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Research paper

Ruthenium(II) complexes of *bis*-guanidine ligands with substituted Schiff bases. Syntheses and characterization of $[\text{RuH}(\text{CO})\{\kappa^2\text{-}N,N\text{-(2-HO-ArCH=NN)}_2\text{CNH}_2\}(\text{PPh}_3)_2]$ (Ar = C_6H_4 -, 5-Cl- C_6H_3 -, 3,5-Br $_2$ - C_6H_2 -)

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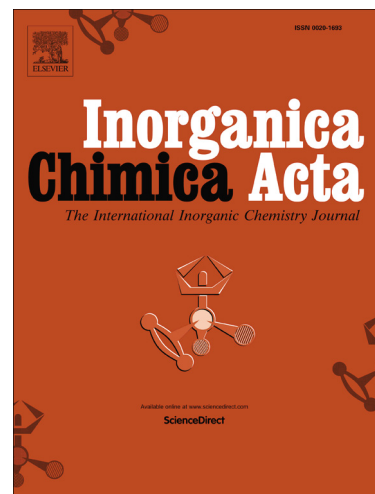
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Ruthenium(II) complexes of *bis*-guanidine ligands with substituted Schiff bases. Syntheses and characterization of $[\text{RuH}(\text{CO})\{\kappa^2\text{-}N,N\text{-(2-HO-ArCH=NN)}_2\text{CNH}_2\}(\text{PPh}_3)_2]$ (Ar = C₆H₄-, 5-Cl-C₆H₃-, 3,5-Br₂-C₆H₂-)

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Abstract

Condensation of *N,N'*-diaminoguanidine hydrochloride with two equivalents of salicylaldehyde, 5-chlorosalicylaldehyde and 3,5-dibromosalicylaldehyde in ethanol afforded corresponding guanidinium derivatives functionalized with *O,N*-bidentate Schiff bases $(2\text{-HO-ArCH=NNH})_2\text{C=NH}\cdot\text{HCl}$ (Ar = C₆H₄, L1H·HCl; Ar = 5-ClC₆H₃, L2H·HCl; Ar = 3,5-Br₂C₆H₂, L3H·HCl). Reactions of $[\text{RuHCl}(\text{CO})(\text{PPh}_3)_3]$ with one equivalent of L1H·HCl, L2H·HCl, and L3H·HCl in the presence of excess triethylamine (Et₃N) in refluxing tetrahydrofuran gave the neutral ruthenium(II) complexes of the type $[\text{RuH}(\text{CO})\{\kappa^2\text{-}N,N\text{-(2-HO-ArCH=NN)}_2\text{CNH}_2\}(\text{PPh}_3)_2]$ (Ar = C₆H₄, **1**; Ar = 5-ClC₆H₃, **2**; Ar = 3,5-Br₂C₆H₂, **3**) accordingly. X-ray crystal structure determinations are reported for complexes **1–3**.

Keywords: Ruthenium; Guanidinato; Schiff base, *N,N'*-diaminoguanidine hydrochloride; Crystal structure;

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