

Orthometallation of tris(3-sodium sulfonatophenyl)phosphine with dirhodium(II) acetate.

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Streszczenie

Tetraacetatodirhodium(II) reacts with tris(3-sodium sulfonatophenyl)phosphine (TPPTS) giving $[\text{Rh}_2(\text{OOCCH}_3)_3\{\text{I}-(3\text{-NaO}_3\text{SC}_6\text{H}_3)\text{P}(\text{C}_6\text{H}_4\text{SO}_3\text{Na}-3)_2\}(\text{HOOCCH}_3)]\cdot 6\text{H}_2\text{O}$ (1) and $[\text{Rh}_2(\text{OOCCH}_3)_2\{\text{I}-(3\text{-NaO}_3\text{SC}_6\text{H}_3)\text{P}(\text{C}_6\text{H}_4\text{SO}_3\text{Na}-3)_2\}_2(\text{HOOCCH}_3)]\cdot 12\text{H}_2\text{O}$ (2). Their structures and properties have been studied by electronic, IR, and $^{31}\text{P}\{^1\text{H}\}$, $^1\text{H}\{^31\text{P}\}$, and $^{13}\text{C}\{^1\text{H}\}$ NMR spectroscopies. In compound 1, one of the acetate bridges is replaced by a phosphine ligand, orthometalated via the C2 carbon atom of the phenyl ring. One axial site of the Rh_2^{2+} core is occupied by a sulfonato group of the metalated ring and another one by a labile molecule of acetic acid. ^1H NMR spectroscopy shows that chemical shifts of the aromatic protons depend on the nature of the axial ligands. Compound 2 contains two orthometalated molecules of TPPTS with a head-to-head structure, and one of these ligands is metalated via the C2 atom and another one via C6.

Adres publiczny

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Strona internetowa wydawcy

<https://www.acs.org/content/acs/en.html>