

TiO₂ Nanoparticle Production with Flame Synthesis Method by using Flash Boiling Spray - Relation between Injection Conditions and Nanoparticle Physical Properties -

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Abstract

The authors proposed a novel nano size particle production system, Flashing Spray Flame Nanoparticle Synthesis Method, by using flash boiling spray. In this method, the mixed solution is used to improve the vaporization characteristics of the precursor. The mixed solution is supplied directly to the chamber as flash boiling spray by an injector. The nanoparticles are produced by flame thermal energy. In this paper, we investigated the relation between TiO₂ nanoparticle physical properties and injection conditions. As a result, TiO₂ particle was agglomerated by decreasing injection frequency.

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