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A novel Biphenyl-derived salicylhydrazone Schiff base fluorescent probes for identification of Cu^{2+} and application in living cells

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Abstract A novel biphenyl-derived salicylhydrazone Schiff base (**BSS**) fluorescent probes for highly sensitive and selective identification of Cu^{2+} has been synthesized. In addition, the recognition has been proved experimentally. The results indicated that the complex forms a 1:1 complex with Cu^{2+} shows fluorescent quenching. Furthermore, the detection limit of 1.54×10^{-8} M. More interesting, the probe **BSS** not only have a good biocompatibility in living cells, but also the sense behavior of Cu^{2+} in the cells nucleus.

Keywords Salicylhydrazone Schiff base; fluorescence; identification; Cu^{2+} .

1. Introduction

Copper followed by iron and zinc is the third most abundant transition elements in human body[1].The World Health Organization (WHO) report suggests that under

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