

Technology Offer

Method of obtaining nanopowders with an antibacterial character

Summary

A Romanian research team has developed a new method for obtaining nanopowders with an antibacterial character, suitable for the paint industry. Industrial and research partners are sought for, in order to jointly design and build an industrial installation for producing nanopowders. The Romanian research team offers commercial agreement with technical assistance.

Creation Date	09 June 2015
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Reference	TORO20150609002

Details

Description

A Romanian research team has developed a method for obtaining nanopowders with an antibacterial character, suitable for the paint industry.

The process of obtaining nanopowders with antibacterial character of Ag / ZnO (0.1 wt.% doping component) takes place in two stages:

1. precursor preparation by using the co-precipitation method;
2. the formation of silver doped zinc oxide nanopowders, through calcination treatment. The silver concentration must be small so as not to affect the white color of the powders.

The method of obtaining nanopowders with antibacterial character has already been tested under laboratory conditions by the Romanian research team, representing the subject of a Romanian patent due to be granted.

The Romanian research team is looking for industrial and research partners, in order to design and build an industrial installation for producing nanopowders.

Advantages and Innovations

The materials thus obtained have special antibacterial properties and a longer lifespan, as compared to corresponding products commonly used, the destructive action of microorganisms has been eliminated.

Advantages of the proposed method:

- utilization of cheap and commonly used precursors;
- reduced costs related to nanopowders obtaining;
- low labor consuming;
- no complicated and difficult to use installations needed;
- excellent quality of the obtained powder, with no impurities, with high degree of homogeneity and very fine grained;
- the technological parameters are easily controlled and the working conditions are friendly (pH neutral or slightly alkaline, diluted solutions, reasonable temperatures, etc.);

- very rich range of nano-particulate materials that can be obtained, in well-defined stoichiometric ratios.

Stage of Development

Under development/lab tested

IPR Status

Patent(s) applied for but not yet granted

Comment Regarding IPR status

Patent applied for at the State Office for Inventions and Trademarks, in force on the territory of Romania.

Keywords

Technology

02007003

Ceramic Materials and Powders

03004003

Colours, dyes related to Chemical Technology

Market

08001017

Industrial chemicals

NACE

M.72.1.9

Other research and experimental development on natural sciences and engineering

Network Contact

Issuing Partner

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Open for EOI : **Yes**

Dissemination

Send to Sector Group

Nano- and Microtechnologies

Client

Type and Size of Organisation Behind the Profile

R&D Institution

Year Established

0

Already Engaged in Trans-National Cooperation

No.

Languages Spoken

English

Client Country

Romania

Partner Sought

Type and Role of Partner Sought

- Type of partner sought: industry and institutes
- Specific area of activity of the partner: nanomaterial production.
- Task to be performed by the partners sought: to jointly design and assembly an industrial production installation for nanopowders. Technical assistance offered by the Romanian research team.

Type and Size of Partner Sought

SME 11-50,R&D Institution

Type of Partnership Considered

Commercial agreement with technical assistance
Research cooperation agreement