

Helical channels, low framework density and structure-directing effect: a novel non-centrosymmetric zinc phosphate NIS-4 prepared by ionothermal reaction

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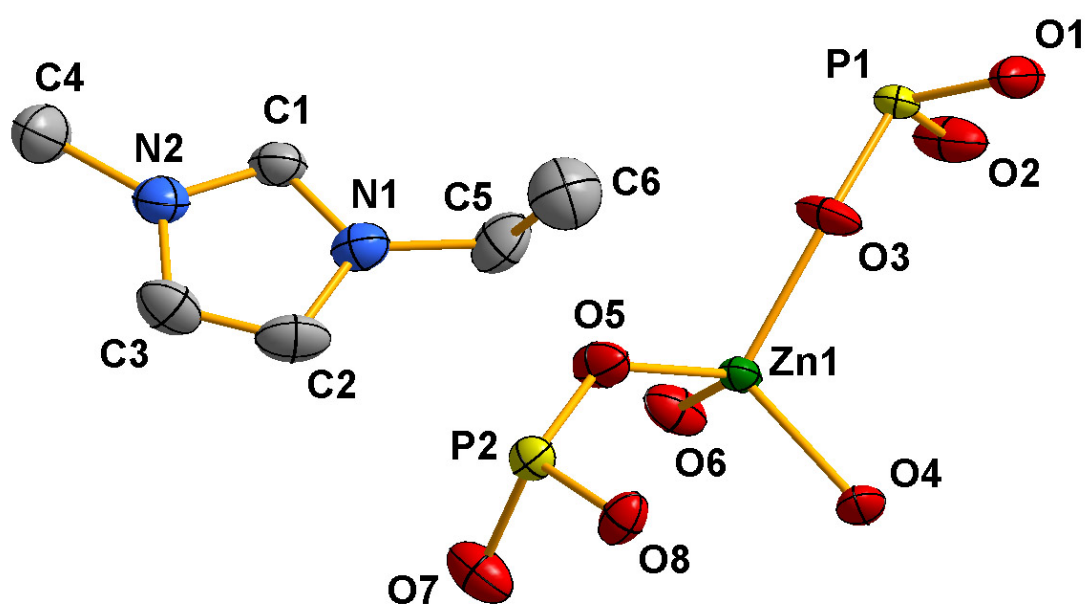


Fig. S1 ORTEP plot of NIS-4. Thermal ellipsoids are given at 50% probability.

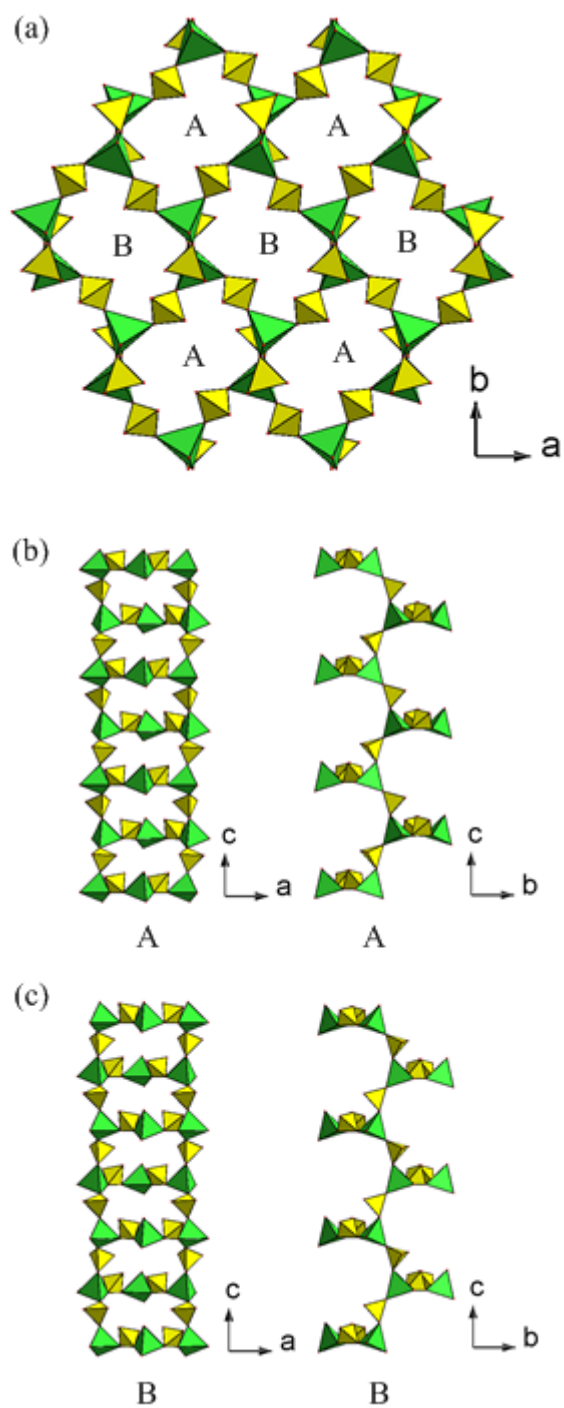


Fig. S2 (a) Polyhedral view of NIS-4 projected along the [001] direction; (b) the zigzag-ladder structures of the 12-membered ring channel A; (c) the zigzag-ladder structures of the 12-membered ring channel B. Template cations and all hydrogen atoms are not shown for clarity. Green and yellow tetrahedra represent ZnO₄ and PO₄, respectively.

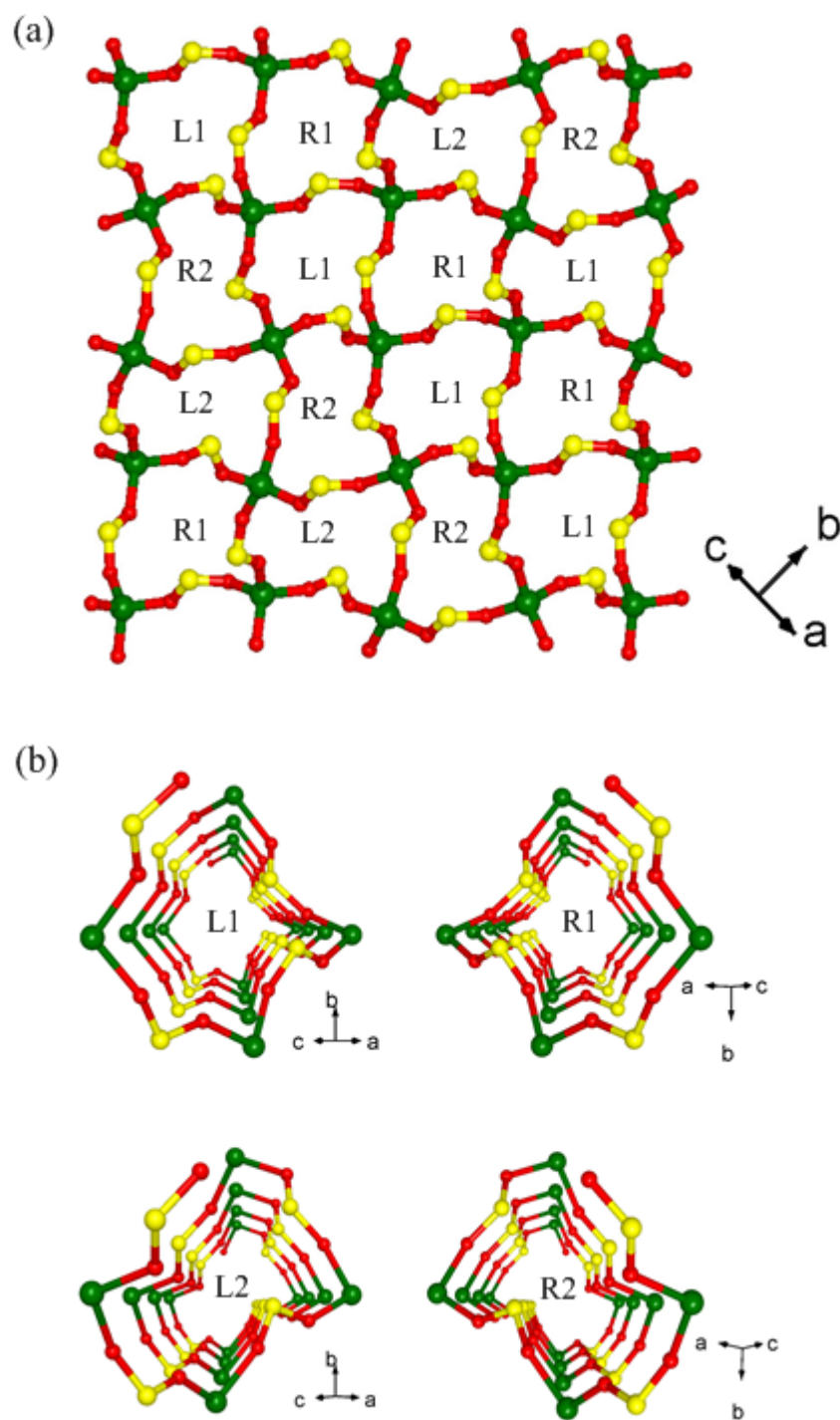


Fig. S3. (a) Ball-stick framework and helical representations of helical channels viewed along the [101] direction; (b) the corresponding perspective view of four kinds of helical channels. Template cations and terminal O atoms (or hydroxyls) are omitted for clarity. Zn, P and O atoms are displayed as green, yellow, and red balls, respectively.

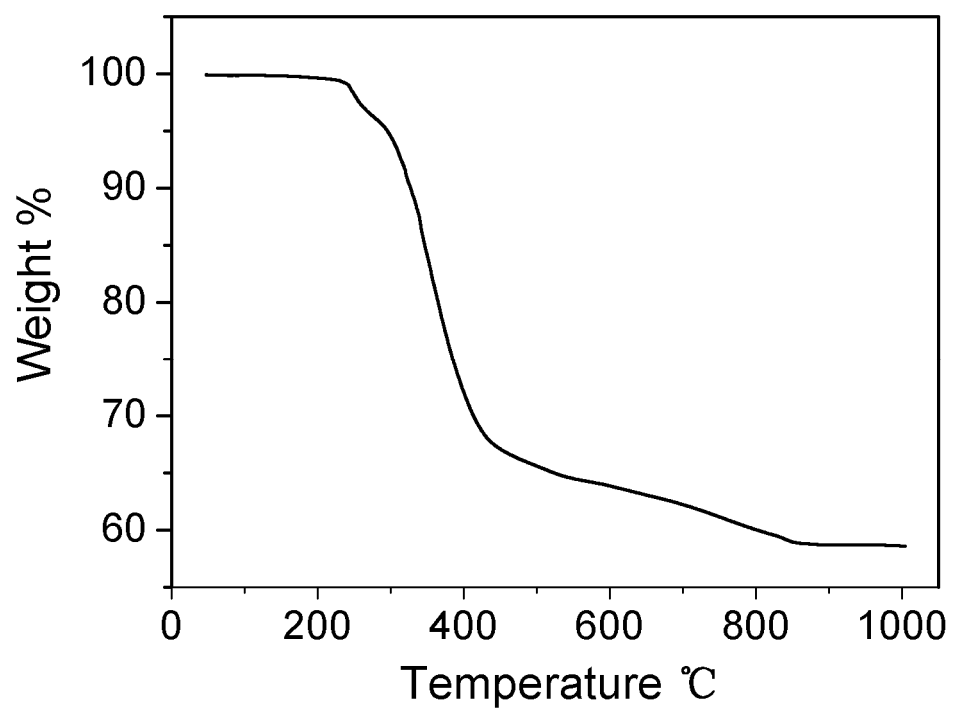


Fig. S4 TGA curve for NIS-4.

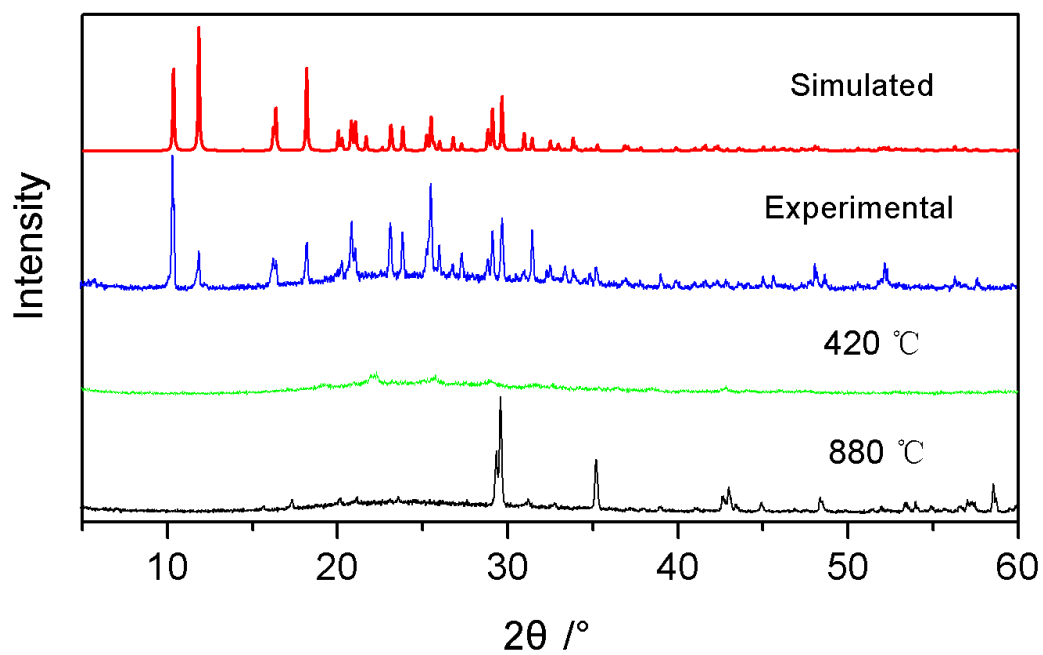


Fig. S5 PXR D patterns for NIS-4.