

Search history

Search 1: TAC=(methane and catalyst and oxidation) and INV=(David WATSON) (Results 2)
 Search 2: TAC=(methane and catalyst and oxidation) and IC=(b01d53/86) (Results 176)
 Search 3: TAC=(methane and catalyst and oxidation and low) and IC=(b01d53/86) (Results 55)
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 Search 5: TAC=(methane and catalyst and oxidation and low and air and platinum) and IC=(b01d53/86) (Results 17)

7) Family number: 23424417 (US5779912A)

Title: PHOTOCATALYTIC OXIDATION OF ORGANICS USING A POROUS TITANIUM DIOXIDE MEMBRANE AND AN EFFICIENT OXIDANT

Abstract: Source: US5779912A A method and apparatus for mineralizing organic contaminants in water or [air](#) provides photochemical [oxidation](#) in a unique two-phase or three-phase boundary system formed in each pore of a TiO₂ membrane in a photocatalytic reactor. In the three-phase system, gaseous oxidant, liquid contaminant, and solid semiconductor photocatalyst meet and engage in an efficient [oxidation](#) reaction. The porous membrane has pores which have a region wherein the meniscus of the liquid varies from the molecular diameter of water to that of a capillary tube resulting in a diffusion layer that is several orders of magnitude [smaller](#) than the closest known reactors. The photocatalytic reactor operates effectively at ambient temperature and [low](#) pressures.

Classifications:

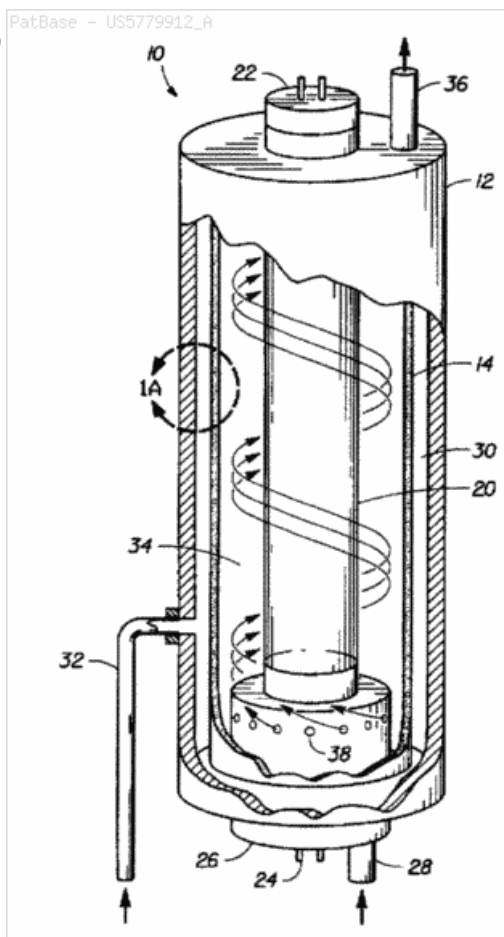
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International (IPC 1-7): B01J19/08 B01J19/12 C02F1/32 C02F1/72 C07C29/48

CPC: Y10S210/908 Y02W10/37 C02F1/325 B01D53/864
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B012219/00162 B012219/00164 B01J2219/0883 C01B3/38
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C02F2201/328 C02F2305/10 Y02P20/52

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US: 204/157.3 204/157.9 210/198.1 210/201 210/205 210/748
210/748.14 210/758 210/759 210/760 210/763 210/908 422/186.3
422/24 502/5



Family:

Publication number	Publication date	Application number	Application date
US5779912 A	19980714	US19970791599	19970131
US6117337 A	20000912	US19980096277	19980611
US6136186 A	20001024	US19980115358	19980714
US6156211 A	20001205	US19980115040	19980714
US6409928 BA	20020625	US20000679891	20001005

Priority:

US19970791599 19970131	US19980096277 19980611	US19980115040 19980714
US20000679891 20001005	US19980115358 19980714	

Probable Assignee: LYNNTech INC
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Assignee(s): CITY BANK ; LYNNTech AIR SYSTEMS LTD
Inventor(s): (std): GONZALEZ ANUNCIA ; GONZALEZ MARTIN ANUNCIA ; HODKO DALIBOR ; MURPHY OLIVER J ; SALINAS CARLOS

8) Family number: 12701728 (US2006233690A)

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Title: METHOD FOR PURIFYING HYDROGEN IN A REFORMED GAS

Abstract: Source: US2006233690A A hydrogen purifying apparatus and method are provided for oxidizing and removing carbon monoxide (CO) in a modified gas containing CO in addition to a main component hydrogen gas. The apparatus and method use comprises a **catalyst** reaction segment having a **catalyst** layer for oxidizing CO, a material gas supplying segment for supplying the modified gas to the reaction segment via a material gas supply pathway, and an oxidant gas supplying segment for supplying an oxidant gas on the path of the material gas supply pathway. Preferably, the apparatus further comprises means for cooling the **catalyst** layer at the upstream side and means for heating the **catalyst** layer at the downstream side.

Classifications:

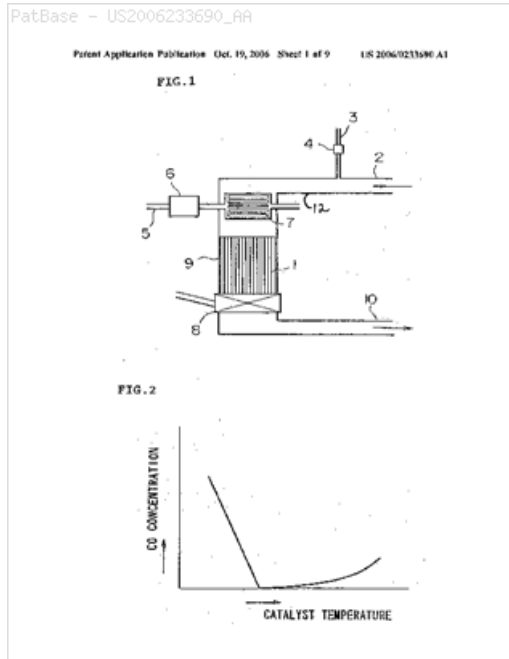
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B01D53/62 B01D53/86 B01D53/94 B01J19/24 B01J21/00 B01J23/42
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H01M8/06 (Core/Invention)

International (IPC 1-7): B01D53/86 B01D53/94 B01J21/16
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Y02E60/50

US: 422/173 422/177 423/247 423/247P 95/114 95/140



Family:

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CN1205115 C	20050608	CN19991011864	19990729
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EP0976679 B1	20020710	EP19990306008	19990728
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US2006233690 AA	20061019	US20060456027	20060706
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Priority:

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JP19990357507 19990720 JP19990102608 19990409

Probable Assignee: PANASONIC CORP

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Assignee(s): MATSUSHITA ECOLOGY SYSTEMS CO LTD ; MATSUSHITA ELECTRIC IND CO ; MATSUSHITA ELECTRIC INDUSTRIAL CO ; MATSUSHITA ELECTRIC INDUSTRIAL CO LTD ; PANASONIC ECOLOGY SYSTEMS CO LTD

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

Designated states: DE FR GB IT

Title: SPOX-ENHANCED PROCESS FOR PRODUCTION OF SYNTHESIS GAS

Abstract: Source: US2002110521A A method, system and **catalysts** for improving the yield of syngas from the catalytic partial **oxidation** of **methane** or other light hydrocarbons is disclosed. The increase in yield and selectivity for CO and H₂ products results at least in part from the substitution of H₂S partial **oxidation** to elemental sulfur and water for the combustion of light hydrocarbon to CO₂ and water.

Classifications:

International (IPC 8-9): B01D50/00 B01D53/38 B01D53/52 B01D53/86 B01J10/00 B01J12/00 B01J19/00 B01J19/24 B01J23/40 B01J23/63 B01J35/04 B01J37/08 B01J8/00 B01J8/02 C01B17/04 C01B17/16 C01B3/00 C01B3/26 C01B3/36 C01B3/38 C01B3/40 C01B31/18 C01B7/00 C07C1/02 (Advanced/Invention); B01J35/00 B01J35/04 B01J37/02 (Advanced/Non-invention); B01D53/48 B01D53/86 B01J12/00 B01J19/00 B01J19/24 B01J23/40 B01J23/54 B01J35/00 B01J37/00 B01J8/02 C01B17/00 C01B3/00 (Core/Invention); B01J35/00 B01J37/00 (Core/Non-invention); C08G (Subclass/Non-invention)

International (IPC 1-7): B01D50/00 B01D53/52 B01D53/86 B01J10/00 B01J23/10 B01J8/00 B01J8/02 C01B17/02 C01B17/04 C01B3/02 C01B3/26 C01B3/38 C01B31/18 C01B7/00 C07C1/02 C07C5/00 C08G

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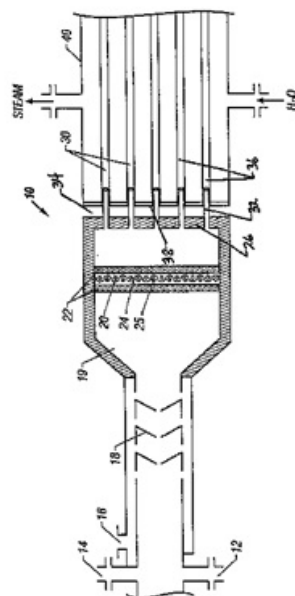
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Family:

Publication number	Publication date	Application number	Application date
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AT416023 E	20081215	AT20010993301T	20011218
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PatBase - US2002110521_AA

Patent Application Publication Aug. 15, 2002 Sheet 1 of 2 US 2002/010521 A1



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EP1924526 A2	20080528	EP20060801499	20060815
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WO06091658 A3	20061207	WO2006US06255	20060222
WO07032850 A2	20070322	WO2006US31762	20060815
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ZA200404334 A	20060101	ZA20040004334	20040101

Priority:

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Probable Assignee: PHILLIPS 66 CO

Assignee(s): (std): CONOCO INC ; CONOCOPHILIPS CO ; CONOCOPHILIPS COMPANY ; CONOCOPHILLIPS CO ; KELLER ALFRED E ; RAMANI SRIRAM ; PANJALA DEVADAS

Assignee(s): KELLER ALFRED ; ALLISON JOE D ; PRUITT TERRY D ; PHILLIPS 66 CO ; CONOCOPHILLIPS COMPANY

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Inventor(s): TERRY D PRUITT ; JOE D ALLISON ; DEVADAS PANJALA

Agent(s): PIZZEYS PATENT AND TRADE MARK ATTORNEYS PTY LTD; PIZZEYS; RIDOUT AND MAYBEE LLP; TOWLER PHILIP DEAN; CONOCOPHILIPS COMPANY; CONOCOPHILIPS CO; CONLEY ROSE; CONLEY ROSE PC

Designated states: BE 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 HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS 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

10) Family number: 30256744 (US2003198584A)

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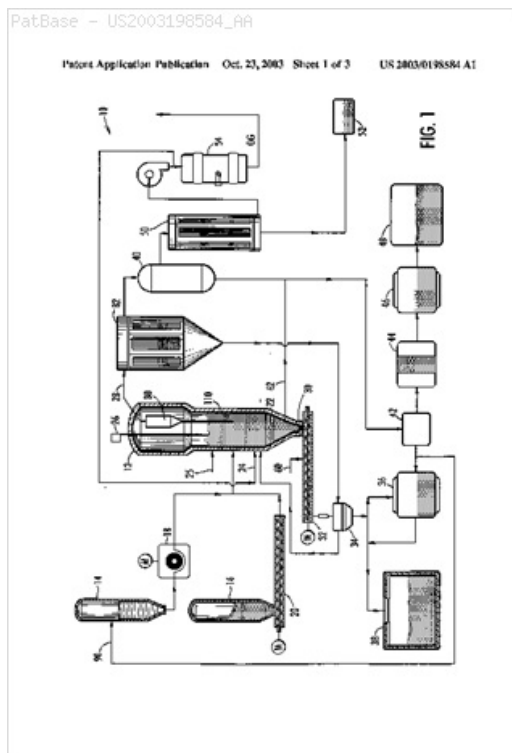
Title: SINGLE STAGE DENITRATION

Abstract: Source: US2003198584A A system and method is described having a single reaction vessel (12) using superheated steam optionally augmented by oxygen for reducing nitrogen oxides present in a wide variety of organic compounds. Reduction takes place quickly when a steam/oxygen mixture is injected into a fluidized bed (22) of ceramic beads. Reducing additives are metered into the reaction vessel (12) and/or provide energy input to reduce nitrates to nitrogen. The speed of the fluidizing gas mixture agitates the beads that then help to break up solid wastes and to allow self-cleaning through abrasion thereby eliminating agglomerates, and the oxygen, when used, allows for some **oxidation** of waste by-products and provides an additional offset for thermal requirements of operation.

Classifications:

International (IPC 8-9): A62D3/00 A62D3/20 A62D3/33 A62D3/37
A62D3/38 A62D3/40 B01D53/56 B01D53/68 B01D53/75 B01D53/86
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C02F1/72 C22B26/00 C22B7/02 C22B7/04 (Advanced/Non-invention);
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US: 202/262 202/262S 422/168 422/184.1 422/184.100S 422/198
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US20020246266 20020918 US20020185616 20020628 US20020111148 20020419
WO2003US23745 20030730 US20070717970 20070314 WO2005US36228 20050927
WO2000US41323 20001019

Probable Assignee: STUDSVIK INC

Assignee(s): (std): MASON J B ; MASON J BRADLEY ; MASON JOHN B ; STADSVIK INK ; STUDSVIK INC ; OLIVER THOMAS W ; STUDSVIK DEV INC

Assignee(s): STUDSVIK INC ERWIN ; STUDSVIK DEVELOPMENT INC ; MASON BRADLEY J ; MASON J

Inventor(s): (std): BRADLEY MASON J ; J ; J BRADLEY MASON ; MASON BRADLEY J ; MASON J ; MASON J B ; MASON J BRADLEY ; MASON JOHN B ; MASON JOHN BRADLEY ; MEHSON DZH BREHDLI ; OLIVER THOMAS W

Inventor(s): OLIVER THOMAS ; MASON J BRADLEY PASCO ; MASON JOHN

Agent(s): GOWLING LAFLEUR HENDERSON LLP; BECKER KURIG STRAUS; HOWICK NICHOLAS KEITH; BECKER EBERHARD; NEXSEN PRUET ADAMS KLEEMEIER INC; SARA A CENTIONI NEXSEN PRUET JACOBS AND POLLARD LLC; NEXSEN PRUET ADAMS KLEEMEIER LLC; NEXSEN PRUET LLC; NEXSEN PRUET ADAMS KLEEMEIER LLC; SARA A; TOWNSEND M; KING AND SPALDING; CENTIONI SARA A; MANN MICHAEL A; MICHAEL A; KING AND SPALDING 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

11) Family number: 30685477 (US2002013222A)

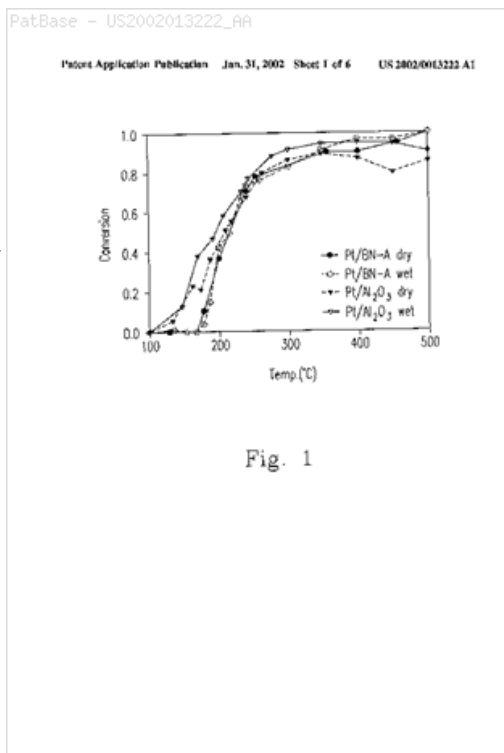
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Title: Boron nitride supporting type noble metal **catalysts**

Abstract: Source: US2002013222A Noble metal **catalysts** supported by the boron nitride (BN) to be used for oxidizing the volatile organic compound (VOC) are provided. The noble metal is selected from a group consisting of **platinum** (Pt), palladium (Pd), rhodium (Rh) and Ruthenium (Ru). The process for forming the **catalyst** includes steps of dissolving a noble metal complex compound in an organic solvent for forming a solution, mixing the solution with the boron nitride (BN) for forming a wetted boron nitride (BN) such that the noble metal complex compound is spread on a surface of the boron nitride (BN), and reducing the noble metal complex on the surface of the wetted boron nitride (BN) into the noble metal at a specific temperature by a gas.

Classifications:

International (IPC 8-9): B01D53/56 B01D53/72 B01D53/86
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F23C13/00 F23J7/00 F23K5/10 (Advanced/Invention);
B01J21/02 (Advanced/Non-invention);
B01D53/86 B01J23/00 B01J23/40 B01J23/42 B01J27/24 B01J32/00
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B01J21/00 B01J21/02 (Core/Non-invention)
International (IPC 1-7): B01D53/86 B01J21/02 B01J23/38 B01J27/24
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F23C13/00 F23C13/08 F23K5/10 F23K2900/05004
European: B01J23/40 B01J23/42 B01J27/24 B01J37/02M8
F23C13/00 F23C13/08 F23K5/10 L01J21/02 R23K900/05004
US: 423/213.5 423/245.3 502/200 502/202 502/207 502/325



Family:

Publication number	Publication date	Application number	Application date
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CN1603682 A	20050406	CN200410032262	20040325
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EP1519109 A3	20071010	EP20040005997	20040312
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JP2005257253 A2	20050922	JP20040344178	20041129
JP3619829 B2	20050216	JP20010133955	20010501
JP4057581 B2	20080305	JP20040344178	20041129
TW200512040 A	20050401	TW20040106399	20040310
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US2004058809 AA	20040325	US20030675731	20030929
US2006111236 AA	20060525	US20050314146	20051220

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Priority:

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Probable Assignee: GREEN HYDROTEC CORP

Assignee(s): (std): GREEN HYDROTEC CORP ; HEKICHIN KAGI KAIHATSU KOFUN Y ; HEKICHIN KAGI KAIHATSU KOFUN YUGENKOSHI ; LEI MIN HUNG ; LEI MINHONG ; REI MIN HON ; WU CHI SHENG ; PAN JEN WEI ; REI MIN HO

Assignee(s): MIN HON REI NO ; MIN HON REI ; REI MIN HONTW ; LIN ZHI AN

Inventor(s): (std): HANG FU WANG ; LEI MIN HUNG ; LIN JR AN ; MIN HON REI ; PAN REN WEI ; WANG HANG FU ; WU JI SHENG ; WU CHI SHENG ; REI MIN HON ; PAN JEN WEI ; LIN ZHI AN ; O KOHO ; REI MIN HO

Inventor(s): WANG, HANG-FU ; REI, MIN-HON

Agent(s): BEVER HOFFMAN AND HARMS LLP, TRI-VALLEY OFFICE; BEVER HOFFMAN AND HARMS LLP TRI VALLEY OFFICE

Designated states: AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LT LU LV MC MK NL PL PT RO SE SI SK TR

12) Family number: 42899861 (US2009035200A)

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Title: **LOW**-TEMPERATURE, MOVING BED CATALYTIC REACTOR FOR CONTROL OF NOX EMISSIONS FROM COMBUSTION

Abstract: Source: US2009035200A An apparatus for **low**-temperature NOx-reduction is disclosed, which is useful in boiler installations at electric-generating plants. The apparatus employs one or a plurality of moving-bed reactors wherein a moving bed of common base-metal **catalyst** is used for selective catalytic reduction of NOx present in flue gas. The moving bed permits continuous introduction of fresh or regenerated **catalyst**, thus obviating the conventional problems of sulfur-poisoning and consequent reduction in catalytic activity with such **catalysts**. Due to the lower activation energies of such **catalysts**, an SCR utilizing the moving-bed reactors disclosed herein can be located downstream of the **air** heater, further improving electric-generating efficiency. Methods for **low**-temperature NOx reduction are also disclosed.

Classifications:

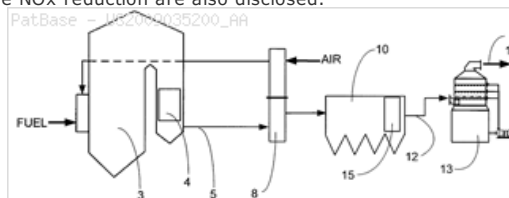
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C01B21/02 F23G7/06 (Advanced/Invention);
B01D53/56 B01D53/86 B01J8/12 F23G7/06 (Advanced/Non-invention);
B01D53/34 B01D53/56 B01D53/74 B01D53/83 B01J19/18 B01J8/08
C01B21/00 (Core/Invention)

International (ipc 1-7): B01D53/34

CPC: B01D53/8631 B01D2255/906 F23J2215/60 F23J2217/102
F23J2217/105 F23J2219/10 Y02P20/584

European: B01D53/86F2D L01D255/906 R23J215/60 R23J217/102 R23J217/105 R23J219/10

US: 422/139 422/144 422/168 422/169 422/171 422/177 422/178 422/181 423/210 423/215.5 423/239.1



Family:

Publication number	Publication date	Application number	Application date
AU2008283781 AA	20090205	AU20080283781	20080804
AU2008283781 BB	20130131	AU20080283781	20080804
BG110586 A	20100730	BG20100110586	20100125
BRPI0814164 A2	20150120	BR2008PI14164	20080804
CA2695371 AA	20090205	CA20082695371	20080804
CA2695371 C	20151027	CA20082695371	20080804
CN101772374 A	20100707	CN200880101306	20080804
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CO2661384 A2	20110322	CO20100010754	20100202
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EP2173466 A4	20120418	EP20080797111	20080804
IN00181KN2010 A	20100716	IN2010KN00181	20100115
JP2010535100 T2	20101118	JP20100519271T	20080804
KR20100047247 A	20100507	KR20107002457	20100202
MX2010001265 A1	20100301	MX20100001265	20080804
NZ582759 A	20110826	NZ20080582759	20080804
RU2010102970 A	20110910	RU20100102970	20080804
UA102072 C2	20130610	UA20100001353	20080804
US2009035200 AA	20090205	US20080175540	20080718
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WO09018573 A1	20090205	WO2008US72103	20080804

Priority:

US20070175540 20070718 US20070953608P 20070802 US20080175540 20080718
WO2008US72103 20080804

Probable Assignee: BABCOCK AND WILCOX CO

Assignee(s): (std): BABCOCK AND WILCOX POWER GEN GROUP INC ; GHORISHI SEYED B ; DOWNS WILLIAM ; ROGERS KEVIN J ; BAILEY RALPH T ; BABCOCK AND WILCOX POWER GENERAT

Assignee(s): BABCOCK AND WILCOX CONSTRUCTION CO INC ; BABCOCK AND WILCOX DENMARK HOLDINGS INC ; BABCOCK AND WILCOX EBENSBURG POWER INC ; BABCOCK AND WILCOX EQUITY INVESTMENTS INC ; BABCOCK AND WILCOX INT ; BANK OF AMERICA NA ; BABCOCK AND WILCOX INT INC ; BABCOCK AND WILCOX INT SALES AND SERVICE CORP ; AMERICON EQUIPMENT SERVICES INC ; AMERICON INC ; APPLIED SYNERGISTICS INC ; B AND W SERVICE CO ; BABCOCK AND WILCOX CHINA HOLDINGS INC ; BABCOCK AND WILCOX CO ; BABCOCK AND WILCOX POWER GENERATION GROUP INC ; CREDIT SUISSE CAYMAN ISLANDS BRANCH AS COLLATERAL ; DIAMOND OPERATING CO INC ; DIAMOND POWER AUSTRALIA HOLDINGS INC ; DIAMOND POWER CHINA HOLDINGS INC ; DIAMOND POWER EQUITY INVESTMENTS INC ; DIAMOND POWER INT ; PALM BEACH RESOURCE RECOVERY CORP ; POWER SYSTEMS OPERATIONS INC ; REVLOC RECLAMATION SERVICE INC ; NATIONAL ECOLOGY CO ; NORTH COUNTY RECYCLING INC ; BANK OF AMERICA NA ADMINISTRATIVE

Inventor(s): (std): BAILEY RALPH ; BAILEY RALPH T ; DOWNS WILLIAM ; DOWNS WILLIAMS ; GHORISHI SEYED ; GHORISHI SEYED B ; JORGE KEVIN J ; ROGERS KEVIN ; ROGERS KEVIN J ; WILLIAM DOWNS ; BEILEY RALPH T

Inventor(s): SEYED B GHORISHI ; KEVIN J JORGE ; KEVIN J ROGERS ; RALPH T BAILEY

Agent(s): GRIFFITH HACK; RIDOUT AND MAYBEE LLP; LUZ CLEMENCIA DE PAEZ; MELDRUM DAVID JAMES; AXIS PATENT INT; BABCOCK AND WILCOX POWER GENERATION GROUP INC; ERIC; MARICH ERIC

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

Abstract: Source: US2009035192A By using catalytic partial [oxidation](#) or autothermal reforming process, a catalytic oxidizer installed in the engine's Exhaust Gas Recycle (EGR) line can be used to produce from fossil fuels or bio-fuels a reformat gas containing H₂ and CO for an IC engine or a gas turbine. Thus, a system consisting of an EGR Oxidizer and an IC engine/gas turbine can be used by itself as a driving device, or can be combined with an electric generator and a battery bank to produce, store and transmit electricity to be used in stationary or mobile power generation, transportation and utility etc. The Oxidizer can also be used to provide reducing gases to regenerate the NO_x or diesel particulate traps, so that the traps can continuously be used for reducing emissions from IC engine, diesel truck, gas turbine, power plant etc.

PatBase - US2009035192_AA

PatBase - US2009035192_A4

The diagram illustrates a power plant system for a mobile laboratory. Key components and their interconnections are as follows:

- Fuel Sources:** Fuel Tank 1 (Fuel Mixture) and Fuel Tank 12 (Fuel/Water) supply fuel to the system.
- Pumps and Valves:** Pumps 2, 3, 4, 6, 11, and 13, along with valves 100, 101, 102, 103, 104, 105, 106, 107, and 108, manage the flow of fuel and air throughout the system.
- Generator and Battery Bank:** The system includes an Electric Generator (5) and a Battery Bank/Gird (15) connected to an AC/OC Voltage converter (16).
- Air Intake and Exhaust:** Air is drawn from the atmosphere (14 Air) through a filter (104) and is exhausted (Vent) through a filter (106).
- Control and Monitoring:** The system is controlled and monitored by a unit (7) connected to the generator and battery bank.

European: B01D53/90 B01D53/94F2 B01D53/94H C01B3/32B2
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Family:

Publication number	Publication date	Application number	Application date
US2009035192 AA	20090205	US20080217058	20080701
US8061120 BB	20111122	US20080217058	20080701

US2007096258P 20070730 US20080217058 20080701

Assignee(s): (std): HWANG HERNG SHINN

Agent(s): HERNG-SHINN HWANG

Abstract: Source: US2009101516A The present invention relates to methods and apparatus for activation of a **low** reactivity, non-polar chemical compound. In one example embodiment, the method comprises introducing the **low** reactivity chemical compound to a **catalyst**. At least one of (a) an oxidizing agent or a reducing agent and (b) a polar compound is provided to the **catalyst** and the chemical compound. An alternating current is applied to the **catalyst** to produce an activation reaction in the chemical compound. This activation reaction produces a useful product. The present invention also relates to a method for oxidizing aromatic compounds by electrocatalysis to oxidized products.

PatBase - US2009101516_AA

European: B01J19/08D B01J23/00B B01J8/02B4 C07C45/36
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L01J52/00 Y02A00/50

Family:

Publication number	Publication date	Application number	Application date
CA2698067 AA	20090326	CA20082698067	20080919
EP2201046 A1	20100630	EP20080831850	20080919
EP2201046 A4	20100922	EP20080831850	20080919
EP2620209 A1	20130731	EP20130163256	20080919
JP2010540437 T2	20101224	JP20100525830T	20080919
US2009101516 AA	20090423	US20080212948	20080918
US2009134037 AA	20090528	US20080284337	20080918
US7964084 BB	20110621	US20080284337	20080918
WO09038753 A1	20090326	WO2008US10880	20080919
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Priority:

EP20080831850 20080919 US20070994854P 20070920 US20080284337 20080918
 US20080212948 20080918 WO2008US10880 20080919

Probable Assignee: CATELECTRIC CORP**Assignee(s):** (std): CATELECTRIC CORP ; CATELECTRIC CORP C O UPDIKE KE ; HU BOXUM ; SUIB STEVEN LAWRENCE ; UNIV CONNECTICUT ; STANCOVSKI VICTOR ; HU BOXUN**Assignee(s):** OF CONNECTICUT UNIV ; UNIV ; CATELECTRIC CORP C O UPDIKE KELLY AND SPELLACY P C ; CATELECTRIC CORP C O UPDIKE KELLY AND SPELLACY PC**Inventor(s):** (std): HU BOXUM ; HU BOXUN ; STANCOVSKI VICTOR ; SUIB STEVEN LAWRENCE**Agent(s):** HOEGER STELLRECHT AND PARTNER PATENTANWALTE; CANTOR COLBURN LLP; LIPSITZ AND MCALLISTER LLC; MCALLISTER DOUGLAS M ET AL; SISTI NICHOLAS J**Designated states:** AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW**15) Family number: 43781252 (US2009246109A)**

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Title: SOLID SOLUTIONS AND METHODS OF MAKING THE SAME

Abstract: Source: US2009246109A A composite single phase crystalline mixed metal oxide NOx scavenger formed of a solid solution, wherein the solid solution has a well defined single phase crystalline structure, as determined by conventional x-ray Diffraction method; and, a NOx scavenger disposed within the single phase oxide structure, without formation of additional X-ray discrete phase, wherein the NOx scavenger is formed from oxides of an element selected from the group consisting of alkali metals, alkaline earth metals, transition metals, rare earth metals and mixtures thereof. The aforementioned single phase oxide may further possess a cubic fluorite structure and said composite cubic oxide NOx scavenger may be advantageously applied to the control of emissions, of both gaseous and solid or particulate nature, from internal combustions especially engines operating under the principle of compression ignition.

Classifications:

International (IPC 8-9): B01D39/06 B01D53/34 B01D53/56
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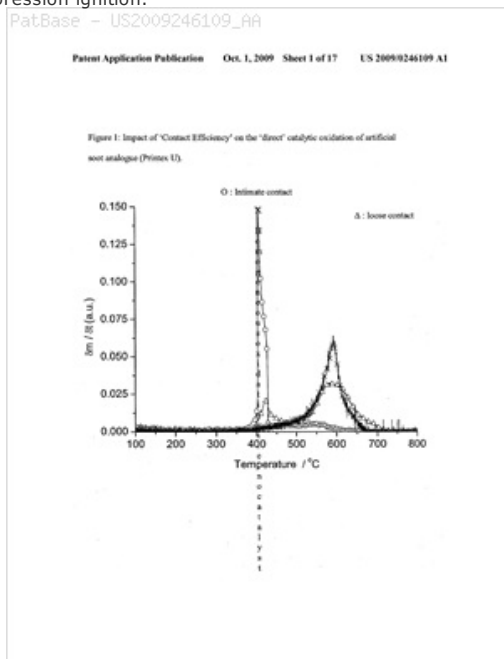
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Publication number	Publication date	Application number	Application date
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Priority:

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WO2009US38398	20090326	US20160183876	20160616		

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

16) Family number: 48532446 (US2012189523A)

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Title: METHOD AND APPARATUS FOR REMOVING **LOW**-CONCENTRATION **METHANE**

Abstract: Source: US2012189523A Disclosed are a method and an apparatus for removing **methane** from a gas which contains the **methane** at such a **low** concentration as not to be rendered into a combustible range with whatever ratio of **air**

mixed therewith. In order to ensure satisfactory **methane** removal performance even in the coexistence of sulfur compound and in order also to provide stable **methane** removal performance for an extended period of time without performance deterioration even when the **methane** concentration varies significantly, the gas is fed to a heat exchanger for preheating and **methane** is exposed to an **oxidation catalyst** which oxidizes the **methane** through contact therewith. Then, the resultant gas is fed again to the heat exchanger for heat recovery through heat exchange with un-reacted gas. Further, the flow rate of gas to be treated is varied, according to a concentration of the **methane** contained in this treated gas.

Classifications:

International (IPC 8-9): B01D53/56 B01D53/72 B01D53/86

B01D53/94 B01J23/44 B01J23/46 F23G5/46 F23G5/50

F23G7/07 (Advanced/Invention);

B01J21/06 B01J23/42 B01J35/04 (Advanced/Non-invention)

CPC: B01D53/8668 B01D2251/11 B01D2255/1021 B01D2255/1028

B01D2255/20707 B01D2255/20715 B01D2257/7025 B01D2259/65

B01J21/063 B01J21/066 B01J23/42 B01J23/468 B01J35/04 F23G5/46

F23G5/50 F23G7/07 F23G2206/10 Y02C20/20

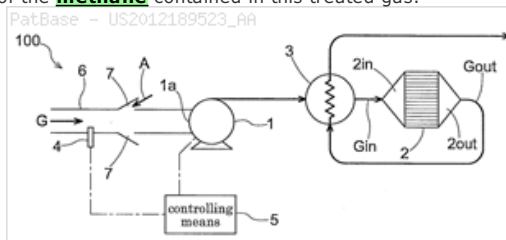
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L01D257/702A2 L01D259/65 L01J21/06T L01J21/06W L01J23/42

L01J35/04

US: 1/1 422/111 422/111S 423/245.1 423/245.100P



Family:

Publication number	Publication date	Application number	Application date
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Priority:

JP20090221225 20090925

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WO2010JP65956 20100915

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17) Family number: 55475452 (US2016228815A)

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Title: PROCESS FOR REMOVING **METHANE** FROM A GAS

Abstract: Source: US2016228815A In a method for removing **methane** from feed gas having a **methane** concentration of 2 mole percent or less, the feed gas is optionally mixed with make-up **methane** or **air** and passed through a heat exchanger to heat the gas to an **oxidation** reactor inlet temperature T1. The heated stream is passed to the reactor where the **methane** is oxidised. A gas stream including the products of the **oxidation** reaction are removed with the gas stream being at a reactor outlet temperature T2 higher than the inlet temperature T1. The gas stream is then passed through the heat exchanger against the reactor stream to recover heat from the gas stream removed in the reactor and to heat the reactor stream. The outlet temperature T2 is measured and the inlet temperature T1 is controlled by adjusting the relative amount of make-up **methane** and/or **air** added to the feed gas.

Classifications:

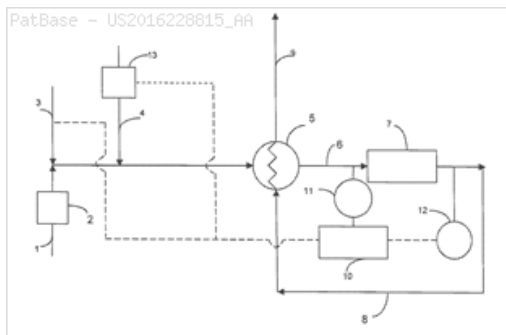
International (IPC 8-9): B01D53/86 (Advanced/Invention);

B01J19/00 (Core/Invention)

CPC: B01D2257/7025 B01D2258/06 B01D53/86 B01D53/8668

Y02C20/20 B01D53/864 B01D2255/1021 B01D2255/1023

US: 423/245.3



Family:

Publication number	Publication date	Application number	Application date
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IN201647008193 A	20160708	IN201647008193	20160309
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WO15059453 A1	20150430	WO2014GB53126	20141017

Priority:

GB20130018592 20131021 GB20140018509 20141017 WO2014GB53126 20141017

Probable Assignee: JOHNSON MATTHEY DAVY TECHNOLOGIES LTD

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Inventor(s): (std): DAVID WATSON ; JOHN SWINNEY ; SWINNEY JOHN ; WATSON DAVID

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