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SUPPLEMENTARY DATA

Novel Platinum-Porphyrin as Sensing Compound for Efficient Fluorescent and Amperometric Detection of H_2O_2

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Comparative UV-vis Study for Pt(II)-TAPP Solved in Different Solvents

Pt(II)-TAPP is soluble in all the investigated solvents, namely: hexane, chlorobenzene, tetrahydrofuran, chloroform, dichloromethane, benzonitrile, dimethylformamide and dimethylsulfoxide, and the color of the solutions does not significantly vary with the polarity of the solvents. The UV-vis spectra of the compound recorded in various solvents is presented in Figure S1.

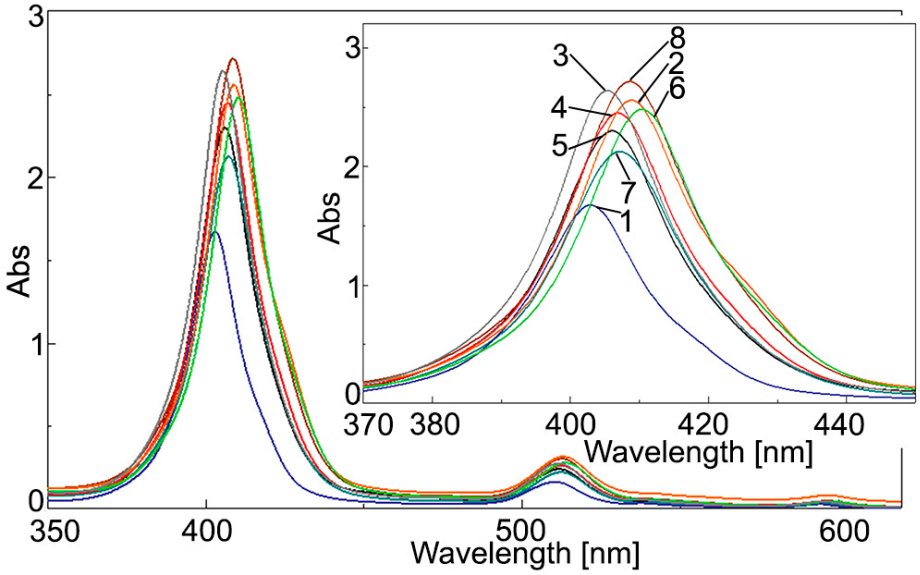

Figure S1. UV-vis spectra of Pt(II)-TAPP (the same concentration 3 x 10^{-5}M) in different solvents: hexane(1); chlorobenzene (2); tetrahydrofuran (3); chloroform (4); dichloromethane (5); benzonitrile (6); dimethylformamide (7); dimethylsulfoxide (8). Effect of the solvent polarity on the intensity and position of the bands.

It can be concluded that the increase in polarity of the solvent leads to a slight bathochromic effect upon the position of the Soret band, from 403 nm in hexane to 409 nm in DMSO. The same bathochromic effect can be noticed for the Q bands. The most dramatic effect is to be noticed

regarding the intensity of absorption. A strong hyperchromic effect is taking place especially for DMSO that increases our expectations for using this biocompatible solvent in further medical tests.

Comparative Fluorescence Spectra for Pt(II)-TAPP Solved in Different Solvents

The fluorescence investigations on Pt(II)-TAPP complex from different solvents (Figure S2) reveal that the emission spectra have the characteristic features of porphyrins, presenting an emission maximum around 658 nm and a second less pronounced peak at around 724 nm. The change in polarity of the solvent has little influence upon the location of the bands, but large importance regarding the intensity of emission that is considerably growing from DMF to DMSO (Barbosa et al., 2013).

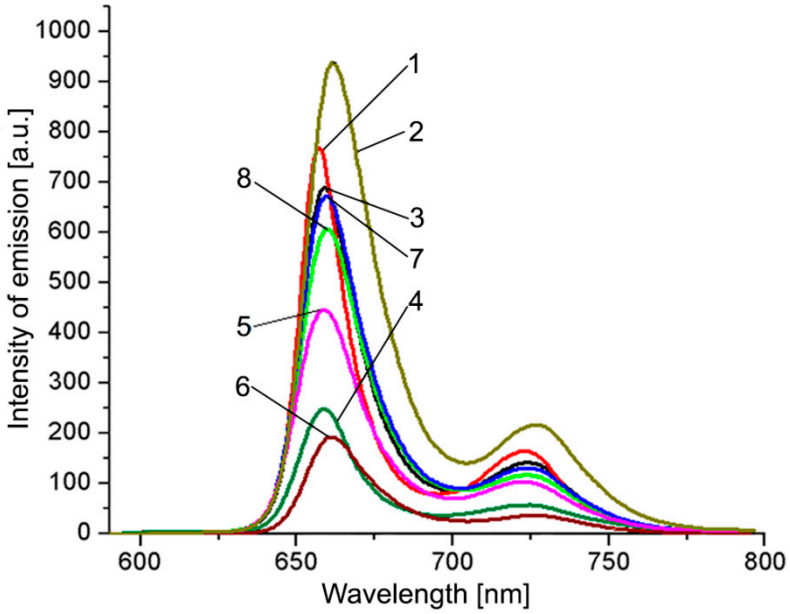

Figure S2. Effect of the solvent polarity on the position and intensity of the bands in fluorescence spectra of Pt(II)-TAPP (the same concentration 3×10^{-5} M), in: hexane (1); chlorobenzene (2); tetrahydrofuran (3); chloroform (4); dichloromethane (5); benzonitrile (6); dimethylformamide (7); dimethylsulfoxide (8).