

1) Family number: 57414072 (US2016030856A)

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Title: DISTILLATION REACTOR MODULE

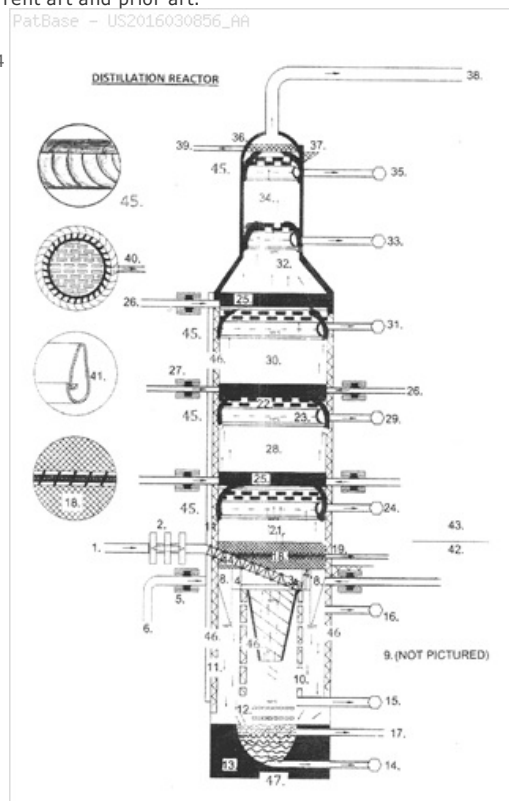
Abstract: The distillation reactor consists of a reactor apparatus with corresponding method of upstream distilling and purification of carbon based liquid or liquidized streams for use as fuels, lubricating oils and or gaseous energy and electricity production. The distillation reactor consolidates the atmospheric and vacuum distillation processes along with desalting, defueling, deasphalting, fractionation, thin/wiped film evaporation and Hydro finishing into an advanced high velocity, high volume single reactor system. Carbon based feed streams include either a single stream or preferably, a combined stream of liquefied coal slurries, crude oils, spent oils, Pyrolytic oils and or peat or other plant carbon derived liquids, vapors, mists or gases. The method further consists of controlling the mix ratio, flow velocity, sequential fractionation and filtration technology and processing atmospheres of the carbon feeds with the reactor apparatus. The combined apparatus and method allows for a refinery to consistently produce a finished barrel of oil well below traditional costs and at a higher efficiency than current art and prior art.

Classifications:

International (IPC 8-9): B01D3/00 B01D3/06 B01D3/10 B01D3/26 B01D3/32 B01D39/20 B01D53/48 B01D53/62 B01D59/04 B01J B01J19/24 B01J19/26 B01J2/00 B01J6/00 B01J8/24 B02C23/00 B03C1/00 B22F3/10 B22F9/00 B29B17/00 C01B17/027 C01B17/74 C02F1/00 C10B49/12 C10G1/00 C10G11/18 C10G33/00 C10G45/00 C10G57/00 C10G7/00 C10G7/06 C10G9/04 C10J3/72 C10L9/10 C22B13/00 C22B15/00 C22B21/00 C22B7/00 C22B9/00 F03G7/00 F27B17/00 G21C1/02 G21D5/00 H01M10/54 H01M8/00 H02K55/02 H02K7/09 (Advanced/Invention)

CPC: Y02E30/40 G21D1/00 B01J19/0093 B01J2219/00864 B01J2219/00867 B01J2219/00871 C01G21/02 C01B3/32 C01B13/02 C01B17/02 C01B2203/0205 C01B2203/0283 C01B2203/043 C01B2203/0445 C01B2203/0475 C10G1/02 C10G1/10 C10G31/08 C10G75/04 Y02P20/129 B09B5/00 Y02P30/446 Y02E30/30 B01D3/10 B01D3/006 B01D3/06 B01D39/2027 F03G7/00 B01D3/009 C10G7/06 G21C1/00 G21D5/00 C10G7/00 C10G57/00 C10G7/003 C10L9/10 C10J3/72 C10G1/00 C01B17/027 C01B17/74 B01J6/008 B01J2/00 B01J19/24 B01D53/48 B01D53/62 C22B9/00 F27B17/00 C02F1/00 C22B7/00 B29B17/00 B22F3/10 B22F9/00 C22B21/00 C22B15/00 C22B13/00 H01M8/00 H01M10/54 H02K55/02 H02K7/09 B02C23/00 B03C1/00 C10L2290/544 C10J2300/093 C10J2300/0946 B22F2009/001 C01B17/48 C10G11/18 C10G33/00 C10G45/00 Y02E20/16 Y02E20/18 Y02W10/33 Y02W10/37 Y02W30/84 C01B32/05 C01B32/20 C01B32/50 Y02P10/143

US: 196/46 202/232 209/213 210/251 241/301 241/65 266/160 310/90.5 422/129 422/170 422/187 422/198 422/255 423/522 423/567.1 429/49 505/163 505/166 60/698

**Family:**

Publication number	Publication date	Application number	Application date
CA2907677 AA	20150921	CA20142907677	20140318
EP2969180 A2	20160120	EP20140762668	20140318
EP2969180 A4	20161005	EP20140762668	20140318
IL242590 A0	20160131	IL20140242590	20140318
JP2016512165 T2	20160425	JP20160502609T	20140318
US2016030856 AA	20160204	US20140776734	20140318
US2016032904 AA	20160204	US20140776736	20140318
US2016045841 AA	20160218	US20140776732	20140515
WO14146129 A2	20140918	WO2014US31118	20140318
WO14146129 A3	20150129	WO2014US31118	20140318
WO14153570 A2	20140925	WO2014US38290	20140515
WO14153570 A3	20150219	WO2014US38290	20140515
WO14153570 A9	20150806	WO2014US38290	20140515
WO14200605 A2	20141218	WO2014US31116	20140318
WO14200605 A3	20150326	WO2014US31116	20140318
WO14200605 A4	20150430	WO2014US31116	20140318
WO14200605 A9	20150205	WO2014US31116	20140318

Priority:

US20130800209P 20130315	US20130801170P 20130315	US20130801491P 20130315
US20140776734 20140318	US20140776736 20140318	WO2014US31118 20140318

Probable Assignee: TRANSTAR GROUP LLC

Assignee(s): (std): BRADLEY RANDALL ; KALPAN ALLEN ; KAPLAN ALLEN ; TRANSTAR GROUP LTD

Assignee(s): TRANSTAR GROUP LLC

Inventor(s): (std): KAPLAN ALLEN ; BRADLEY RANDALL ; KALPAN ALLEN

Agent(s): ADE AND CO INC; NELLIGAN OBRIEN PAYNE LLP; PERRONACE ANDREA; HERSHKOVITZ ABRAHAM ET AL; HERSHKOTIZ ABRAHAM ET AL

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

2) Family number: 2348374 (US4405573A) PatBase

Title: Process for preparing potassium ferrate (K₂FeO₄)

Abstract: Disclosed is a process for making potassium ferrate (K₂FeO₄) by reacting substantially pure KOH, Cl₂, and a ferric salt in the presence of a stabilizing proportion of at least one ferrate-stabilizing compound (e.g., a combination of an alkali metal silicate and an alkali metal iodine-containing salt). The formed K₂FeO₄ is separated and recovered from other reaction co-products [KCl, H₂O, KOCl, and Fe(OH)₃] and excess KOH. Other specific improvements include the following: (i) returning KCl co-product back to a chlor/alkali membrane-type electrolytic cell and then making very pure KOH and Cl₂; (ii) recycling excess KOH back to the ferrate-forming reaction; and (iii) recovering a substantially pure dry solid K₂FeO₄ product by washing the above-noted K₂FeO₄ product in DMSO or its equivalent; and then washing with methanol or its equivalent, before drying.

Classifications:

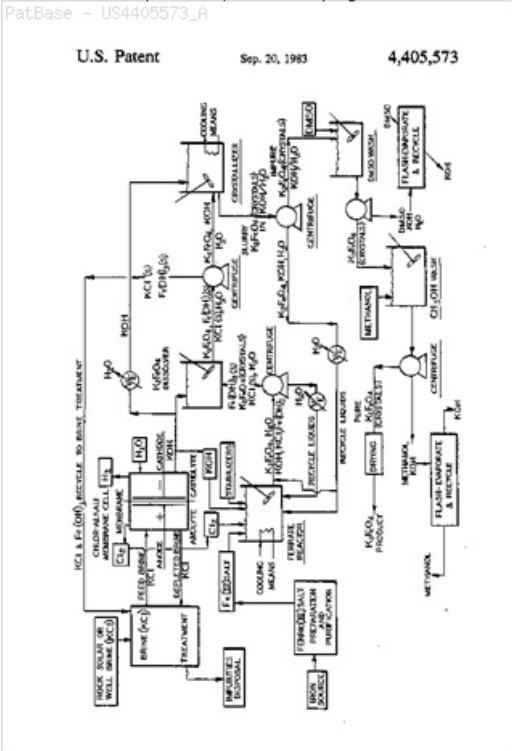
International (IPC 8-9): C01G49/00 C01G49/02 (Advanced/Invention); C01G49/00 (Core/Invention)

International (IPC 1-7): C01G49/00 C01G49/02 C25B1/46 C25B15/08

CPC: C01G49/0081 C01P2006/60

European: C01G49/00C20 M01P6/60

US: 423/150 423/150.1 423/179 423/275 423/594 423/594.2



Family:

Publication number	Publication date	Application number	Application date
CA1163421 A1	19840313	CA19820413822	19821020
DE3266228 D1	19851017	DE19823266228	19821105
EP0082590 A1	19830629	EP19820305914	19821105
EP0082590 B1	19850911	EP19820305914	19821105
JP58110435 A2	19830701	JP19820208751	19821130
US4405573 A	19830920	US19810331949	19811217

Priority:

US19810331949 19811217 CA19820413822 19821020

Probable Assignee: OLIN CORP

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Assignee(s): OLIN MATHIESON CHEM CORP ; DEININGER JAMES P ; DOTSON RONALD L

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Agent(s): OSLER HOSKIN AND HARCOURT LLP

Designated states: BE DE FR GB IT NL SE

Title: MAGNETICALLY IMMOBILIZED METABOLIC ENZYMES AND COFACTOR SYSTEMS

Abstract: The present invention provides compositions and methods for producing magnetic bionanocatalysts (BNCs) comprising metabolically self-sufficient systems of enzymes that include P450 monooxygenases or other metabolic enzymes and cofactor regeneration enzymes.

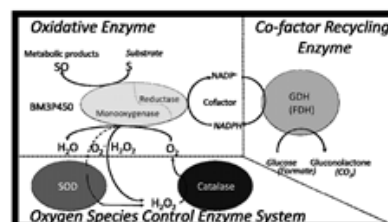
Classifications:

International (IPC 8-9): B01J35/00 B01J37/025 B82Y25/00 B82Y30/00 C12N11/14 C12N9/02 (Advanced/Invention)

CPC: C12N11/14 B82Y25/00 B82Y30/00 C12N9/0071

PatBase - WO18102319_A1

Figure 1



Family:

Publication number	Publication date	Application number	Application date
CA3045640 AA	20190530	CA20173045640	20171128
WO18102319 A1	20180607	WO2017US63542	20171128

Priority:

US20160429765P 20161203 WO2017US63542 20171128

Probable Assignee: ZYMTRONIX CATALYTIC SYSTEMS INC

Assignee(s): (std): ZYMTRONIX CATALYTIC SYSTEMS INC

Assignee(s): BROOKS RANI TALAL ; CHUN MATTHEW ; CORGIE STEPHANE

Inventor(s): (std): CORGIE STEPHANE ; CHUN MATTHEW ; BROOKS RANI TALAL

Agent(s): BERESKIN AND PARR LLP SENCRL SRL; KAPLAN JONATHAN M

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

Title: ENVIRONMENTALLY-FRIENDLY COMPOSITIONS AND METHODS FOR EXTRACTING MINERALS AND METALS FROM ORE

Abstract: The subject invention provides safe, environmentally-friendly, compositions and methods for extracting minerals and/or metals from ore. More specifically, the subject invention provides for bioleaching using a composition comprising one or more biosurfactant-producing microorganisms and/or microbial growth by-products. In specific embodiments, the composition comprises biosurfactant-producing yeasts and/or their growth by-products.

Classifications:

International (IPC 8-9): C22B3/02 C22B3/18 (Advanced/Invention)

Family:

Publication number	Publication date	Application number	Application date
WO19133554 A1	20190704	WO2018US67408	20181222

Priority:

US20170610581P 20171227

Probable Assignee: LOCUS IP CO LLC

Assignee(s): (std): LOCUS IP CO LLC

Inventor(s): (std): ALIBEK KEN ; FARMER SEAN ; MOLDAKOZHAYEV ALIBEK ; IBRAGIMOVA SAMAL

Agent(s): SALIWANCHIK DAVID R ET AL

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

Title: SELECTIVE EXTRACTION OF PLATINUM-GROUP METALS USING CHLORINE AND OZONE CONCENTRATED SOLUTIONS.

Family:

Publication number	Publication date	Application number	Application date
JP10207010 A2	19980807	JP19970019591	19970120
US6210871 BA	20010403	US19980009773	19980120

Priority:

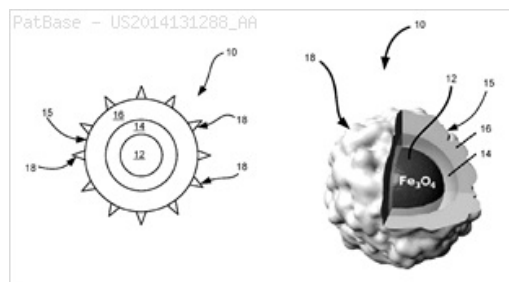
JP19970019591 19970120

Probable Assignee: FUJIFILM HOLDINGS CORP**Assignee(s):** (std): FUJI PHOTO FILM CO LTD**Assignee(s):** FUJIFILM CORP ; FUJIFILM HOLDINGS CORP ; FUJI PHOTO FILM CO**Inventor(s):** (std): ISHII YOSHIO ; YABUKI YOSHIHARU**7) Family number: 52403899** (US2014131288A)

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Title: SUPERPARAMAGNETIC PHOTOCATALYTIC MICROPARTICLES

Abstract: This disclosure is directed at a microparticle for use in water treatment comprising a core layer; a shell layer, deposited on and encasing the core layer; and a photoactive layer surrounding the shell layer. The disclosure also provides a method for producing same.

Classifications:**International (IPC 8-9):** B01J23/745 B01J27/02 B01J37/02 C02F1/00 C02F1/32 C02F1/72 (Advanced/Invention)**CPC:** C02F2305/08 C02F2305/10 C02F1/325 C02F1/488 B01J21/063 B01J21/08 B01J23/44 B01J23/50 B01J23/52 B01J23/72 B01J23/755 B01J35/0013 B01J35/0033 B01J35/004 B01J35/008 B01J37/033 B01J37/06 B01J37/16 B01J37/031 C02F1/32 B01J23/42 B01J23/745 B01J37/0221 C02F1/725**US:** 210/748.14 252/62.59 427/127**Family:**

Publication number	Publication date	Application number	Application date
CA2843513 AA	20140129	CA20122843513	20120517
US2014131288 AA	20140515	US20120118255	20120517
WO12155269 A1	20121122	WO2012CA50323	20120517

Priority:

US20110457710P 20110517

US20120118255 20120517

WO2012CA50323 20120517

Probable Assignee: GU FRANK25 WESTMOUNT ROAD NORTHWATERLOO1N2L 5G7CA**Assignee(s):** (std): GU FRANK ; LESHUK TIMOTHY MICHAEL CARTER ; LINLEY STUART**Assignee(s):** LINLEY STUART515G SUNNYDALE PLACEWATERLOO1N2L 4S9CA ; LESHUK TIMOTHY MICHAEL CARTER329 DANSBURY DRIVEWATERLOO1N2K 2M1CA ; GU FRANK25 WESTMOUNT ROAD NORTHWATERLOO1N2L 5G7CA**Inventor(s):** (std): LESHUK TIMOTHY MICHAEL CARTER ; LINLEY STUART ; GU FRANK**Inventor(s):** LESHUK TIMOTHY MICHAEL CARTER329 DANSBURY DRIVEWATERLOO1N2K 2M1CA ; LINLEY STUART515G SUNNYDALE PLACEWATERLOO1N2L 4S9CA ; GU FRANK25 WESTMOUNT ROAD NORTHWATERLOO1N2L 5G7CA**Agent(s):** BORDEN LADNER GERVAIS LLP; GOWLING LAFLEUR HENDERSON LLP; WONG JEFFREY W ET AL**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 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 IS IT JP KE KG KM KN KP KR 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 PE PG PH PL PT QA RO RS RU RW 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**8) Family number: 500978** (US3819363A)

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Title: METAL RECOVERY METHOD

Abstract: A system for recovering noble metal values from chemically composite ore materials. The process is effective to assay as well as to remove commercial quantities of precious metals associated chemically or physically with naturally occurring organic compounds. For example, previous metals which are chelated or are present in the form of complex ions, as well as metals which are physically or chemically bound to or form parts of large organic molecules may be recovered. The starting material may be an ore including water and organic and inorganic underwater deposits, usually from coastal regions. The organic portion of the ore is separated by flotation from the shells, sand, and the like. Calcium carbonate is removed by acid treatment, and the remaining organic float material is treated with a water-immiscible, volatile organic solvent or other material which forms a gel-like material. The solvent, such as benzene or the like, is then reclaimed by heating the mass below the boiling point of water. Thereafter, the precious metal containing composition material is treated with a strong oxidant such as perchloric acid, any excess oxidant is removed from the oxidized composite material, and the organic precious metal composite material spontaneously ignites at about 200 DEG C., producing waste gases and an ash material. The ash contains mixed previous elemental metals and metal oxides salts and slags which are suitable for immediate electric arc furnace reduction in preparation for the formation of cast anodes from which pure metals are ultimately recovered.

Classifications:

International (IPC 1-7): B03B7/00 C22B1/00 C22B1/02 C22B1/12 C22B11/00 C22B11/04 B02B3/00 C22B4/00 C22B5/00 C22B5/16 C22D7/00

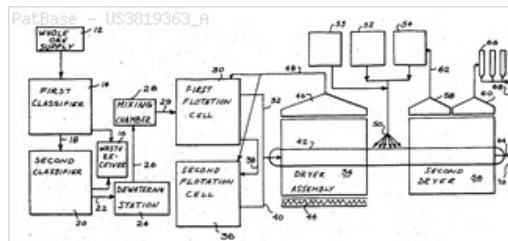
International (IPC 1-7): B03B7/00 C22B1/00 C22B1/02 C22B1/12 C22B11/00 C22B11/04 C22B3/00 C22B4/00 C22B5/00 C22B5/16 C22D7/00

International (IPC 1-7): B03B7/00 C22B1/00 C22B1/02 C22B1/12 C22B11/00 C22B11/04 C22B3/00 C22B4/00 C22B5/00 C22B5/16 C22D7/00

CPC: C22B5/00 Y02P10/234 C22B3/00 C22B1/00 C22B4/00 C22B5/16
C22B11/00

European: C22B1/00 C22B11/00 C22B3/00 C22B4/00 C22B5/00
C22B5/16

US: 423/22 423/23 423/26 75/10.19 75/10.23 75/10R 75/11.8 75/428
75/637



Family:

Publication number	Publication date	Application number	Application date
CA960871 A1	19750114	CA19710116431	19710623
DE2131481 A1	19720105	DE19712131481	19710624
FR2096458 A1	19720218	FR19710022828	19710623
GB1360031 A	19740717	GB19710029356	19710623
NL7108748 A	19711228	NL19710008748	19710624
OA3834 A	19711224	OA19710054275	19710622
US3819363 A	19740625	US19710132061	19710407
US3979205 A	19760907	US19740480965	19740619
ZA7104049 A	19730228	ZA19710004049	19710621

Priority:

US19700049455 19700624 US19710132061 19710407 US19740480965 19740619

Probable Assignee: WANZENBERG FRITZ WALTER

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Assignee(s): FRITZ W WANZENBERG ; WANZENBERG FRITZ W ; WANZENBERG F US

Inventor(s): (std): WANZENBERG FRITZ W ; WANZENBERG F ; W WANZENBERG FRITZ

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