

Two Hexa-TM-Containing (TM = Co^{2+} and Ni^{2+}) $\{\text{P}_2\text{W}_{12}\}$ -Based Trimeric Tungstophosphates

Shuang Yao,^a Zhiming Zhang,^a Yangguang Li,^a and Enbo Wang^{*a}

^aKey laboratory of Polyoxometalate Science of Ministry of Education, Department of Chemistry, Northeast Normal University, Renmin Street No.5268, Changchun, Jinlin, 130024, P. R. China.

*E-mail: wangeb889@nenu.edu.cn (E. B. Wang).

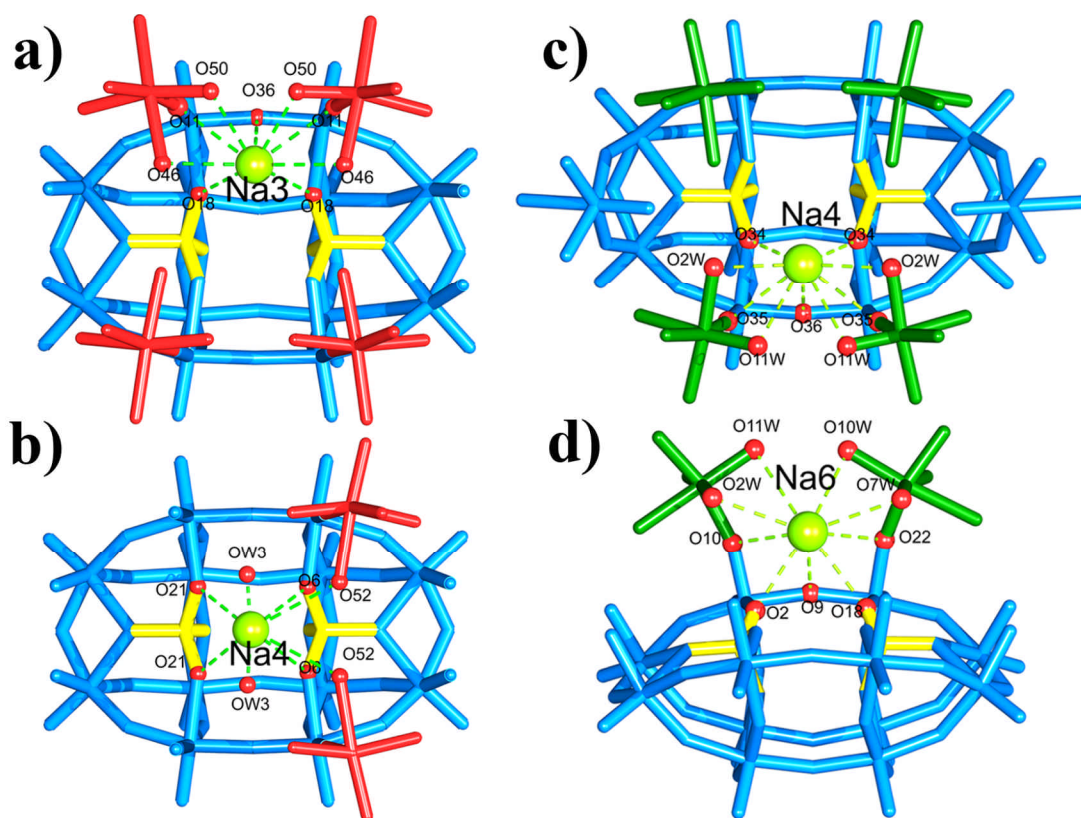


Figure S1. The ball-and-stick representations of the coordination modes of three Na⁺ cations sealed in polyoxoanions **1** a) and b); **2** c) and d)

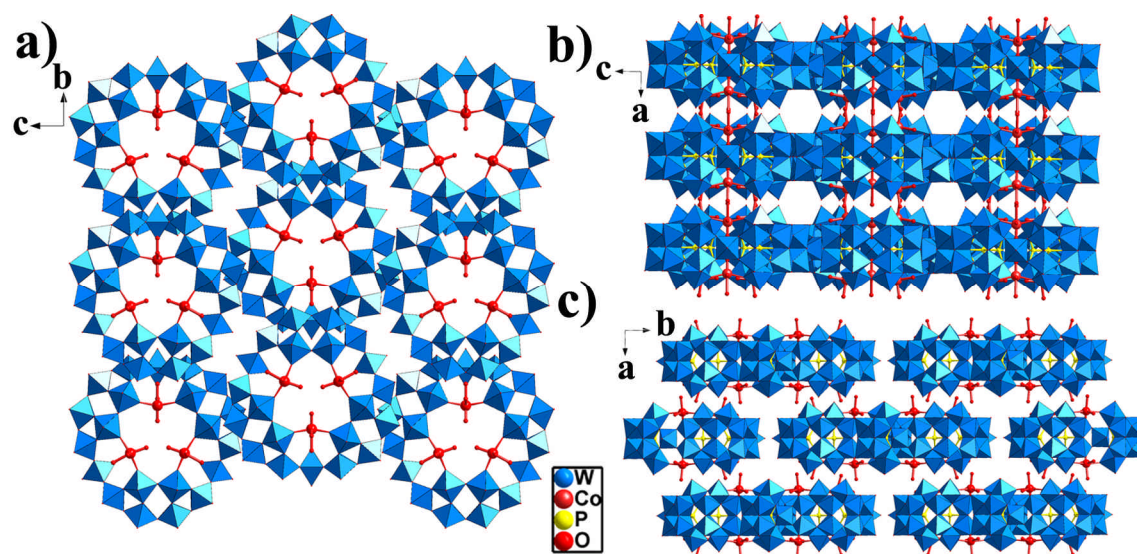


Figure S2. Polyhedral representation of the packing arrangements of **1** viewed along different directions. Na^+ and the lattice H_2O molecules are omitted for clarity.

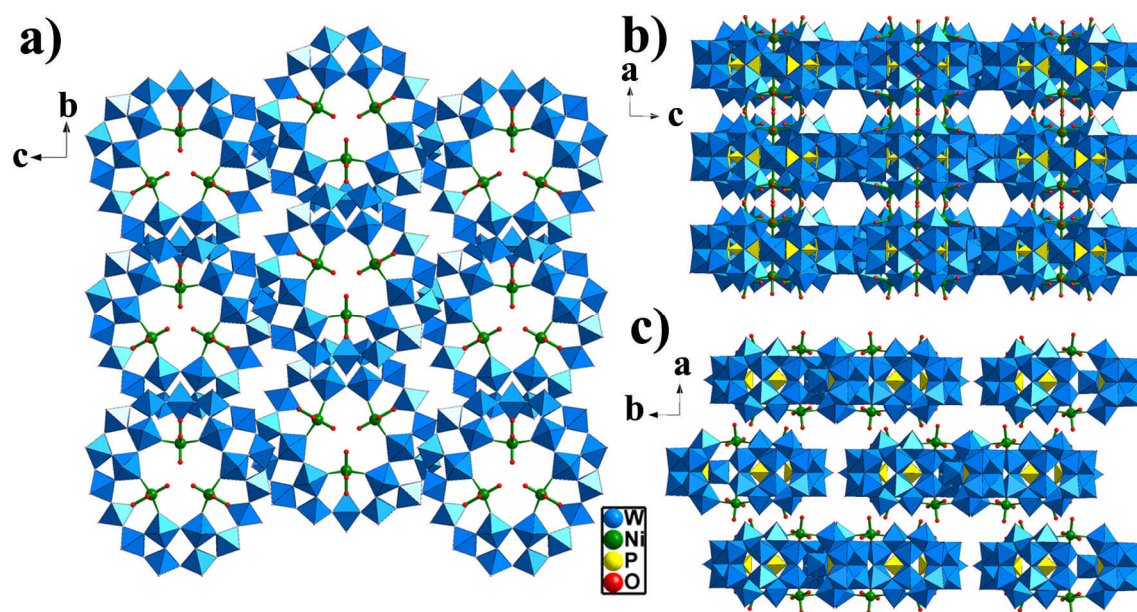


Figure S3. Polyhedral representation of the packing arrangements of **2** viewed along different directions. Na^+ and the lattice H_2O molecules are omitted for clarity.

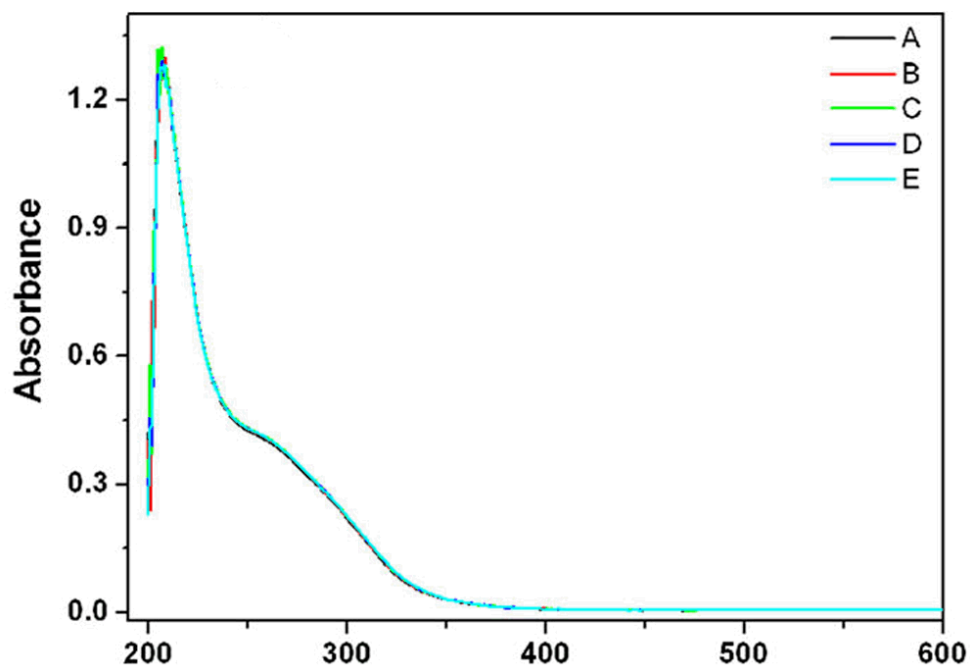


Figure S4. The UV spectra of of **1** in a pH 2.5 aqueous solution (1 M LiCl + 0.5 M H₂SO₄). The UV curves were detected per 24 hours for five times.

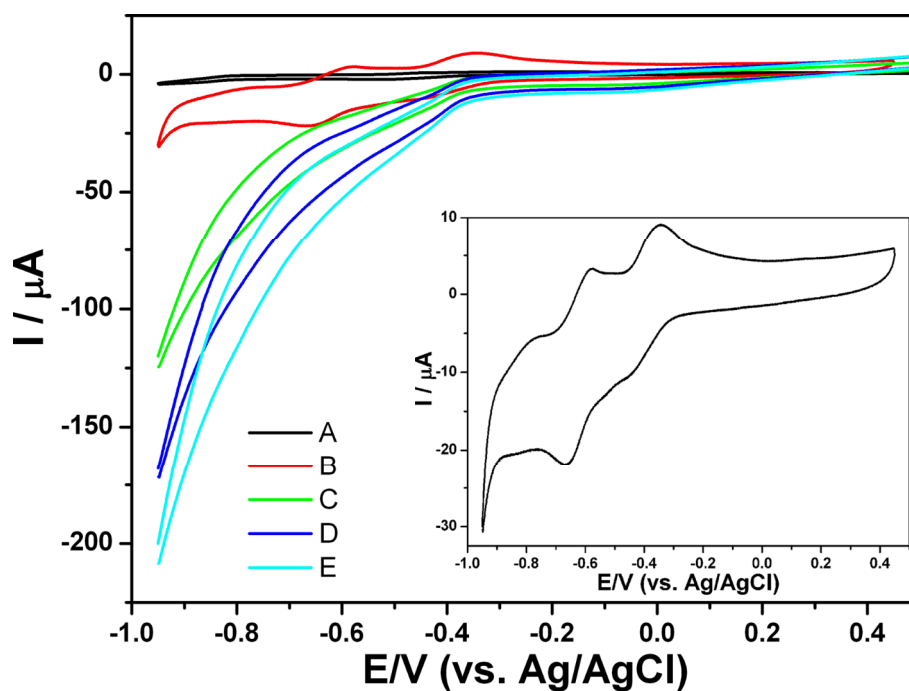


Figure S5. Electrocatalysis of the reduction of NO₂⁻ in the presence of 10⁻³ M **2** at the scan rate of 10 mV s⁻¹ with NO₂⁻ concentrations of 0.0 (B), 2.0 (C), 3.0 (D), and 5.0 mM (E). Inner: Cyclic voltammogram of 10⁻³ M **2** in a pH 2.5 (1 M LiCl + 0.5 M H₂SO₄) solution at the scan rates 10 mV s⁻¹.

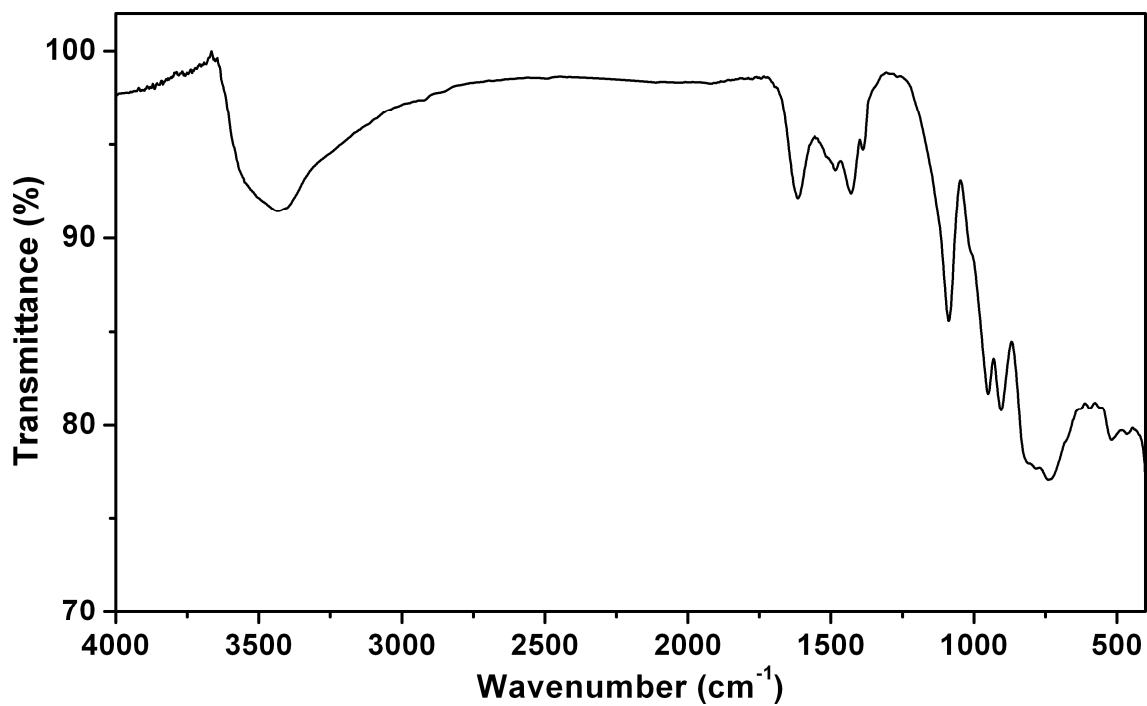


Figure S6. IR spectra for compound 1.

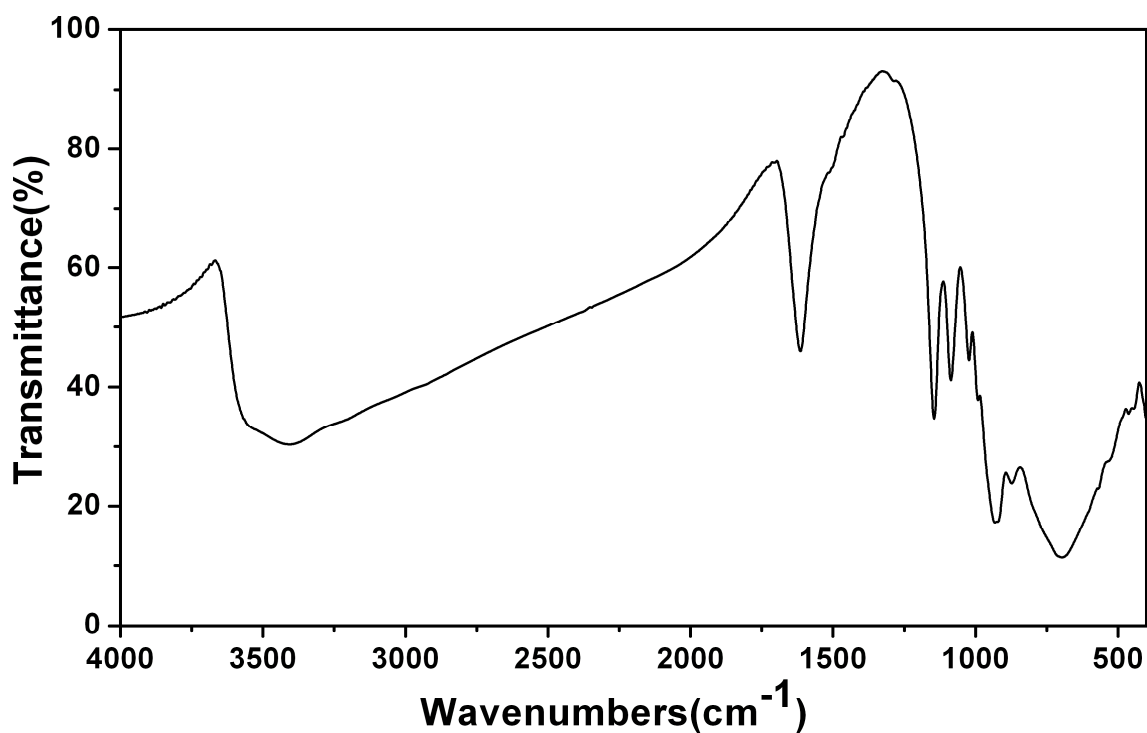


Figure S7. IR spectra for compounds 2.

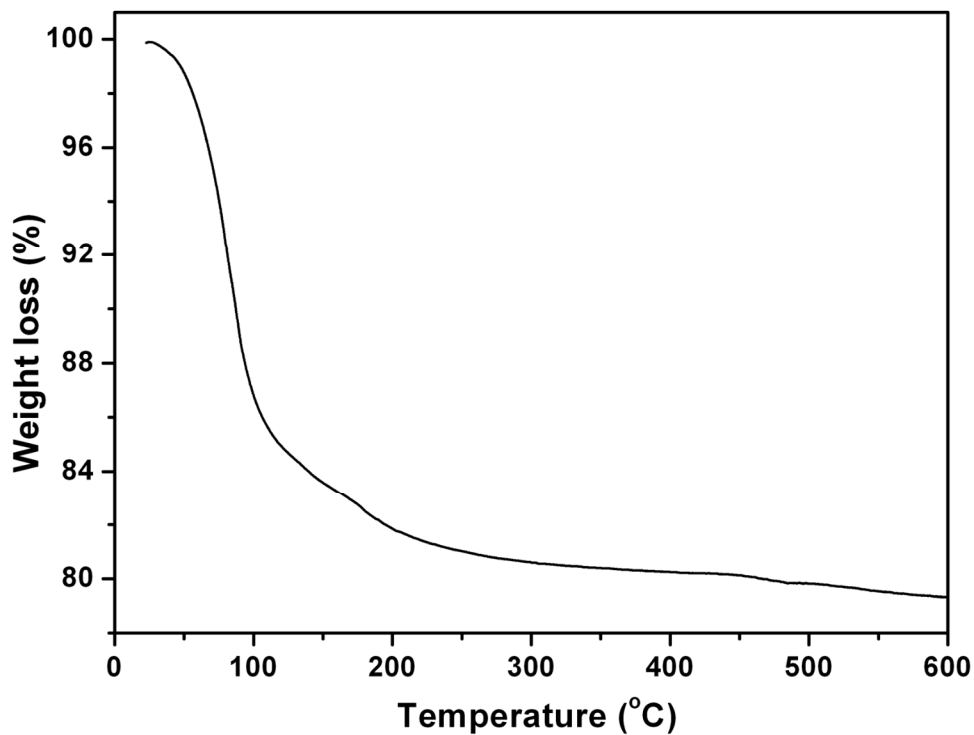


Figure S8.The TG curve of compound 1.

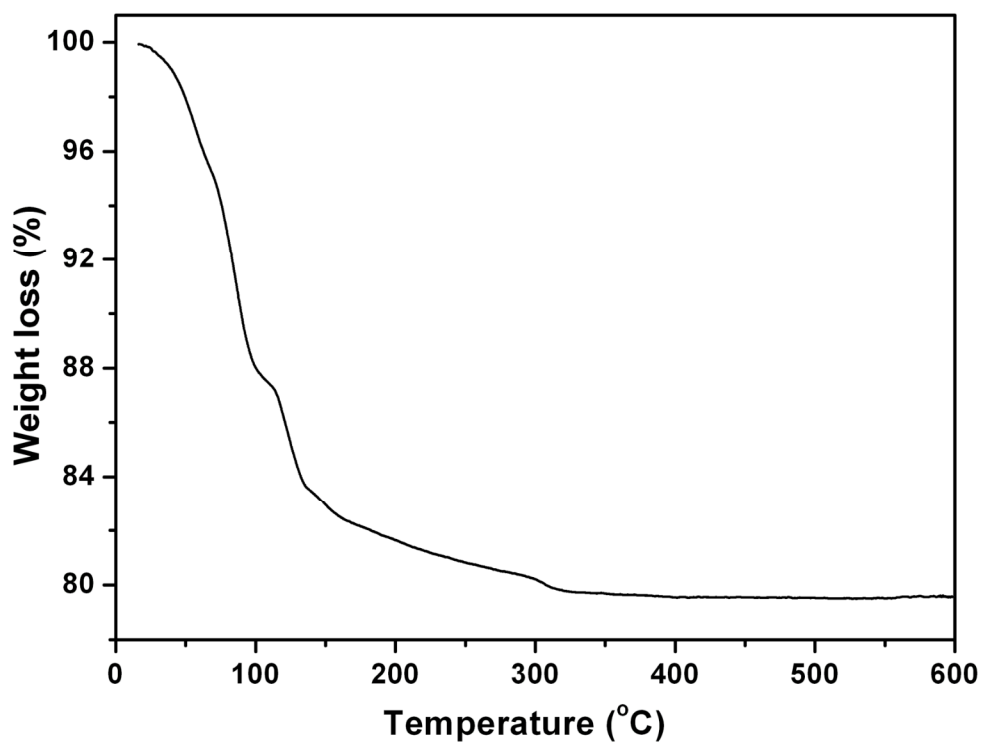


Figure S9.The TG curve of compound 2.