

**Synthesis of thermally stable micro spherical chi-alumina by thermal decomposition of aluminum isopropoxide in mineral oil**

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**Abstract:** Thermal decomposition of aluminum isopropoxide (AIP) in mineral oil at 250-300 degreesC over a 2 h duration results in X-alumina powders having high thermal stability. The mechanism of the process involves the formation of amorphous complex before further decomposition takes place. Phase transformation of the obtained products was also investigated. It was found that X-alumina synthesized by this method transformed directly to alpha-alumina at temperature higher than 1000 degreesC. (C) 2003 Elsevier Science B.V. All rights reserved.

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