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Has received an application for a patent for a new and useful invention. The title and description of the invention are enclosed. The requirements of law have been complied with, and it has been determined that a patent on the invention shall be granted under the law.

Therefore, this

United States Patent

Grants to the person(s) having title to this patent the right to exclude others from making, using, offering for sale, or selling the invention throughout the United States of America or importing the invention into the United States of America, and if the invention is a process, of the right to exclude others from using, offering for sale or selling throughout the United States of America, or importing into the United States of America, products made by that process, for the term set forth in 35 U.S.C. 154(a)(2) or (c)(1), subject to the payment of maintenance fees as provided by 35 U.S.C. 41(b). See the Maintenance Fee Notice on the inside of the cover.

Michelle K. Lee

Director of the United States Patent and Trademark Office



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Lu et al.

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(54) PHOTOCATALYTIC STRUCTURE AND METHOD FOR MANUFACTURING PHOTOCATALYTIC SOL-GELS

(58) Field of Classification Search
Note

See application file for complete search history.

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 266 days.

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(21) Appl. No. 14/228,510

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(57) ABSTRACT

The invention provides a photocatalytic structure comprising a carrier and a photocatalytic film formed on the carrier, in which the photocatalytic film comprises titanium dioxide with shape of rhombus particles. The titanium dioxide particle has anatase structure. The titanium dioxide particle is rhombus with a major axis 10-15 nm and minor axis 3-6 nm. The photocatalytic film which is formed by titanium dioxide with shape of rhombus particles has a high overall photocatalytic activity so that the effects of stainproofing and self-cleaning can be improved. The invention also relates to a method for manufacturing photocatalytic sol-gels.

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