

Title of the invention:

Method and device for the deposition of nanoparticles on the inner wall of the capillary polymer using ultrasonic waves

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Summary:

The invention provides a method and an apparatus for coating of the inner wall of teflon capillary tubing with nanoparticles (e.g. of metals or their oxides). Using this method the inner surface of tubing can achieve chemical or biological activity.

Advantages / innovative aspects:

- Slick and inactive surface coated with the catalyst.
- Persistent nanoparticles in coating.
- The higher temperature and pressure is not required.
- A solvent other than water is not required.

Keywords:

Teflon, capillary, photocatalyst, layer, microreactor

Use:

The preparation of teflon capillary tubing for microfluidic and photocatalytic purification of water. Antibacterial filter. A photocatalytic synthesis of organic compounds in the microfluidic systems. Medical analytics.

State of the progress:

stage of development

Intellectual property rights:

Patent application no. P.420175 – 13.01.2017 – Poland

Expected cooperation:

contract of sale, licence agreement, cooperation agreement

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<http://photo-catalysis.org/displayPublication.php?id=881>