A novel cyclometalated Ir(III) complex based luminescence intensity and lifetime sensor for Cu2+

Wei Shen, Zhengjian Qi*, Liqiang Yan, Wenwen Tian, Xia Cui, Hongtao Yao, Yueming Sun*

College of Chemistry and Chemical Engineering, Southeast University, Nanjing, Jiangsu 211189, P.R. China

* E-mail: qizhengjian@seu.edu.cn (ZJ Qi), sun@seu.edu.cn (YM. Sun)

Fig. S1. The comparative trial of $^1$H NMR spectra of Ir-2 (black line) and Ir-2 + 4.0 equiv. Cu$^{2+}$ (red line) in MeCN-$d_3$ solution.
Fig. S2. The comparative trial of ESI$^-$–HRMS spectra of Ir-2 (a) and Ir-2 + 4.0 equiv. Cu$^{2+}$ (b).
Fig. S3. (a) Job’s plot of Ir-2 with Cu$^{2+}$ according to the method of continuous variations. The total concentrations of Ir-2 and Cu$^{2+}$ were kept constant at 10 μM. The PL intensity was recorded in an aqueous solution. (b) Benesi–Hildebrand linear analysis plot of Ir-2 at different Cu$^{2+}$ concentrations.