Design and spectroscopic study of new ruthenium(II) complexes containing ligands derived front terpyridine and dipyrido[3,2-a:2?,3?-c] phenazine: Ru(4?-Rph-tpy) [dppz(COOH)]Cl}PF6 with R = NO 2, Br, Cl

López, R.

Moya, S. A.

Zúñiga, C.

Yáñez, M.

Bayón, J. C.

Aguirre, P.

A series of polypyridine ruthenium complexes of the general formula {Ru(Rph-tpy)[dppz(COOH)]Cl} PF6 with R = Br (1), Cl (2), NO 2 (3) where Rph-tpy is 4?-(4-Rphenyl-2,2?:6?, 2?-terpyridine and dppz(COOH) is dipyrido[3,2-a:2?,3?-c] phenazine-2-carboxylic acid were prepared and characterized. These complexes display intense metal-to-ligand charge-transfer (MLCT) bands centered about 500 nm. The effect of pH on the absorption spectra of these complexes consisting of protonatable ligands has been investigated in water solution by spectrophotometric titration. The electrochemistry shows oxidation potentials for the Ru(II)-Ru(III) couple at +0.881 (1), +0.907 (2) and +0.447 V (3), respectively.