

Spectroscopical characterization, photostability and $^1\text{O}_2$ generation species of *meso*-tetra(pyridyl)porphyrins coordinated to $\text{Pt}(\text{bpy})\text{Cl}^+$ units

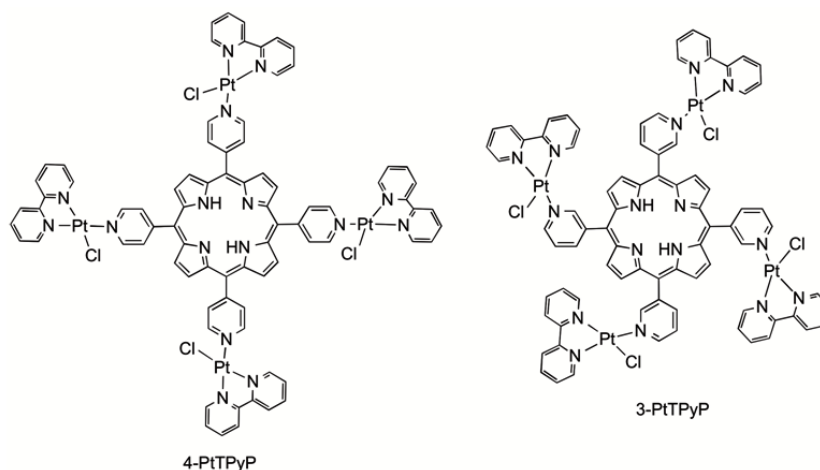
Thiago A. Vargas, Davi F. Back and Bernardo A. Iglesias*

Universidade Federal de Santa Maria, Departamento de Química, 97105-900, Santa Maria – RS – Brazil.

*e-mail: bernardopgq@gmail.com

Porphyrins are an interesting class of heteroaromatic 18 π -electron aromatic macrocycles that have found wide applications in many fields, including biologic systems, medicine, catalysis and materials.¹ Such applications explore their optical, photochemical, photoelectrochemical, catalytic, binding and electrochemical properties.¹ In this context, porphyrins are molecules of great interest due to their ability to act as photosensitizers, when irradiated with light. The exploitation of this property has led to the approval of the clinical porphyrin photodynamic therapy (PDT) for the treatment of certain types of disease and cancer, and recently, age-related macular and retinal degeneration.²

In this work, were investigated the absorption and emission behavior of *meso*-tetra(pyridyl)porphyrins with platinum(II) complexes³ and also the photostability and ERO's generation species by red light action (660 nm). The interaction of the peripheral platinum(II)-porphyrins with red leaser system were evaluated UV-vis analysis and kinetic experiments, using 1,3-diphenylbenzofuran (DPBF) as a $^1\text{O}_2$ probe.



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1. Kadish, K. M.; Smith, K. M.; Guillard, R.; *The Porphyrin Handbook*; Academic Press, San Diego, **2000-2003**, 1-20.
2. Bacellar, I. O. L.; Tsubone, T. M.; Pavani, C.; Baptista, M. S.; *Int. J. Mol. Sci.*; **2015**, *16*, 20523-20559.
3. Naue, J. A.; Toma, S. H.; Bonacin, J. A.; Araki, K.; Toma, H. E.; *J. Inorg. Biochem.*; **2009**, *103*, 182–189.