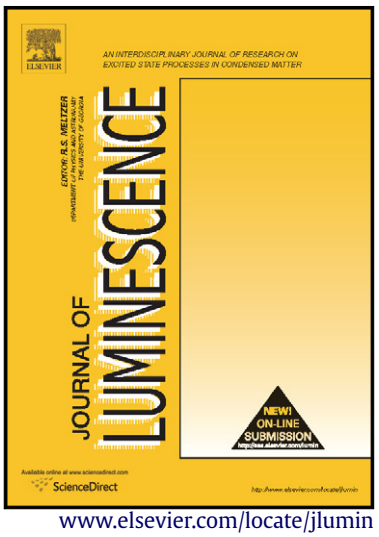

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Madhurya Chandel[a], Sutapa Mondal Roy[a], Darshna Sharma[a], Suban K Sahoo[a,*], Amit Patel[a], Premlata Kumari[a], Ranu S. Dhale[b], Ashok Kumar SK[c], Jitendra P. Nandre[d] and Umesh D. Patil[d]

[a]Department of Applied Chemistry, SV National Institute of Technology, Surat, Gujrat, India.

[b]School of Chemical Sciences, National Institute of Science Education and Research, Bhubneswar, Odissa, India.

[c]School of Advanced Sciences, VIT University, Vellore, Tamil Nadu, India.

[d]School of Chemical Sciences, North Maharashtra University, Jalgaon, Maharashtra, India.

Abstract

The anion recognition ability of a novel azo dye derived from 4-hydroxycuomarin (**L**) was investigated by experimental (UV-Vis, fluorescence and ^{1}H NMR) and theoretical [(B3LYP/6-31G(d,p)] methods. Among the surveyed anions, the receptor **L** showed both naked-eye detectable color and spectral changes in the presence of F^-, AcO^- and $H_2PO_4^-$ due to the formation of hydrogen bonding complexes followed by deprotonation between these anions and **L**.

Keywords: Anion recognition; Coumarin derivative; Colorimetric; Fluorescence; DFT.

*Corresponding author (Dr SK Sahoo): E-mail: suban_sahoo@rediffmail.com; Mob: +91-9662620556