

Ruthenium(II) carbonyl complexes containing two N-monodentate 1,8-naphthyridine ligands: active catalysis in transfer hydrogenation reactions

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© International Union of Crystallography, 2018 The reaction of 2-aminonicotinaldehyde with 2- or 4-methoxyacetophenone in basic media leads to the new ligands

2-(4-methoxyphenyl)-1,8-naphthyridine and 2-(2-methoxyphenyl)-1,8-naphthyridine, respectively, in high yield. The reaction of these naphthyridine derivatives with $[\text{RuCl}_2(\text{CO})_2]_n$ leads to the respective complexes

cis-dicarbonyldichloridobis[2-(4-methoxyphenyl)-1,8-naphthyridine- $\text{N}8$]ruthenium(II) and cis-dicarbonyldichloridobis[2-(2-methoxyphenyl)-1,8-naphthyridine- $\text{N}8$]ruthenium(II), both $[\text{RuCl}_2(\text{C}_{15}\text{H}_{12}\text{N}_2\text{O})_2(\text{CO})_2]$, in good yield. Both ruthenium(II) complexes display a slightly distorted octahedron with two cis carbonyl, two cis chloride and two cis naphthyridine ligands, the latter coordinated in a monodentate fashion through the N atom in the 8-position. Both complexes exhibit a moderate catalytic activity in the hydrogen-transfer reaction from propan-2-ol to acetophenone in the presence of a base, with 100% selectivity.