

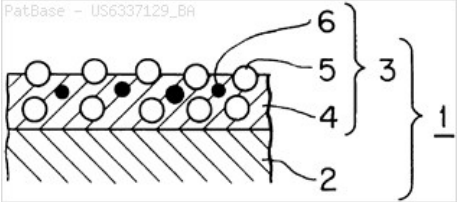
Diego Gonzalez

Title: ANTIFOULING MEMBER AND ANTIFOULING COATING COMPOSITION

Abstract: Source: US6337129B Disclosed is a member having an antifouling surface on which the so-called "stains," such as deposits and contaminants, are less likely to be deposited. The surface of the member has both a hydrophobic portion, and a hydrophilic portion induced by a photocatalyst, the hydrophobic portion and the hydrophilic portion being present in a microscopically dispersed and exposed state on the surface. More specifically, according to a first aspect of the present invention, there is provided a member comprising: a substrate; and a surface layer provided on the substrate, the surface layer comprising a photocatalytic oxide, a silicone resin or silica, and a water-repellent fluororesin, the silicone or silica and the water-repellent fluororesin being present in a microscopically dispersed and exposed state on the outermost surface of the surface layer. According to a second aspect of the present invention, there is provided a member comprising: a substrate; and a surface layer provided on the substrate, the surface layer comprising a hydrophobic resin and a photocatalytic oxide, the hydrophobic resin and the photocatalytic oxide being present in a microscopically dispersed and exposed state on the outermost surface of the surface layer, the photocatalytic oxide being self-hydrophilified or functioning to hydrophilify the photocatalytic oxide still remaining unhydrophilified present around the photocatalytic oxide by photocatalytic action created in response to photoexcitation. In this surface where the hydrophobic portion and the hydrophilic portion are present adjacent to each other, a hydrophilic deposit having affinity for the hydrophilic portion does not have affinity for the adjacent water-repellent portion. On the other hand, a hydrophobic deposit having affinity for the hydrophobic portion does not have affinity for the adjacent hydrophilic portion. Therefore, both the hydrophilic deposit and the hydrophobic deposit cannot be deposited on the surface of the member, and, even when deposited on the surface of the member, are unstable and hence are easily removed, permitting the surface of the member to be kept clean.

Classifications:

International (IPC 8-9): A47B81/04 A47F3/04 A47G1/00 A47G19/00 A47J43/28 A47K3/02 A61F9/02 A61J1/10 A61L27/00 A61L29/00 A61L29/14 A61L31/00 A61L33/00 A63B33/00 B01D53/86 B01J35/00 B01J35/02 B05D5/00 B05D5/08 B05D7/24 B08B17/02 B08B17/06 B32B15/04 B32B27/00 B32B27/12 B32B27/18 B32B27/20 B32B27/30 B32B33/00 B32B5/30 B32B9/00 B60B3/00 B60J1/00 B60R1/06 B60S1/02 B60S1/60 B62J99/00 C03C17/23 C03C17/25 C03C17/30 C03C17/32 C08J7/00 C08K3/08 C08K3/22 C08K3/24 C08K3/34 C08K9/06 C08L101/12 C08L27/12 C08L27/18 C08L27/22 C08L77/02 C08L83/04 C09D1/00 C09D127/04 C09D127/12 C09D183/02 C09D183/04 C09D183/10 C09D5/00 C09D5/14 C09D5/16 C09D7/00 C09D7/12 C09K3/00 C09K3/18 C09K3/22 E01D19/00 E01D19/10 E01D2/00 E01F15/00 E01F15/02 E01F15/04 E01F15/08 E01F8/00 E01F8/02 E01F9/00 E04B1/62 E04D1/28 E04D13/00 E04F13/08 E04H15/54 E06B3/02 E06B9/24 E06B9/386 E21D11/04 F21S2/00 F21V3/04 F24C15/12 F25D21/04 F28F1/24 F28F13/18 F28F19/04 G02B5/08 G02C11/08 G02C7/02 G02C7/04 H01B17/50 H01L31/04 H01Q1/02 H01Q1/40 (Advanced/Invention); A01J37/02 B05D5/00 B05D7/24 C08L27/18 C09D1/00 C09K3/00 C09K3/18 E01D101/00 E01D101/40 F24C15/12 (Advanced/Non-invention); A47B81/00 A47F3/04 A47G1/00 A47G19/00 A47J43/00 A47K3/02 A61F9/02 A61J1/10 A61L27/00 A61L29/00 A63B33/00 B01D53/86 B01J35/00 B05D5/00 B05D5/08 B05D7/24 B08B17/00 B32B15/04 B32B27/00 B32B27/12 B32B27/18 B32B27/20 B32B27/30 B32B33/00 B32B5/22 B32B9/00 B60B3/00 B60J1/00 B60R1/06 B60S1/02 B60S1/56 B62J99/00 C03C17/23 C03C17/25 C03C17/30 C03C17/32 C08J7/00 C08K3/00 C08K9/00 C08L101/00 C08L27/00 C08L77/00 C08L83/00 C09D1/00 C09D127/02 C09D127/12 C09D183/02 C09D183/04 C09D183/10 C09D5/00 C09D5/14 C09D5/16 C09D7/00 C09D7/12 C09K3/00 C09K3/18 C09K3/22 E01D19/00 E01D2/00 E01F15/00 E01F15/02 E01F8/00 E01F8/02 E01F9/00 E04B1/62 E04D1/28 E04D13/00 E04F13/08 E04H15/32 E06B3/02 E06B9/24 E06B9/38 E21D11/04 F21S2/00 F21V3/00 F24C15/12 F25D21/04 F28F1/24 F28F13/00 F28F19/00 G02B5/08 G02C11/00 G02C7/02 G02C7/04 H01B17/00 H01L31/04 H01Q1/00 H01Q1/02 (Core/Invention); B01J37/00 C08L27/00 F24C15/12 (Core/Non-invention)



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Family:

Publication number	Publication date	Application number	Application date
AT443117 E	20091015	AT19970924296T	19970602
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CN1927474 A	20070314	CN200610093452	19970602
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DK0903389 T3	20100118	DK19970924296T	19970602
EP0903389 A1	19990324	EP19970924296	19970602
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Probable Assignee: TOTO LTD

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Inventor(s): HAYAKAWA MAKOTO TOTO LTD ; MACHIDA MITSUYOSHI TOTO LTD ; WATABE TOSHIYA HAYAKAWA MAKOTO MACHIDA MITSUYOSHI ; WATANABE TOSHIYA TOTO LTD

Agent(s): GRUENECKER KINKELDEY STOCKMAIR AND SCHWANHAEUSSER ANWALTSSOZIETAET; GRUENECKER KINKELDEY STOCKMAIR AND SCHWANHAEUSSER

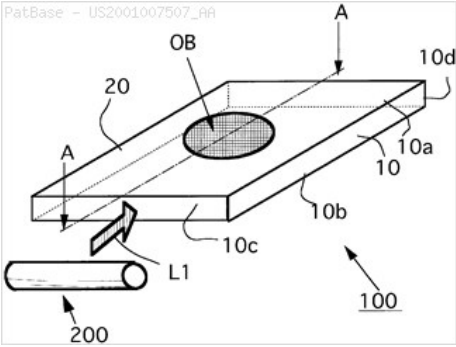
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Title: PHOTOCATALYTIC PANEL AND METHOD FOR ACTIVATING SAME

Abstract: Source: US2001007507A A photocatalytic panel or pane and a method for activating the same are disclosed. The photocatalytic panel includes a transparent substrate having major surfaces parallel with and opposed to each other and an edge surface; a photocatalytic film formed on at least one of the major surfaces and a light source for exciting the photocatalytic film. Light from the light source enters the substrate from a vicinity of the edge surface (or a peripheral portion of the substrate) and then is reflected totally within a laminate of the substrate and the photocatalytic film. The method includes the steps: preparing the photocatalytic panel, entering light from the light source into the substrate from a vicinity of the edge surface (or the peripheral portion and reflecting the light within the laminate in accordance with total internal reflection, thereby the photocatalytic film is excited. Therefore, the photocatalytic film can effectively be activated via the substrate to oxidize/reduce substances in contact with the photocatalytic film.

Classifications:

International (IPC 8-9): A61L9/00 B01D53/86 B01J19/12 B01J19/24 B01J35/00 B01J35/02 C02F1/32 C02F1/72 F21V8/00 G01N21/77 G02B6/02 G02B6/26 (Advanced/Invention); A61L9/00 C02F1/30 C02F1/32 G02B6/00 G02B6/28 (Advanced/Non-invention); A61L9/00 B01D53/86 B01J19/12 B01J19/24 B01J35/00 C02F1/32 C02F1/72 F21V8/00 G02B6/02 G02B6/26 (Core/Invention); A61L9/00 C02F1/30 G02B6/00 G02B6/28 (Core/Non-invention)
International (IPC 1-7): A61L9/00 B01D53/86 B01J19/08 B01J19/12 B01J19/24 B01J35/02 C02F1/32 C02F1/72 E06B7/12 G02B6/02 G02B6/16 G02B6/26 G02F1/03 G02F1/07
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Family:

Publication number	Publication date	Application number	Application date
JP2003334422 A2	20031125	JP20020143727	20020517
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JP9225295 A2	19970902	JP19960080434	19960227
US2001007507 AA	20010712	US20010770933	20010124
US2003026585 AA	20030206	US20020225115	20020819
US6108476 A	20000822	US19980146915	19980902
US6238630 BA	20010529	US19980146917	19980902
US6501893 BA	20021231	US20000644418	20000821
US6771866 BB	20040803	US20020225115	20020819

Priority:

JP19960080434 19960227 US19980146917 19980902 US19980146915 19980902
US20020225115 20020819 US20010770933 20010124 JP20020143727 20020517
US20000644418 20000821

Probable Assignee: IIMURA KEIJI

Assignee(s): (std): IIMURA KEIJI

Inventor(s): (std): IIMURA KEIJI

Title: Indoor air quality module including a shield to minimize the leakage of **ultraviolet light**

Abstract: Source: US2005191205A An indoor **air** quality module includes an **ultraviolet light** source located between two titanium dioxide coated honeycombs. When photons of **ultraviolet light** are absorbed by the titanium dioxide coating, reactive hydroxyl radicals are formed that attack and oxidize contaminants in the air to water, carbon dioxide, and other substances. A shield is positioned outside each of the honeycombs to minimize the direct leakage of **ultraviolet light** from the module. The height of each shield depends on the distance between each shield and the **ultraviolet light** source and the maximum angle that **ultraviolet light** can pass through the honeycomb without any reflection on the surface of the honeycomb. Any **ultraviolet light** that directly leaks from the honeycomb contacts the shield and reflects towards honeycomb, minimizing the direct leakage of **ultraviolet light** from the module and increasing the photocatalytic rate of the contaminants.

Classifications:

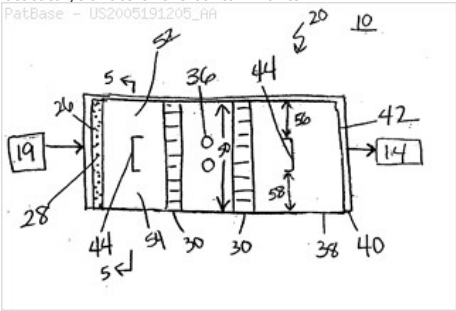
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International (IPC 1-7): A61L2/00 A61L9/00 A62B7/08

CPC: A61L9/20 B01D53/8668 B01D53/8675 B01D2255/20707 B01D2255/802 B01D2257/708 F24F3/166 F24F2003/1667

European: A61L9/20 B01D53/86P B01D53/86Q2 F24F3/16C L01D255/207A L01D255/80B L01D257/708 R24F3/16D1

US: 422/1 422/121 422/121S 422/186.3 422/186.300S 422/1S 422/24 422/24P 422/306 422/306S 422/4 422/4S 422/5 422/5S



Family:

Publication number	Publication date	Application number	Application date
EP1722828 A2	20061122	EP20050712978	20050207
EP1722828 A4	20070606	EP20050712978	20050207
US2005191205 AA	20050901	US20040789699	20040227
WO05091787 A2	20051006	WO2005US03742	20050207
WO05091787 A3	20060908	WO2005US03742	20050207

Priority:
US20040789699 20040227 WO2005US03742 20050207

Probable Assignee: CARRIER CORP

Assignee(s): (std): CARRIER CORP

Assignee(s): OCCHETTA MARCO ; USLENGHI FEDERICO ; ANTONIONE FRANCESCO

Inventor(s): (std): USLENGHI FEDERICO ; OCCHETTA MARCO ; ANTONIONE FRANCESCO

Agent(s): CARLSON GASKEY AND OLDS PC

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SM SN SY SZ TD TG TJ TM TN TR TT TZ UA UG UZ VC VN YU ZA ZM ZW

Title: EMISSION CLEANING INSTALLATION AND CLEANING METHOD FOR EMISSIONS

Abstract: Source: US2002189930A The present invention relates to an emission cleaning installation which is easy to connect continuously even to existing large-scale incineration furnaces and which is able to oxidatively break down and eliminate environmental pollutants contained in the emissions, for example dioxins, dibenzofurans, coplanar PCBs, nitrogen oxides (NOx) and the like without temperature control of the emission temperature, by the photocatalytic action of the photocatalyst, and to a method for emission cleaning and elimination which uses the abovementioned emission cleaning installation. The emission cleaning installation of a preferred exemplary embodiment is provided with a cylinder body, which is **ultraviolet light** permeable and through which the emissions pass, with photocatalyst pellets, which are accommodated in the interior of the abovementioned cylinder body and come into contact with the abovementioned emissions, and with a light source, which photoexcites the abovementioned photocatalyst pellets. A further emission cleaning installation of a preferred exemplary embodiment is provided with a filter container, which continuously adjoins the emission supply duct of the incineration furnace, with a connecting component between them, and the interior of which is filled with filtration materials, with a photocatalyst container, which continuously adjoins the corresponding filter container in a freely removable manner via or without a heat-resistant component and the interior of which is filled with photocatalyst pellets, and with a component for expelling gases, which continuously adjoins the corresponding photocatalyst container, the abovementioned photocatalyst container being provided with a plurality of cylindrical housings, which transmit **ultraviolet light** through the interior of the corresponding photocatalyst container, and with a light source, which is fitted in each housing and radiates the exciting light for the abovementioned photocatalyst pellets.

Classifications:

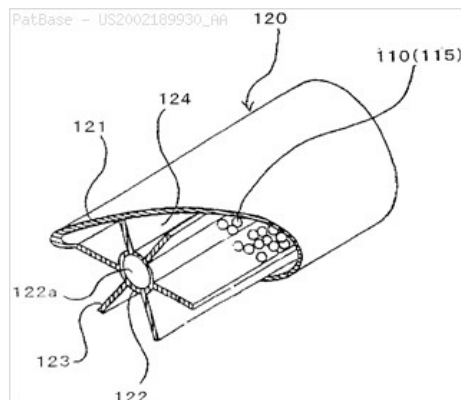
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CPC: B01D53/885 B01D255/802

European: B01D53/88B L01D255/80B

US: 204/157.3 204/157.300S 204/158.2 204/158.200P 422/121 422/186 422/186.3 422/186S 588/227

**Family:**

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DE10049595 A1	20010523	DE20001049595	20001006
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US2003000824 AA	20030102	US20020101047	20020318
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US6838059 BB	20050104	US20020101047	20020318

Priority:

JP19990290579	19991013	JP19990290582	19991013	JP19990360219	19991220
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US20020101047	20020318				

Probable Assignee: TAODA HIROSHI MR

Assignee(s): (std): AGENCY IND SCIENCE TECHN ; AGENCY OF IND SCIENCE AND TECHNOL ; AIZAWA KAZUU ; NAT INST OF ADV IND AND TECHNOL ; NAT INST OF ADVANCED IND AND TEC ; NAT INST OF ADVANCED IND SCIEN ; NATIONAL INST OF ADVANCED INDUSTRIAL SCIENCE AND TECHNOLOGY ; SEKRETAER DER AGENTUR DER IND ; YAMADA IND TOKIO TOKYO ; NATL INST OF ADVANCED IND SCIE ; TOUGEDA HIROSHI ; YAMADA IND KK ; TAODA HIROSHI ; YAMADA IND KABUSHIKIGAISH ; YAMADA INDUSTRY ; NATL INST OF ADVANCED INDUSTRIAL SCIENCE AND TECHN ; NATIONAL INSTITUTE OF ADVANCED INDUSTRIAL SCIENCE AND TECHNOLOGY ; YAMADA INDUSTRY KABUSHIKIGAISH ; YAMADA INDUSTRY KK ; YAMADA YUKIO

Assignee(s): NATL INST OF ADVANCED INDUSTRIAL SCIENCE AND TECHNOLOGY METI ; NATIONAL INSTITUTE OF ADVANCED INDUSTRIAL AND TECHNOLOGY ; NATIONAL INSTITUTE OF ADVANCED INDUSTRIAL SCIENCEAND TECHNOLOGY ; YAMADA INDUSTRY KABUSHIKIGAISHA ; YAMADA IND ; SEKRETAER DER AGENTUR DER INDUSTRIELLEN WISSENSCHAFT UND TECHNOLOGIE TOKIO TOKYO ; TAODA MR HIROSHI ; TAODA HIROSHI MR ; NATIONAL INSTITUTE OF ADVANCED INDUSTRIAL SCIENCEA ; NATIONAL INSTITUTE OF ADVANCED INDUSTRIAL SCIENCE ; YAMADA INDUSTRIE TOKIO TOKYO ; SEKRETAER DER AGENTUR DER INDUSTRIELLEN WISSENSCHA ; TAODA HIROSHI 1 33 KIYOSUMI CHO NAGOYA ; NATIONAL INST OF ADVANCED INDUSTRIAL SCIENCEAND TE ; YAMADA IND KABUSHIKIGAISHA ; NATIONAL INST ADVANCED INDUSTRIAL SCIENCE AND TECH ; NATIONAL INST OF ADVANCED INDUSTRIAL SCIENCE AND T ; JAPAN AGENCY OF INDUSTRIAL SCIENCE AND TECHNOLOGY ; AGENCY OF INDUSTRIAL SCIENCE AND TECHNOLOGY

Inventor(s): (std): AIZAWA KAZUU ; TAODA HIROSHI ; YAMADA YUKIO ; TOUGETA HIROSHI ; TOUGEDA HIROSHI ; AIZAWA KAZUTAKA

Agent(s): JEFFREY D; LORUSSO LOUD AND KELLY LLP; MARC A

Title: STRESS-INDUCED BANDGAP-SHIFTED SEMICONDUCTOR PHOTOELECTROLYTIC/PHOTOCATALYTIC/PHOTOVOLTAIC SURFACE AND METHOD FOR MAKING SAME

Abstract: Source: US2003228727A Titania is a semiconductor and photocatalyst that is also chemically inert. With its bandgap of 3.0, to activate the photocatalytic property of titania requires light of about 390 nm wavelength, which is in the ultra-violet (UV), where sunlight is very low in intensity. A method and devices are disclosed wherein stress is induced and managed in a thin film of titania in order to shift and lower the bandgap energy into the longer wavelengths that are more abundant in sunlight. Applications of this stress-induced bandgap-shifted titania photocatalytic surface include photoelectrolysis for production of hydrogen gas from water, photovoltaics for production of electricity, and photocatalysis for detoxification and disinfection.

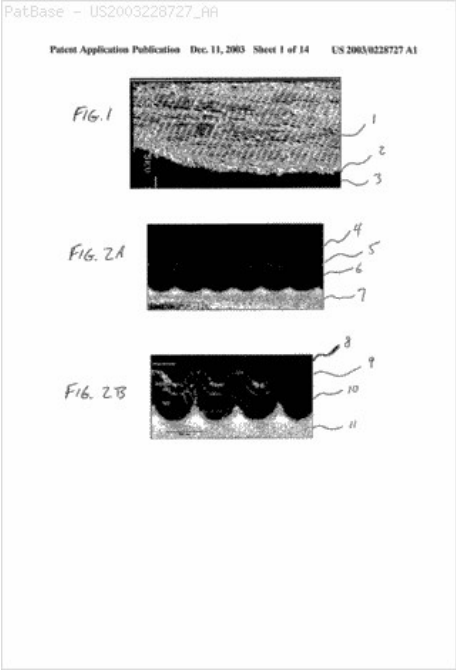
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International (IPC 1-7): H01L21/8238

CPC: H01L31/02366 Y10S123/12 G02B27/0006 H01G9/2031 H01L31/0392 Y02E10/542 B01J21/063 B01J35/004 B01J37/0226 C01B3/042 C01G23/047 Y02E60/364 C25B11/0405 C25B1/02 H01L31/035281 H01L31/03529 H02S40/44 H01M14/005 C25B1/003 Y02E10/52 C25B15/02 H01L31/06 H02S20/00 Y02E60/368 Y02E10/60 H01L31/0547 H01L31/0543

European: B01J21/06T B01J35/00D6 B01J37/02C8B C01B3/04B C01G23/047 C25B1/00B C25B15/02 H01G9/20D2 H01L31/0236 H01L31/032 H01L31/0352C2 H01L31/0352C3 H01L31/0392 H01L31/042B H01L31/052B H01L31/058 H01L31/06 S02B27/00C Y02E10/50 Y02E10/52 Y02E10/54D Y02E10/60 Y02E60/36D Y02E60/36F2 **US:** 123/1.00A 123/1A 123/2 123/25.00AS 123/25A 123/3 123/575 123/DIG.12 136/235 136/245 136/246 136/256 136/259 180/65.21 180/65.210P 204/242 204/290.01 204/290.010S 204/660 204/660S 205/171 205/322 205/340 205/50 210/739 210/748 210/748.01 210/748.09 210/748.090P 210/748.14 252/62.2 257/432 257/432S 257/E31.11 257/E31.110S 257/E31.124 257/E31.124S 359/245 359/245P 385/1 385/122 385/14 385/2 422/186 422/186P 422/222 422/222S 422/29 422/29S 422/4 427/309 438/200 438/200P 438/31 438/57 438/57P 701/103 903/902 903/902S



Family:

Publication number	Publication date	Application number	Application date
CN102144295 A	20110803	CN200980131092	20090607
CN102144295 B	20140730	CN200980131092	20090607
EP2289108 A2	20110302	EP20090763354	20090607
EP2289108 A4	20140514	EP20090763354	20090607
US2003228727 AA	20031211	US20030424259	20030426
US2008283121 AA	20081120	US20080136736	20080610
US2008299697 AA	20081204	US20080136716	20080610
US2009101420 AA	20090423	US20090348250	20090102
US2009107548 AA	20090430	US20090348194	20090102
US2009110591 AA	20090430	US20090348238	20090102
US2009116095 AA	20090507	US20090351818	20090110
US2009127124 AA	20090521	US20070773379	20070703
US2010040514 AA	20100218	US20090604359	20091022
US2014090975 AA	20140403	US20120681334	20121119
US7485799 BB	20090203	US20030424259	20030426
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US7947221 BB	20110524	US20090604359	20091022
US7992528 BB	20110809	US20090348250	20090102
US7995871 BB	20110809	US20090351818	20090110
US8673399 BB	20140318	US20080136716	20080610
WO09152063 A2	20091217	WO2009US46531	20090607
WO09152063 A3	20100311	WO2009US46531	20090607

Priority:

US20020380169P 20020507	US20030424259 20030426	US20070773379 20070703
US20080136736 20080610	US20080136716 20080610	US20090348250 20090102
US20090348194 20090102	US20090348238 20090102	US20090351818 20090110
US20090604359 20091022	WO2009US46531 20090607	US20120681334 20121119

Probable Assignee: NANOPTIK CORP

Assignee(s): (std): CHANDEKAR AMOL N ; GUERRA JOHN M ; GUERRA JOHN MICHAEL ; NANOPTIK CORP ; THULIN LUKAS M

Inventor(s): (std): CHANDEKAR AMOL N ; GUERRA JOHN MICHAEL ; THULIN LUKAS M ; GUERRA JOHN M

Agent(s): COLE DAVID JOHN; DAVID J COLE; GOODWIN PROCTER LLP; DAVID J

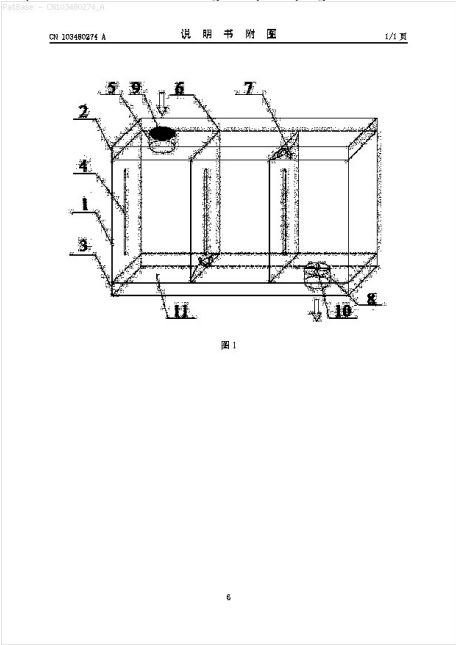
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Title: WALL-HANGING PHOTOCATALYTIC AIR PURIFIER

Abstract: Source: CN103480274A A wall-hanging photocatalytic air purifier comprises a box body, an upper cover, a lower cover, partition plates, an air inlet and an air outlet, the partition plates divide the box into a plurality of air channels, an end portion of each of the partition plates is provided with an arc-shaped gap to communicate adjacent two air channels, an ultraviolet lamp is installed on the inner wall at the left side of each of the air channels, the inner wall at the right side of each of the air channels is uniformly coated with a photocatalyst, the back side of each of the air channels is made by adopting a transparent material, other inner walls of each of the air channels are respectively uniformly coated with a reflection coat, the upper end of the air inlet is provided with a primary screen, and the air outlet is provided with an exhaust fan. Air in a room enters the air purifier through the air inlet, and undergoes a photocatalytic reaction under the ultraviolet light or visible light irradiation, and obtained purified air enters the room through the air outlet. The purifier has the advantages of large photocatalytic reaction area, high light source utilization rate, small size, realization of direct hanging on a wall or window, use convenience and good purifying effect.

Classifications:

International (IPC 8-9): B01D53/86 (Advanced/Invention)



Family:

Publication number	Publication date	Application number	Application date
CN103480274 A	20140101	CN201310471629	20131011

Priority:

CN201310471629 20131011

Probable Assignee: UNIV CHONGQING

Assignee(s): (std): CHONGQING UNIV ; UNIV CHONGQING

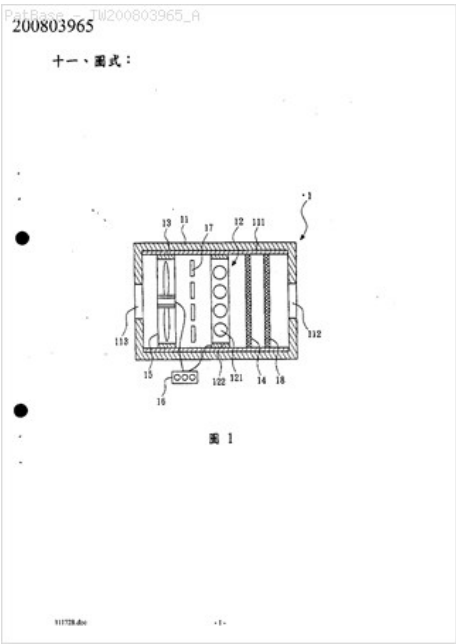
Inventor(s): (std): CHUAN HE ; FENG XINYU ; LIU PENG ; WANG XIAOYAN ; ZHANG DONGKAI ; ZHANG YANMEI ; ZHENG JIE

Title: An energy-saving photocatalytic organic gas treatment system

Abstract: Source: TW200803965A The present invention relates to an energy-saving photocatalytic organic gas treatment system. The energy-saving photocatalytic organic gas treatment system comprises a shell, ultraviolet lamps, at least one energy-saving material, and at least one air filter. There is one entry and one exit from the shell and the shell coats the energy-saving material on the inside. The ultraviolet lamps can produce the **ultraviolet light** and the **ultraviolet light** reflection can be via energy-saving material on the shell inside and could effectively increase the decomposition rate of organic contaminants. The energy-saving material can increase the overall luminous intensity of **ultraviolet light**. Moreover, the surface of air filters coated with photocatalysts, while the photocatalysts can reduce the organic contaminants by **ultraviolet light**. As a result, this invention possesses an effective promotion the decomposition rate of organic contaminants, energy saving, and air filtration simultaneously.

Classifications:

International (IPC 8-9): A61L9/22 F24F3/16 B01D53/86 (Advanced/Invention)



Family:

Publication number	Publication date	Application number	Application date
TW200803965 A	20080116	TW20060125650	20060713

Priority:
TW20060125650 20060713

Probable Assignee: UNIV NAT SUN YAT SEN

Assignee(s): (std): UNIV NAT SUN YAT SEN

Assignee(s): NATIONAL SUN YAT SEN UNIVERSITY

Inventor(s): (std): LEE CHIA WEI ; LO CHO CHING ; WANG DAVID ; WU YI CHEN ; YUAN CHUNG SHIN ; HUNG CHUNG HSUANG

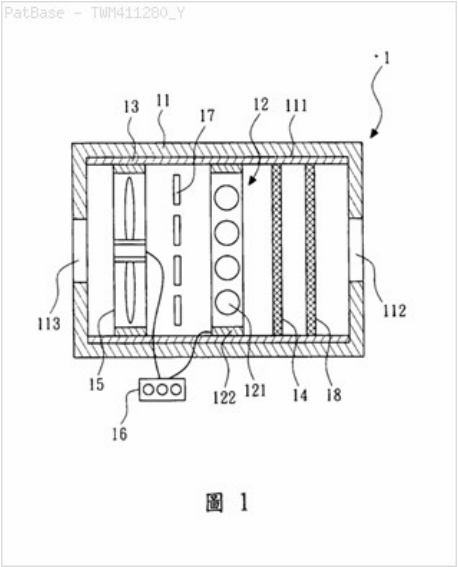
Inventor(s): HUNG CHUNG HSUANG AND

Title: An energy-saving photocatalytic organic gas treatment system

Abstract: Source: TWM411280Y The present invention relates to an energy-saving photocatalytic organic gas treatment system. The energy-saving photocatalytic organic gas treatment system comprises a shell, ultraviolet lamps, at least one energy-saving material, and at least one air filter. There is one entry and one exit from the shell and the shell coats the energy-saving material on the inside. The ultraviolet lamps can produce the **ultraviolet light** and the **ultraviolet light** reflection can be via energy-saving material on the shell inside and could effectively increase the decomposition rate of organic contaminants. The energy-saving material can increase the overall luminous intensity of **ultraviolet light**. Moreover, the surface of air filters coated with photocatalysts, while the photocatalysts can reduce the organic contaminants by **ultraviolet light**. As a result, this invention possesses an effective promotion the decomposition rate of organic contaminants, energy saving, and air filtration simultaneously.

Classifications:

International (IPC 8-9): A61L9/22 B01D53/86 F24F3/16 (Advanced/Invention)



Family:

Publication number	Publication date	Application number	Application date
TWM411280 Y	20110911	TW20110200518U	20060713

Priority:

TW20060200518U 20060713

Probable Assignee: UNIV NAT SUN YAT SEN

Assignee(s): (std): UNIV NAT SUN YAT SEN

Assignee(s): NATIONAL SUN YAT SEN UNIVERSITY

Inventor(s): (std): HUNG CHUNG HSUANG ; LEE CHIA WEI ; LO CHO CHING ; WANG DAVID ; WU YI CHEN ; YUAN CHUNG SHIN

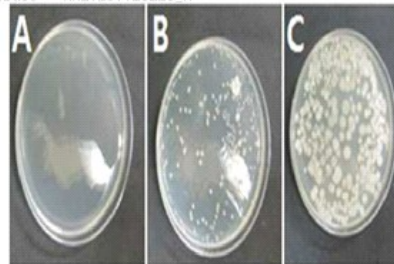
Title: AIR CLEANING DEVICE

Abstract: Source: KR20150026126A The present invention relates to an air purifier, the air purifier 100 includes a blower 180 is installed on the right side surface portion 120 and the outside air intake, a right side portion 120 and the side opposite to the left side surface portion (130) there is a plurality of ventilation holes 135 are formed, the upper surface portion 105 has UV generator 108 is provided, and ultraviolet radiation is to be irradiated, a bottom portion 140 has a laminated mirror 145, the irradiated **ultraviolet** the sikimyeo **reflection** inside the titanium dioxide (TiO_2) is attached to the coated filter unit 115. UV **light** generated from the **ultraviolet** ray generator 10 is incident into the air purifier 100, the blower 180 is activated and the ambient air to flow into the air purifier 100, the photocatalytic energy by the filter unit 115 The organic material is generated in the air are decomposed and foreign matter suction, purified air is discharged to the outside.

Classifications:

International (IPC 8-9): F24F13/28 F24F3/16 (Advanced/Invention)

PatBase - KR20150026126-A



- A. 이동식 공기정화 장치를 설치한 클린벤치내의 세균 번식
 B. 이동식 공기정화 장치를 설치하지 않은 클린벤치내의 세균 번식
 C. 클린벤치 외부의 세균 번식

Family:

Publication number	Publication date	Application number	Application date
KR20150026126 A	20150311	KR20130104521	20130830

Priority:

KR20130104521 20130830

Probable Assignee: CHO JI WON

Assignee(s): (std): CHO JI WON

Inventor(s): (std): CHO JI WON

Title: TRANSFORMABLE TOY VEHICLE

Abstract: Source: US2006089080A A toy vehicle includes a central housing having first and second oppositely disposed sides. A first wheel is rotatably mounted on the first side of the housing, and a second wheel is rotatably mounted on the second side of the housing. Each of the first and second wheels has a central hub and a plurality of individual vanes rotatably attached to the hub. Each hub has a center disposed along a first axis of rotation. Each vane is rotatable about a second vane axis extending transversely with respect to the first axis. An end of each vane distal to the hub forms a circumferential surface portion of one of the first and second wheels.

Classifications:
International (IPC 8-9): A63H17/00 A63H17/26 A63H17/267 A63H23/04 A63H29/00 A63H29/22 A63H33/00 B60B1/00 B60W10/02 B62B1/02 (Advanced/Invention); A63H17/00 A63H29/00 A63H29/22 (Advanced/Non-invention); B60B1/00 B60W10/02 B62B1/00 (Core/Invention); A63H (Subclass/Invention)
International (IPC 1-7): A63H17/00
CPC: A63H33/003 A63H17/004 A63H17/262
European: A63H17/00C A63H17/26B A63H33/00D
US: 180/313 280/30 446/164 446/462 446/465 446/470

Family:

Publication number	Publication date	Application number	Application date
AT454196 E	20100115	AT20050804908T	20051019
AU2005256097 AA	20060511	AU20050256097	20051019
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CA2536215 AA	20060116	CA20052536215	20051019
CA2536215 C	20080429	CA20052536215	20051019
CN101115539 A	20080130	CN200580001075	20051019
CN101115539 B	20101006	CN200580001075	20051019
DE212005000009 U1	20060427	DE200521000009U	20051019
DE602005018771 D1	20100225	DE200560018771T	20051019
EP1755905 A2	20070228	EP20050804908	20051019
EP1755905 A4	20080319	EP20050804908	20051019
EP1755905 B1	20100106	EP20050804908	20051019
ES1064006 UA	20070101	ES20060050001U	20051019
ES1064006 Y1	20070401	ES20060050001U	20051019
GB200600616 A0	20060222	GB20060000616	20051019
GB2422560 A1	20060802	GB20060000616	20051019
GB2422560 B2	20070411	GB20060000616	20051019
HK1089709 A1	20070525	HK20060110145	20060913
KR100846729 B1	20080716	KR20067006361	20060331
KR20060080219 A	20060707	KR20067006361	20060331
MXPA06000985 A1	20060515	MX2006PA00985	20060125
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US7794300 BB	20100914	US20070748264	20070514
WO06029416 A2	20060316	WO2005US37424	20051019
WO06029416 A3	20070301	WO2005US37424	20051019

Priority:
US20040622037P 20041026 US20050642060P 20050107 US20070748264 20070514
WO2005US37424 20051019 US20050223132 20050909

Probable Assignee: MATTEL INC

Assignee(s): (std): LEONOV VLADIMIR ; MATTEL INC ; MOLL JOSEPH THOMAS ; ONG KENLIP ; WILLETT WILLIAM

Inventor(s): (std): JOSEPH THOMAS MOLL ; KENLIP ONG ; LEONOV VLADIMIR ; MOLL JOSEPH T ; MOLL JOSEPH THOMAS ; ONG KENLIP ; VLADIMIR LEONOV ; WILLETT WILLIAM ; WILLIAM WILLETT

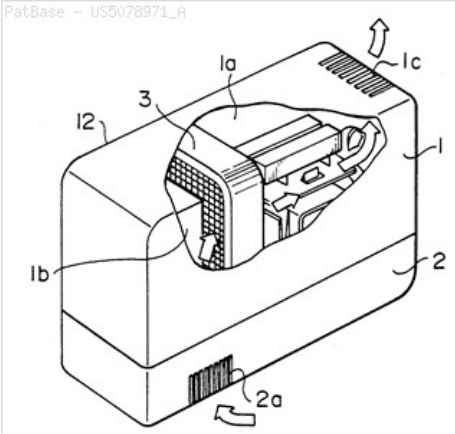
Agent(s): BOBZIEN HANS CHRISTOPH; AKIN GUMP STRAUSS HAUER AND FELD LLP; PANITCH SCHWARZE BELISARIO AND NADEL LLP

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KM KP KR KZ LC LI LK LR LS LT LU LV LY MA MC MD MG MK ML MN MR MW MX MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SM SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

Title: DEODORIZER DEVICE

Abstract: Source: US5078971A A deodorizer device for use in a refrigerator has an absorbent capable of absorbing odor components from air, a layer of a photocatalyst deposited on the surface of the absorbent, and a light source for illuminating the photocatalyst layer to excite the same. Air containinig odor components is forced by a blower to flow through the absorbent.

PatBase - US5078971_A



Classifications:
International (IPC 8-9): A61L9/16 A61L9/20 B01D53/04 B01D53/38 B01D53/81 B01D53/86 B01J35/02 F25D17/04 F25D23/00 (Advanced/Invention); A61L9/16 A61L9/18 B01D53/04 B01D53/38 B01D53/81 B01D53/86 B01J35/00 F25D17/04 F25D23/00 (Core/Invention)
International (IPC 1-7): A61L9/16 A61L9/20 B01D53/04 B01D53/34 B01D53/36 F25D23/00
CPC: Y10S261/88 F25D17/042 A61L9/16 A61L9/20 B01D53/38 F25D2317/0415
European: A61L9/16 A61L9/20 B01D53/38 F25D17/04A R25D317/0415
US: 261/DIG.88 422/121 422/122 422/124 422/125 422/306 502/5 62/264 62/78

Family:

Publication number	Publication date	Application number	Application date
JP2164420 A2	19900625	JP19880318552	19881219
KR930004403 B1	19930527	KR19890018139	19891208
US5078971 A	19920107	US19890450460	19891214

Priority:

JP19880318552 19881219

Probable Assignee: HITACHI LTD

Assignee(s): (std): HITACHI LTD

Inventor(s): (std): KANAI ATSUSHI ; KASHIWABUCHI MASAAKI ; KAWASHIMA MASAEI ; KOBAYASHI TOORU ; KOBAYASHI TORU ; MATSUDA MICHIIYA ; MATUDA MICHIIYA ; TAKAHASHI KIKUCHI ; TAKAHASHI KIKUZI ; WASHIMI FUMIKATSU ; WASHIMI FUMIKAZU ; WASHIMI BUNICHI ; TAKAHASHI KIKUJI ; KAWASHIMA MASAE