A photochromic metal-organic framework with rare 3-D self-interpenetrated architecture and ultrahigh MnO_4^- sensing ability

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Table S1 The information of main chemicals.

Chemicals	Manufacturer
CBr_4	Adamas
PPh_3	Adamas
Toluene	Titan
9,10-Anthracenedione	Adamas
4-pyridine boronic acid	Adamas
$Pd(OAC)_2$	Adamas
Na_2CO_3	Adamas
dioxane	Titan
ethyl acetate	Titan
dichloromethane	Titan
methanol	Titan
isopropanol	Titan
acetonitrile	Titan

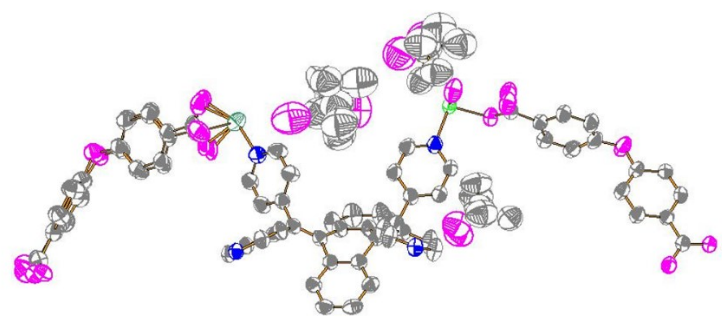

Figure S1. The asymmetric unit of **1** (Ni1, bright green; Ni2, sea green; N, blue; O pink; C, grey; all H atoms are omitted for clarity).

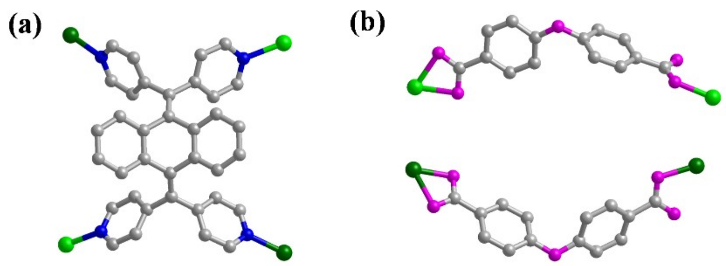

Figure S2. The coordination and connected environment of **L** (a) and OBA^{2-} (b) (Ni1, bright green; Ni2, sea green; N, blue; O pink; C, grey; all H atoms are omitted for clarity).

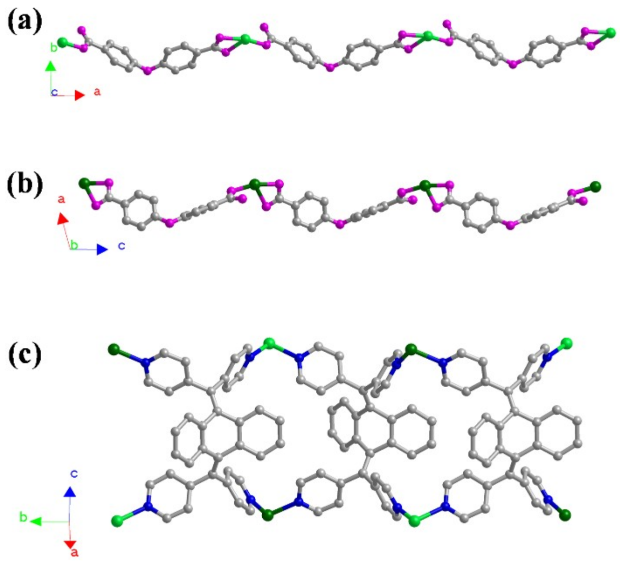

Figure S3. 1-D chains formed by OBA^{2-} (a, b) and **L** (c) (Ni1, bright green; Ni2, sea green; N, blue; O pink; C, grey; all H atoms are omitted for clarity).

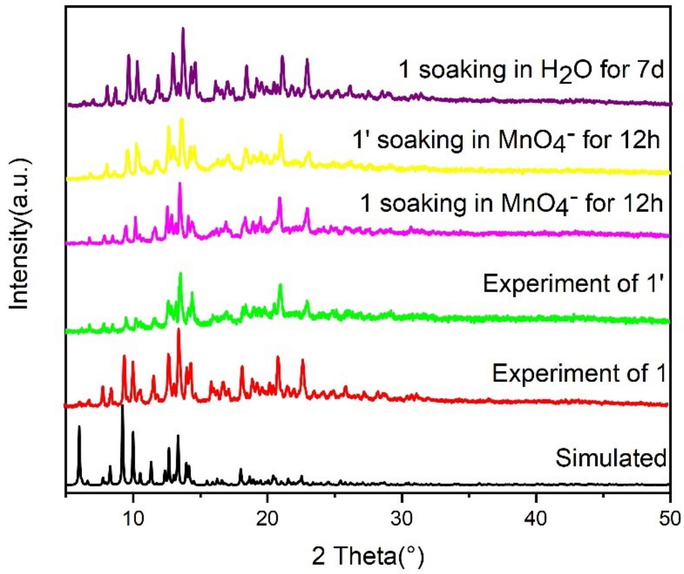

Figure S4. The simulated and experimental PXRD of **1** and **1’**.

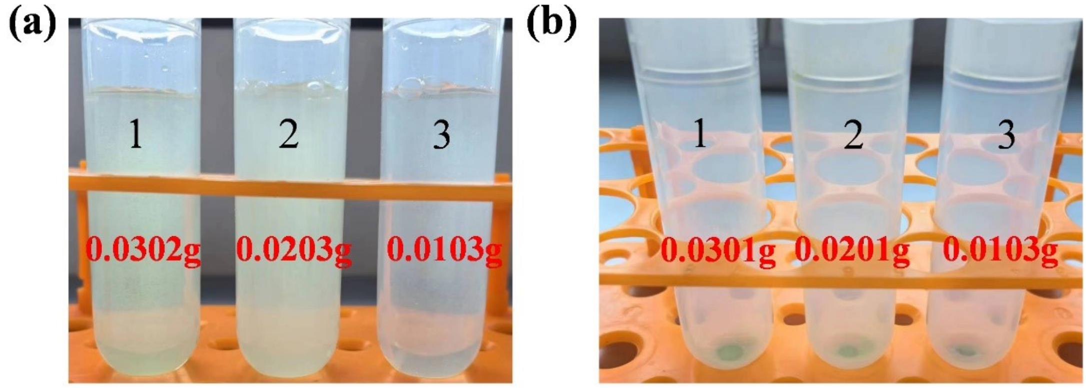

Figure S5. The mass of the crystal of **1** before and after soaking in water for 7 days.

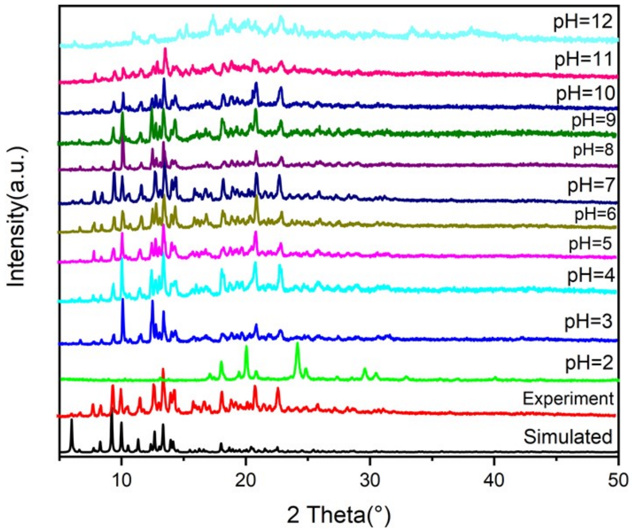

Figure S6. PXRD pattern of 1 after soaking in pH range 2-12 for 24 h.

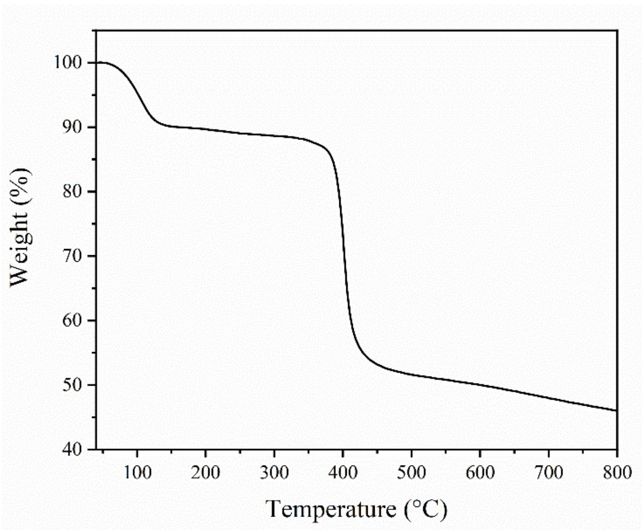

Figure S7. The TGA of 1.

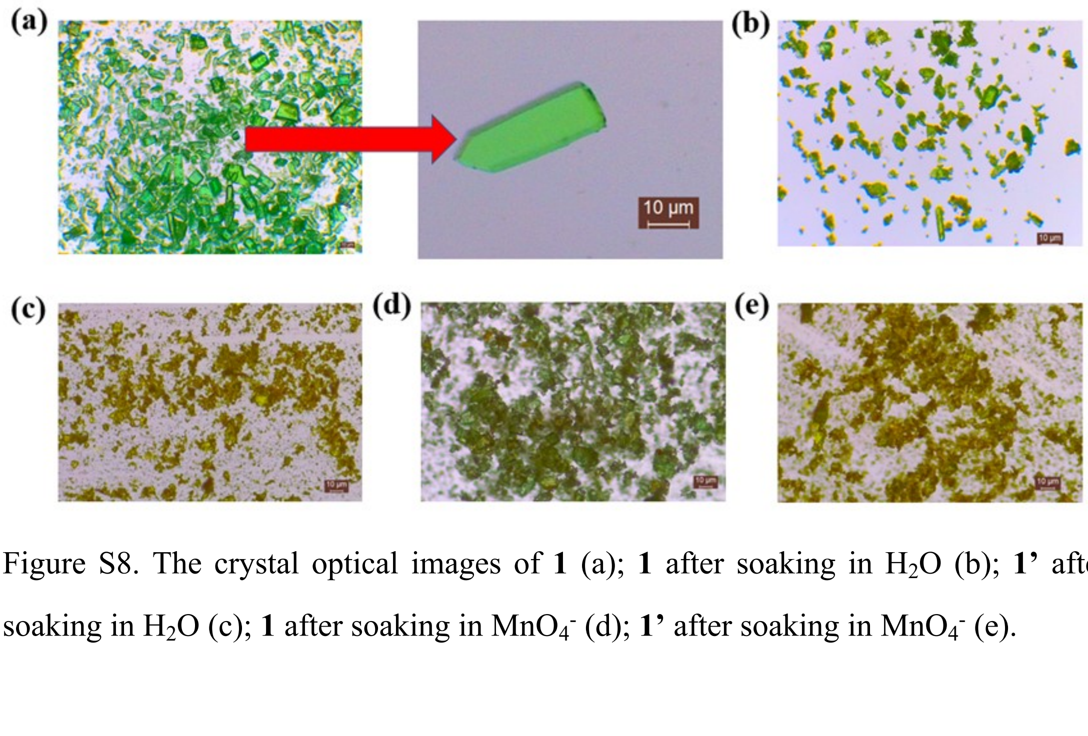

Figure S8. The crystal optical images of **1** (a); **1** after soaking in H_2O (b); **1’** after soaking in H_2O (c); **1** after soaking in MnO_4^- (d); **1’** after soaking in MnO_4^- (e).

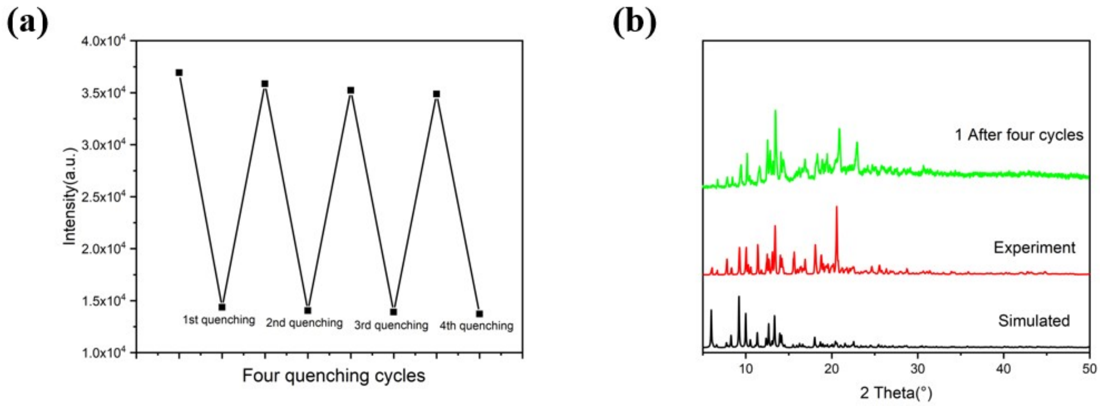

Figure S9. Reusability of **1** for sensing MnO_4^- in H_2O and PXRD patterns of **1** after four cycles detecting MnO_4^- compared with original patterns.

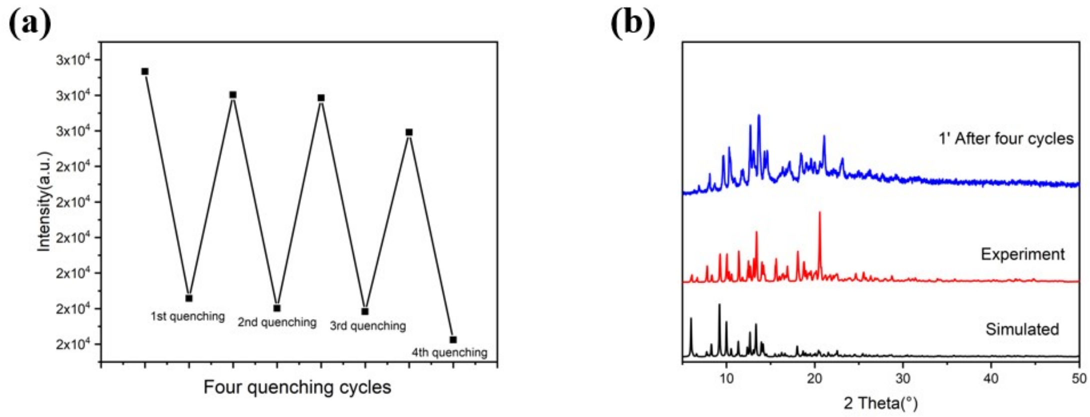

Figure S10. Reusability of **1’** for sensing MnO_4^- in H_2O and PXRD patterns of 1’ after four cycles detecting MnO_4^-compared with original patterns.