

## 3. ADVANCED TOPICS ON SPACE-GROUP SYMMETRY

selenium are incompatible with the space group of left-handed selenium.

The case of selenium can be contrasted to that of NaP (details for NaP are given at the end of Section 3.5.3.2 in the *Example for case I*). Crystalline NaP contains one kind of enantiomeric, helical  $(P^-)_\infty$  ions that are either  $4_1$  or  $4_3$  helices (rod groups  $\mathcal{H}_{4_1,22}$  and  $\mathcal{H}_{4_3,22}$ , respectively). In this case the space group  $P2_12_12_1$  is a non-enantiomorphic (achiral) Sohncke space group. It is therefore compatible with either of the two different NaP enantiomorphs.

The building blocks of  $\text{NaClO}_3$ , namely spherical  $\text{Na}^+$  ions and pyramidal  $\text{ClO}_3^-$  ions (point group  $3m$ ), are not chiral, but their arrangement in the crystal is chiral. Both enantiomorphs adopt the same non-enantiomorphic Sohncke space group  $P2_13$  (Abrahams & Bernstein, 1977; Bruke-Laing & Trueblood, 1977).

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