



TECHNOLOGY

High Surface Area Oxide Powders by Coprecipitation

OVERVIEW

Nanosized oxide materials with high surface area are of interest for a wide range of applications including gas sensors, abrasives, electrode materials for solid oxide fuel cells, etc. Various solution based coprecipitation methods for synthesizing these nanosized oxide materials have been reported. These conventional coprecipitation methods use chemicals such as ammonium hydroxide and hydrazine hydrate, urea, etc as the precipitation agents. However, each of these conventional methods has the disadvantage that hard agglomerates are formed.

Researchers at the University of Maryland have come up with a novel coprecipitation method for the preparation of nanocrystalline oxide particles with uniform size distribution. The advantages of the above novel coprecipitation method are as follows:

- 1) Precipitation occurs at room temperature.
- 2) As synthesized materials are crystalline.
- 3) No further annealing is needed for crystallization.
- 4) Particle size ranging from 1.5-3 nm.
- 5) Relatively inexpensive.
- 6) No formation of hard agglomerates during preparation.

For additional information, please contact the Office of Technology Commercialization, University of Maryland College Park, via phone at (301) 405-3947 or e-mail at otc@umd.edu.

CONTACT INFO

UM Ventures
0134 Lee Building
7809 Regents Drive
College Park, MD 20742
Email: umdtechtransfer@umd.edu
Phone: (301) 405-3947 | Fax: (301) 314-9502

Additional Information

INSTITUTION

University of Maryland, College Park

CATEGORIES

- Materials

EXTERNAL RESOURCES

PS-2007-113