Co-operation profile details from Enterprise Europe Northern Ireland

11 DE 1699 3NPX - Zinc Silicate Microcrystals
Technology collaboration OFFER

Abstract
A German university has developed an invention concerns a simple process for the large-scale production of high-porosity zinc silicate microcrystals using ionized liquids. The invention has a variety of applications, particulary for catalysis in the chemical industry, but also in medical applications. The university is looking for final users and partners for implementation of the product and further development. The invention can be used under a national or international license agreement.

Description
The invention concerns a simple process for the large-scale production of high-porosity zinc silicate microcrystals using ionized liquids.
Tetrabutylammonium hydroxide, a strongly hydrated ionized liquid, reacts with zinc silicate in a glass vessel brought to high temperature. The reaction produces highporosity zinc silicate microcrystals.
The industry already uses various silicates as catalysts or molecular filters. The silicates produced using the invention are partially catalytic and therefore suitable for heterogeneous catalysis.
The invention's main asset is its simplicity for producing zinc silicate microcrystals. It is compatible with any types of silicates and can transform them into catalytic high-porosity micro-crystals.
The invention is suitable for producing zinc silicates with a complex morphology that can be freely configured using two parameters, temperature and reaction time. The resulting hemimorphite can be converted by calcination into willemite.
The invention is thus a good solution for coating glass with a porous film usable as catalyst.

Current and Potential Domain of Application: The invention has a variety of applications, particularly for catalysis in the chemical industry. Moreover, because hemimorphite is a sensor material, the invention is also appealing for medical applications such as sonography devices.

Target partner expertise sought:

- Type of partner sought:
- Specific area of activity of the partner: - Type of partner sought: Industry

- Specific area of activity of the partner: catalysis in the chemical industry, medical applications

- Task to be performed by the partner sought:
implementation of the product
- Task to be performed by the partner sought:

Key information:

Country of origin: GERMANY

Listed under: Chemistry & Chemical Engineering

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To find out more, contact Enterprise Europe Northern Ireland on 02890 698824 or email us at enterprise.europe@investni.com quoting ref 11 DE 1699 3NPX