

## Supporting Information for:

### **Mn<sub>2</sub>TeO<sub>6</sub>: a distorted inverse trirutile structure.**

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Figure S1 (color online): Description of the  $\Sigma_3$  distortion components (polarization vectors) of all atoms in Mn<sub>2</sub>TeO<sub>6</sub>, using projections evidencing the two octahedra chains separately for simplicity. The direction and amplitude of the atomic displacements are schematized by arrows.

Figure S2 (color online): Projection along [001] of the RT structure of Mn<sub>2</sub>TeO<sub>6</sub>, deduced from the X-ray data refinement results, highlighting the oxygen atomic arrangement along *b* (blue ellipses) (for comparison with Figure 9d).

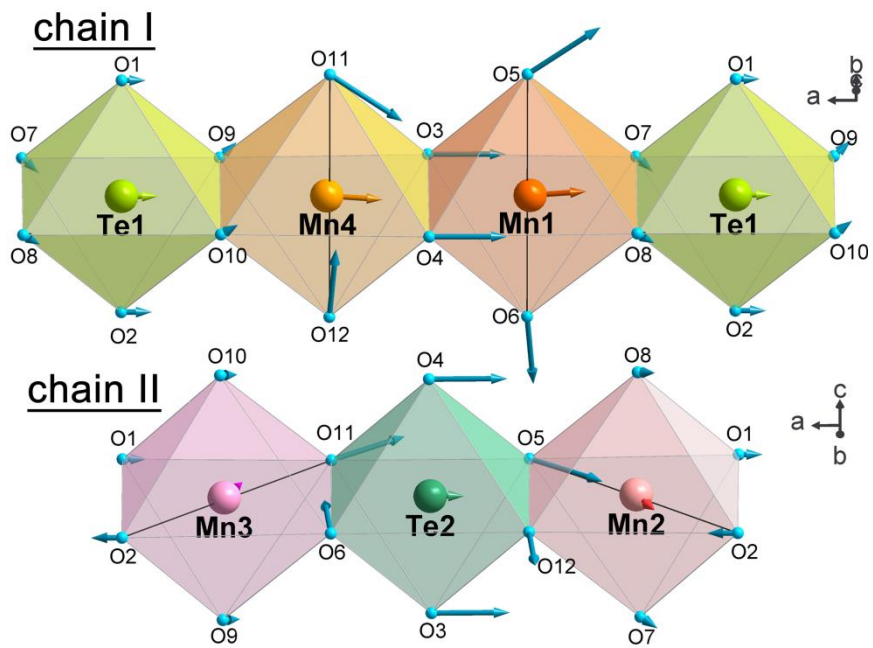


Figure S1

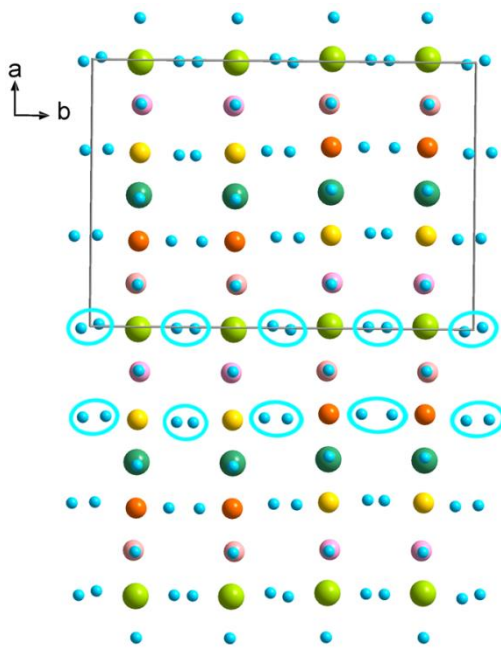


Figure S2