

Accepted Manuscript

Title: Highly sensitive and selective colorimetric naked-eye detection of Cu^{2+} in aqueous medium using a hydrazone chemosensor

Author: Shengli Hu Jingjing Song Fang Zhao Xianggao Meng Gongying Wu



PII: S0925-4005(15)00390-1
DOI: <http://dx.doi.org/doi:10.1016/j.snb.2015.03.059>
Reference: SNB 18252

To appear in: *Sensors and Actuators B*

Received date: 1-12-2014
Revised date: 13-3-2015
Accepted date: 26-3-2015

Please cite this article as: S. Hu, J. Song, F. Zhao, X. Meng, G. Wu, Highly sensitive and selective colorimetric naked-eye detection of Cu^{2+} in aqueous medium using a hydrazone chemosensor, *Sensors and Actuators B: Chemical* (2015), <http://dx.doi.org/10.1016/j.snb.2015.03.059>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Highly sensitive and selective colorimetric naked-eye detection of Cu^{2+} in aqueous medium using a hydrazone chemosensor

Shengli Hu^{a,*}, Jingjing Song^a, Fang Zhao^a, Xianggao Meng^{b,*}, Gongying Wu^a

^a Hubei Collaborative Innovation Center for Rare Metal Chemistry, Hubei Key Laboratory of Pollutant Analysis & Reuse Technology, Department of Chemistry and Chemical Engineering, Hubei Normal University, Huangshi 435002, P.R.China

^b Key Laboratory of Pesticide & Chemical Biology, Ministry of Education, College of Chemistry, Central China Normal University, Wuhan 430079, P.R.China

Abstract

A novel Cu^{2+} -specific colorimetric hydrazone sensor **1** was designed and developed. The color of **1** changes from colorless to pink on addition of $10.0 \mu\text{M}$ Cu^{2+} in aqueous buffer solution, which can be detected by the naked eye. The analytical detection limit for Cu^{2+} by the naked eye is as low as $2.0 \mu\text{M}$. The stoichiometry for **1** and Cu^{2+} in complex is 2:1 in aqueous solution.

Key words

*Corresponding author: E-mail : hushengli168@126.com Tel.: +86 0714 6515602 Fax: +86 0714 6515602

*Corresponding author: E-mail : mengxianggao@mail.ccnu.edu.cn. Tel.: +86 027 62972178 Fax: +86 027 62972178

Download English Version:

<https://daneshyari.com/en/article/7145816>

Download Persian Version:

<https://daneshyari.com/article/7145816>

[Daneshyari.com](https://daneshyari.com)