

Table S1. Crystallographic data and structural refinement details for the title compounds.

	1	2	3
Empirical formula	C ₃₈ H ₄₆ O ₁₉ N ₇ Cl ₁₅ FeSb ₁ Pr ₄	C ₇₂ H ₈₃ O ₃₈ N ₁₄ Cl ₂₉ Fe ₂ Sb ₂₄ Pr ₈	C ₈ H ₂₅ N _{0.5} Cl _{12.5} Sb ₁₂ Pr ₄ O ₂₃
Formula weight	3517.19	6941.82	2964.05
Crystal system	monoclinic	orthorhombic	monoclinic
Space group	<i>P</i> 2 ₁ / <i>c</i>	<i>Pccn</i>	<i>C</i> 2/ <i>m</i>
T/K	17.3764(10)	15.1348(5)	30.385(2)
$\lambda/\text{\AA}$	15.6415(9)	31.4569(7)	14.9201(12)
<i>a</i> / \AA	30.6147(18)	32.3294(9)	11.2014(7)
<i>b</i> / \AA	90	90	90
<i>c</i> / \AA	105.791(6)	90	90.379(7)
$\beta/^\circ$	90	90	90
<i>V</i> / \AA^3	8006.8(8)	15391.8(7)	5078.1(6)
<i>Z</i>	4	4	4
<i>D_c</i> / Mg·m ⁻³	2.918	2.996	3.877
μ/mm^{-1}	7.090	58.396	10.743
<i>F</i> (000)	6416	12632	5284
Measured refls.	79381	75286	13723
Independent refls.	16255	13605	6374
<i>R</i> _{int}	0.0609	0.1299	0.0340
No. of parameters	956	772	300
<i>GOF</i>	1.068	1.053	1.051
^a <i>R</i> ₁ , ^b <i>wR</i> ₂ [<i>I</i> > 2σ(<i>I</i>)]	<i>R</i> ₁ = 0.0345, <i>wR</i> ₂ = 0.0605	<i>R</i> ₁ = 0.0647, <i>wR</i> ₂ = 0.1699	<i>R</i> ₁ = 0.0330, <i>wR</i> ₂ = 0.0659
^a <i>R</i> ₁ , ^b <i>wR</i> ₂ (all data)	<i>R</i> ₁ = 0.0641, <i>wR</i> ₂ = 0.0717	<i>R</i> ₁ = 0.0916, <i>wR</i> ₂ = 0.1977	<i>R</i> ₁ = 0.0515, <i>wR</i> ₂ = 0.0734

$$^a R_1 = \sum \|F_o| - |F_c|\| / \sum |F_o| \quad ^b wR_2 = [\sum w(F_o^2 - F_c^2)^2 / \sum w(F_o^2)^2]^{1/2}$$

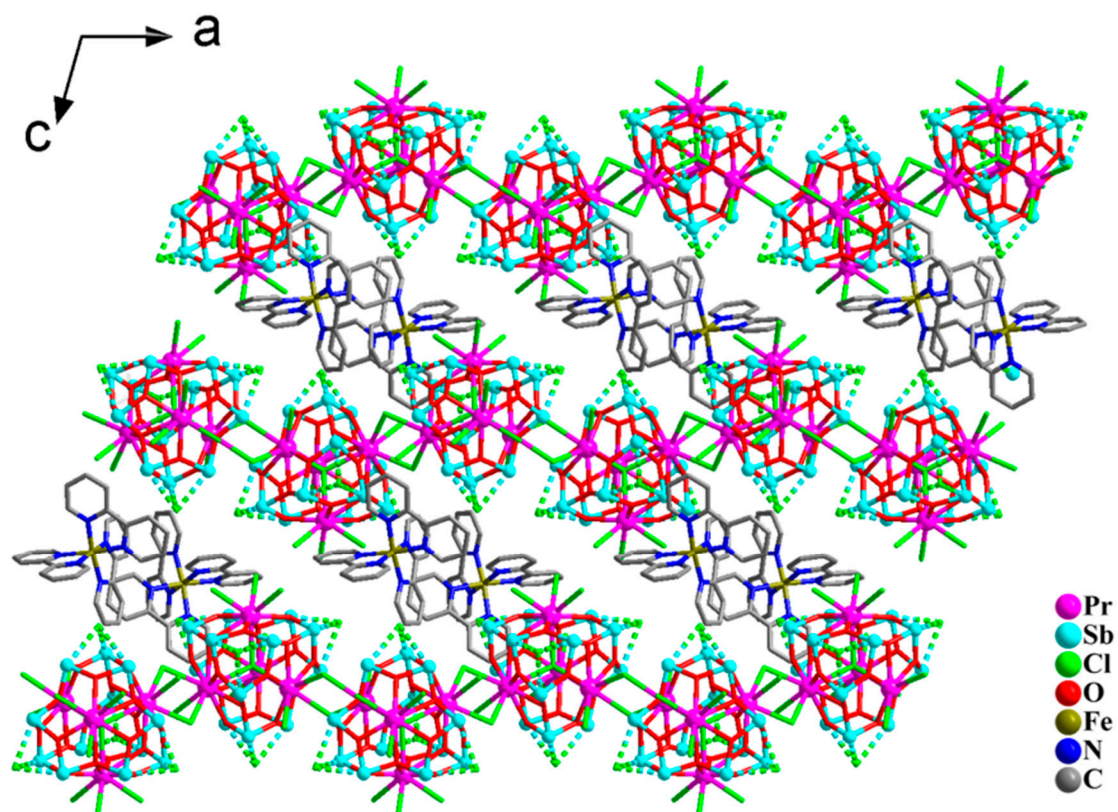


Figure S1. View along the *b*-axis of the packing of anionic chains together with the $[\text{Fe}(2,2'\text{-bpy})_3]^{2+}$ cations in compound 1. For clarity, the guest molecules and H atoms are omitted.

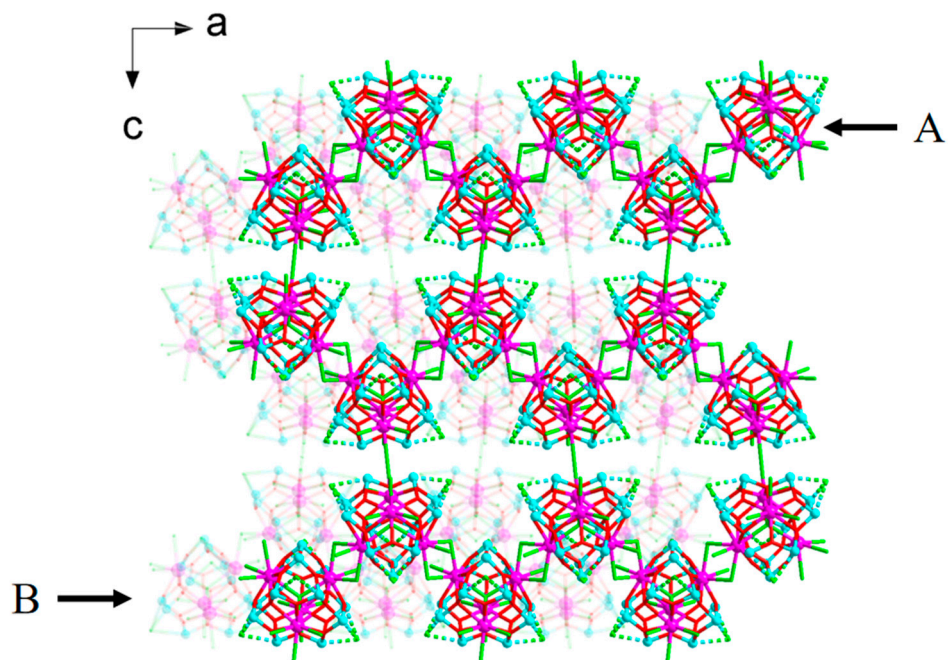
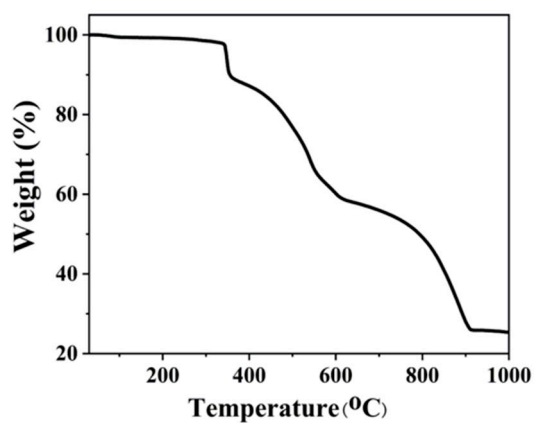


Figure S2. View along the *b*-axis of the packing of the anionic layers in compound 2.

(a)



(b)

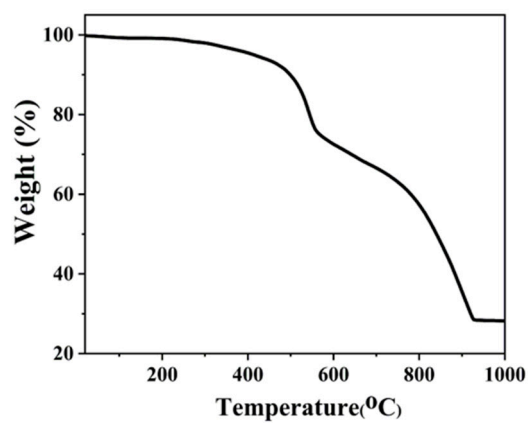


Figure S3. Thermogravimetric curves for compounds **1** (a) and **3** (b).



Figure S4. Photograph for the solution formed by dissolving 4 mg compound **1** in 4 mL water.

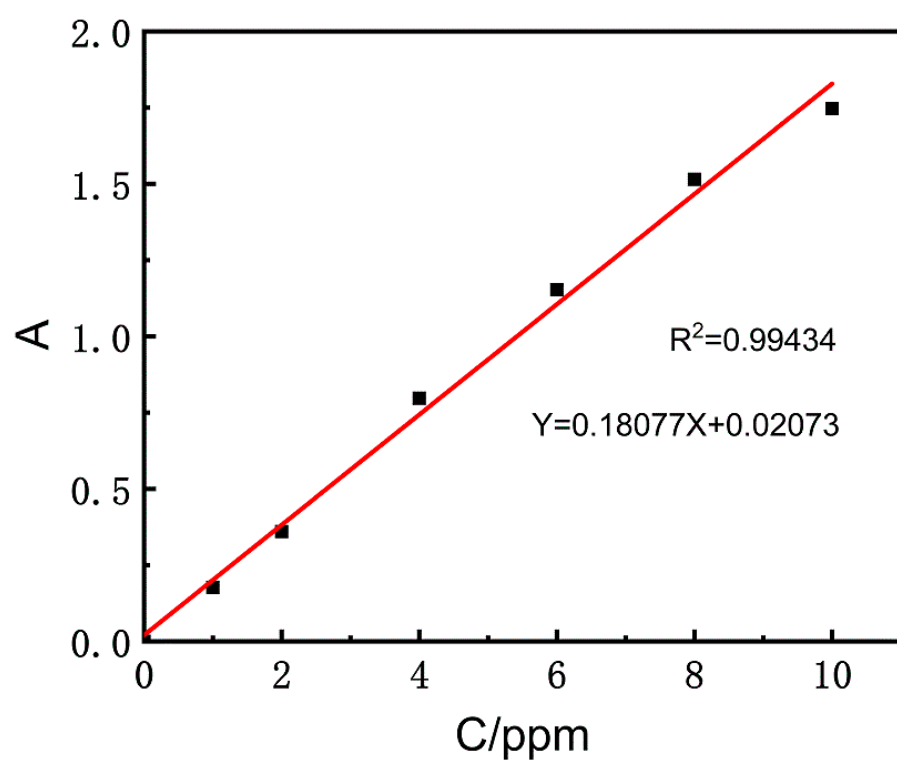


Figure S5. Standard curve for methylene blue solution; the horizontal coordinate is the concentration and the vertical coordinate is the absorbance.