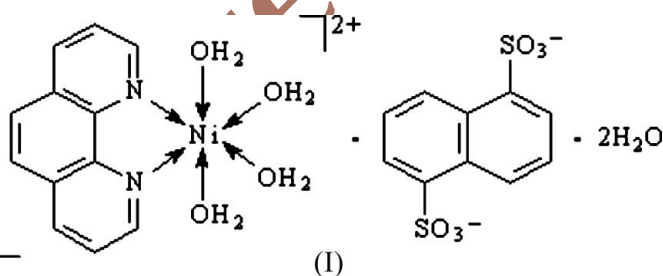
## Key indicators

Single-crystal X-ray study  
 $T = 294$  K  
Mean  $\sigma(\text{C}-\text{C}) = 0.004$  Å  
 $R$  factor = 0.036  
 $wR$  factor = 0.096  
Data-to-parameter ratio = 14.0

For details of how these key indicators were automatically derived from the article, see <http://journals.iucr.org/e>.

## Comment

Tetraaqua(1,10-phenanthroline)nickel(II) naphthalene-1,5-disulfonate dihydrate, (I) (Fig. 1), is isostructural with the copper(II) analog (Liu *et al.*, 2006) reported recently. The cation lies on a crystallographic twofold rotation axis which runs through the  $\text{Ni}^{\text{II}}$  atom and the anion lies on a centre of inversion. The  $\text{Ni}^{\text{II}}$  center shows distorted octahedral coordination. Selected bond distances and angles are listed in Table 1.



As in the Cu analog, the structure of (I) features extensive O—H···O hydrogen bonds (Table 2) that give rise to a three-dimensional supramolecular framework (Fig. 2).

## Experimental

A mixture of  $\text{Ni}(\text{NO}_3)_2\cdot 6\text{H}_2\text{O}$  (58 mg, 0.2 mmol), 1,10-phenanthroline (37 mg, 0.2 mmol) and disodium naphthalene-1,5-disulfonate (67 mg, 0.2 mmol) in water (10 ml) was placed in a Teflon-lined stainless steel Parr bomb that was heated at 413 K for 48 h. The bomb was then cooled to room temperature over a period of 24 h. Green crystals were isolated in about 30% yield.

## Crystal data

$[\text{Ni}(\text{C}_{12}\text{H}_8\text{N}_2)(\text{H}_2\text{O})_4]\cdot$   
 $(\text{C}_{10}\text{H}_6\text{O}_6\text{S}_2)\cdot 2\text{H}_2\text{O}$   
 $M_r = 633.28$   
Monoclinic,  $C2/c$   
 $a = 20.562$  (3) Å  
 $b = 12.4311$  (19) Å  
 $c = 12.5373$  (18) Å  
 $\beta = 124.576$  (2)°

$V = 2638.6$  (7) Å<sup>3</sup>  
 $Z = 4$   
 $D_x = 1.594$  Mg m<sup>-3</sup>  
Mo  $K\alpha$  radiation  
 $\mu = 0.96$  mm<sup>-1</sup>  
 $T = 294$  (2) K  
Block, green  
0.20 × 0.20 × 0.18 mm

Data collection

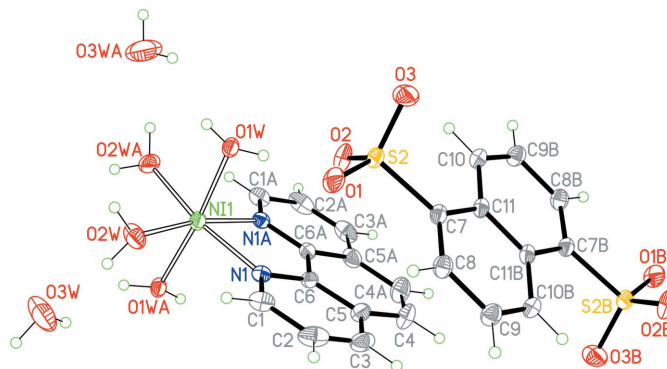
Bruker SMART APEX CCD area-detector diffractometer  
 $\varphi$  and  $\omega$  scans  
 Absorption correction: multi-scan (SADABS; Bruker, 1998)  
 $T_{\min} = 0.891$ ,  $T_{\max} = 1.000$   
 (expected range = 0.750–0.841)

7257 measured reflections  
 2677 independent reflections  
 2167 reflections with  $I > 2\sigma(I)$   
 $R_{\text{int}} = 0.030$   
 $\theta_{\text{max}} = 26.4^\circ$

Refinement

Refinement on  $F^2$   
 $R[F^2 > 2\sigma(F^2)] = 0.036$   
 $wR(F^2) = 0.096$   
 $S = 1.09$   
 2677 reflections  
 191 parameters  
 H atoms treated by a mixture of independent and constrained refinement

$w = 1/[\sigma^2(F_o^2) + (0.0502P)^2 + 1.2664P]$   
 where  $P = (F_o^2 + 2F_c^2)/3$   
 $(\Delta/\sigma)_{\text{max}} = 0.001$   
 $\Delta\rho_{\text{max}} = 0.81 \text{ e } \text{Å}^{-3}$   
 $\Delta\rho_{\text{min}} = -0.42 \text{ e } \text{Å}^{-3}$



**Figure 1**  
 The formula unit of (I), showing displacement ellipsoids at the 30% probability level. [Symmetry codes: (A)  $1 - x, y, \frac{1}{2} - z$ ; (B)  $\frac{3}{2} - x, \frac{1}{2} - y, 1 - z$ .]

**Table 1**

Selected geometric parameters (Å, °).

Ni1—Ni1	2.0728 (19)	S1—O1	1.4540 (18)
Ni1—O1W	2.0882 (17)	S1—O2	1.450 (2)
Ni1—O2W	2.054 (2)	S1—O3	1.4525 (19)
O1W—Ni1—O1W <sup>i</sup>	174.40 (9)	Ni1 <sup>i</sup> —Ni1—Ni1	79.69 (10)
O2W—Ni1—O1W	88.78 (7)	Ni1—Ni1—O1W	88.29 (7)
O2W—Ni1—O2W <sup>i</sup>	96.48 (15)	O2W—Ni1—O1W <sup>i</sup>	87.49 (7)
O2W—Ni1—Ni1 <sup>i</sup>	170.34 (8)	Ni1—Ni1—O1W <sup>i</sup>	96.02 (7)
O2W—Ni1—N1	92.11 (9)		

Symmetry code: (i)  $-x + 1, y, -z + \frac{1}{2}$ .

**Table 2**

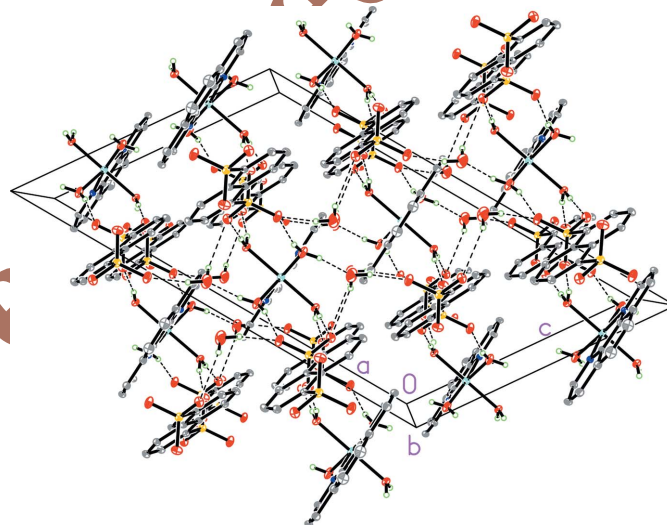
Hydrogen-bond geometry (Å, °).

<i>D</i> —H... <i>A</i>	<i>D</i> —H	H... <i>A</i>	<i>D</i> ... <i>A</i>	<i>D</i> —H... <i>A</i>
O1W—H1WA...O2	0.84 (1)	1.89 (1)	2.727 (2)	176 (3)
O1W—H1WB...O1 <sup>ii</sup>	0.84 (1)	1.96 (1)	2.806 (2)	178 (3)
O2W—H2WB...O3W	0.84 (1)	1.86 (1)	2.688 (3)	170 (3)
O2W—H2WA...O3 <sup>iii</sup>	0.85 (1)	1.91 (1)	2.758 (3)	174 (4)
O3W—H3WA...O1 <sup>iii</sup>	0.83 (1)	2.44 (1)	2.922 (4)	117.7 (3)
O3W—H3WA...O1W <sup>i</sup>	0.83 (1)	2.61 (1)	3.308 (3)	142.4 (4)
O3W—H3WB...O3 <sup>iv</sup>	0.86 (1)	2.00 (1)	2.832 (3)	164.7 (4)

Symmetry codes: (i)  $-x + 1, y, -z + \frac{1}{2}$ ; (ii)  $-x + \frac{3}{2}, -y + \frac{3}{2}, -z + 1$ ; (iii)  $x - \frac{1}{2}, -y + \frac{3}{2}, z - \frac{1}{2}$ ; (iv)  $x - \frac{1}{2}, y + \frac{1}{2}, z$ .

Water H atoms were located in a difference map and refined with an O—H distance restraint of 0.85 (1) Å and with  $U_{\text{iso}}(\text{H}) = 1.2U_{\text{eq}}(\text{O})$ . H atoms bound to C atoms were placed in calculated positions (C—H = 0.93 Å) and refined in the riding-model approximation, with  $U_{\text{iso}}(\text{H}) = 1.2U_{\text{eq}}(\text{C})$ .

Data collection: SMART (Bruker, 1998); cell refinement: SAINT (Bruker, 1998); data reduction: SAINT; program(s) used to solve structure: SHELXS97 (Sheldrick, 1997); program(s) used to refine



**Figure 2**  
 The crystal structure of (I), with hydrogen bonds indicated by dashed lines.

structure: SHELXL97; molecular graphics: SHELXTL (Bruker, 1998); software used to prepare material for publication: SHELXTL.

The authors thank Dalian Nationalities University for supporting this work.

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