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Juanjuan Wu, Zhuo Ye, Feng Wu, Hongying Wang, Lintao Zeng, Guang-Ming Bao

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Juanjuan Wu,[a, b] Zhuo Ye,[b] Feng Wu,[b] Hongying Wang,[b] Lintao Zeng,[b*] Guang-Ming Bao[a*]

[a] *Institute of Veterinary Drug / Jiangxi Provincial Key Laboratory for Animal Health, Jiangxi Agricultural University, Nanchang 330045, P.R. China. E-mail: bycb2005@gmail.com (*G.-M. Bao*).*

[b] *Tianjin Key Laboratory of Organic Solar Cells and Photochemical Conversion, School of Chemistry and Chemical Engineering, Tianjin University of Technology, Tianjin 300384, P. R. China. E-mail: zlt1981@126.com.* (L. Zeng)

ABSTRACT:

Thiophenols are a class of highly toxic environmental pollutant, hence it is very necessary to monitor thiophenols in environment and living cells with an efficient and reliable method. Herein, a novel fluorescent probe for thiophenols has been developed, which exhibited a colorimetric and fluorescence turn-on dual response towards thiophenols with good selectivity and fast response. The sensing mechanism for thiophenols was attributed to nucleophilic substitution reaction, which was confirmed by HPLC. The probe exhibited good recovery (from 90 % to 107 %) and low limit of detection for thiophenols (37 nM) in industrial wastewater. Moreover, the probe has been successfully employed to visualize thiophenol in living cells. Therefore, the