

1.89: Pseudo symmetry

A crystal space can in general be divided in N components S_1 to S_N . When a coincidence operation $\phi(S_i) \rightarrow S_j$ brings the i -th component S_i to coincide with the j -th component S_j , for any i and j , ϕ is a symmetry operation of the space group.

Sometimes, ϕ brings S_i close to, but not exactly on, the position and orientation of S_j ; in this case the operation mapping S_i onto S_j is not crystallographic but the linear and/or rotational deviation from a space group operation is limited. For this reason, it is preferable to describe the crystallographic operation ϕ as a **pseudo symmetry operation**.

Pseudo symmetry operations for the lattice play an important role in twinning, namely in the case of twinning by pseudomerohedry and twinning by reticular pseudomerohedry.

This page titled [1.89: Pseudo symmetry](#) is shared under a [CC BY 4.0](#) license and was authored, remixed, and/or curated by [Online Dictionary of Crystallography](#) via [source content](#) that was edited to the style and standards of the LibreTexts platform.