## Accepted Manuscript

4-(4,5-Diphenyl-1*H*-imidazole-2-yl)-*N*,*N*-dimethylaniline-Cu(II) complex, a highly selective probe for glutathione sensing in water-acetonitrile mixtures

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PII: S0143-7208(18)30949-5

DOI: 10.1016/j.dyepig.2018.05.069

Reference: DYPI 6798

To appear in: Dyes and Pigments

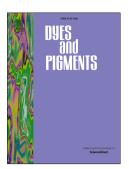
Received Date: 26 April 2018

Revised Date: 28 May 2018

Accepted Date: 28 May 2018

Please cite this article as: Okda HE, El Sayed S, Ferreira RCM, Costa SPG, Raposo MMM, Martínez-Máñez Ramó, Sancenón Fé, 4-(4,5-Diphenyl-1*H*-imidazole-2-yl)-*N*,*N*-dimethylaniline-Cu(II) complex, a highly selective probe for glutathione sensing in water-acetonitrile mixtures, *Dyes and Pigments* (2018), doi: 10.1016/j.dyepig.2018.05.069.

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## ACCEPTED MANUSCRIPT

1	4-(4,5-Diphenyl-1 <i>H</i> -imidazol-2-yl)- <i>N</i> , <i>N</i> -dimethylaniline-Cu(ll)
2	complex, a highly selective probe for glutathione sensing in
3	water-acetonitrile mixtures
4	
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17	Abstract
18	The imidazole derivative 4-(4,5-diphenyl-1 <i>H</i> -imidazol-2-yl)- <i>N</i> , <i>N</i> -dimethylaniline (probe 1) formed
19	a highly coloured and non-emissive 1:1 stoichiometry complex with Cu(II) in water-acetonitrile
20	1:1 (v/v) solutions. Among all the amino acids (Lys, Val, Gln, Leu, His, Thr, Trp, Gly, Phe, Arg,
21	Ile, Met, Ser, Ala, Pro, Tyr, Gly, Asn, Asp, Glu, Cys and Hcy) and tripeptides (GSH) tested only
22	GSH induced the bleaching of the $1 \cdot Cu(II)$ solution together with a marked emission
23	enhancement at 411 nm (excitation at 320 nm). These chromo-fluorogenic changes were
24	ascribed to a selective GSH-induced demetallation of the $1 \cdot \text{Cu(II)}$ complex that resulted in a
25	recovery of the spectroscopic features of probe 1. In addition to the remarkable selectivity of
26	$1 \cdot \text{Cu(II)}$ complex toward GSH a competitive limit of detection as low as 2 $\mu\text{M}$ was determined
27	using fluorescence measurements.

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