

Synthesis and optical determination of chemosensor toward Cu(II) and Hg(II)

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Abstract

A new chemosensor based on rhodamine B (1) for Hg²⁺ and Cu²⁺ was synthesized by one-step condensation reaction of rhodamine B hydrazide and Azo dye. Studying for its fluorogenic and colorimetric behaviors towards various metal ions, extreme sensitivity and selectivity were achieved by the detection of Hg²⁺ and Cu²⁺ over other commonly coexistent metal ions, which were accompanied by ring opening of a rhodamine spirocycle framework. In acetonitrile, the presence of Hg²⁺ and Cu²⁺ induces the formation of a Dye 1-ion complex, which was deduced by spectroscopy.

참고문헌

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