

Exploration of nitrosylation reactions of α -diimine rhenium tricarbonyl complexes bearing π -basic ligands

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Organometallic complexes based on rhenium metal cores attract lot of attention in the scientific community due to their high potential as anticancer agents. In this master work we investigated the possibility of synthesizing new rhenium compounds by modifying the bromo tricarbonyl bipyridine rhenium complexes. The aim was to obtain and explore the chemistry of dicarbonyl nitrosyl bipyridine carboxylate rhenium complexes. The preparation of carboxylato tricarbonyl bipyridine rhenium complexes, followed by their direct nitrosylation with NOBF_4 seemed to be the best synthetic route. Three tricarbonyl bipyridine carboxylato rhenium complexes were successfully synthesized. Nitrosylation of the compounds worked but these products could not be successfully isolated yet, probably due to the sensitivity to solvent or moisture. The experiments and procedure can be optimized in the future.

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