

総説論文

ソルボサーマル反応による環境調和機能セラミックスの創製

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Synthesis of Environmentally Friendly Ceramic Materials by Solvothermal Reactions

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Solvothermal reactions are designated as the reactions which use high temperatures and/or high pressure solvents. It is possible to control the acid-base reaction rate, morphology and agglomeration of the products, i.e., well dispersed nanoparticles with high crystallinity can be obtained by solvothermal reactions. Therefore, solvothermal reactions are expected to be used to generate environmentally friendly functional ceramic materials. Actually, various functional ceramic materials, such as high performance near infrared shielding materials, UV-shielding materials, automobile exhaust gas cleaning catalysts, etc. have been fabricated by solvothermal reactions.

Key Words : Environmentally friendly, Ceramic materials, Solvothermal reactions, Near infrared shielding, UV shielding, Automobile exhaust gas cleaning