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## **Supporting information for article:**

A new luminescent anionic metal-organic framework based on heterometallic zinc(II)-barium(II) for selective detection of Fe<sup>3+</sup> and Cu<sup>2+</sup> ions in aqueous solution

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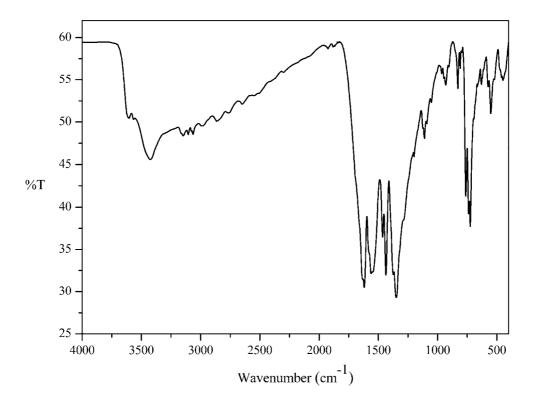


Figure S1 Infrared spectrum of 1.

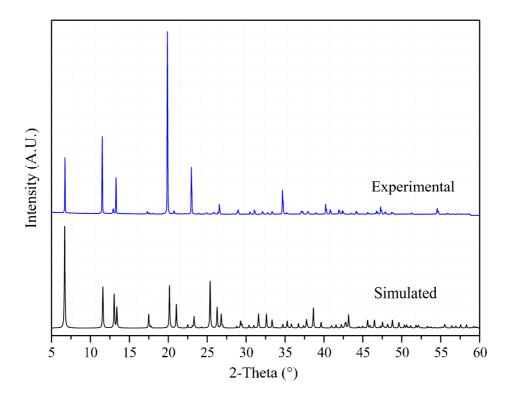
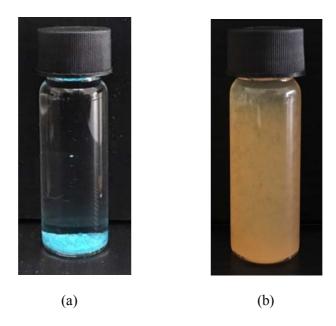
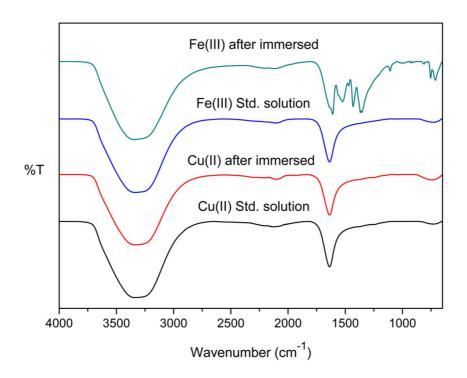


Figure S2 Comparison of the simulated and experimental PXRD patterns of 1.



**Figure S3** The photographs of crystalline 1 after immersion in aqueous solutions of  $Cu^{2+}$  (a) and  $Fe^{3+}$  (b) overnight at ambient temperature.



**Figure S4** Comparison of the IR spectra (top-to-down) of aqueous solutions of  $Fe^{3+}$  after immersion in **1** (green),  $Fe^{3+}$  standard solution (blue),  $Cu^{2+}$  after immersion in **1** (red), and  $Cu^{2+}$  standard solution (black).