研究简报

双异薄荷醇黄原酸镍的吡啶加合物

叶 琼* 周 挺 瞿志荣
(南京大学配位化学研究所,配位化学国家重点实验室,南京 210093)

关键词: 镍; 八面体; 手性黄原酸
中图分类号: O614.81+3 **文献标识码**: A **文章编号**: 1001-4861(2005)10-1591-02

Adduct of Bis(2-isopropyl-5-methylcyclohexyl xanthalato) Nickel(Ⅱ) with Pyridine

YE Qiong* ZHOU Ting QU Zhi-Rong
(*Coordination Chemistry Institute, State Laboratory of Coordination Chemistry, Nanjing University, Nanjing* 210093)

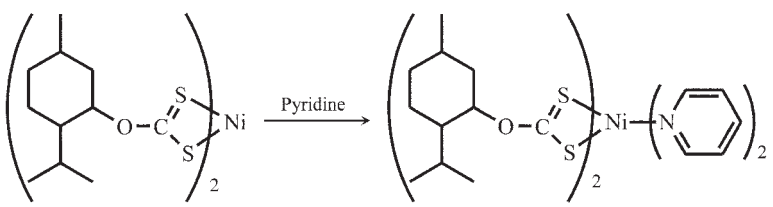
Abstract: The reaction of homochiral bis(2-isopropyl-5-methylcyclohexyl xanthalato) nickel(Ⅱ) with pyridine yields an chiral adduct bis(2-isopropyl-5-methylcyclohexyl xanthalato)(dipyridine) nickel(Ⅱ) (Ⅰ) in which the coordination geometry of the central Ni atom displays a slightly distorted octahedron composed of four S atoms from two xanthalato ligands and two N atoms from pyridine rings. CCDC: 252342.

Key words: nickel(Ⅱ); octahedron; chiral xanthalato

Metal xanthalato compounds have found various applications in ore extract agents and petroleum as lubricating oil antiwear additives[1,2]. The homochiral xanthalato metal complexes are very rare while their homochiral adducts are unprecedented, as we are aware[3]. Herein we report a homochiral xanthalato nickel(Ⅱ) adduct, bis(2-isopropyl-5-methylcyclohexyl xanthalato)(dipyridine) nickel(Ⅱ) (Ⅰ) obtained by the reaction of homochiral bis(2-isopropyl -5-methylcyclohexyl xanthalato) nickel(Ⅱ) with pyridine (Scheme 1). Fig.1 clearly shows that the central Ni atom has a slightly distorted octahedron coordination geometry composed of an equatorial plane with four S atoms of isomenthyl xanthalato ligand and two apical positions with N atom of pyridine ring.

Crystal data

$C_{32}H_{48}N_2NiO_2S_4$, M=521.47, monoclinic, space group $P2_1$, a=0.619 17(4)(2) nm, b=3.189 0(18)(2) nm, c=0.899 58(6) nm, β=94.968(2)°, V=1.769 6(2) nm^3, Z=2, θ_{max}=25.00°, R=0.037 0 (3 739 data with $I \geqslant 2\sigma(I)$), R=0.050 5 (all data; 25 041). Programs used:



Scheme 1

收稿日期:2005-07-25。收修改稿日期:2005-09-12。
973 项目(No.G2000077500)。
*通讯联系人。E-mail:nju_yeqiong@yahoo.com
第一作者:叶 琼,23 岁,女,博士生;研究方向:手性配位化合物及不对称催化。

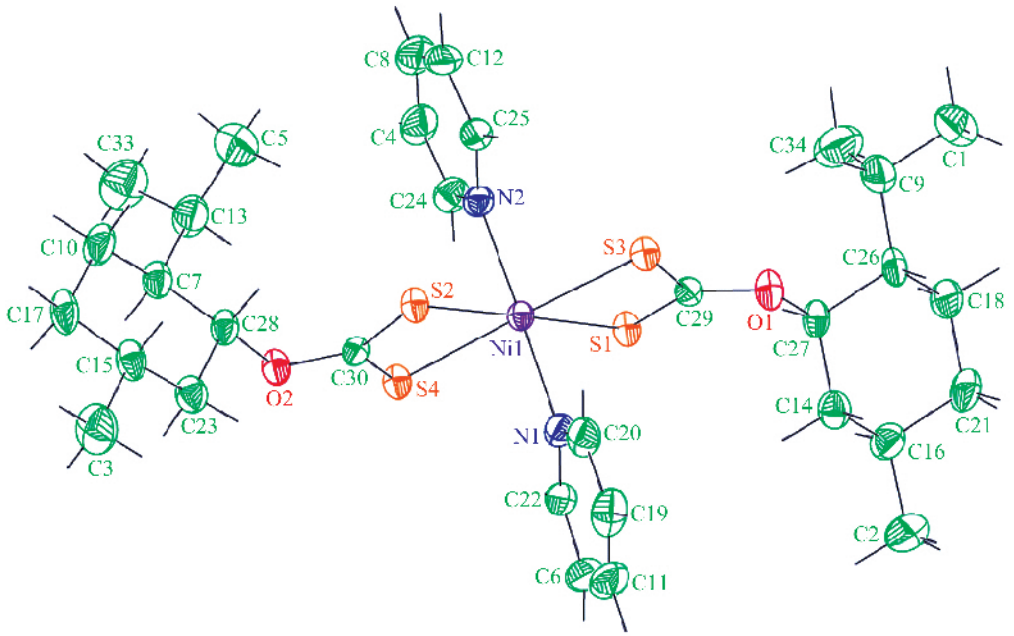


Fig.1 An ORTEP view of adduct (**I**)

Key bond distances (nm) and angles(°):

Ni(1)-N(1) 0.210 9(4), Ni(1)-N(2) 0.212 0(4), Ni(1)-S(3) 0.242 1(13), Ni(1)-S(4) 0.242 6(13), Ni(1)-S(2) 0.246 6(11), Ni(1)-S(1) 0.246 5(12);

N(1)-Ni(1)-N(2) 178.42(17), N(1)-Ni(1)-S(3) 89.04(12), N(2)-Ni(1)-S(3) 92.08(12), N(1)-Ni(1)-S(4) 89.21(12), N(2)-Ni(1)-S(4) 89.67(12), S(3)-Ni(1)-S(4) 178.25(5), N(1)-Ni(1)-S(2) 90.24(11), N(2)-Ni(1)-S(2) 88.37(10), S(3)-Ni(1)-S(2) 106.54(4), S(4)-Ni(1)-S(2) 73.54(4), N(1)-Ni(1)-S(1) 88.80(11), N(2)-Ni(1)-S(1) 92.59(10), S(3)-Ni(1)-S(1) 73.55(4), S(4)-Ni(1)-S(1) 106.35(4), S(2)-Ni(1)-S(1) 179.03(5).

SAINT, SADABS, SHELX-97, ORTEP.

CCDC: 252342.

References:

[1] Xiong R G, Zuo J L, You X Z, et al. *Tribol. Inter.*, **1996**,**20**: 137~146

[2] Xiong R G, Wang H, Zuo J L, et al. *J. Tribol.*, **1996**,**118**:676~680

[3] Xiong R G, You X Z, Abrahams B F, et al. *Angew. Chem. Int. Ed.*, **2001**,**40**:4422~4424

[4] YE Qiong(叶 琼), PANG Jie(庞 洁), QU Zhi-Rong(瞿志荣). *Wuji Huaxue Xuebao*(*Chin. J. Inorg. Chem.*), **2005**,**21**: 1589~1590