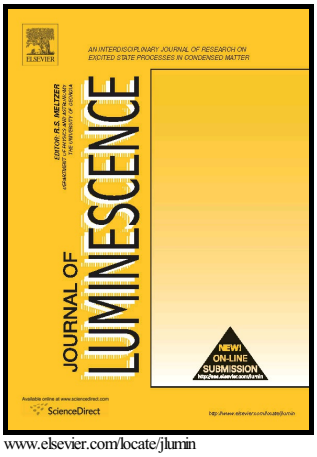

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Imidazole-containing ratiometric receptor for the selective and sensitive detection of cyanide and fluoride via deprotonation and a receptor-anion ensemble for Cu^{2+} sensing

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Abstract

A novel imidazole-functionalized receptor, **M**, containing anthraquinone as a signaling unit was synthesized and characterized. Its potential application to detect CN^- and F^- ions in DMSO was investigated using UV-Vis and fluorescence spectroscopy. A color change and bathochromic shift corresponding to the intramolecular charge transfer (ICT) transition in the absorption spectra were observed upon addition of CN^- and F^- ions. Fluorescence enhancement and quenching at 532 and 581 nm, respectively, were observed in the emission spectra of **M** upon addition of CN^- and F^-. The receptor senses cyanide and