Acta Crystallographica Section E
Structure Reports Online
ISSN 1600-5368

Bis{(*E*)-2,4-diiodo-6-[(2-morpholinoethyl)iminomethyl]phenolato}nickel(II)

Dong-Sheng Xia, Wu Chen, Hao Wang and Qing-Fu Zeng*

Engineering Research Center for the Clean Production of Textile Printing, Ministry of Education, Wuhan University of Science and Engineering, Wuhan 430073, People's Republic of China
Correspondence e-mail: qingfu_zeng@163.com

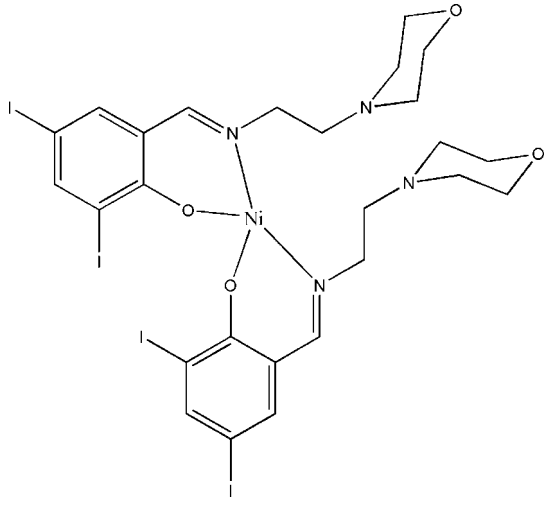
Received 21 May 2008; accepted 22 May 2008

Key indicators: single-crystal X-ray study; T = 298 K; mean σ(C–C) = 0.014 Å; R factor = 0.054; wR factor = 0.154; data-to-parameter ratio = 17.9.

In the title mononuclear nickel(II) complex, $[Ni(C_{13}H_{15}I_2N_2O_2)_2]$, the Ni^{II} atom is four-coordinated in a tetrahedral geometry by the imine N and phenolate O atoms of the two Schiff base ligands. The O and N atoms of the morpholine substituent in the ligand are not involved in coordination to the Ni atom.

Related literature

For related structures, see: Cheng *et al.* (2007); Li *et al.* (2007); Qiu *et al.* (2006); Shi *et al.* (2007); Wang *et al.* (2005); Zhu *et al.* (2003).



Experimental

Crystal data

$[Ni(C_{13}H_{15}I_2N_2O_2)_2]$
M_r = 1028.85
Triclinic, $P\overline{1}$
a = 9.940 (2) Å
b = 11.371 (2) Å
c = 14.526 (3) Å
α = 87.138 (3)°
β = 79.028 (4)°
γ = 76.197 (4)°
V = 1565.3 (5) Å^3
Z = 2
Mo $K\alpha$ radiation
μ = 4.60 mm^{-1}
T = 298 (2) K
0.17 × 0.15 × 0.15 mm

Data collection

Enraf–Nonius CAD-4 diffractometer
Absorption correction: ψ scan (North *et al.*, 1968)
T_{min} = 0.465, T_{max} = 0.507
6131 measured reflections
6081 independent reflections
4486 reflections with $I > 2\sigma(I)$
R_{int} = 0.039

Refinement

$R[F^2 > 2\sigma(F^2)]$ = 0.053
$wR(F^2)$ = 0.154
S = 1.07
6081 reflections
340 parameters
H-atom parameters constrained
$\Delta\rho_{max}$ = 1.01 e Å^{-3}
$\Delta\rho_{min}$ = −1.19 e Å^{-3}

Table 1
Selected geometric parameters (Å, °).

Ni—O4	1.956 (6)	Ni—N2	2.001 (7)
Ni—O2	1.989 (6)	Ni—N4	2.004 (7)
O4—Ni—O2	104.7 (3)	O4—Ni—N4	94.2 (3)
O4—Ni—N2	102.8 (3)	O2—Ni—N4	101.5 (3)
O2—Ni—N2	93.7 (3)	N2—Ni—N4	153.5 (3)

Data collection: *CAD-4 Software* (Enraf–Nonius, 1989); cell refinement: *CAD-4 Software*; data reduction: *XCAD4* (Harms & Wocadlo, 1995); program(s) used to solve structure: *SHELXS97* (Sheldrick, 2008); program(s) used to refine structure: *SHELXL97* (Sheldrick, 2008); molecular graphics: *SHELXTL* (Sheldrick, 2008); software used to prepare material for publication: *SHELXTL*.

The authors appreciate the generous financial support of this work by the Chinese Funds for Zhicheng Project (No. 2006BAC02A11) and Wuhan Yindao project (No. 20066009138-07).

Supplementary data and figures for this paper are available from the IUCr electronic archives (Reference: SJ2504).

References

Cheng, K., You, Z.-L. & Zhu, H.-L. (2007). *Aust. J. Chem.* **60**, 375–379.
Enraf–Nonius (1989). *CAD-4 Software*. Enraf–Nonius, Delft, The Netherlands.
Harms, K. & Wocadlo, S. (1995). *XCAD4*. University of Marburg, Germany.
Li, Y.-G., Shi, D.-H., Zhu, H.-L., Yan, H. & Ng, S. W. (2007). *Inorg. Chim. Acta*, **360**, 2881–2889.
North, A. C. T., Phillips, D. C. & Mathews, F. S. (1968). *Acta Cryst.*A**24**, 351–359.
Qiu, X.-Y., Ma, J.-L., Liu, W.-S. & Zhu, H.-L. (2006). *Acta Cryst.* E**62**, m1289–m1290.
Sheldrick, G. M. (2008). *Acta Cryst.* A**64**, 112–122.
Shi, D.-H., You, Z.-L., Xu, C., Zhang, Q. & Zhu, H.-L. (2007). *Inorg. Chem. Commun.* **10**, 404–406.
Wang, S.-F., Xue, J.-Y., Shi, L., Zhu, H.-L. & Ng, S. W. (2005). *Acta Cryst.* E**61**, m1481–m1483.
Zhu, H.-L., Zeng, Q.-F., Xia, D.-S., Liu, X.-Y. & Wang, D.-Q. (2003). *Acta Cryst.* E**59**, m777–m779.