Supporting information

Indole–rhodamine-based ratiometric fluorescent probe for Pd^{2+} determination and cell imaging

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1. The fluorescence intensities ratio (F_{590}/F_{410}) for **R1** as a function of Pd^{2+} concentration

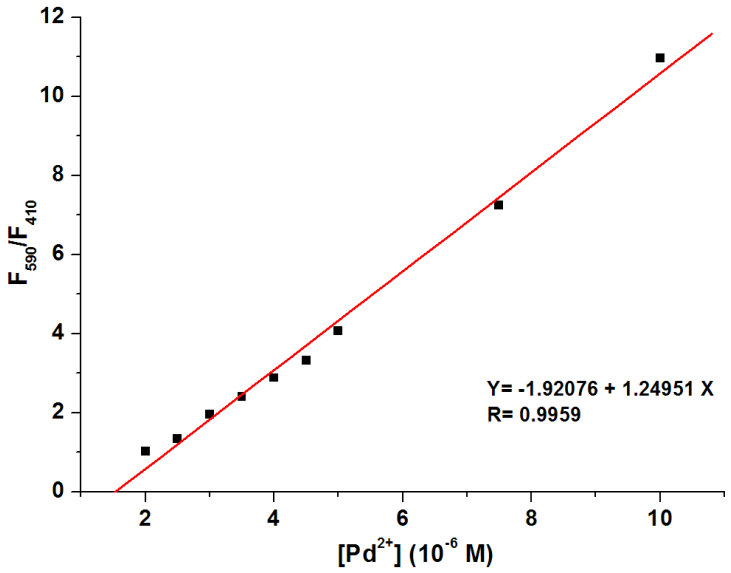

Fig. S1 The fluorescence intensities ratio (F_{590}/F_{410}) for **R1** as a function of Pd^{2+} concentration in CH_3OH/PBS (5 mM, pH = 7.40, 50% CH_3OH) solution (excited at 330 nm).

2. Job plots of **R1** with Pd^{2+}

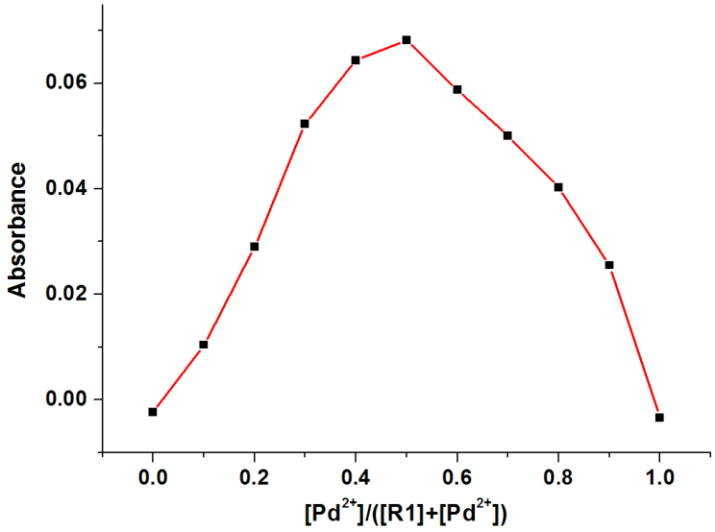

Fig. S2 Job plots of **R1** with Pd^{2+} in CH_3OH/PBS (5 mM, pH = 7.40, 50% CH_3OH) solution according to the absorbance at 570 nm. The total concentration of **R1** and Pd^{2+} were all kept at 10 μM.

3. The Benesi-Hildebrand plot of the **R1**-Pd^{2+} complex.

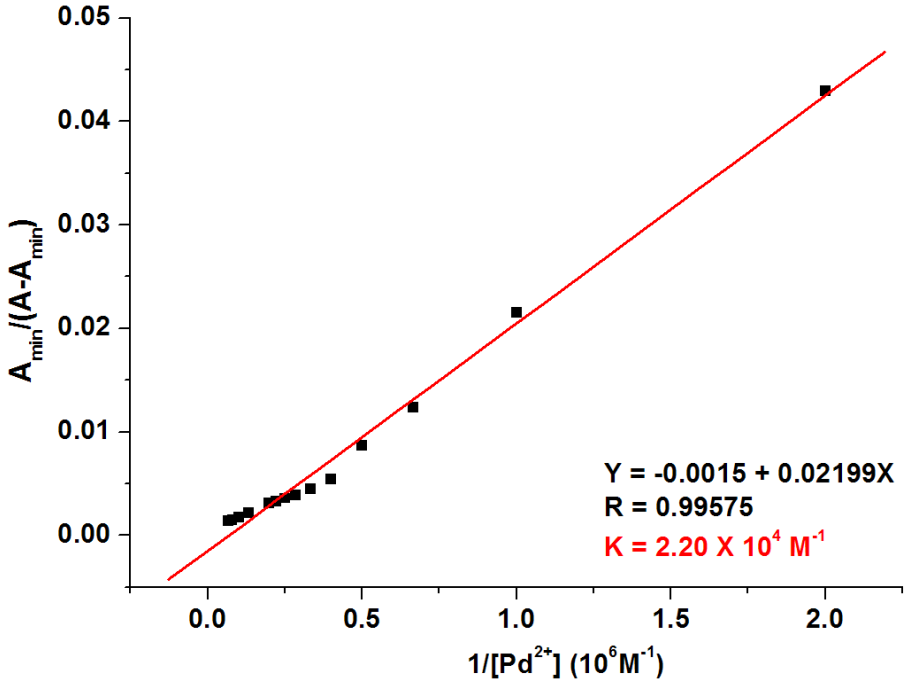

Fig. S3 The Benesi-Hildebrand plot of the **R1**-Pd^{2+} complex.

4. ESI-MS spectrum of the probe **R1** with Pd^{2+}

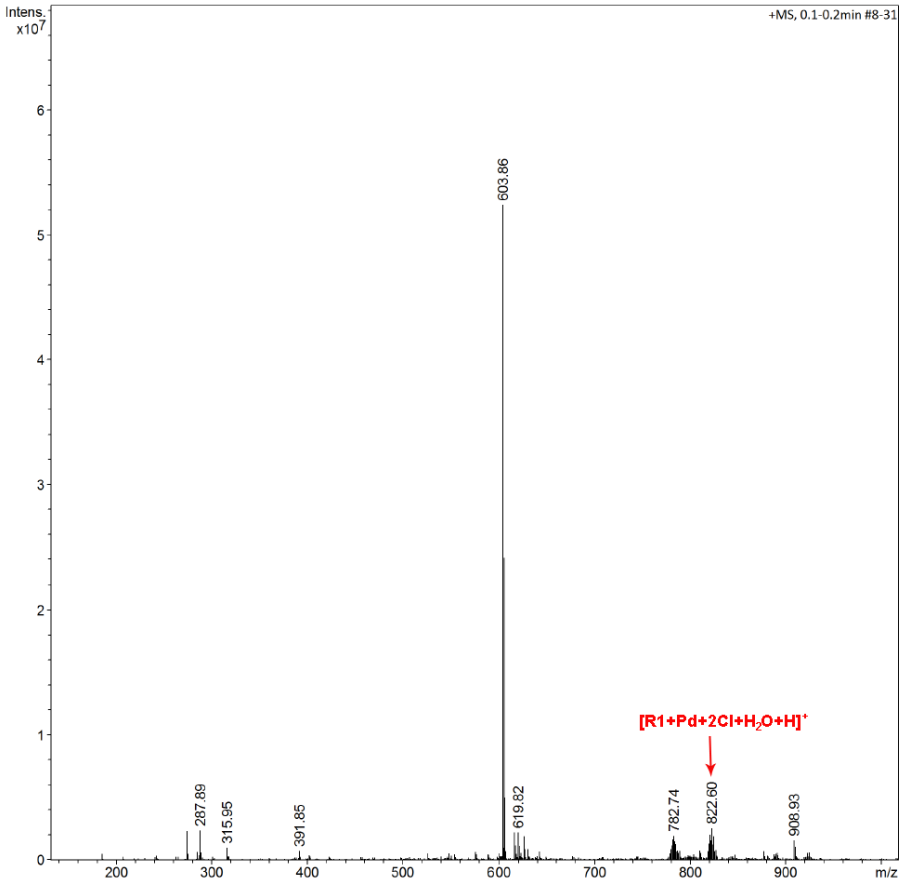

Fig. S4 ESI-MS spectrum of the probe **R1** with Pd^{2+} in EtOH solution.

5. The effect of pH

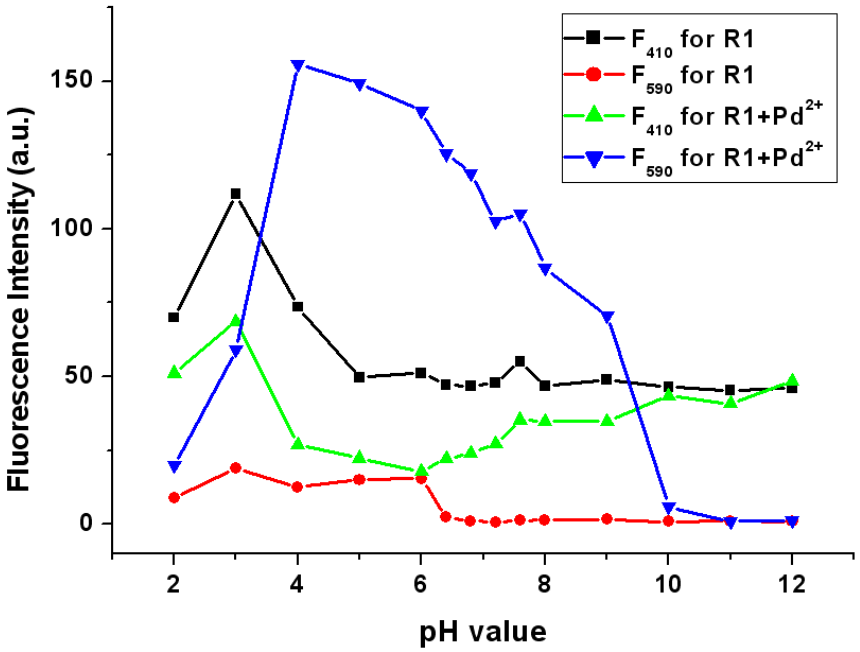

Fig. S5 The effect of pH (2.0-12.0) on the relative fluorescence intensity of 5 μM probe **R1** with 1 equiv. Pd^{2+} in CH_3OH/PBS (5 mM, pH = 7.40, 50% CH_3OH) solution.

6. The effect of 1 equiv. coexistent metal cations

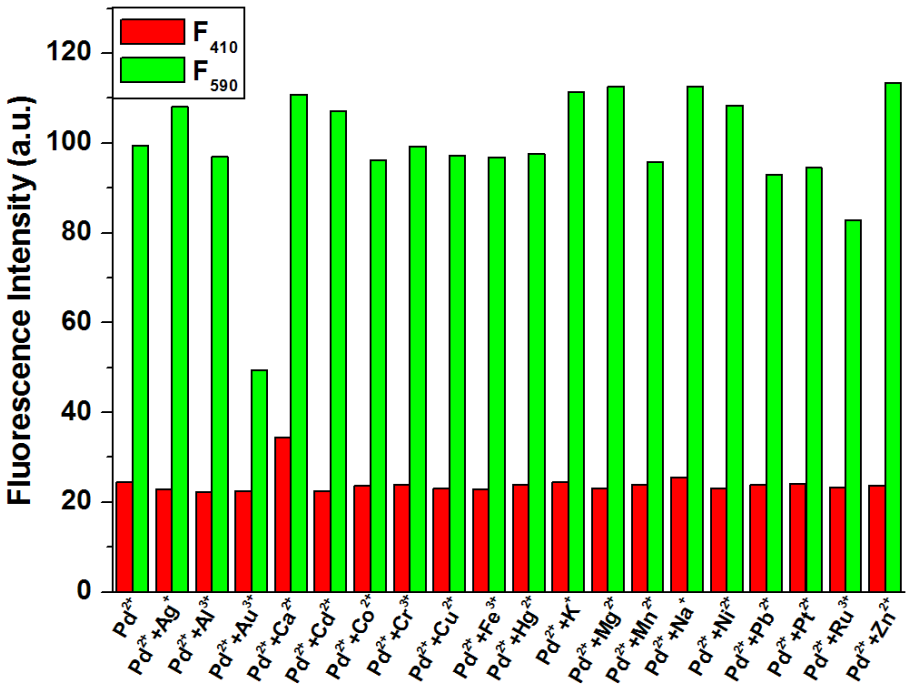

Fig. S6 The effect of 1 equiv. coexistent metal cations on the relative fluorescence intensity at 410 and 590 nm (excited at 330 nm) of 5 μM **R1** with 1 equiv. Pd^{2+} in CH_3OH/PBS (5 mM, pH = 7.40, 50% CH_3OH) solution

7. Time course for the fluorescence response

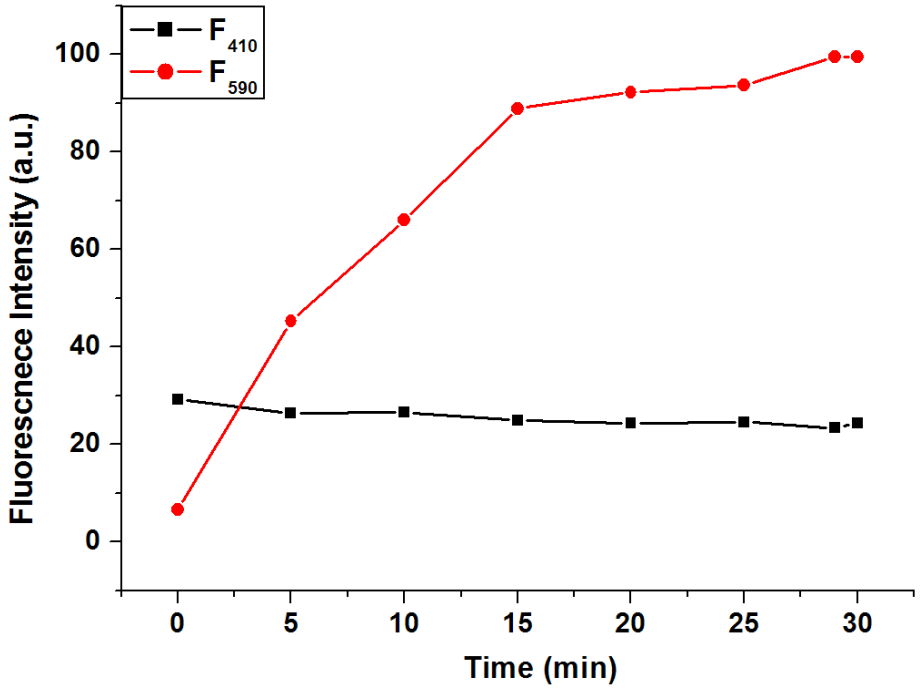

Fig. S7 Time course for the fluorescence response at 410 nm and 590 nm (excited at 350 nm) of 5 μM **R1** upon the addition of 1.0 eq. Pd^{2+} in CH_3OH/PBS (5 mM, pH = 7.40, 50% CH_3OH) solution at room temperature.

8. ESI-MS, ^1H NMR and ^{13}C NMR spectrum of **R1**

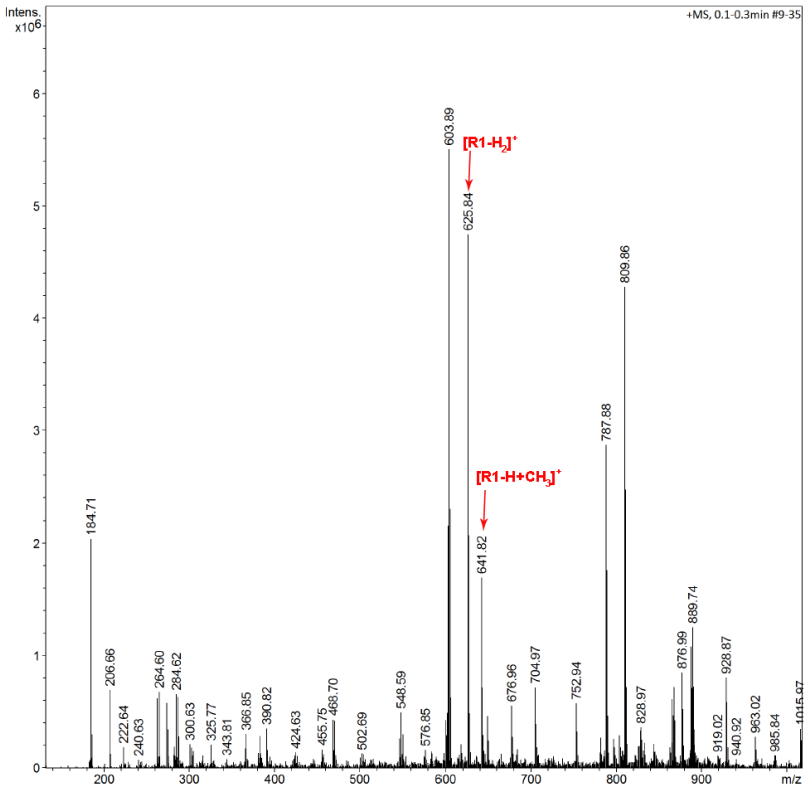

Fig. S8 ESI-MS spectrum of **R1** in EtOH solution.

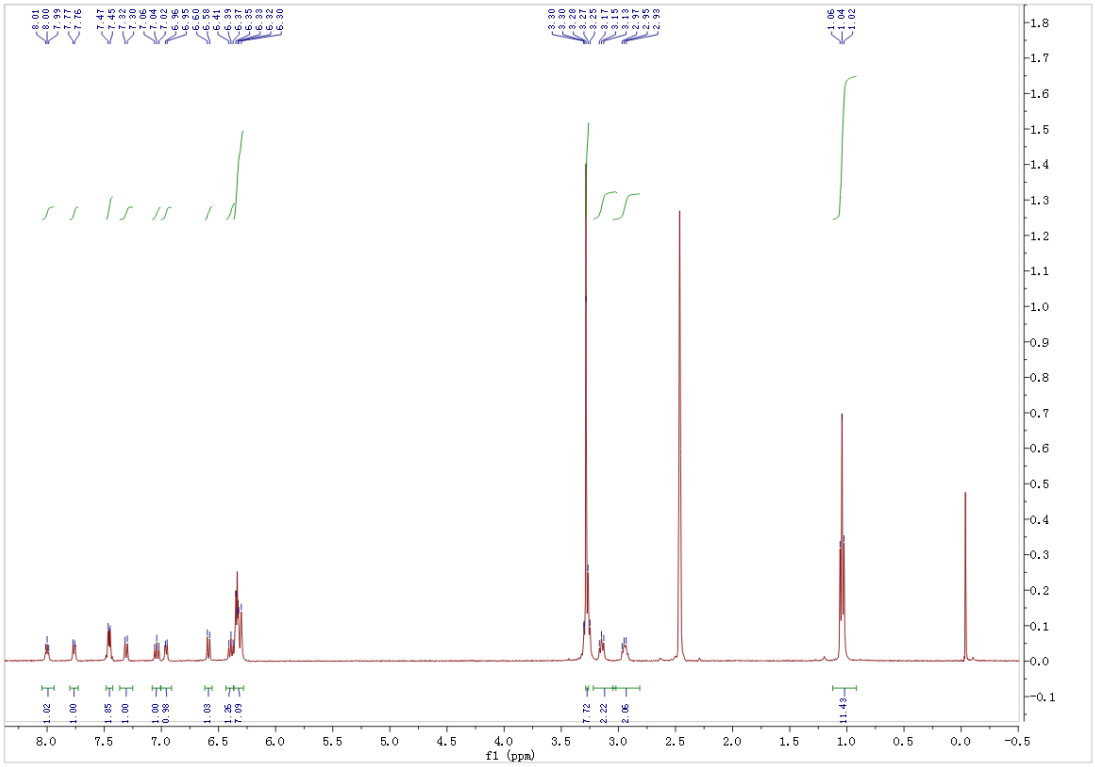

Fig. S9 ^{1}H NMR spectrum of **R1**.

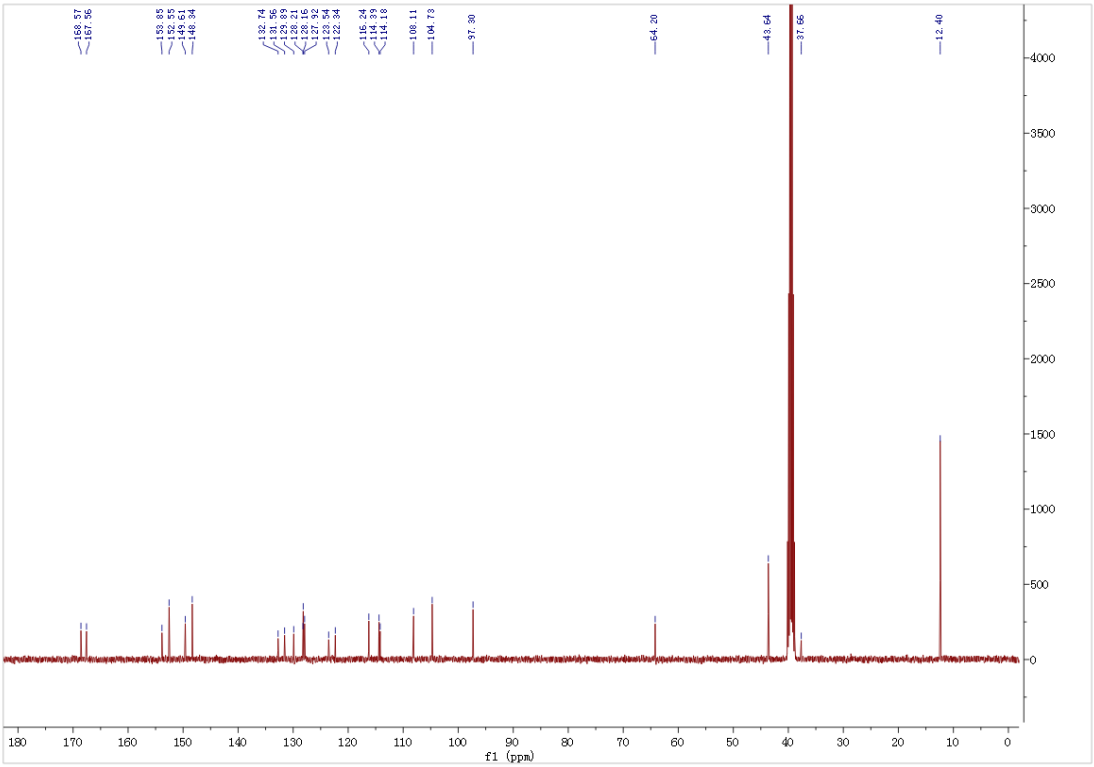

Fig. S10 ^{13}C NMR spectrum of **R1**.