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## SUPPLEMENTARY MATERIAL

## Three in One Sensor: A Fluorescent, Colorimetric and Paper Based Probe for Selective

**Detection of Mercury (II)** 

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## **NEW JOURNAL OF CHEMISTRY**

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Figure S1. a) HRMS spectrum, b) <sup>1</sup>H-NMR spectrum, and c) <sup>13</sup>C-NMR spectrum of the sensor molecule.





Figure S2. Change in the percent quenching amounts in the emission maximum of the sensor upon stepwise additions of 20-40-60-80-100-120-140 and 160  $\mu$ L (0.17, 0.33, 0.51, 0.67, 0.83, 1.00, 1.17 and 1.33 mol equivalents) for each ion, (As<sup>3+</sup>, Cd<sup>2+</sup>, Cu<sup>2+</sup>, Fe<sup>3+</sup>, Hg<sup>+</sup>, K<sup>+</sup>, Ni<sup>2+</sup>, Se<sup>4+</sup> and Zn<sup>2+</sup>), and the obtained additional quenching in the emission spectra upon addition of 0.6 eq. Hg<sup>2+</sup>.



Figure S3. a) Emission spectra collected during the titration of 0.24 M sensor with 0.25 M HNO<sub>3</sub> (aq), b) Emission spectra collected during the titration of 0.24 M sensor with  $Hg^{2+}$  in 0.25 M HNO<sub>3</sub> (aq), c) Emission spectra collected during the titration of 0.24 M sensor with  $Hg^{2+}$  in 0.05 M HNO<sub>3</sub> (aq), d) Linear fitting analysis using data in (c), d) Linear fitting analysis using data in (b).



Figure S4. The control experiment for UV-Vis titration of the 0.24 mM sensor with deionized water.



Figure S5. FTIR spectrum of sensor before (black) and after (red) addition of Hg<sup>2+</sup>.



Figure S6. Emission spectra collected during the titration of tested fluorophore with 10 mM  $Hg^{2+}$ , b) Emission spectra collected during the titration of tested fluorophore with water (control experiment). Inset of a: Chemical structure of the tested fluorophore.