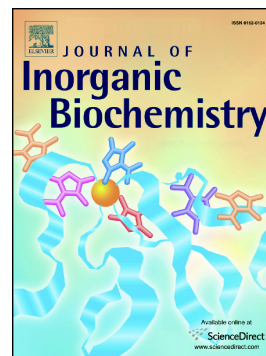


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EPR AND PHOTOPHYSICAL CHARACTERIZATION OF SIX BIOACTIVE OXIDOVANADIUM(IV) COMPLEXES IN THE CONDITIONS OF *IN VITRO* CELL TESTS

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Abstract

A number of oxido vanadium(IV) complexes have been reported to display anticancer activity. A theranostic approach, based on the simultaneous observation of both the effect of oxido vanadium(IV) complexes on cell viability and the disclosure of their intracellular fate, is possible by using oxido vanadium(IV) complexes functionalized with fluorescent ligands. In the present study we accomplished the characterisation of six oxido vanadium(IV) complexes in conditions close to those employed for *in vitro* administration. In particular, we investigated the light harvesting properties of such complexes in the presence of a dimethylsulphoxide/aqueous buffer mixture, and we found that one complex exhibits a quantum yield suitable for confocal microscopy investigations. EPR investigations in the same conditions provide information about the presence of ligands' substitution processes. Finally, the electrochemical properties of all

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