



Tetrathiafulvalene-Imine-Pyridine Assemblies for Pb²⁺ Recognition

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Résumé en anglais

A series of donor- π -acceptor systems incorporating a tetra-thiafulvalene moiety as the donating unit have been designed and synthesized. The efficiency of the imine ($C=N$ -) bond as a conjugated π -linker in promoting intramolecular charge transfer is demonstrated and supported by calculations at the B3LYP/6-31G(d,p) level of theory. This property has been explored in the case of pyridyl-substituted systems which exhibit in particular a high binding affinity and selectivity for Pb²⁺ ($\log K = 3.5$ in CH₂Cl₂/CH₃CN), as shown by UV/Vis and ¹H NMR titrations as well as by remarkable colorimetric and electrochemical signaling.

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