Studies of the interaction between adenosine 5'-triphosphate and $[Rh_2(OAc)_2(phen)_2(H_2O)_2](OAc)_2$.

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The interaction of binuclear rhodium (II) complex $[Rh_2(OAc)_2(phen)_2(H_2O)_2](OAc)_2$ with ATP have been investigated using ^{1}H , ^{13}C , ^{31}P NMR, $^{1}H–^{15}N$ NMR HMBC experiments and UV–Vis difference spectroscopy. The results show that ATP interact with by stacking with the phenanthroline coordinated to rhodium. Both NMR and UV–Vis measurements suggest that phosphate residue of ATP does not interact with the positively charged $[Rh_2]^{2+}$ in axial position. It should be emphasized however, that in the presence of $[Rh_2(OAc)_2(phen)_2(H_2O)_2](OAc)_2$ in acidic solutions (pD 3.35) deprotonation of N1 nitrogen atom of ATP molecule occurs. This is confirmed by ^{1}H , $^{1}H–^{15}N$ NMR HMBC, as well as by comparing of stability constants of the stacking adducts at different pH.

Słowa kluczowe

ATP–Rh complex, NMR, Stacking interactions, Dirhodium complex

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