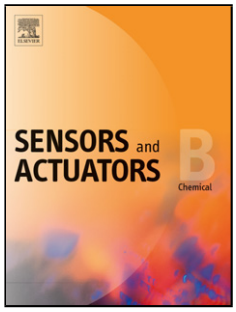


Title: Naphthalene-Glycine Conjugate: An Extremely Selective Colorimetric Chemosensor for Iodide Ion in Aqueous Solution

Authors: Arunabha Thakura, Sushil Ranjan Bhatta, Bijan Mondal, Deepak Kakash, Piyush Chawla

PII: S0925-4005(18)30734-2
DOI: https://doi.org/10.1016/j.snb.2018.04.038
Reference: SNB 24513

To appear in: *Sensors and Actuators B*

Received date: 2-2-2018
Revised date: 5-4-2018
Accepted date: 7-4-2018

Please cite this article as: Arunabha Thakura, Sushil Ranjan Bhatta, Bijan Mondal, Deepak Kakash, Piyush Chawla, Naphthalene-Glycine Conjugate: An Extremely Selective Colorimetric Chemosensor for Iodide Ion in Aqueous Solution, Sensors and Actuators B: Chemical https://doi.org/10.1016/j.snb.2018.04.038

Naphthalene-Glycine Conjugate: An Extremely Selective Colorimetric Chemosensor for Iodide Ion in Aqueous Solution

Arunabha Thakur[a]*, Sushil Ranjan Bhatta[a], Bijan Mondal[b], Deepak Kakash[c], Piyush Chawla[c]

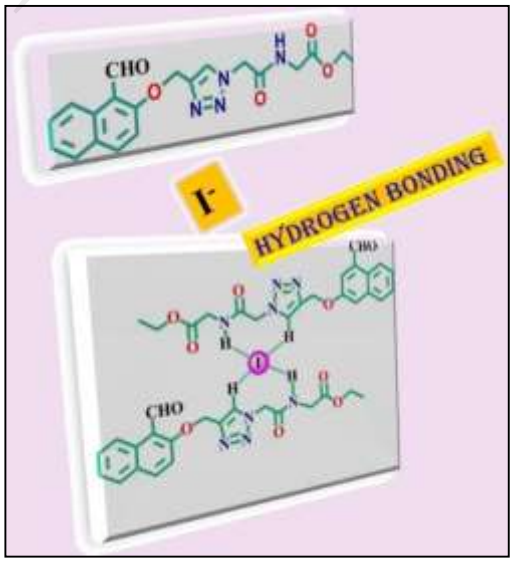
[a]Department of Chemistry, Jadavpur University, Kolkata- 700032, India.

[b]Department of Chemistry, Indian Institute of Technology Madras, Chennai-36, India.

[c]Department of Chemistry, National Institute of Technology Rourkela, Rourkela-769008, India
Email: arunabha.thakur@jadavpuruniversity.in, babuiitm07@gmail.com

Garphicla abstract

A novel water soluble chemosensor based on naphthalene-glycine conjugate has been designed and synthesized which was highly selective and sensitive towards detection of iodide anion. Addition of iodide ion to the receptor solution led to the complete diminution of the fluorescence intensity. Based on the ^{1}H NMR titration, ESI-MS data and Job's plot along with the theoretical calculation using DFT method the probable binding modes of this receptor with iodide anion has also been suggested and binding ratio of ligand to anion is found to be 2:1.



Highlights