

A novel Pt^{II} complex containing hybrid coumarin derivative: synthesis, characterization and crystal structure.

Henrique J. Arruda^{1*}, Thiago M. Pereira¹, Arthur. E. Kummerle¹, Guilherme P. Guedes and Amanda P. Neves¹

¹Departamento de Química, Universidade Federal Rural do Rio de Janeiro, Campus de Seropédica, BR-465 km 7, Seropédica-RJ, Brazil

*e-mail: henriqueufrj@outlook.com

Pt^{II} complexes have been extensively investigated since the first report of the tumor inhibiting properties of cisplatin in 1969.¹ Despite of its success in the treatment of certain tumors, *cisplatin* has shown severe side effects, such as nephrotoxicity and neurotoxicity, as well as acquired resistance.² A variety of molecules have been attached to Pt^{II}, from simple amines to bioactive compounds, such as coumarin derivatives.³ This work describes the synthesis and characterization of a new Pt^{II} complex (TS5) containing a hybrid coumarin derivative (THP-5). The Pt^{II} compound has been prepared from a solution of the respective ligand in DMF and the precursor *cis*-[Pt(DMSO)₂Cl₂] in 10% excess in its solid form, Fig. 1.

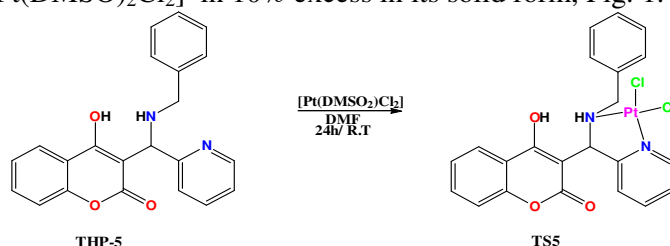


Fig.1: Synthesis of TS5 complex.

The TS5 has been characterized by ¹H NMR (data not shown) and X-ray diffraction analysis. The complex has the neutral ligand coordinated in a bidentate fashion to the metal. Two chlorines complete the coordination sphere of the Pt^{II} ion, which exhibits square planar geometry, Fig. 2.

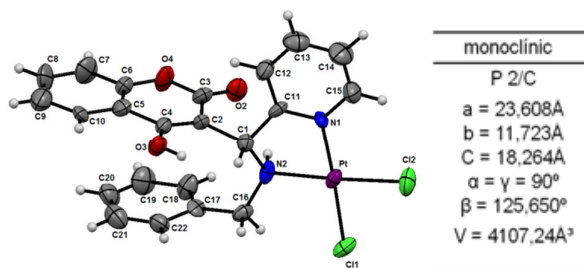


Fig.2: View of the asymmetric unit of the *cis*-[Pt(THP-5)Cl₂] and cell parameters.

Other analysis of the TS5, such as IR, conductivity and elemental analysis, are underway.

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- UFRRJ, PPGQ, CAPES, LDRX-UFF