Synthesis and structural characterisation of the oxo-rhenium(V) complexes with spirophosphorane derived bidentate ligand (P~O$^-$). Crystal structure of *trans*-$ReOCl_2[OCMe_2CMe_2OP(OCMe_2CMe_2O)](PPh_3)$.

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Streszczenie

The reactions of $ReO(OEt)Cl_2L_2$, L=py, PPh_3 or $ReOCl_3(Me_2S)(OPPh_3)$, with spirohydrophosphorane $HP(OCMe_2CMe_2O)_2$ – abbreviated here as HP∼O – in toluene yield $ReOCl_2$(P∼O)L complexes, L=py (**1**), PPh_3 (**2**) and $OPPh_3$ (**3**), respectively. The encountered bidentate phosphite pinacolato $(OCMe_2CMe_2O)POCMe_2CMe_2O^-$ ligand (P∼O$^-$) is afforded by means of a spirophosphorane ring-opening reaction. All the pink–violet compounds **1**–**3** were characterised by NMR, IR and UV–Vis spectroscopies. The structure of *trans*-$ReOCl_2$(P∼O)PPh_3 (**2**) was determined crystallographically. The rhenium atom adopts distorted octahedral geometry with a *trans* multiply bonded terminal oxo ligand ($Re–O_t$=1.698(2) Å) *trans* to pinacolate oxygen (Re–O=1.880(2) Å). Two phosphorus atoms as well as two chlorides are mutually in a *trans* arrangement.

Słowa kluczowe

Spirophosphorane ring-opening, Phosphite diolato(1−) ligand, Crystal structures

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