

polytypic transition

A transition of a crystalline structure into one or more forms which differ in the way identical layers of atoms are stacked.

Example: ZnS consists of two identical close packings, one of Zn atoms, the other S atoms, with the one displaced to the other along the *c*-axis through one-quarter of the layer spacing. In sphalerite-type ZnS the layers have the face-centred-cubic (ABC ABC) sequence, in wurtzite-type ZnS they have the hexagonal-close-packed (AB AB) sequence. The transition of sphalerite-type ZnS to wurtzite-type ZnS occurs at 1297 K.

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