

The Opportunity

Researchers at the National Institute of Advanced Industrial Science and Technology (AIST) have successfully developed porous ceramic thin films with micropores of uniform size.

Product Applications

Porous ceramic thin films are used in numerous products such as catalysts and catalyst supports.

Particularly when the ceramic of these films is *titanium oxide*, the film is particularly useful as a photocatalyst for decomposing and deodorizing harmful and unpleasant odors.

Intellectual Property

Kazumi Kato and Hiroshi Taoda are lead inventors on the primary AIST intellectual property, as protected by US **6,284,314**. Key features include:

- Deposition of a layer of a ceramic sol containing polyethylene glycol or polyethylene oxide is followed by heating and firing the substrate to form a catalyst or catalyst support.
- The ceramic sol is produced by hydrolyzing a metal alkoxide in the presence of an alcohol amine.
- Dozens of metals may be selected including those from Group IIA, IIA, VIII, IVB, VB, VIB, and VIIB. (See Claim 1.)
- Enables use of a variety of coating methods -- dip coating, spin coating, brushing, or spraying.
- Substrate materials are not critical; may be selected from among many shapes; e.g. microspheres, and many materials such as glass, ceramics, concrete, and metals.



Organizational Capabilities

AIST (National Institute of Advanced Industrial Science and Technology) is Japan's extensive public research organization established in 2001.

Comprised of more than 50 autonomous research units in various innovative research fields and employs about 2500 research scientists and well over 3000 visiting scientists.

AIST Home Page:

www.aist.go.jp/aist_e/about_aist/index.html

For More Information

AIST is seeking to license this technology and provide assistance with its commercialization success to qualified organizations.

Consideration will be provided to a range of financial, strategic, and commercial investment options.

Certain circumstances will warrant consideration for nominal funding from AIST.

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