ELECTRONICS, IT AND TELECOMMS,INDUSTRIAL MANUFACTURING, Technology Offer

High quality and innovative ceramic oxide powders and value added products for new energy technologies.

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Abstract

A Norwegian SME is offering innovative high quality ceramic oxide powders and value added products for new energy technologies such as ceramic fuel cells (SOFC), dense oxygen permeable membranes, proton conducting membranes, catalysts and batteries. Tailor-made nanosized ceramic powders according to requested composition and quality. The powders are delivered ready for further processing, further processing and characterisation can also be included. The SME is looking for techn. cooperation.

Description

A Norwegian SME uses spray pyrolysis for fabrication of high quality multi component ceramic oxide powders. A wide variety of high purity, chemically homogenous powders of narrow particle size distribution can be produced by this method. With this technology it is possible to tailor complex oxides in relative large quantities with high quality, excellent for further processing. Areas of use are within the sectors of lead-free electroceramics and energy technology ceramics including applications in fuel cells, membranes, electrodes or lead free electroceramics.

The benefits of the technology used are:
- controlled particle size (nano to submicron)
- narrow particle size distribution
- tuneable surface area
- homogeneous composition
- high purity
- good flow properties

Phase purity is always ensured by x-ray analysis. Additional optional powder characterisation is scanning electron microscopy analysis, BET surface analysis, particle size analysis, thermal analysis such as thermogravimetric analysis and dilatometry.

The Norwegian SME is looking for industrial partners and businesses in need of a commercial scale supplier of high quality ceramic powders.

Innovations and advantages of the offer

The materials are fabricated with a method enabling large scale production with high quality and reproducibility. High quality powders have narrow particle size distribution, high purity and homogeneity, controlled particle size around 100 nm, good flow properties. Delivery size from 300 g up to 15 kg and more.

Current and Potential Domain of Application

Solid oxide fuel cells, dense gas separation membranes, lead free electroceramics.

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