FLUORESCENT PROPERTIES OF NEUTRAL AND PROTONATED DI-PYRIDYL-THIAZOLOTHIAZOLES

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The molecules 2,5-Di-pyridin-2(and 4)-yl-thiazolo[5,4-d]thiazole show very interesting fluorescent properties under long wavelength UV radiation. In the neutral form solutions exhibit weak blue fluorescent emission. However addition of even a very small amount of strong acid will cause the fluorescence to shift to longer wavelength and strongly increase in intensity. Ab initio calculations have been performed on these molecules to try to characterize their absorption and emission properties. In addition, optical measurements have been made to verify the computational results.