

Manganese(II) coordination compounds of thiazole-hydrazone based NNN-donor ligands: Synthesis, characterization and catalytic activity

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The reaction of $\text{Mn}(\text{OAc})_2 \cdot 4\text{H}_2\text{O}$ with (*E*)-2-(2-(pyridin-2-ylmethylene)hydrazinyl)benzo[d]thiazole (HL^1) and (*E*)-2-(2-(1-(pyridin-2-yl)ethylidene)hydrazinyl)benzo[d]thiazole (HL^2), in methanol resulted in the formation of $[\text{Mn}(\text{L}^1)_2] \cdot 2\text{CH}_3\text{OH}$ (**1**) and $[\text{Mn}(\text{L}^2)_2]$ (**2**) as neutral mononuclear Mn(II) coordination compounds. These compounds were characterized by spectroscopic methods and their molecular structures were determined by single crystal X-ray diffraction analysis. In these compounds, the ligands are coordinated to the Mn(II) core via the nitrogen atoms of thiazole ring, pyridine ring and imine moiety and act as tridentate mononegative NNN-donor ligand. The manganese(II) coordination compounds were also used as catalyst for olefin oxidation in the presence of *tert*-butylhydroperoxide (TBHP) or H_2O_2 as oxidant. Under similar experimental conditions with equal loading of Mn(II) coordination compounds, the presence of TBHP resulted in higher oxidation conversion than H_2O_2 .

Słowa kluczowe

Thiazole, Neutral mononuclear Mn(II) complex, Olefin, Oxidation, TBHP, H_2O_2

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