
Stirring Effects on Properties of Al Goethite Formed from Ferrihydrite

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Abstract: Minerals in surface environments form in both turbulent and non-turbulent systems. This study compares the properties of Al goethite formed from ferrihydrite at 60 ° C in 0.3 M KOH with and without mechanical stirring. Compared to the static system, stirring increased crystal order and needle thickness, decreased unit cell edge length *a*, but not *b* and *c*, reduced the separation between the 2 OH-bending vibrations, increased Al substitution and promoted hematite formation.

Key Words: Al Goethite • Crystallinity • Hematite • Stirring • Unit Cell Parameters

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