The detection and removal of Al(III) by a novel fluorescent material based-on Bodipy-Anthraquinone

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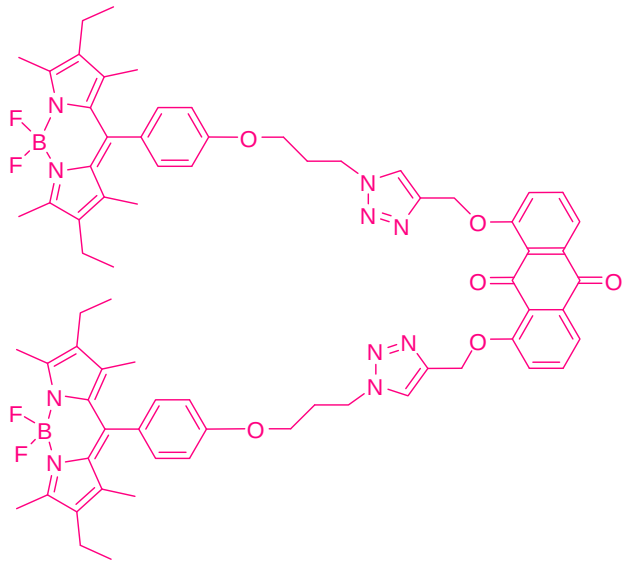
The fluorometric method is one of the most effective in the detection and removal of most metal ion. Therefore, the sensor chemists focused on the preparing of the selective-sensitive fluorescent chemosensors such as Bodipy, rhodamine, fluorescein etc. While the scientists propounded a fewer fluorescent sensors for Al(III) ion, a lot of paper available in journals for transition metal ions. Although the poor complex ability of aluminum, however the sensor chemists still propose to the selective-sensitive fluorescent sensors for Al (III) ion (Gündüz, 2014; Köstereli, 2012; Xie, 2011).

In this study, a dual novel sensor based on Bodipy-Anthraquinone was synthesized. After the characterization of sensor, [MS, ^{1}H-NMR, ^{13}C-NMR, elemental analysis], the changes in the absorption, emission and excitation spectra of this molecule were investigated in presence of several metal ions. The results show that the synthesized Bodipy-Anthraquinone can be used as a selective fluorescence sensor for Ag (I) metal. After the complexation with silver ions, the fluorescence intensity of Bodipy is significantly quenched and the wavelength slightly shifted to red by increase concentration.



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