Office of technology transfer

LEHIGH UNIVERSITY

Novel Fabrication Method for Micro-Porous Alumina-Based Ceramics

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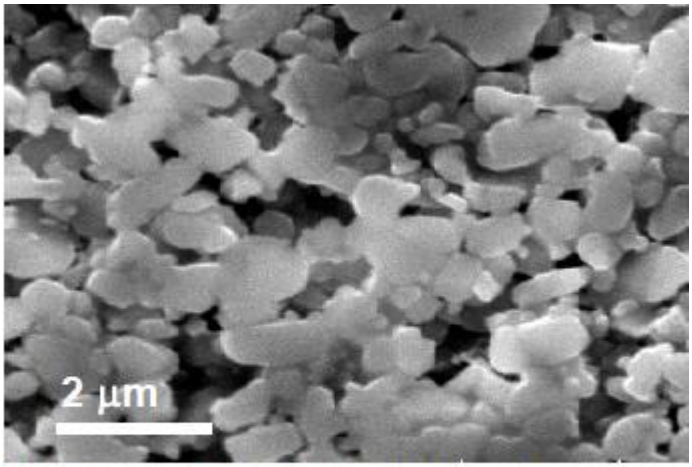
Overview

The given invention provides a low-cost novel fabrication method for micro-porous Al2O3 and its composites. Potential applications are expected in the aerospace industry as wick materials with suitable morphological characteristics (porosity ~ 50%, pore size ~ 1 micron) and sufficient strength. They could also be used as a catalyst support in the chemical industry.



Al_2O_3-5wt%SiO_2-5wt% carbonate
1300 °C, 1 h, (62.4 %TD)
PowerPoint from Composite Material Engineering Technology (COMET) for Spacecraft Applications Workshop, October 16th-17th, 2007

Advantages

- No special processing technique or equipment is required
- Net-shape forming of micro-porous Al2O3 and Al2O3-containg ceramics can be fabricated
- Low cost

Applications

- Wick materials in aerospace industry
- Catalyst support for chemical industry

Status of Intellectual Property

A US provisional patent has been filed for this technology.

Lehigh ExpertNet

- **Helen M Chan -** http://expert1.cc.lehigh.edu/LehighExperts/ExpertDetail.aspx?ExpertID=70122032

Licensing Opportunities

- Exclusive
- Non-exclusive
- Research Sponsorship
- Product Development Partnerships (PDP)

Lehigh Case # 060308-01