

8.1: Preferred orientation

Preferred orientation arises when there is a stronger tendency for the crystallites in a powder or a texture to be oriented more one way, or one set of ways, than all others. An easily visualized case of preferred orientation is that which results when a material with a strong cleavage or growth habit is packed into a specimen or when a metal sheet is obtained by rolling.

Preferred orientation should not be confused with 'graininess' or 'inadequate powder average', in which there are so few crystallites being irradiated that the number of correctly oriented crystallites varies significantly from reflection to reflection of different types.

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