

The dataset contains data for this study that were measured at the University of Leeds:

Analytical characterisation of the perchlorate salt solvates (CHN microanalysis)

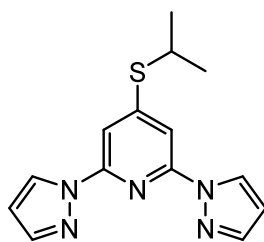
X-ray Crystallographic data:

- Structures of **1**[ClO₄]₂·MeNO₂ at three temperatures (CCDC 1428759–1428760 and 1563026).
- Structures of **1**[ClO₄]₂·MeCN at two temperatures (CCDC 1428761–1428762).
- Structures of **1**[ClO₄]₂·γMe₂CO at two temperatures (CCDC 1428763–1428764).
- Structures of **1**[ClO₄]₂·H₂O at two temperatures (CCDC 1563027–1563028).
- Structures of **1**[ClO₄]₂·sf at two temperatures (CCDC 1563029–1563030).

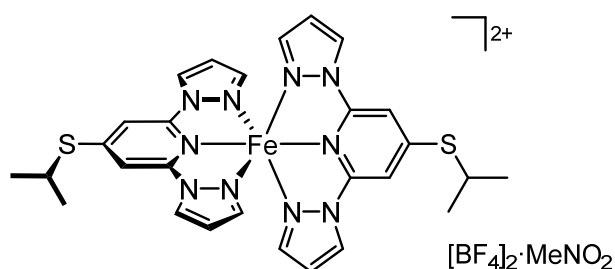
X-ray powder diffraction data (measured and simulated).

Solid state magnetic susceptibility measurements of the perchlorate salts at a scan rate of 5 K.min⁻¹ (raw and processed data).

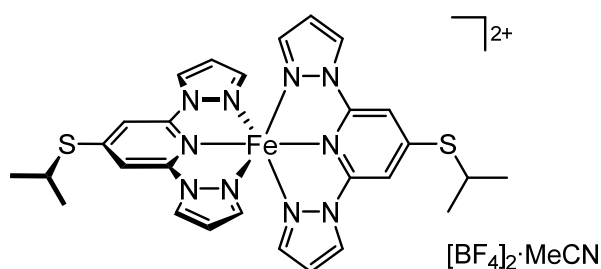
Compounds referred to in this study



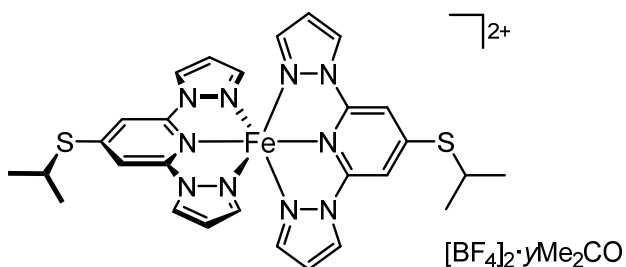
L
4-(Isopropylsulfanyl)-2,6-di(pyrazol-1-yl)pyridine
 $C_{14}H_{15}N_5S$



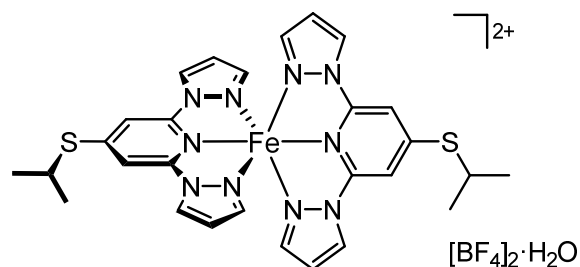
1[BF₄]₂·MeNO₂
Bis[4-(isopropylsulfanyl)-2,6-di(pyrazol-1-yl)pyridine]-
iron(II) ditetrafluoroborate nitromethane solvate
 $C_{29}H_{33}B_2F_8FeN_{11}O_2S_2$



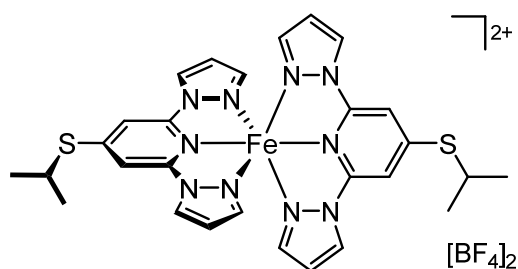
1[BF₄]₂·MeCN
Bis[4-(isopropylsulfanyl)-2,6-di(pyrazol-1-yl)pyridine]-
iron(II) ditetrafluoroborate acetonitrile solvate
 $C_{30}H_{33}B_2F_8FeN_{11}S_2$



1[BF₄]₂·yMe₂CO
Bis[4-(isopropylsulfanyl)-2,6-di(pyrazol-1-yl)pyridine]-
iron(II) ditetrafluoroborate acetone (1/0.75) solvate
 $C_{30.25}H_{34.50}B_2F_8FeN_{10}O_{0.75}S_2$

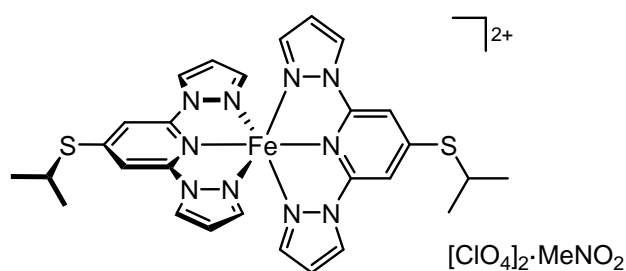


1[BF₄]₂·H₂O
Bis[4-(isopropylsulfanyl)-2,6-di(pyrazol-1-yl)pyridine]-
iron(II) ditetrafluoroborate hydrate
 $C_{28}H_{32}B_2F_8FeN_{10}OS_2$



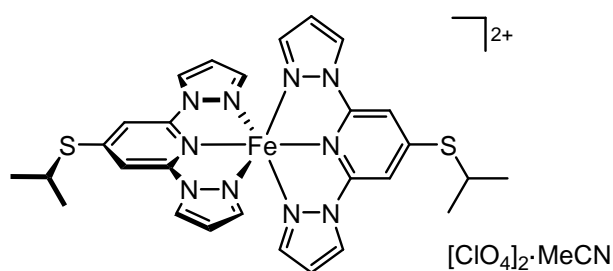
1[BF₄]₂·sf
Bis[4-(isopropylsulfanyl)-2,6-di(pyrazol-1-yl)pyridine]-
iron(II) ditetrafluoroborate
 $C_{28}H_{30}B_2F_8FeN_{10}S_2$

Compounds referred to in this study (continued)



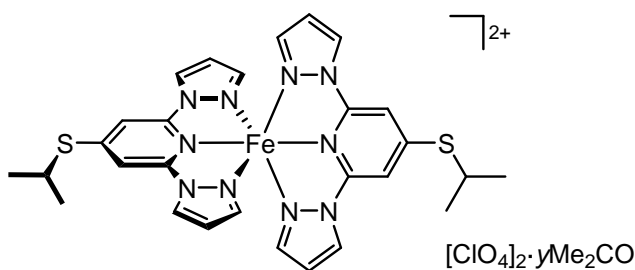
1[ClO₄]₂·MeNO₂

Bis[4-(isopropylsulfanyl)-2,6-di(pyrazol-1-yl)pyridine]-
iron(II) diperchlorate nitromethane solvate
C₂₉H₃₃Cl₂FeN₁₁O₁₀S₂



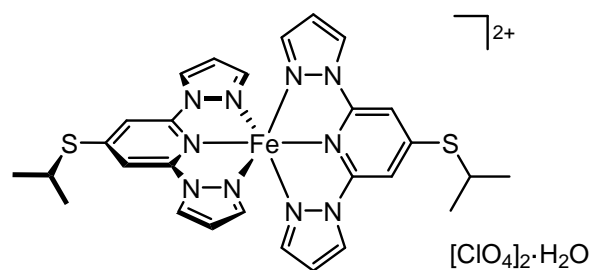
1[ClO₄]₂·MeCN

Bis[4-(isopropylsulfanyl)-2,6-di(pyrazol-1-yl)pyridine]-
iron(II) diperchlorate acetonitrile solvate
C₃₀H₃₃Cl₂FeN₁₁O₈S₂



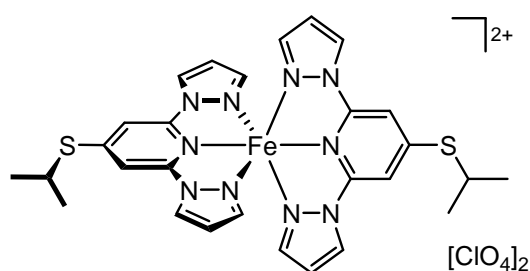
1[ClO₄]₂·yMe₂CO

Bis[4-(isopropylsulfanyl)-2,6-di(pyrazol-1-yl)pyridine]-
iron(II) diperchlorate acetone (1/0.70) solvate
C_{30.10}H_{34.20}Cl₂FeN₁₀O_{8.70}S₂



1[ClO₄]₂·H₂O

Bis[4-(isopropylsulfanyl)-2,6-di(pyrazol-1-yl)pyridine]-
iron(II) diperchlorate hydrate
C₂₈H₃₂Cl₂FeN₁₀O₉S₂



1[ClO₄]₂·sf

Bis[4-(isopropylsulfanyl)-2,6-di(pyrazol-1-yl)pyridine]-
iron(II) diperchlorate
C₂₈H₃₀Cl₂FeN₁₀O₈S₂