

Search history

Search 1: catalyst and wash* and (wet near (pulveri* or crush* or mill or ground)) and sulfur and hydrotreat* (Results 51)
Search 2: 1 and tac=catalyst (Results 21)
Search 3: (catalyst near (reactiv* or deactiv* or washing or regenerat*)) and (wet near (pulveri* or crush* or mill or ground)) (Results 325)
Search 4: 3 and ((pulveri* or crush* or mill or ground) near (sulfur or sulphur*)) (Results 4)
Search 5: tac=(catalyst near (reactiv* or deactiv* or washing or regenerat*)) (Results 23373)
Search 6: 5 and (wet near (pulveri* or crush* or mill or ground)) (Results 46)
Search 7: 6 and (hydrocarbon or hydrotreatment or transition) (Results 28)
Search 8: (7) AND IPC=(B01 OR C10) (Results 21)
Search 9: tac=(catalyst near (reactiv* or deactiv* or hydrocrack* or crack* or hydrotreat* or regenerat*)) (Results 31983)
Search 10: 9 and calcin* and (wet near (pulveri* or crush* or mill or ground)) (Results 45)
Search 11: (10) AND IPC=(B01 OR C10) (Results 39)
Search 12: 11 and (wash* near catalyst) (Results 6)
Search 13: 11 and ((wash* or spent or used or deactiv*) near catalyst) (Results 33)
Search 14: 13 and sulfur (Results 15)

1) Family number: 13363085 (US6214211B)

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Title: CATALYTIC CRACKING CATALYST

Abstract: A catalytic cracking catalyst composition comprising (a) a spherical boehmite gel alumina, (b) a zeolite, (c) a clay mineral and (d) a binder; a catalytic cracking catalyst produced by spray-drying a slurry containing the catalytic cracking catalyst composition to obtain a spherical catalyst, and then calcining the spherical catalyst; a method of catalytically cracking a heavy oil comprising catalytically cracking a heavy oil in the presence of the catalytic cracking catalyst.

Classifications:

International (IPC 8-9): B01J29/06 B01J29/08 B01J35/08 B01J35/10 B01J37/00 C10G11/05 C10G11/18 (Advanced/Invention); B01J21/04 (Advanced/Non-invention); B01J29/00 B01J35/00 B01J37/00 C10G11/00 (Core/Invention); B01J21/00 (Core/Non-invention)

International (IPC 1-7): B01J29/06 B01J29/08 B01J35/08 B01J35/10 B01J37/00 C10G11/02 C10G11/05 C10G11/18

CPC: B01J35/1061 B01J35/108 C10G11/05 B01J21/04 B01J29/084 B01J29/088 B01J37/0009 B01J37/0045 B01J2229/16 B01J2229/36 B01J2229/42

European: B01J29/08Y B01J29/08Z2 B01J35/10 B01J37/00B B01J37/00B4C C10G11/05 L01J21/04 L01J229/16 L01J229/36 L01J229/42 L01J29/08Y

US: 208/118 208/121 208/122 502/60 502/64 502/65 502/68 502/79

項目	測定値
比重@ 15℃	0.927
硫黄分 (wt %)	0.3
残留炭素分 (wt %)	4.0
金属分	
V (ppm)	9
Ni (ppm)	6

Family:

Publication number	Publication date	Application number	Application date
JP11300208 A2	19991102	JP19980110398	19980421
NL1011808 A1	19991022	NL19991011808D	19990415
NL1011808 C2	20000223	NL19991011808	19990415
US6214211 BA	20010410	US19990292610	19990415

Priority:

JP19980110398 19980421

Probable Assignee: IDEMITSU KOSAN CO LTD

Assignee(s): (std): IDEMITSU KOSAN CO ; PETROLEUM ENERGY CENTER FOUND

Assignee(s): IDEMITSU KOSAN CO LTD ; PETROLEUM ENERGY CENTER

Inventor(s): (std): ITO TOSHIO ; ITOH TOSHIO

Inventor(s): TOSHIO ITOH

2) Family number: 36069161 (US2007272593A)

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Title: HYDROCRACKING CATALYST AND PROCESS USING INSITU PRODUCED Y-FAUJASITE

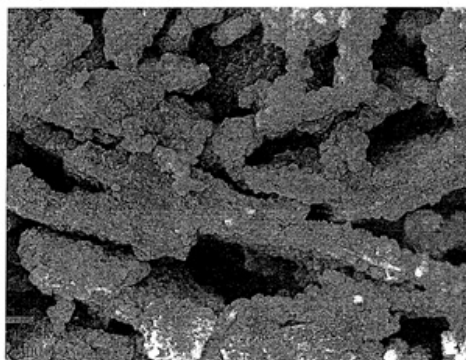
Abstract: A hydrocracking catalyst comprising zeolite crystallized as a layer on the surface of a porous alumina-containing matrix, said zeolite-layered matrix arranged in a configuration to provide macropores in which the zeolite layer is provided on the walls of the macropores. Hydrogenating metals can be incorporated into the catalyst.

Classifications:

International (IPC 8-9): B01J29/08 B01J35/10 B01J21/04 B01J29/06 B01J29/064 B01J29/10 B01J29/16 B01J35/02 C10G45/02 C10G47/00 C10G47/16 C10G47/20 C10G65/12 (Advanced/Invention); B01J35/02 B01J35/10 B01J37/00 B01J37/02 (Advanced/Non-invention);

B01J21/00 B01J29/00 B01J35/00 C10G47/00 (Core/Invention)
International (IPC 1-7): B01J35/10
CPC: C10G2300/1037 C10G2300/301 B01J29/084 B01J29/064
 B01J29/106 B01J29/166 B01J35/1066 B01J37/0009 B01J37/0045
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 B01J37/0072 B01J37/0215 B01J35/023 B01J35/026 B01J29/06
 C10G47/16
European: B01J29/06 B01J29/064 B01J29/08Y B01J29/10Y
 B01J29/16Y C10G45/02 C10G47/20 C10G65/12 L01J229/64
 L01J35/10C6 L01J37/00B L01J37/00B4C M10G400/02
US: 1/1 208/111.01 208/111.010P 208/111.1 208/111.100S
 208/111.3 208/111.35 502/63 502/63S 502/64 502/66 502/66P
 502/68 502/69 502/69S 502/74 502/79

PatBase - US2007272593_AA



Family:

Publication number	Publication date	Application number	Application date
CA2645198 AA	20080912	CA20072645198	20070226
CA2645198 C	20160628	CA20072645198	20070226
CN101432071 A	20090513	CN200780015544	20070226
CN104673364 A	20150603	CN201510032638	20070226
EP1991351 A1	20081119	EP20070751677	20070226
EP2522425 A1	20121114	EP20120179221	20070226
IN05273CN2008 A	20090320	IN2008CN05273	20080930
IN274252 B	20160722	IN2008CN05273	20080930
KR101432315 B1	20140820	KR20087024067	20070226
KR20080102276 A	20081124	KR20087024067	20070226
MX2008011533 A1	20081002	MX20080011533	20070226
RU2008138994 A	20100410	RU20080138994	20070226
RU2435643 C2	20111210	RU20080138994	20070226
TW200740979 A	20071101	TW20070106846	20070227
US2007272593 AA	20071129	US20070711415	20070226
US2010075832 AA	20100325	US20090625641	20091125
US2013252802 AA	20130926	US20130899816	20130522
US2017001179 AA	20170105	US20160256472	20160902
US8372772 BB	20130212	US20090625641	20091125
US8460540 BB	20130611	US20070711415	20070226
US9433934 BB	20160906	US20130899816	20130522
US10207257 BB	20190219	US20160256472	20160902
WO07103027 A1	20070913	WO2007US04937	20070226

Priority:

US20060778575P	20060302	CN200780015544	20070226	EP20070751677	20070226
US20070711415	20070226	WO2007US04937	20070226	US20090625641	20091125
US20130899816	20130522	US20160256472	20160902		

Probable Assignee: BASF SE

Assignee(s): (std): BASF CATALYSTS LLC ; BASF CORP ; BASF KATALISTS LLK ; BASF SE ; STOCKWELL DAVID M ; LERNER BRUCE A

Assignee(s): BASF CATALYST LLC ; DESIGNATION OF INVENTOR HAS NOT YET BEEN FILED

Inventor(s): (std): STOCKWELL DAVID M ; LERNER BRUCE A ; STOCKWELL DAVID ; GAO XINGTAO ; SMITH GARY M ; STOKUEHLL DEJVID M ; LERNER BRJUS A

Inventor(s): THE DESIGNATION OF THE INVENTOR HAS NOT YET... ; LERNER BRUCE ; BRUCE A LERNER ; DAVID M STOCKWELL

Agent(s): SIM AND MCBURNEY; ALTMANN ANDREAS ET AL; ALTMANN ANDREAS; RAYMOND F KELLER BASF CATALYSTS LLC; BASF CATALYSTS LLC; BERNARD; BASF CORP; LOWENSTEIN SANDLER 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 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 MG MN ML MM MR 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 SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

3) Family number: 30130203 (US2002115556A)

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Title: STRUCTURALLY ENHANCED CRACKING CATALYSTS

Abstract: Zeolite microsphere FCC catalysts having a novel morphology comprising a macroporous matrix and crystallized zeolite freely coating the walls of the pores of the matrix. The catalysts are formed from microspheres containing a metakaolin and kaolin calcined through its exotherm, the latter calcined kaolin being derived from a kaolin having a high pore volume. Kaolin having a high pore volume can be a pulverized ultrafine kaolin or a kaolin which has been pulverized to have an incipient slurry point less than 57 percent solids.

Classifications:

International (IPC 8-9): B01J21/04 B01J21/12 B01J21/16 B01J23/00
 B01J23/10 B01J23/847 B01J29/00 B01J29/06 B01J29/08 B01J35/00
 B01J35/10 B01J37/00 B01J37/02 B01J37/08 B01J37/30 C10G11/00
 C10G11/02 C10G11/05 C10G11/18 C10G9/32 (Advanced/Invention);
 B01J29/06 B01J29/08 B01J37/00 (Advanced/Non-invention);
 B01J21/00 B01J23/00 B01J23/10 B01J23/76 B01J29/00 B01J29/08
 B01J35/00 B01J37/00 C10G11/00 C10G11/05
 C10G9/00 (Core/Invention)

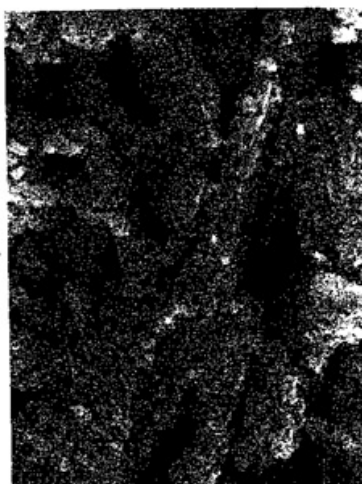
International (IPC 1-7): B01J21/04 B01J21/12 B01J21/16 B01J23/00
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B01J35/10 B01J37/00 B01J37/08 B01J37/30 C10G11/00 C10G11/02
C10G11/04 C10G11/05 C10G11/18 C10G9/32
CPC: C10G11/18 B01J37/0009 C10G2400/02 B01J35/1019
B01J35/1038 B01J35/1095 B01J29/088 B01J35/0026 B01J35/08
B01J35/1066 B01J35/1071 B01J35/1076 C10G2300/107
B01J35/1042 B01J35/002 B01J21/16 B01J29/084 B01J35/10
B01J35/108 B01J37/0045 B01J37/0246 B01J2229/42 B01J2229/64
C10G11/05
European: B01J21/16 B01J29/06 B01J29/08Y B01J29/08Z2
B01J35/00D B01J35/10 B01J37/00B B01J37/00B4C B01J37/02M6
C10G11/05 L01J21/16 L01J229/42 L01J229/64 L01J35/10D
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US: 208/118 208/120.01 208/120.010P 208/122 502/60 502/60S
502/63 502/63P 502/63S 502/64 502/64P 502/64S 502/65 502/65S
502/68 502/68S 502/73 502/79 502/79S

PatBase - US2002115556_AA

Patent Application Publication Aug. 22, 2002 Sheet 1 of 4 US 2002/015556 A1

Fig. 1



Family:

Publication number	Publication date	Application number	Application date
AT401954 E	20080815	AT20010973385T	20010921
AU2001292971 AA	20020402	AU20010292971	20010921
AU2001292971 BB	20060720	AU20010292971	20010921
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BRPI0114097 A	20040302	BR2001PI14097	20010921
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BRPI0114097 B8	20190514	BR2001PI14097	20010921
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BRPI0507405 A	20070626	BR2005PI07405	20050121
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CA2422874 C	20101130	CA20012422874	20010921
CA2463564 AA	20040408	CA20022463564	20021009
CA2463564 C	20100831	CA20022463564	20021009
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CN1225311 C	20051102	CN20018017891	20010921
CN1498133 A	20040519	CN20018017891	20010921
CN1630553 A	20050622	CN20028020780	20021009
CN1913965 A	20070214	CN200580003985	20050121
DE60135008 D1	20080904	DE20016035008	20010921
DE60246153 D1	20140508	DE20026046153	20021009
EP1333920 A2	20030813	EP20010973385	20010921
EP1333920 B1	20080723	EP20010973385	20010921
EP1444037 A2	20040811	EP20020803282	20021009
EP1444037 B1	20140402	EP20020803282	20021009
EP1502648 A1	20050202	EP20040078055	20010921
EP1711261 A1	20061018	EP20050705965	20050121
IN00484KN2004 A	20060414	IN2004KN00484	20040413
IN02167KN2006 A	20070518	IN2006KN02167	20060801
IN230204 B	20090227	IN2003KN00322	20030319
IN246025 B	20110211	IN2006KN02167	20060801
IN247488 B	20110415	IN2004KN00484	20040413
JP2004513760 T2	20040513	JP20020528390T	20010921
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KR100819635 B1	20080404	KR20037004195	20010921
KR101018596 B1	20110303	KR20097023501	20091111
KR101121608 B1	20120313	KR20067017752	20050121
KR20040011418 A	20040205	KR20037004195	20010921
KR20040045853 A	20040602	KR20047005657	20021009

KR200301215923 A	200301194	KR20067013351	200510104
MXPA03002474 A1	20030714	MX2003PA02474	20010921
MXPA04003622 A1	20040730	MX2004PA03622	20021009
TH53599 B	20170201	TH20051000350	20050128
TH56868 A	20030620	TH20011003894	20010924
TH73480 A	20051215	TH20051000350	20050128
TW200538539 A	20051201	TW20050102180	20050125
US2002115556 AA	20020822	US20010956250	20010920
US2003089640 AA	20030515	US20010978180	20011017
US2003130107 AA	20030710	US20020190992	20020708
US2003136707 AA	20030724	US20020164488	20020606
US2003199386 AA	20031023	US20030445687	20030527
US2004220046 AA	20041104	US20040770849	20040203
US6656347 BB	20031202	US20010956250	20010920
US6673235 BB	20040106	US20020164488	20020606
US6716338 BB	20040406	US20020190992	20020708
US6942784 BB	20050913	US20040770849	20040203
US6943132 BB	20050913	US20030445687	20030527
WO0224329 A2	20020328	WO2001US29701	20010921
WO0224329 A3	20030206	WO2001US29701	20010921
WO03054114 A2	20030703	WO2002US32122	20021009
WO03054114 A3	20031023	WO2002US32122	20021009
WO05077530 A1	20050825	WO2005US01858	20050121

Priority:

US20000667677	20000922	US20010956250	20010920	EP20010973385	20010921
WO2001US29701	20010921	US20010978180	20011017	US20020164488	20020606
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WO2002US32122	20021009	WO2001US29701	20030322	US20030445687	20030527
US20040770849	20040203	WO2005US01858	20050121		

Probable Assignee: ENGELHARD CORP

Assignee(s): (std): BASF CATALYSTS LLC ; STOCKWELL DAVID M ; ENGELHARD CORP

Assignee(s): RYU J Y ; MADON ROSTAM J ; ENGLEHARD CORP ; HARRIS DAVID H ; RYU JY ; XU MINGTING ; LERNER BRUCE ; MADON ROSTAM ; STOCKWELL DAVID ; BASF CATALYSTS LLC FLORHAM PARK ; BROWN RANDALL P ; BROWN STEPHEN H ; DODWELL GLENN W

Inventor(s): (std): BROWN RANDALL P ; BROWN STEPHEN H ; MADON ROSTAM ; HARRIS DAVID H ; XU MINGTING ; STOCKWELL DAVID ; LERNER BRUCE ; DODWELL GLENN W ; MADON ROSTAM J ; STOCKWELL DAVID M ; RYU J Y ; STOCKWELL D M ; BROWN R P ; BROWN S H ; GLENN W DODWELL ; RYU JI YONG ; MINGTING XU ; BRUCE LERNER ; DAVID H HARRIS ; SH BROWN ; DAVID M STOCKWELL ; RP BROWN ; ROSTAM J MADON ; DM STOCKWELL ; STOCKWELL DAVID M BROWN STEPHE ; STOCKWELL DAVID M ; ZU MINGTING ; DODWELL GLENN W ; BROWN RANDALL ; STEPHEN H BROWN ; RANDALL P BROWN

Inventor(s): RYU JY ; XU MINGTING EDISON ; DODWELL GLENN W BARTLESVILLE ; LERNER BRUCE PRINCETON JUNCTION ; MADON ROSTAM J FLEMINGTON ; HARRIS DAVID H MOUNTAIN INSIDE ; STOCKWELL DAVID M MIDDLESEX ; S H BROWN ; R P BROWN ; D M STOCKWELL ; J ; BROWN STEPHEN ; MINGTING ZU ; DAVID M STOCKWELL ; GLENN W DODWELL ; RYU J

Agent(s): GRIFFITH HACK ; SIM AND MCBURNEY ; MUELLER BORE AND PARTNER PATENTANWALTE PARTG MBB ; FISHER ADRIAN JOHN ET AL ; HOWARD PAUL NICHOLAS ; KELLER RAYMOND F ; RAYMOND F

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 SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

4) Family number: 9080272 (US4948773A)

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Title: AMPHORA PARTICULATE CATALYST-SUPPORT AND A METHOD FOR THE PREPARATION OF AN AMPHORA-TYPE PARTICULATE CATALYST-SUPPORT

Abstract: An amphora-type particulate catalyst-support having an adequately small average particle size and a low attrition index and a method for preparing an amphora-type particulate catalyst-support are disclosed, wherein the method comprises the steps of: (a) forming a mixed slurry having a solid content of 10 to 30 wt percent by adding water to a mixture of 60 to 80 parts by weight of a component (A) comprising at least one component selected from the group consisting of allophane, red mud, bauxite, and laterite with 20 to 40 parts by weight of a binder (B), such as silica sol, alumina-titania, etc.; (b) wet grinding the solid in the mixed slurry to form a slurry of finely divided solid having an average particle size of 0.6 to 2.0 μm; (c) spray-drying the slurry of the finely divided solid to form spray-dried particles; and (d) calcining the spray-dried particles. The catalyst-supports can be advantageously used as a support for preparing particulated catalysts having improved properties; i.e., high catalytic activities and selectivities, a high anti-attrition property, etc., especially those which are very effective for the hydrotreating of a heavy oil, such as a vacuum residue, etc., giving a high yield of a kerosene-light oil fraction with a low hydrogen consumption and low yields of byproducts, such as cokes, asphaltenes, and the like.

Classifications:

International (IPC 8-9): B01J23/16 B01J23/70 B01J23/84 B01J23/847 B01J32/00 B01J35/02 B01J35/08 (Advanced/Invention); B01J23/76 B01J35/00 (Core/Invention)

International (IPC 1-7): B01J23/16 B01J23/70 B01J23/84 B01J32/00 B01J35/08 B01J37/10

CPC: B01J35/026

European: B01J35/02P

US: 502/242 502/247 502/439 502/527 502/527.16 502/9

Family:

Publication number	Publication date	Application number	Application date
CA1330075 A1	19940607	CA19890591273	19890216
JP1784375 C3	19930831	JP19870010064	19870121
JP4074052 B4	19921125	JP19870010064	19870121
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Priority:

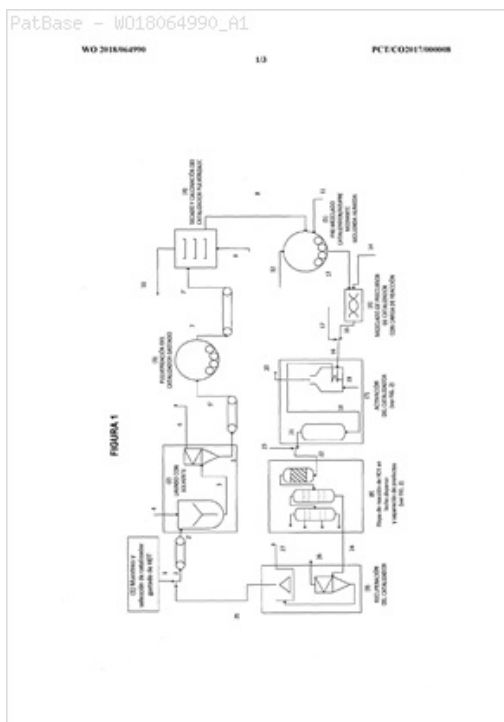
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Probable Assignee: RES ASS PETROLEUM ALTERNAT DEV**Assignee(s):** (std): RES ASS PETROLEUM ALTERNAT DEV ; RES ASSOC PETROLEUM ALTERNAT D**Assignee(s):** RES ASSOC PETROLEUM ALTERNAT DEV RAPAD ; RESEARCH ASSOCIATION FOR PETROLEUM ALTERNATIVES DE ; RESEARCH ASSOCIATION FOR PETROLEUM ALTERNATIVES DEVELOPMENT ; ITO TOSHIO**Inventor(s):** (std): ITO TOSHIO**Agent(s):** KIRBY EADES GALE BAKER**5) Family number: 67505277 (WO18064990A1)**

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Title: A METHOD FOR MANUFACTURING CATALYSTS FROM DEACTIVATED HYDROTREATMENT CATALYSTS AND THE APPLICATION THEREOF IN A DISPERSED-BED HYDROCRACKING PROCESS

Abstract: This invention is related to the formulation and method for preparing catalytic materials for hydrocracking (HCK) processes for heavy crude oil fractions in dispersed-bed reactors from catalysts deactivated in fixed-bed hydrotreatment (HDT) units. To prepare said materials, the catalyst precursors must be subjected to a process comprising the following single operations consecutively: washing by liquid/liquid extraction, grinding, drying, calcination and activation by treatment with elemental sulfur. This invention also relates to a hydrocracking process on a modified dispersed bed that improves the performance of the catalysts prepared.

Classifications:**International (IPC 8-9):** B01J21/20 B01J23/92 B01J23/94 B01J38/00 B01J38/48 C10G47/00 (Advanced/Invention)**CPC:** B01J21/20 B01J23/92 B01J23/94 B01J38/00 B01J38/48 C10G47/00**Family:**

Publication number	Publication date	Application number	Application date
CO20160002624 A1	20171110	CO20160002624	20161003
WO18064990 A1	20180412	WO2017C000008	20171003

Priority:

CO20160002624 20161003

Probable Assignee: UNIVERSIDAD INDUSTRIAL DE SANTANDER**Assignee(s):** (std): ECOPETROL SA ; UNIV INDUSTRIAL DE SANTANDER**Assignee(s):** UNIVERSIDAD INDUSTRIAL DE SANTANDER**Inventor(s):** LUIS JAVIER HOYOS MARIN ; DAVID DE JESUS PEREZ MARTINEZ ; JULY CAROLINA VIVAS BAEZ ; JUAN CARLOS COBOS GOMEZ ; LUZ MARINA BALLESTEROS RUEDA ; VICTOR GABRIEL BALDOVINO MEDRANO**Agent(s):** ILBA LUCIA GONZALEZ ZABALA; GONZALEZ ZABALA ILBA LUCIA**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 DJ 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 JO JP KE KG KH KM KN KP KR KW KZ LA LC 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**6) Family number: 4321289 (US4968405A)**

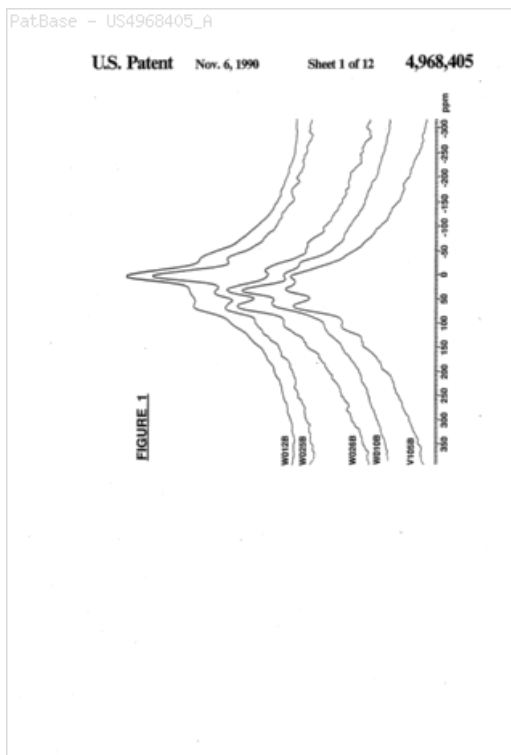
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Title: Fluid catalytic cracking using catalysts containing monodispersed mesoporous matrices

Abstract: Disclosed is a fluid catalytic cracking process employing a catalyst composition comprised of a monodispersed mesoporous aluminosilicate matrix material having pore diameters between about 100 and 500 Angstroms and alumina contents between about 5 and 40 weight percent, and a crystalline zeolite.

Classifications:

International (IPC 8-9): B01J29/08 C10G11/05 (Advanced/Invention);
 B01J29/00 C10G11/00 (Core/Invention)
International (IPC 1-7): C10G11/05
CPC: B01J29/084 B01J2229/42 C10G11/05
European: B01J29/08Y C10G11/05 L01J229/42
US: 208/120 208/120.01 208/120.15 208/79 502/79



Family:

Publication number	Publication date	Application number	Application date
US4968405 A	19901106	US19890410563	19890921

Priority:

US19880215164 19880705 US19890410563 19890921

Probable Assignee: EXXON MOBIL CORP

Assignee(s): (std): EXXON MOBIL CORP ; EXXON RESEARCH ENGINEERING CO

Assignee(s): EXXON RESEARCH AND ENGINEERING CO ; EXXON RESEARCH AND ENGINEERING COMPANY

Inventor(s): (std): WACHTER WILLIAM A

7) Family number: 6154338 (DD300266A)

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Title: VERFAHREN ZUR HERSTELLUNG EINES RESTENTSCHWEFELUNGSKATALYSATORS METHOD OF MANUFACTURING A REST DESULFURIZATION CATALYST (Machine translation)

Abstract: Source: DD300266A [DE] [Source: Claim 1] 1. Verfahren zur Herstellung eines Restentschwefelungskatalysators durch Fällung einer sauren Aluminiumnitratlösung, die 20 bis 50g/l freie Säure und 85 bis 110g/l Al₂O₃ sowie ein aus alkalischer Natriumsilicatlösung in situ erzeugtes Kieselsäuresol enthält, gegen eine basische Natriumaluminatlauge bei pH-Werten von 7,5 bis 8,5 und einer Temperatur von 65 bis 75 degrees centigrade sowie Zulauf von Kondensat zu einem Aluminiumoxidhydrat der Pseudoboehmitstruktur, welches, bezogen auf Al₂O₃, 2 bis 6 Masseteile in percent Siliziumdioxid enthält, Peptisation mittels Salpetersäure zu einer Tonerdeslurry mit einem Nitratmodul N03/Al₂O₃ von 0,05 bis 0,07 und einem Feststoffmodul Al₂O₃/H₂O von 0,6 bis 0,75, Agglomeration in einem Wirbelgranulator zu Kugeln, wobei die unmittelbar auf das gebildete Granulat einwirkende Temperatur 120 bis 180 degrees centigrade betraegt, Promotierung durch saure Traenkung mit Eisen-, Kupfer- und Magnesiumverbindungen, gekennzeichnet dadurch, dass die saure Aluminiumnitratlösung mit der **Machine translation:** [Source: claim 1] 1 Al₂O₃, as well as a Kieselsäuresol produced from alkaline solution of sodium silicate in situ contains procedures to produce a residual desulfurization catalyst by precipitation of acidic aluminium nitrate solution, the 20 to 50 g / l free acid and 85 to 110 g / l, against an alkaline sodium aluminate hydroxide at pH of 7.5 to 8.5 and a temperature between 65 and 75 degrees centigrade and influx of condensate to an aluminium oxide hydrate of the Pseudoboehmitstruktur, which, based on Al₂O₃, 2 to 6 percent silicon dioxide mass parts contains Peptisation by nitric acid to a Tonerdeslurry with a nitrate module N03/Al₂O₃ from 0.05 to 0.07 and a solids module Al₂O₃/H₂O by 0.6 to 0.75, agglomeration in a Wirbelgranulator to balls, where is the 120 to 180 degrees centigrade temperature immediately to the formed granules, Promotierung by acid impregnation with iron, Copper and magnesium compounds, characterized by the fact that the sour Aluminiumnitratlösung of

Classifications:

International (IPC 8-9): B01J21/04 B01J21/12 B01J23/70 B01J35/08 (Advanced/Invention);
 B01J21/00 B01J23/70 B01J35/00 (Core/Invention)
International (IPC 1-7): B01J21/04 B01J21/12 B01J23/70 B01J35/08

Family:

Publication number	Publication date	Application number	Application date
DD300266 A7	19920604	DD19880319244	19880829

Priority:

DD19880319244 19880829

Probable Assignee: LEUNA WERKE VEB

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Inventor(s): SCHOEDEL RAINER DE ; ROEMBKE WALTER DE ; REBBE KLAUS DE ; MEYE HORST DE ; MERK RALF DE ; KUEHN HARTMUT DE ; HATTWIG MANFRED DE ; GROSSMANN MANFRED DE ; GRASSHOFF EBERHARD DE ; FRIESE HANS GEORG DE ; BIRKE PETER DE

8) Family number: 2044350 (US4525267A)

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Title: PROCESS FOR HYDROCRACKING HYDROCARBONS WITH HYDROTREATMENT-REGENERATION OF SPENT CATALYST

Abstract: PCT No. PCT/JP81/00134 Sec. 371 Date Sep. 23, 1982 Sec. 102(e) Date Sep. 23, 1982 PCT Filed Jun. 9, 1981 PCT Pub. No. WO82/04441 PCT Pub. Date Dec. 23, 1982. A process for hydrocracking hydrocarbons for residuum conversion in the presence of a fluidized catalyst, which is characterized by extracting at least part of the fluidized catalyst from the reaction system as a spent catalyst, subjecting at least part of the spent catalyst to hydrotreatment for solubilizing toluene-insoluble carbonaceous materials deposited on the catalyst thereby regenerating the spent catalyst, and recycling the regenerated catalyst to the hydrocracking step. According to this process, the spent catalyst is recycled to the hydrocracking step in a highly activated state after the regenerative hydrotreatment, so that it becomes possible to suppress the coke production within the reactor to a considerable degree, to maintain the coke level of the catalyst below a predetermined value and to preclude the contamination of the reactor walls with coke. The process of the invention which regenerates the spent catalyst by a hydrotreatment, in contrast to the conventional catalyst regeneration by oxidative roasting, eliminates all the difficult problems as encountered in the oxidative roasting methods.

Classifications:

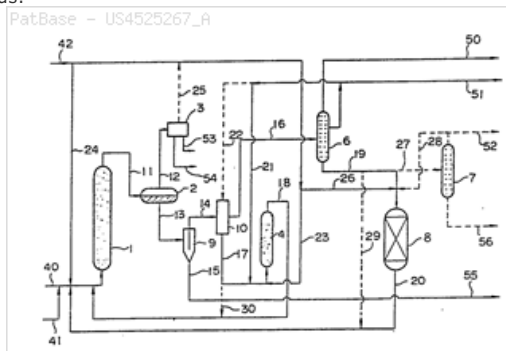
International (IPC 8-9): B01J23/94 C10G47/30 (Advanced/Invention); B01J23/90 C10G47/00 (Core/Invention)

International (IPC 1-7): B01J21/20 B01J23/92 B01J23/94 C10G47/12 C10G47/20 C10G47/30 C10G65/12

CPC: Y10S502/516 C10G47/30 B01J23/94

European: B01J23/94 C10G47/30

US: 208/110 208/111 208/111.15 208/111.2 208/111.3 208/111.35 208/112 208/58 502/21 502/30 502/31 502/5 502/516



Family:

Publication number	Publication date	Application number	Application date
DE3152896 A1	19830616	DE19813152896T	19810609
DE3152896 T	19830616	DE19813152896T	19810609
GB2127320 A1	19840411	GB19830003565	19810609
GB2127320 B2	19851023	GB19830003565	19810609
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US4525267 A	19850625	US19820432942	19820923
WO8204441 A1	19821223	WO1981JP00134	19810609

Priority:

WO1981JP00134 19810609

Probable Assignee: CHIYODA CHEM ENG CONSTRUCT CO

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Assignee(s): CHIYODA CHEMICAL ENG AND CONSTRUCTION CO LTD ; CHIYODA CHEMICAL ENGINEERING AND CONSTRUCTION CO ; CHIYODA CHEMICAL ENGINEERING AND CONSTRUCTION CO L ; CHIYODA CHEMICAL ENGINEERING AND CONSTRUCTION CO LTD ; CHIYODA CHEMICAL ENGINEERING AND CONSTRUCTION CO LTD YOKOHAMA KANAGAWA JP

Inventor(s): (std): IOKA MASAYOSHI ; INOOKA MASAYOSHI

Inventor(s): INOOKA MASAYOSHI YOKOHAMA KANAGAWA JP ; MASAYOSHI INOOKA

Designated states: DE GB JP US

9) Family number: 29253380 (US4617289A)

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Title: Catalyst for purifying diesel engine exhaust gases

Abstract: A catalyst for purifying a diesel engine exhaust gas, said catalyst comprising a refractory three-dimensional structure having a gas filter function, a porous inorganic carrier supported on it, and (a) vanadium oxide and (b) at least one metal selected from the group consisting of platinum, rhodium and palladium supported on the carrier, the amount of component (a) being in the range of 0.2 to 40.0 g as V2O5 per liter of said structure and the amount of component (b) being in the range of 0.1 to 4.0 g as metal per liter of said structure.

Classifications:

International (IPC 8-9): B01D53/86 B01D53/94 B01J23/22

B01J23/64 B01J23/648 B01J37/02 F01N3/00 F01N3/035

F01N3/28 (Advanced/Invention);

F02B1/04 F02B3/06 (Advanced/Non-invention);

B01D53/86 B01D53/94 B01J23/16 B01J23/54 B01J37/00 F01N3/00

F01N3/035 F01N3/28 (Core/Invention);

F02B1/00 F02B3/00 (Core/Non-invention)

International (IPC 1-7): B01D53/36 B01J23/22 B01J23/64

C09K19/20 C09K19/30 C09K19/34 F01N3/00

CPC: B01J23/6482 B01D53/86 B01D53/8609 B01D53/944

B01J37/024 F01N3/035 F01N3/2882 F01N2250/02 F02B1/04

F02B3/06

European: B01D53/86 B01D53/86B4 B01D53/94H B01J23/648B

B01J37/02M F01N3/035 F01N3/28D R01N250/02 R01N37/02

R02B1/04 R02B3/06

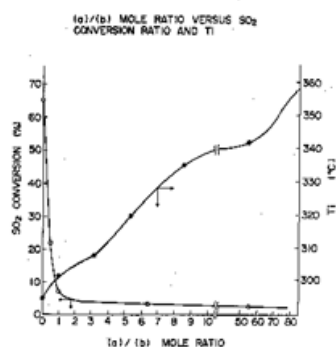
US: 423/215.5 502/325 502/339

U.S. Patent

Oct. 14, 1986

4,617,289

Fig. 1

**Family:**

Publication number	Publication date	Application number	Application date
AT42219 E	19890515	AT19850109882T	19850806
CA1247075 A1	19881220	CA19850488187	19850807
DE3569481 D1	19890524	DE19853569481	19850806
EP0174495 A1	19860319	EP19850109882	19850806
EP0174495 B1	19890419	EP19850109882	19850806
JP1609075 C3	19910628	JP19840186578	19840907
JP1678831 C3	19920713	JP19840164808	19840808
JP2032934 B4	19900724	JP19840186578	19840907
JP3042936 B4	19910628	JP19840164808	19840808
JP61046246 A2	19860306	JP19840164808	19840808
JP61064331 A2	19860402	JP19840186578	19840907
US4617289 A	19861014	US19850762840	19850806

Priority:

JP19840164808 19840808 JP19840186578 19840907 EP19850109882 19850806

Probable Assignee: NIPPON SHOKUBAI CO LTD**Assignee(s):** (std): NIPPON CATALYTIC CHEM IND ; NIPPON SHOKUBAI CO LTD**Assignee(s):** NIPPON SHOKUBAI KAGAKU KOGYO CO ; NIPPON SHOKUBAI KAGAKU KOGYO CO LTD ; NIPPON SHOKUBAI KAGAKU KOGYO KK**Inventor(s):** (std): SAITO KOICHI ; UEDA KENJI ; IKEDA YASUO ; ONO TETSUJI ; ONO TESUJI ; ONO TETSUTSUGU**Designated states:** AT DE FR GB**10) Family number: 33022484** (US2006111575A)

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Title: NON-ROUTINE REACTOR SHUTDOWN METHOD

Abstract: The non-routine (e.g., emergency) shutdown of a chemical reaction process is achieved by a method of safely operating a chemical reaction process which comprises the steps of detecting an undesirable condition capable of affecting the process, minimizing the reaction of the reactants, and maintaining a flow of materials through the reaction zones of the process such that the reaction mixture is displaced from the reaction zones. The flow of materials may be maintained for a period of time such that the substantially all of the reaction mixture is displaced from the reaction zones, thereby flushing the reaction zones. The reaction mixture may then be purged to an ancillary vessel, such as an absorber.

Classifications:

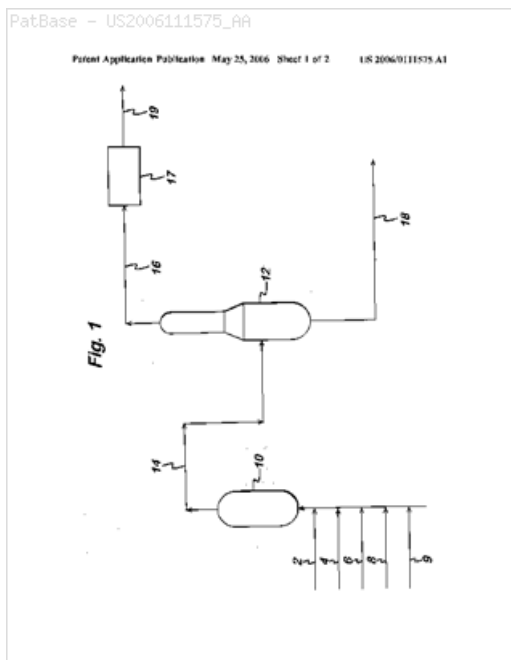
International (IPC 8-9): B01J19/00 B01J23/28 B01J23/90 B01J31/00
 B01J8/00 B01J8/02 C07B33/00 C07B61/00 C07C27/12 C07C46/04
 C07C5/333 C07C51/145 C07C51/16 C07C51/21 C07C51/235
 C07C51/25 C07C53/00 C07C57/00 C07C57/05 C07C67/30
 C07C69/52 C07D301/06 C07D307/89 G05B19/418

G06F19/00 (Advanced/Invention);
 B01J19/00 B01J8/00 (Advanced/Non-invention);
 B01J19/00 B01J23/16 B01J23/90 B01J8/00 C07B33/00 C07B61/00
 C07C46/00 C07C51/16 C07C57/00 C07C67/00 C07D301/00
 C07D307/00 G06F19/00 (Core/Invention);
 C07C51/21 G05B19/418 (Core/Non-invention)

International (IPC 1-7): C07C27/12 C07C51/21 G05B19/418

CPC: B01J19/002 B01J2208/00637 B01J2219/00164 B01J2219/002
 B01J2219/00225 B01J2219/00231 B01J2219/00261 B01J2219/00263
 B01J2219/00272 C07C45/33 C07C45/35 C07C46/06 C07C51/215
 C07C51/252 C07C51/265 C07C51/313 B01J35/0006 C07C67/39
 C10G57/00

European: B01J19/00B4 B01J35/00B C07C45/33 C07C45/35 C07C46/06 C07C51/215 C07C51/25B C07C51/265 C07C51/31B C07C67/39 C10G57/00 L01J208/00C18F L01J219/00B20B2D L01J219/00B20H2 L01J219/00B20H4B2 L01J219/00B40L2 L01J219/00B40L4 L01J219/00B40R L01J219/00B6
US: 502/117 502/129 502/300 502/311 502/328 549/248 549/248P 549/532 549/532S 552/268 552/268S 560/129 560/205 560/205P 560/211 560/211P 560/241.1 562/400 562/400S 562/409 562/512 562/532 562/534 562/534S 562/542 562/543 562/544 562/545 562/545S 562/546 562/547 562/548 562/549 585/324 585/324S 702/22 702/22S



Family:

Publication number	Publication date	Application number	Application date
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JP2006143730 A2	20060608	JP20050335352	20051121
KR100722500 B1	20070528	KR20050106830	20051109
KR20060057509 A	20060526	KR20050106830	20051109
TW200624417 A	20060716	TW20050139374	20051110
TWI305200 B	20090111	TW20050139374	20051110
US2006111575 AA	20060525	US20050268152	20051107
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US2011105784 AA	20110505	US20080009556	20080118
US7361622 BB	20080422	US20050269434	20051108
US7414149 BB	20080819	US20050268152	20051107
US8049036 BB	20111101	US20080009556	20080118

Priority:

US20040629989P 20041122 US20050268152 20051107 US20050269434 20051108
US20080009556 20080118

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Designated states: BE DE FR GB

11) Family number: 28321610 (US2002179492A)

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Title: Gasoline sulfur reduction catalyst for fluid catalytic cracking process

Abstract: The present invention is directed to certain catalyst compositions and processes that are capable of reducing sulfur compounds normally found as part of the gasoline fraction streams of fluid catalytic cracking processes. The present invention requires an equilibrium cracking catalyst composition comprises at least one Y-type zeolite having kinetic conversion activity of at least about 3 in combination with a Lewis acid containing alumina composite present in at least 50 weight percent of the composition. The resultant equilibrium catalyst composition has a kinetic conversion activity of at least about 2.

Classifications:

International (IPC 8-9): B01J23/00 B01J23/06 B01J23/10 B01J29/08 B01J35/00 B01J37/00 C10G11/05 C10G35/095 (Advanced/Invention); B01J23/00 B01J23/06 B01J23/10 B01J29/00 B01J35/00 B01J37/00 C10G11/00 C10G35/00 (Core/Invention)

International (IPC 1-7): B01J B01J23/00 B01J23/06 B01J23/10 B01J29/06 B01J29/08 C10G11/04 C10G11/05 C10G35/095

CPC: B01J23/06 B01J29/084 B01J35/0006 B01J37/0009 B01J2229/16

C10G11/05

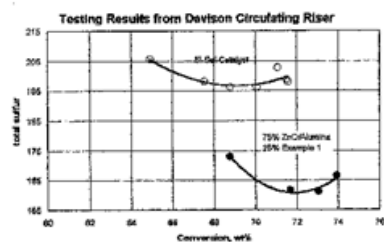
European: B01J23/06 B01J29/08R B01J29/08Y B01J35/00B
B01J37/00B C10G11/05 L01J229/16

US: 208/113 208/120.01 208/120.05 208/120.1 208/120.15
208/120.2 208/120.25 208/120.3 208/120.35 502/300 502/61 502/64
502/65 502/66 502/79

PatBase - US2002179492_AA

Patent Application Publication Dec. 5, 2002 Sheet 1 of 3 US 2002/0179492 A1

FIG. 1



Family:

Publication number	Publication date	Application number	Application date
AR033144 AA	20031203	AR2002P101316	20020410
AT404281 E	20080815	AT20020723710T	20020328
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IN00761MN2003 A	20050429	IN2003MN00761	20030812
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JP2005510337 T2	20050421	JP20020581096T	20020328
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PL373505 A1	20050905	PL20020373505	20020328
PT1381461 T	20081008	PT20020723710T	20020328
RU2003133133 A	20050510	RU20030133133	20020328
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TWI231231 B	20050421	TW20020106976	20020408
US2002179492 AA	20021205	US20010833601	20010413
US6635168 BB	20031021	US20010833601	20010413
WO02083300 A1	20021024	WO2002US10035	20020328

Priority:

US20010833601 20010413 WO2002US10035 20020328 WO2002US10035 20031011

Probable Assignee: WR GRACE AND CO COM

Assignee(s): (std): CHENG WU CHENG ; DEITZ PHILIP STEPHEN ; GRACE W R AND CO ; ZHAO XINJIN ; RUDESILL JOHN ALLEN ; WORMSBECHER RICHARD FRANKLIN ; W R GRACE AND CO CONN

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Inventor(s): (std): ALLEN RUDESILL JOHN ; FRANKLIN WORMSBECHER RICHARD ; STEPHEN DEITZ PHILIP ; WU CHENG CHENG ; XINJIN ZHAO ; ZHAO XINJIN ; WORMSBECHER RICHARD FRANKLIN ; WORMSBECHER RICHARD ; RUDESILL JOHN ALLEN ; RUDESILL JOHN ; DEITZ PHILIP STEPHEN ; DEITZ PHILIP STEPHEN ; DEITZ PHILIP ; CHENG WU CHENG ; WORMSBECHER RICHARD FRANKLIN ; WORMSBECHER RICHARD FRANKLIN ; RUDESILL JOHN ALLEN ; DEITZ PHILIP STEPHEN ; CHENG WU CHENG ; CHENG WU CHENG

Inventor(s): CHENG VU-CHENG ; RICHARD FRANKLIN WORMSBECHER ; PHILIP STEPHEN DEITZ ; JOHN ALLEN RUDESILL ; WU-CHENG CHENG

Agent(s): DAVIES COLLISON CAVE; DAVIES COLLISON CAVE PTY LTD; GOWLING LAFLEUR HENDERSON LLP; BENSON JOHN EVERETT

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE 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 NE NL NO NZ OM PH PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TN TR TT TZ UA UG UZ VN YU ZA ZM ZW

12) Family number: 24115617 (US2003013601A)

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Title: Zeolite based catalyst of ultra-high kinetic conversion activity

Abstract: A catalyst useful in cracking of hydrocarbon feedstock comprising particulate material composed of at least 70 weight percent zeolite and the remainder substantially composed of silica sol, alumina sol or mixtures thereof; wherein the particulate material has a kinetic conversion activity of at least about 3; and compositions for fluid catalytic cracking of petroleum feedstock comprising said catalyst and a second particulate material having a kinetic conversion activity of less than 3 wherein said catalyst composition having a kinetic conversion activity of at least about 2.

Classifications:

International (IPC 8-9): B01J29/00 B01J29/08 B01J35/02

B01J37/00 (Advanced/Invention);

B01J29/00 B01J35/00 B01J37/00 (Core/Invention);

B01J29/00 (Core/Non-invention)

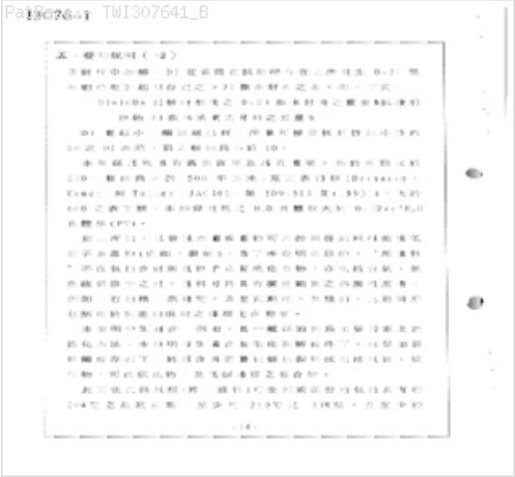
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B01J35/02 B01J37/00

CPC: B01J29/084 B01J37/0009

European: B01J29/08Y B01J37/00B

US: 502/63 502/64 502/65 502/73 502/79



Family:

Publication number	Publication date	Application number	Application date
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AT380588 E	20071215	AT20020728632T	20020328
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AU2002258676 BB	20070712	AU20020258676	20020328
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KR100893954 B1	20090420	KR20037013418	20020328
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PT1377374 T	20080114	PT20020728632T	20020328
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US2003013601 AA	20030116	US20010833603	20010413
US6884744 BB	20050426	US20010833603	20010413
WO02083304 A2	20021024	WO2002US10032	20020328
WO02083304 A3	20030605	WO2002US10032	20020328

Priority:

US20010833603 20010413 WO2002US10032 20020328 WO2002US10032 20031013

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PHILIP

Inventor(s): ZHAO XINJIN CHENG WU CHENG DEITZ PHILIP STEPHEN ; WU-CHENG CHENG ; PHILIP STEPHEN DEITZ

Agent(s): DAVIES COLLISON CAVE; DAVIES COLLISON CAVE PTY LTD; GOWLING LAFLEUR HENDERSON LLP; GOWLING WLG CANADA LLP; TROFFKIN HOWARD J; HOWARD J

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE 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 NE NL NO NZ OM PH PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TN TR TT TZ UA UG UZ VN YU ZA ZM ZW

13) Family number: 13580652 (US6551500B)

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Title: HYDROCRACKING CATALYST, PRODUCING METHOD THEREOF, AND HYDROCRACKING METHOD

Abstract: A hydrocracking catalyst has a carrier that has particles of a compound oxide and a binder present between these particles, and at least one metal component selected from Group 6, Group 9 or Group 10 of the Periodic Table supported on the carrier. The catalyst has a median pore diameter of 40 to 100 Å and the volume of pores whose pore diameter falls within a range of 40 to 100 Å is at least 0.1 mL/g. Moreover, the volume of pores of the catalyst whose pore diameter falls within a range of 0.05 to 5 μm is 0.05 to 0.5 mL/g, and the volume of pores whose pore diameter is 0.5 to 10 μm is less than 0.05 mL/g. This catalyst is mechanically strong enough for practical use and has a high conversion rate and middle distillate selectivity in hydrocracking of hydrocarbon oils, particularly vacuum gas oil.

Classifications:

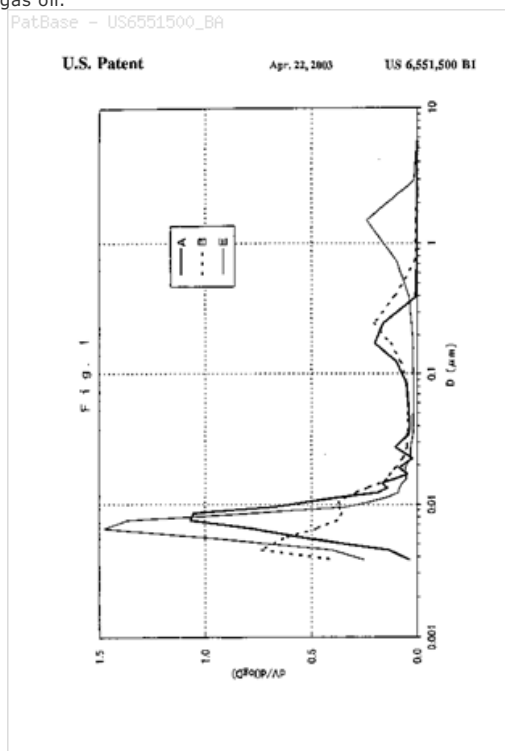
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International (IPC 1-7): B01J21/00 B01J23/85 B01J29/16 B01J35/10 B01J37/00 C10G47/02 C10G47/12 C10G47/14

CPC: B01J35/0026 B01J35/1019 B01J35/1038 B01J35/1061 B01J35/1066 B01J35/108 B01J37/0009 C10G47/12 B01J21/12 B01J23/85 B01J23/888 B01J29/146 C10G2400/06

European: B01J23/85 B01J35/10 C10G45/08 C10G47/12 L01J21/12 L01J23/888 L01J29/14Y L01J37/00B M10G400/06

US: 208/108 208/111.01 208/111.3 208/111.35 502/305 502/313 502/314 502/325 502/332 502/79



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Priority:

JP19980246458 19980901 WO1999JP04722 19990831

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Inventor(s): TORU SAITO ; MANABU KOBAYASHI ; KAORI MATSUZAWA ; KATSUAKI ISHIDA

Designated states: AT BE CH CY DE DK ES FI FR GB GR ID IE IT JP KR LI LU MC NL PT SE SG US

14) Family number: 24049703 (US4152250A)

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Abstract: This invention relates to a catalyst for hydrotreatment of hydrocarbons comprising one or more of metals selected from the group consisting of transition metals and metals of group IIb of the periodic table supported on sepiolite. More particularly it relates to a catalyst effective in the selective demetallization treatment of hydrocarbons.

Classifications:

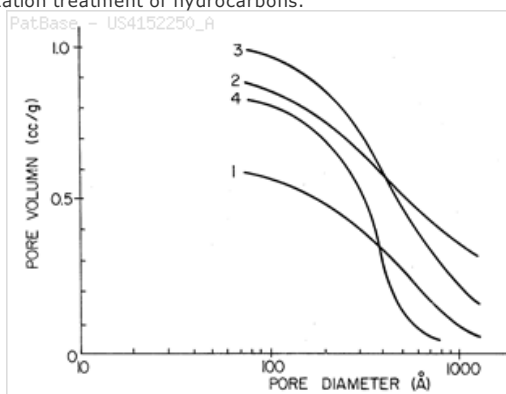
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International (IPC 1-7): B01J20/10 B01J21/00 B01J21/04 B01J21/10 B01J21/14 B01J21/16 B01J23/00 B01J23/06 B01J23/10 B01J23/16 B01J23/20 B01J23/22 B01J23/24 B01J23/34 B01J23/70 B01J23/72 B01J23/74 B01J23/76 B01J23/80 B01J23/84 B01J23/88 B01J29/00 B01J29/06 B01J35/10 B01J37/00 B01J37/04 B01J37/30 B01J38/68 C01B33/22 C04B21/00 C07C11/00 C07C5/14 C07C7/00 C07C9/00 C07C9/14 C10G13/00 C10G23/00 C10G23/02 C10G35/00 C10G35/06 C10G45/04 C10G45/08 C10G47/02 C10G47/12 C10G47/20 C10G49/04 C10G65/04

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US: 208/213 208/216PP 208/216R 208/217 208/251.00H 208/251H 208/254H 252/457 502/242 502/244 502/245 502/247 502/248 502/251 502/252 502/255 502/258 502/62 502/66 502/73 502/74 502/84



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Priority:

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15) Family number: 29974872 (US2003032848A)

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Title: HYDROCARBON CONVERSION PROCESSES USING NON-ZEOLITIC MOLECULAR SIEVE CATALYSTS

Abstract: Hydrocarbon conversion process in which a feedstock is contacted with a non zeolitic molecular sieve to remove most, if not all, of the halogen contained in the catalyst. The halogen may be removed by one of several methods. One method includes heating the catalyst in a low moisture environment, followed by contacting the heated catalyst with air and/or steam. Another method includes steam-treating the catalyst at a temperature from 400 degrees centigrade to 1000 degrees centigrade. The hydrocarbon conversion processes include the conversion of oxygenates to olefins, the conversion of oxygenates and ammonia to alkylamines, the conversion of oxygenates and aromatic compounds to alkylated aromatic compounds, cracking and dewaxing.

Classifications:

International (IPC 8-9): B01J27/18 B01J27/182 B01J29/00 B01J29/04 B01J29/82 B01J29/83 B01J29/85 B01J35/10 B01J37/00 B01J37/04 B01J37/10 C01B37/08 C07B61/00 C07C1/00 C07C1/20 C07C1/24 C07C1/32 C07C11/02 C07C11/04 C07C11/06 C07C13/00 C07C15/00 C07C2/00 C07C2/02 C07C2/56 C07C2/66 C07C209/00 C07C4/00 C07C4/02 C07C5/13 C07C5/22 C07C5/23 C07C6/00 C08F10/00 C10G11/02 C10G3/00 C10G35/00 C10G45/64 C10G47/00 C10G47/16 C10G9/00 (Advanced/Invention); B01J29/00 B01J35/10 C07C11/02 C07C2/00 C08F10/00 (Advanced/Non-invention); B01J27/14 B01J29/00 B01J35/00 B01J37/00 C01B37/00 C07B61/00 C07C1/00 C07C11/00 C07C13/00 C07C15/00 C07C2/00 C07C209/00 C07C4/00 C07C5/00 C07C6/00 C08F10/00 C10G11/00 C10G3/00 C10G35/00 C10G45/58 C10G47/00 C10G9/00 (Core/Invention); B01J35/00 (Core/Non-invention); B01J (Subclass/Invention)

International (IPC 1-7): B01J27/14 B01J27/18 B01J27/182 B01J29/00 B01J29/04 B01J29/06 B01J29/82 B01J29/83 B01J29/85 B01J37/00 B01J37/04 B01J37/10 C01B15/16 C01B37/08 C07B61/00 C07C1/00 C07C1/20 C07C1/207 C07C1/24 C07C1/32 C07C11/02 C07C11/04 C07C11/06 C07C2/00 C10G11/00 C10G15/00 C10G3/00 C10G45/64 C10G47/16 C10G73/02

CPC: C10G3/48 C10G3/62 B01J29/83 B01J29/90 B01J35/023 B01J35/1019 B01J35/1023 C07C11/02 C07C11/04 C07C11/06 C07C2529/00 C10G2300/1022 Y02P30/42 Y02P20/584 Y02P30/20 B01J35/10 B01J37/0045 B01J2229/42 C10G3/49 C10G2400/20 B01J2229/26 C10G2400/22 Y02P20/52 B01J29/85 B01J37/0009 B01J37/10 B01J2229/36 C07C1/20 C07C2529/85

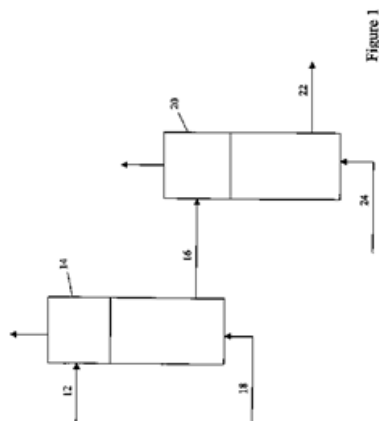
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US: 208/106 208/107 208/108 208/109 208/110 208/111.01 208/113 208/114 208/115 208/118 208/119 208/120.01 208/134 208/135.27 208/143 208/28 423/305 423/305S 423/327.1 423/327.100S 502/208 502/214 502/214S 502/24 502/240 502/240S 502/6 502/60 502/60P 502/60S 502/63 502/64 502/68 518/700 526/127 564/479 585/266 585/310 585/324 585/326 585/327 585/329 585/353 585/357 585/358 585/364 585/365 585/375 585/377 585/378 585/379 585/422 585/446 585/462 585/463 585/466 585/467 585/469 585/470 585/471 585/474 585/475 585/476 585/477 585/480 585/481 585/483 585/486 585/500 585/500P 585/502 585/520 585/527 585/528 585/533 585/638 585/638S 585/639 585/639S 585/64 585/640 585/640P 585/640S 585/643 585/648 585/653 585/653P 585/654 585/664 585/666 585/667 585/669 585/671 585/708 585/709 585/721 585/722 585/734 585/739 585/740 585/750 585/752

PatBase - US2003032848_AA

Patent Application Publication Feb. 13, 2003

US 2003/0032848 A1

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