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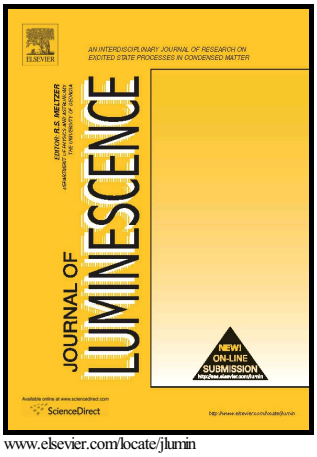

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Pravat Ghorai,[a] Saikat Banerjee,[a] Dipta Nag,[b] Subhra Kanti Mukhopadhyay,[c] Amrita Saha[*a1]

[a]*Department of Chemistry, Jadavpur University, Kolkata- 700032, India.*

[b]*Department of Microbiology, MUC Women's College, Burdwan-713104, India.*

[c]*Department of Microbiology, The University of Burdwan, Burdwan-713104, India.*

asaha@chemistry.jdvu.ac.in
amritasahachemju@gmail.com

Abstract

We present here the synthesis of a simple and low-cost Schiff base chemosensor (**HL**) for selective detection of both Zn(II) and Cu (II) in HEPES buffer pH=7.4. The chemosensor **HL** exhibits quick response through fluorescence and colorimetric changes for both Zn(II) and Cu (II) ions as examined by fluorescence and absorption titrations. Both the metal ions form 1:1 L–Zn(II) (complex **1**) and 1:1 L– Cu(II) (complex **2**) complexes, confirmed by Job's Plot. We are successful to elucidate the structure of complex **1** through X-ray diffraction analysis. Reversibility of the chemosensor in its binding with Zn(II) and Cu (II) ions separately is also examined in presence of Na_2EDTA solution. The enhancement of fluorescence intensity of the chemosensor is based on the chelation-enhanced fluorescence (CHEF) effect of L–Zn(II) with

[1] *Tel. +91-33-24572941*