

Sulphurating and coordinating properties of N,N'-thiobismorpholine towards iron carbonyls

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The reactions of N,N'-thiobismorpholine, {A figure is presented}, with $\text{Fe}(\text{CO})_5$, $\text{Fe}_2(\text{CO})_9$, $\text{Fe}_3(\text{CO})_{11}$ and $[(\eta^5\text{-C}_5\text{H}_5)\text{Fe}(\text{CO})_2\text{THF}]\text{BF}_4$ were examined. Thiobismorpholine undergoes desulphurization towards $\text{Fe}(\text{CO})_5$ with formation of $\text{Fe}_3(\text{CO})_9\text{S}_2$, while the novel complex $\text{Fe}(\text{CO})_4$ {A figure is presented} was isolated and characterized from the reaction with $\text{Fe}_2(\text{CO})_9$. On the other hand, thiobismorpholine is somewhat unreactive towards $\text{Fe}_3(\text{CO})_{11}$ but it undergoes SN fission with $[(\eta^5\text{-C}_5\text{H}_5)\text{Fe}(\text{CO})_2\text{THF}]\text{BF}_4$. © 1990.