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Sinteza, karakterizacija i ispitivanje reakcija novih mononuklearnih kompleksa platine(II) sa DNK

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Poslednjih godina intenzivno se izučavaju interakcije kompleksa prelaznih metala sa DNK. U skladu sa tim, u ovom radu sintetisana su dva nova mononuklearna Pt(II) kompleksa, [Pt(Me_2-mal-*O,O'*)(phen-epoxy)] i [Pt(cbdca-*O,O'*)(phen-epoxy)] (phen-epoxy = 5,6-epoksi-5,6-dihidro-[1,10]fenantrolin; Me_2-mal = anjon dimetilmalonske kiseline i cbdca = anjon ciklobutan-1,1-dikarboksilne kiseline). Kompleksi su okarakterisani na osnovu rezultata IR, UV-Vis i NMR (^1H i ^{13}C) spektroskopije. Interakcije kompleksa sa DNK su ispitivane *primenom UV-Vis i fluorescentne spektroskopije. Rezultati ispitivanja su pokazali da ovi* kompleksi interaguju sa DNK i da mogu istisnuti etidijum-bromid (EtBr) iz DNK-EtBr.

Synthesis, characterization and study of the interactions of new mononuclear platinum(II) complexes with DNA

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Recent years have witnessed a great deal of attention in the studies on the interaction of transition-metal complexes with DNA. In accordance to this, in the present study two new mononuclear Pt(II) complexes, [Pt(Me_2-mal-*O,O'*)(phen-epoxy)] and [Pt(cbdca-*O,O'*)(phen-epoxy)] (phen-epoxy = 5,6-epoxy-5,6-dihydro-[1,10]phenanthroline, Me_2-mal = anion of 2,2-dimethylmalonic acid, cbdca = anion of cyclobutane-1,1-dicarboxylic acid), have been synthesized. These complexes were characterized by IR, UV-Vis and NMR (^1H i ^{13}C) spectroscopic techniques. The binding of these complexes to DNA was investigated by UV-Vis and fluorescence spectroscopy. The obtained results of this study showed that these complexes interact with DNA and that they can displace ethidium bromide (EtBr) from DNA-EtBr adduct.

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