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

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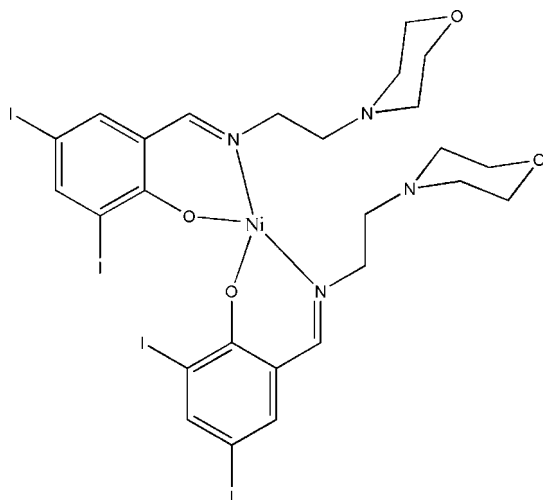
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Key indicators: single-crystal X-ray study; $T = 298$ K; mean $\sigma(\text{C}-\text{C}) = 0.014$ Å; R factor = 0.054; wR factor = 0.154; data-to-parameter ratio = 17.9.

In the title mononuclear nickel(II) complex, $[\text{Ni}(\text{C}_{13}\text{H}_{15}\text{I}_2\text{N}_2\text{O}_2)_2]$, 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

 $[\text{Ni}(\text{C}_{13}\text{H}_{15}\text{I}_2\text{N}_2\text{O}_2)_2]$
 $M_r = 1028.85$

 Triclinic, $P\bar{1}$
 $a = 9.940$ (2) Å

 $b = 11.371$ (2) Å
 $c = 14.526$ (3) Å
 $\alpha = 87.138$ (3)°
 $\beta = 79.028$ (4)°
 $\gamma = 76.197$ (4)°
 $V = 1565.3$ (5) Å³
 $Z = 2$
 Mo $K\alpha$ radiation
 $\mu = 4.60$ mm⁻¹
 $T = 298$ (2) K
 $0.17 \times 0.15 \times 0.15$ mm

Data collection

 Enraf–Nonius CAD-4
 diffractometer
 Absorption correction: ψ scan
 (North *et al.*, 1968)
 $T_{\text{min}} = 0.465$, $T_{\text{max}} = 0.507$

 6131 measured reflections
 6081 independent reflections
 4486 reflections with $I > 2\sigma(I)$
 $R_{\text{int}} = 0.039$

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
 $\Delta\rho_{\text{max}} = 1.01$ e Å⁻³
 $\Delta\rho_{\text{min}} = -1.19$ 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*.

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

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