

## Highly Fluorescent Zinc Complex of Dipodal N-Acyl hydrazone as a Selective Sensor for $\text{H}_2\text{PO}_4^-$ ion and Application in Living Cells

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### List of Figures

Fig S1. FTIR spectrum for **R1** and **R1-Zn<sup>2+</sup>** complex

Fig S2. Job's plot for R1 with (a)  $\text{Co}^{2+}$ , (b)  $\text{Ni}^{2+}$ , (c)  $\text{Cu}^{2+}$  and (d)  $\text{Zn}^{2+}$  ions.

Fig S3. Benesi-Hildebrand plot for **R1** with (a)  $\text{Co}^{2+}$ , (b)  $\text{Ni}^{2+}$ , (c)  $\text{Cu}^{2+}$  and (d)  $\text{Zn}^{2+}$  ions

Fig. S4 Detection limit calculation plotted with absorbance measurement using **R1** and (a)  $\text{Co}^{2+}$ , (b)  $\text{Ni}^{2+}$ , (c)  $\text{Cu}^{2+}$  and (d)  $\text{Zn}^{2+}$  ions

Fig. S5 Detection limit calculation plotted with emission measurement using **R1** and (a)  $\text{Zn}^{2+}$ , and (d)  $\text{H}_2\text{PO}_4^-$  ions.

Fig. S6 Energy level diagram of various HOMO and LUMO of **R1** and **R1-Zn<sup>2+</sup>** complex.

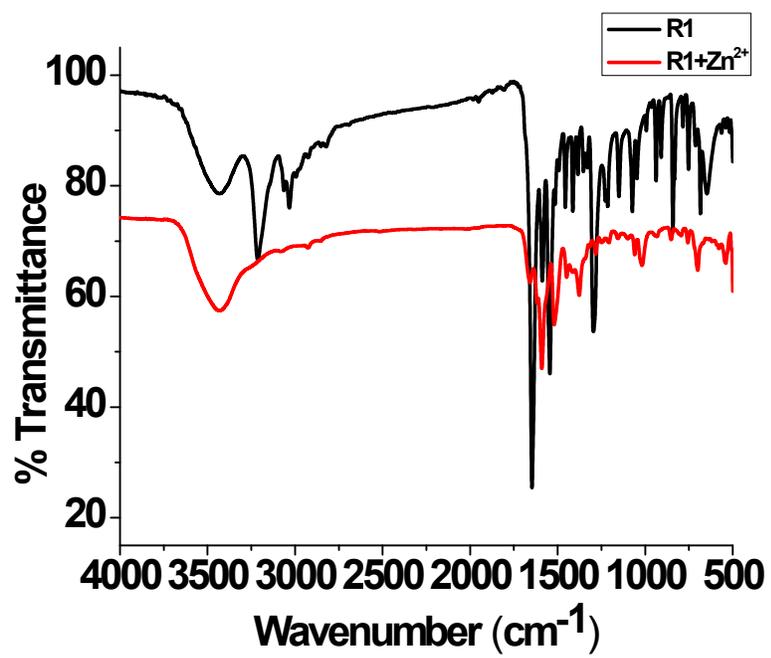


Fig S1. FTIR spectrum for **R1** and **R1-Zn<sup>2+</sup>** complex

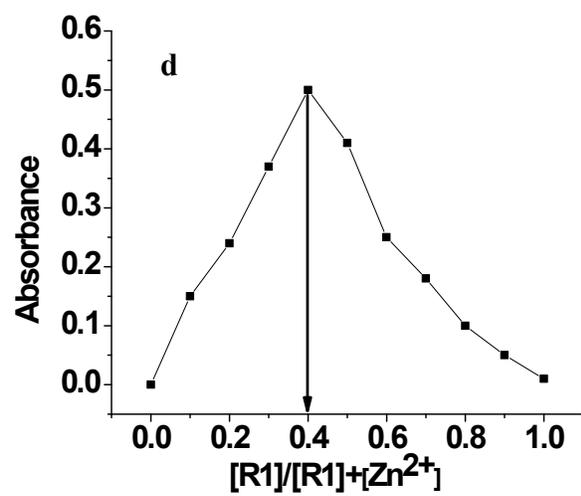
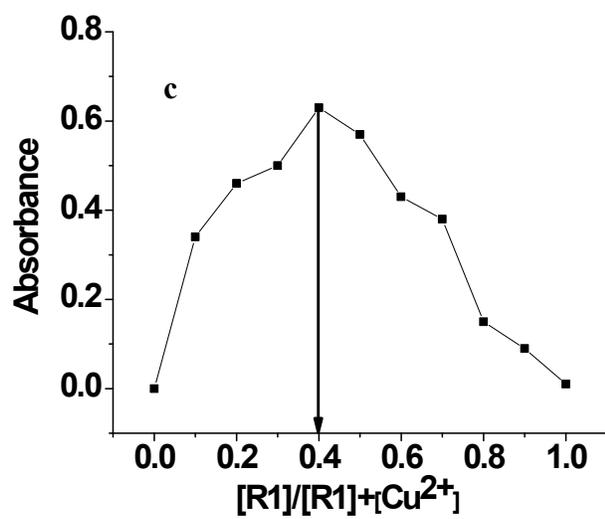
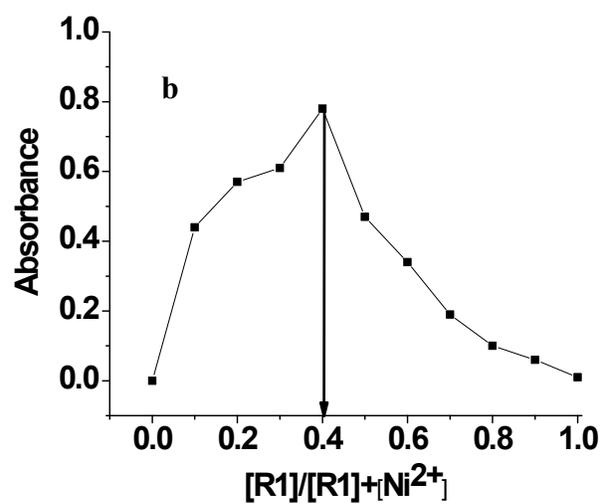
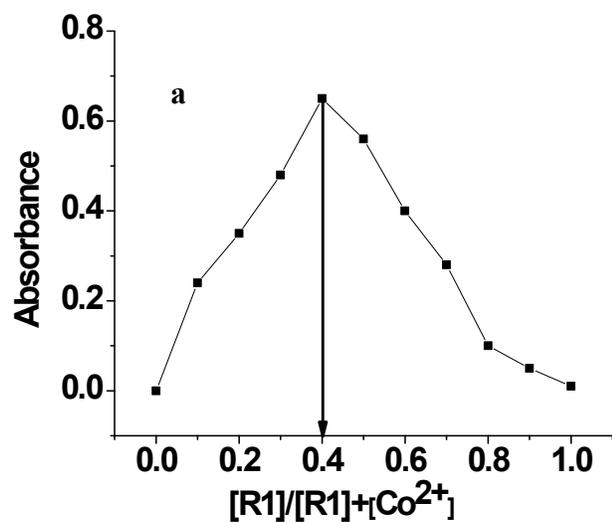
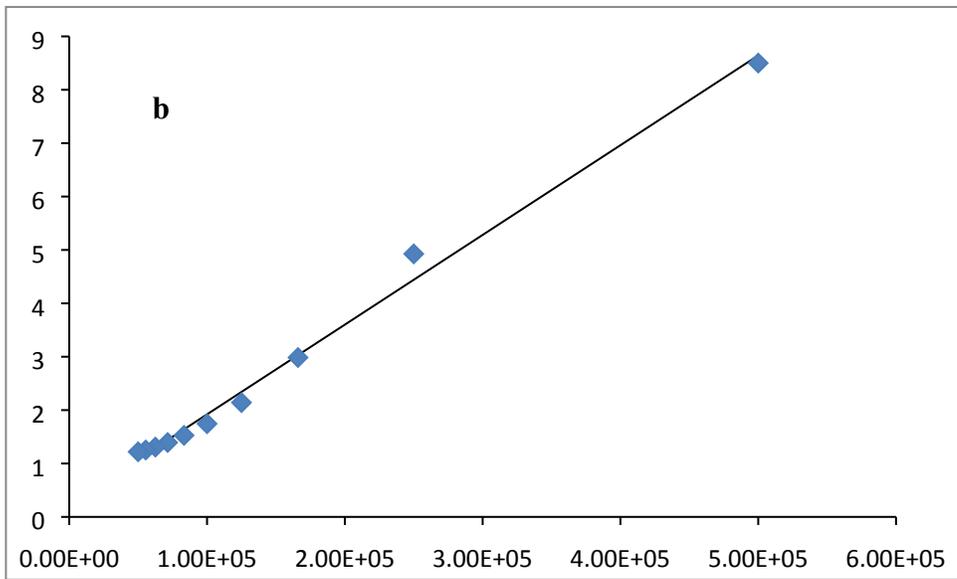
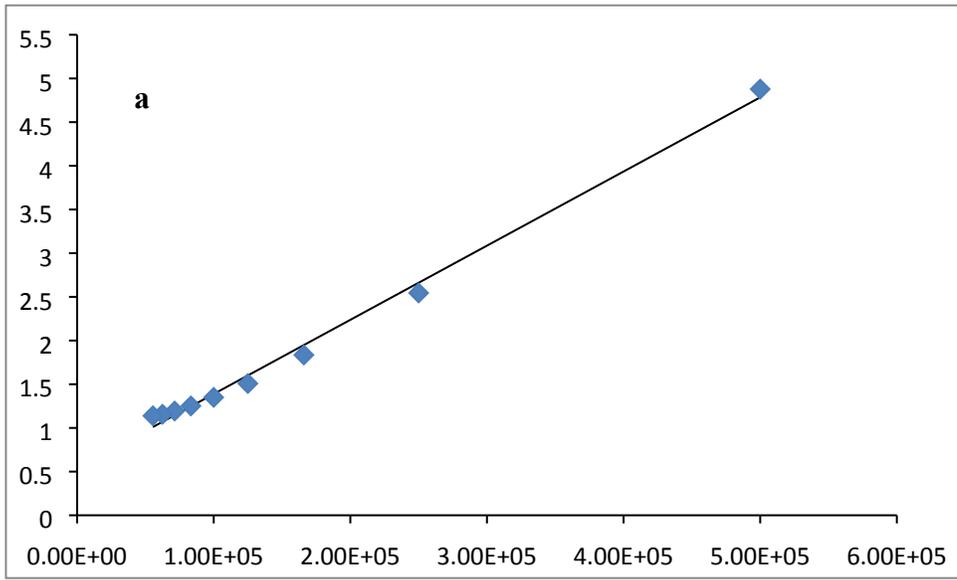


Fig. S2 Job's plot for R1 with (a)  $Co^{2+}$ , (b)  $Ni^{2+}$ , (c)  $Cu^{2+}$  and (d)  $Zn^{2+}$  ions.



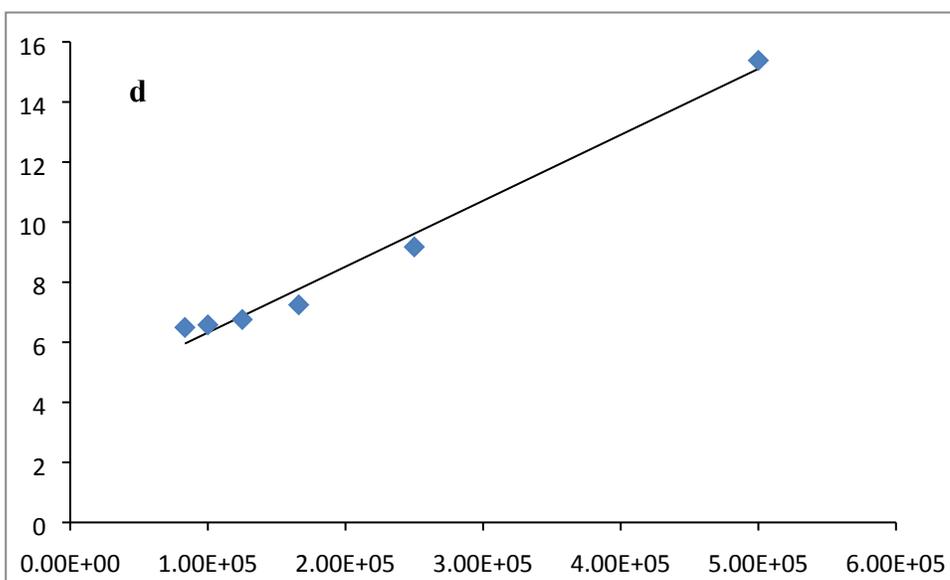
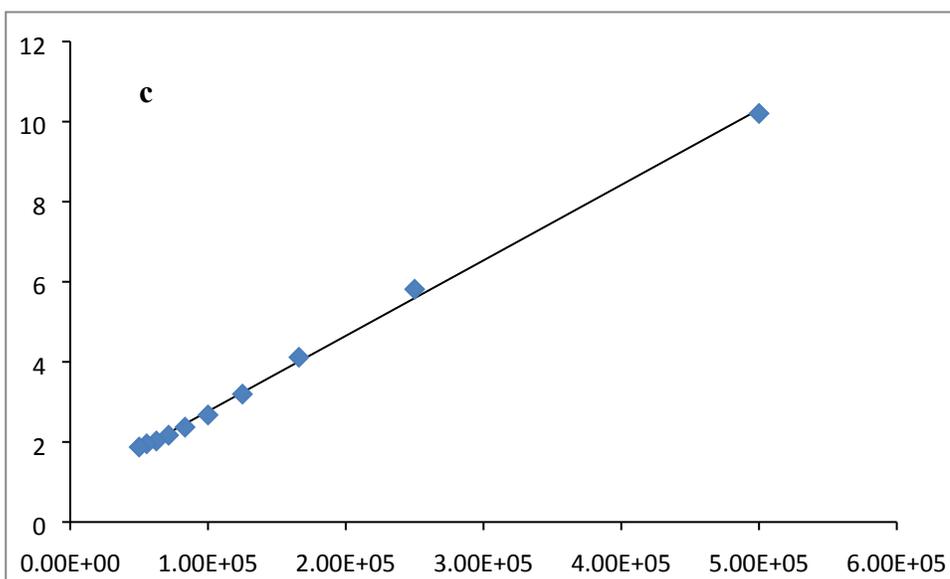
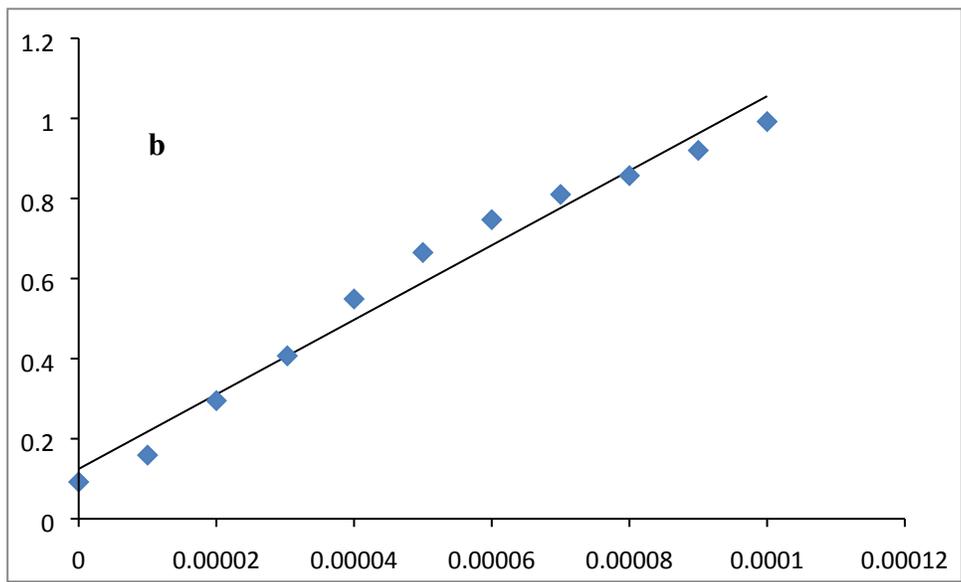
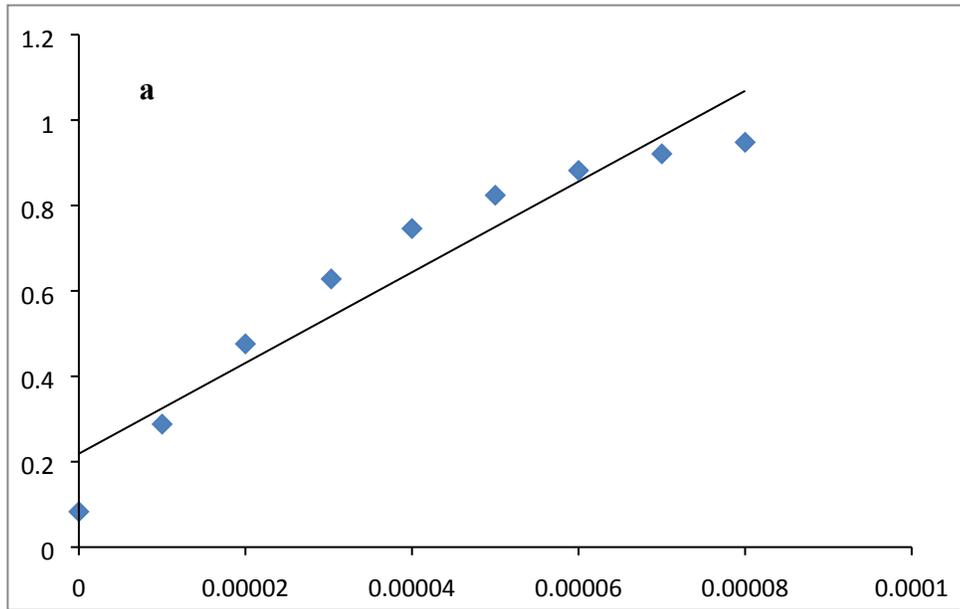


Fig. S3. Benesi-Hildebrand plot for **R1** with (a)  $\text{Co}^{2+}$ , (b)  $\text{Ni}^{2+}$ , (c)  $\text{Cu}^{2+}$  and (d)  $\text{Zn}^{2+}$  ions



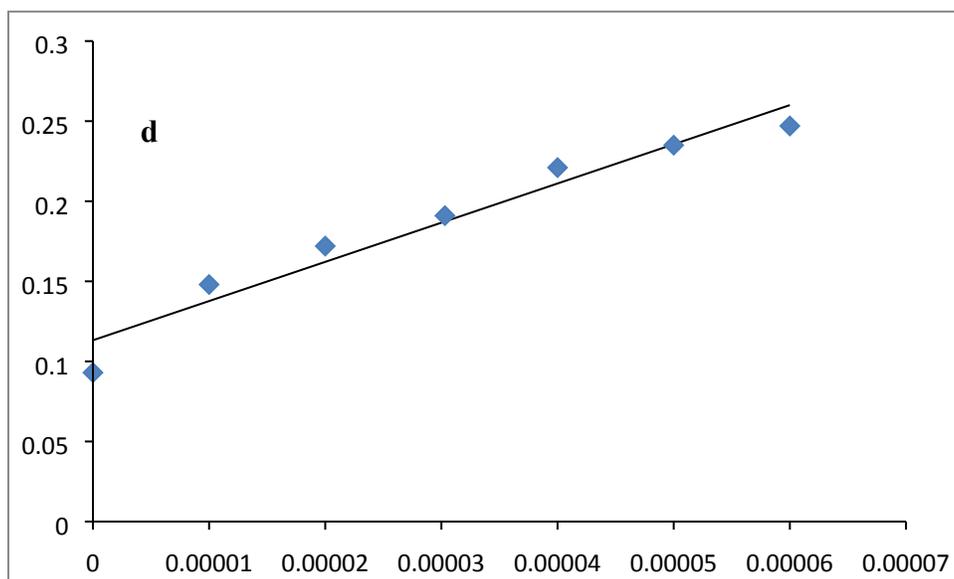
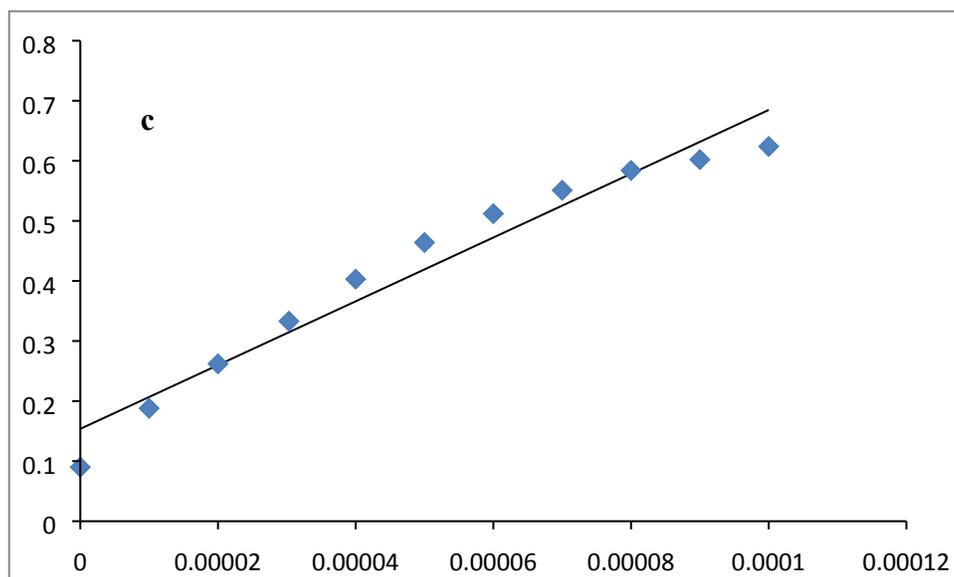


Fig. S4 Detection limit calculation plotted with absorbance measurement using **R1** and (a)  $\text{Co}^{2+}$ , (b)  $\text{Ni}^{2+}$ , (c)  $\text{Cu}^{2+}$  and (d)  $\text{Zn}^{2+}$  ions

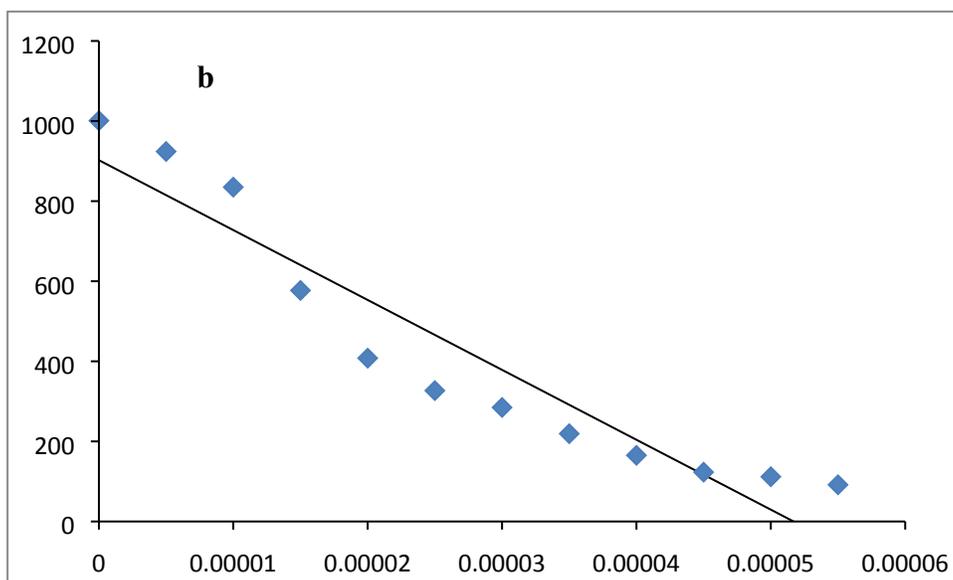
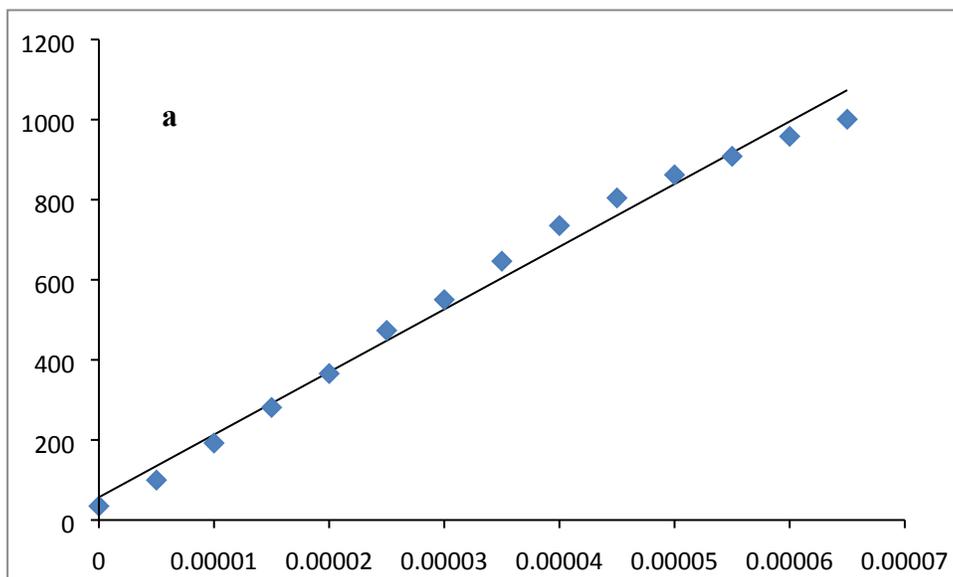


Fig. S5 Detection limit calculation plotted with emission measurement using **R1** and (a)  $Zn^{2+}$ , and (d)  $H_2PO_4^-$  ions.

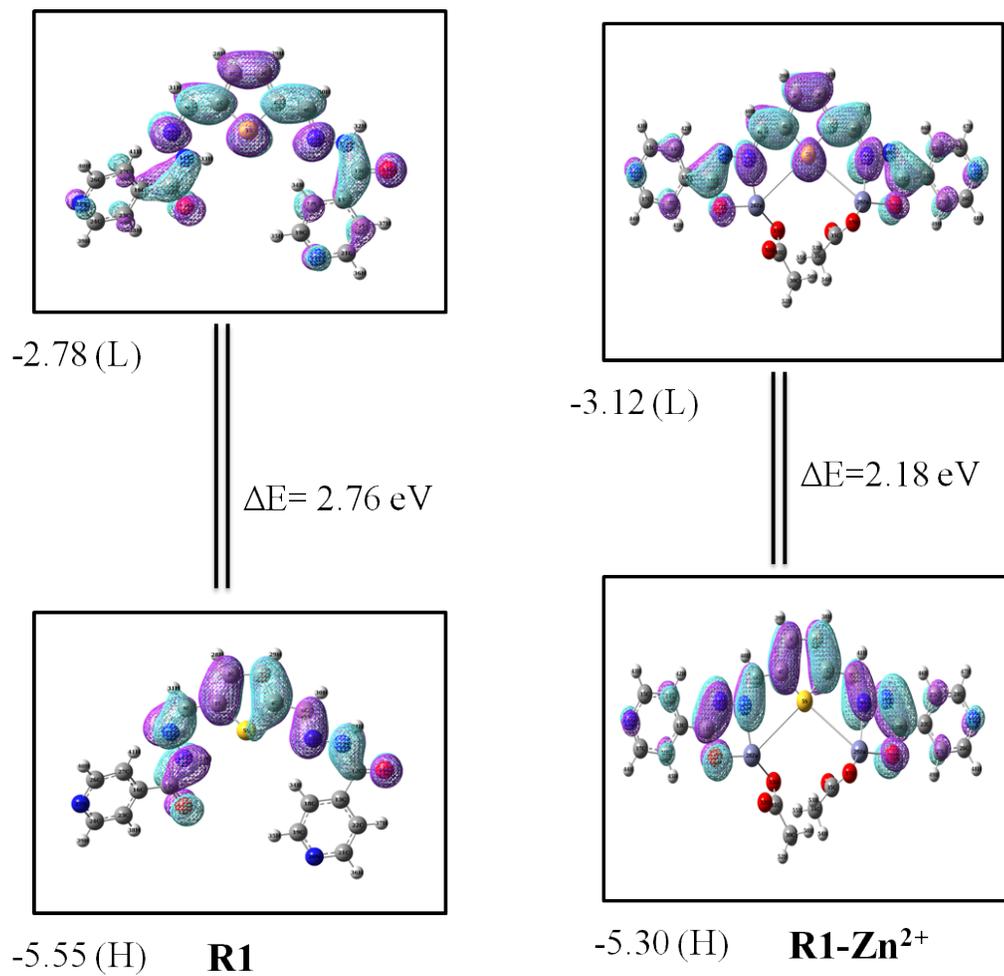


Fig. S6 Energy level diagram of various HOMO and LUMO of R1 and R1-Zn<sup>2+</sup> complex.