

25 Documents

Publication numbers	Title	Current assignees
IN2015MU04333 A	A microwave electrothermal thruster adapted for in-space electrothermal propulsion	JSW STEEL
EP1640608 A1	Spacecraft thruster	ELWING
WO201398505 A1	Plasma thruster and method for generating propulsive plasma thrust	ONERA - OFFICE NATIONAL D ETUDES & DE RECHERCHES AEROSPATIALES
JP2014194220 A	Thruster and thrust-generating process	ELWING
JP2013137024 A	Thruster , system therefor, and propulsion generating method	ELWING
US20110077697 A1	Bio-medical unit system for medication control	AVAGO TECHNOLOGIES
WO2014145726 A1	Compact high-voltage plasma source for neutron generation	STARFIRE INDUSTRY
FR1355686 A	Radio distance measuring system	HONEYWELL
US20060198485 A1	Plasma electric generation system	UNIVERSITY OF CALIFORNIA
CA2987866 A1	Infusion pumps	PERQFLO
US20060254520 A1	RF current drive for plasma electric generation system	UNIVERSITY OF CALIFORNIA
WO201604044 A1	Electromagnetic thrusting system	CANNAE
CA2905929 A1	Plasma generator using dielectric resonator	RADOM
US20150041432 A1	Self-sustained non-ambipolar direct current (dc) plasma at low power	TOKYO ELECTRON
US20080174509 A1	Subwavelength aperture monopulse conformal antenna	LOCKHEED MARTIN
CN104411082 A	Plasma source system and plasma generating method	SHENZHEN INSTITUTE OF ADVANCED TECHNOLOGY CAS
US20170317654 A1	Spatial power combining mechanism (spcm) for the generation and amplification of electromagnetic radiation	CALIFORNIA INSTITUTE OF TECHNOLOGY
CA2931020 A1	Power generation systems and methods regarding same	BRILLIANT LIGHT POWER
EP1762814 A1	Deployment unit for electronic weaponry with independent propellant	TASER INTERNATIONAL
CN206487598U U	Plasma engine	SHENZHEN LANCEVILLE ELECTRONIC TECHNOLOGY
WO2017149526 A2	A method and apparatus for cooperative usage of multiple distance meters	MAY PATENTS
JP2006147449 A	Two-stage hall effect plasma accelerator including plasma source driven by high-frequency discharge	JAPAN AEROSPACE EXPLORATION AGENCY

Publication numbers	Title	Current assignees
WO2010116362 A1	System, floating unit and method for elevating payloads	SKY SAPIENCE
US20110180385 A1	Control of Catalytic Chemical Processes	RAYTHEON
US5020411 A	Mobile assault logistic kinetmatic engagement device	ROWAN LARRY

Family 1/25 - FAMPAT - ©Questel

Title

(WO201785746)

A microwave electrothermal **thruster** adapted for in-space electrothermal propulsion

Images

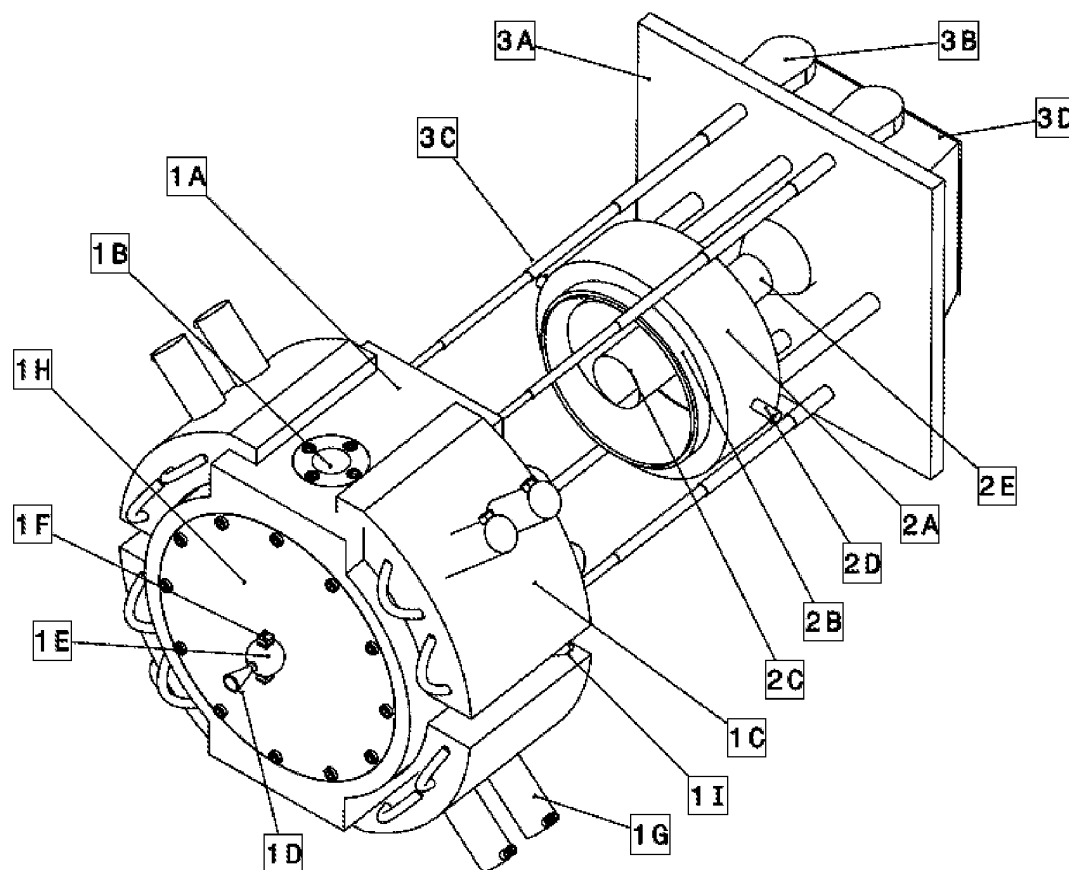


FIG. 1

Publication data including kind & date

IN4333/MUM/2015 A 2015-12-04 IN2015MU04333

WO2017085746 A1 2017-05-26 WO201785746

WO2017085746 A4 2017-08-03 WO201785746



Abstract

(WO201785746)

The present invention relates to a Microwave Electrothermal Thruster (MET) adapted for in-space electrothermal propulsion comprising a tunable frequency Microwave Electrothermal Thruster propulsion module enabling primary propulsion and altitude control of a satellite/spacecraft wherein RF Semiconductors is introduced for the first time as microwave generator inside cavity body to increase its efficiency and respond time and to make the thruster capable of operating in two frequencies by mechanically tuning its cavity making such thruster compact and light weight. The free-floating plasma within the resonant cavity couples the incident electrical power directly to the tangentially injected propellant gas. The plasma forms by focusing the microwave energy into the first transverse magnetic mode and operates independent of the type of propellant gas used. Also, for the first time, Shape Memory Alloy is introduced into the thruster cavity to enable faster and effective tuning of the resonant cavity diameter, when switching between two operational frequencies.

Inventors

Abstract

(EP2295797)

A **thruster** has a main chamber (6) defining an axis (4) of thrust. The **thruster** has means adapted to provide ionizable propellant within the main chamber (6) and an ionizer (124) adapted to ionize the injected gas within the main chamber (6). A first magnetic field generator and an **electromagnetic** field generator are adapted to generate a magnetized ponderomotive accelerating field downstream of said ionizer (124) along the direction of thrust on the said axis (4), wherein the ionizer (124) comprises at least one electron emitter (128). The **thruster** ionizes the gas, and subsequently accelerates both electrons and ions by the magnetized ponderomotive force.

Inventors

EMSELLEM GREGORY

LARIGALDIE SERGE

Latest standardized assignees - inventors removed

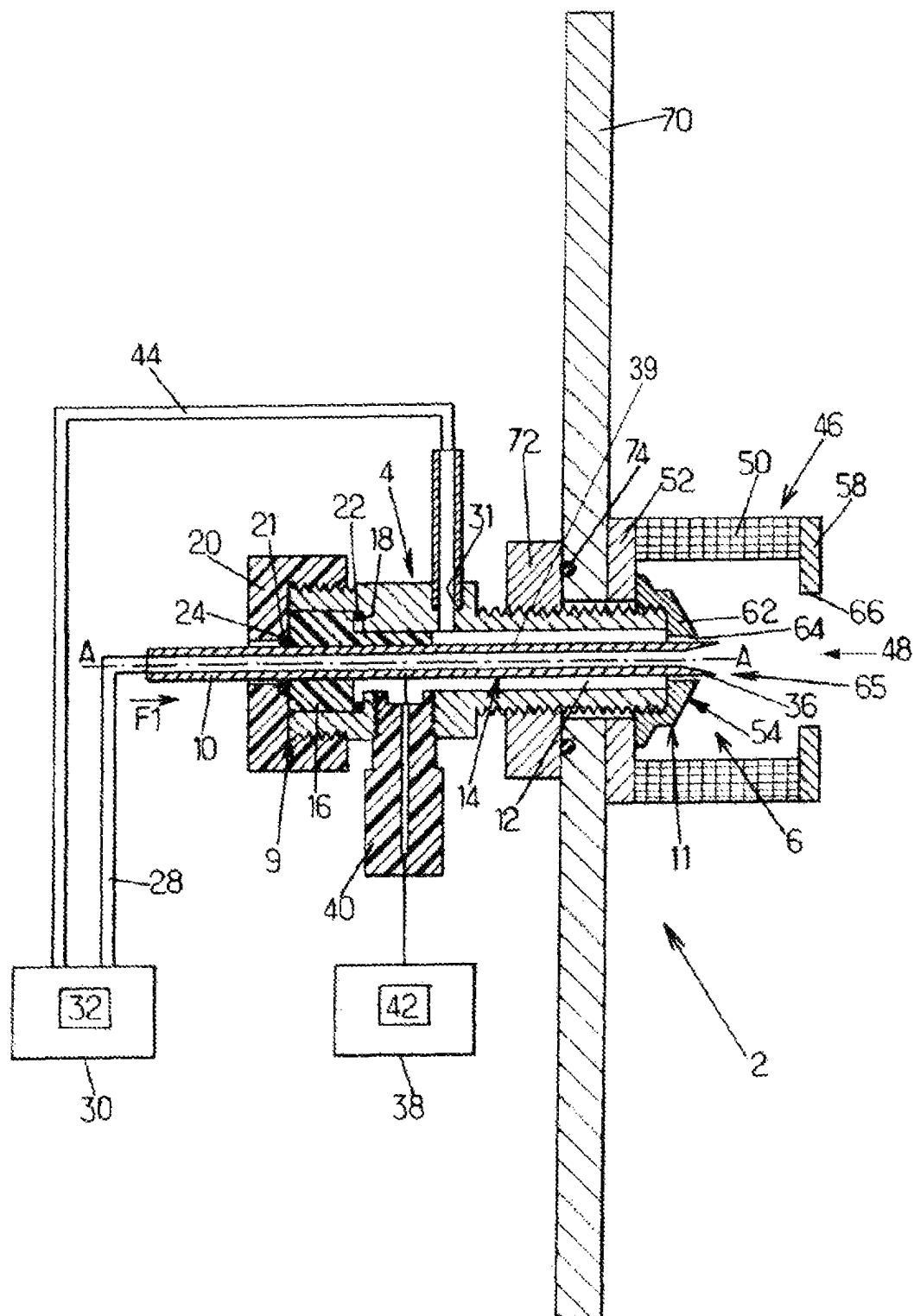
ELWING

Family 3/25 - FAMPAT - ©Questel

Title

(EP2798209)

Plasma **thruster** and method for generating propulsive plasma thrust**Images**



Publication data including kind & date

WO2013098505	A1	2013-07-04	WO201398505
FR2985292	A1	2013-07-05	FR2985292
FR2985292	B1	2014-01-24	FR2985292
CN104114862	A	2014-10-22	CN104114862
EP2798209	A1	2014-11-05	EP2798209
US2015020502	A1	2015-01-22	US20150020502
JP2015509262	A	2015-03-26	JP2015509262
RU2014131219	A	2016-02-20	RU2014131219
EP2798209	B1	2016-09-28	EP2798209



RU2610162	C2	2017-02-08	RU2610162
US9591741	B2	2017-03-07	US9591741
JP6120878	B2	2017-04-26	JP6120878
CN104114862	B	2017-11-21	CN104114862B



Abstract

(EP2798209)

The invention, which relates to a miniaturisable plasma **thruster**, consists of: - igniting the plasma by microhollow cathode discharge close to the outlet and inside the means for injecting the propellant gas, said injection means being magnetic and comprising a tip at the downstream end thereof; - bringing the electrons of the magnetised plasma into gyromagnetic rotation, at the outlet end of said injection means; - sustaining the plasma by means of Electron Cyclotron Resonance (ECR), said injection means being metal and being used as an **antenna** for **electromagnetic** (EM) emission, the volume of ECR plasma at the outlet of said injection means being used as a **resonant cavity** of the EM wave; - accelerating the plasma in a magnetic nozzle by diamagnetic force, the ejected plasma being electrically neutral.

Inventors

LARIGALDIE SERGE

Latest standardized assignees - inventors removed

ONERA - OFFICE NATIONAL D ETUDES & DE RECHERCHES AEROSPATIALES

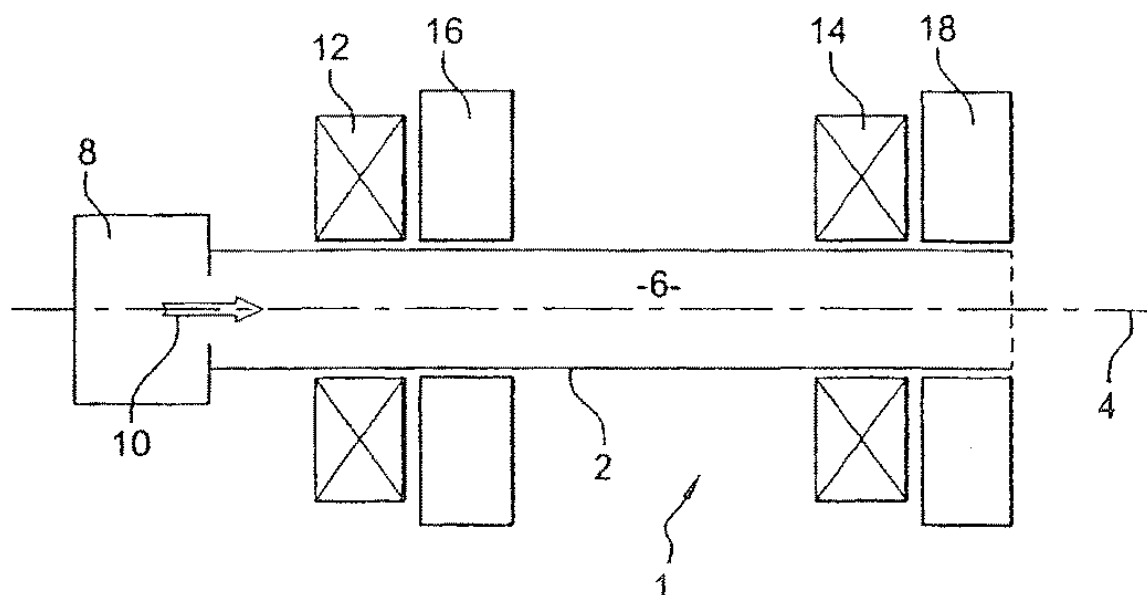
Family 4/25 - FAMPAT - ©Questel

Title

(JP2014194220)

Thruster and thrust-generating process

Images



Publication data including kind & date

[JP2014194220](#) A 2014-10-09 JP2014194220



Abstract

(JP2014194220)

PROBLEM TO BE SOLVED: To provide a **thruster** having a good ejection speed and versatility, being easily to be produced and lightweight as well as resistant to failures. SOLUTION: A **thruster** 1 has a main chamber 6 defined within a tube 2. The tube has a longitudinal axis which defines an axis 4 of thrust. An injector 8 injects ionizable gas toward one end of a main chamber 6 of the tube 2. An ionizer is adapted to ionize the injected gas within the main chamber 6. A first magnetic field generator 12, 14 and an **electromagnetic** field generator 18 are adapted to generate a magnetized ponderomotive accelerating field downstream of said ionizer along the direction of thrust on said axis 4. The **thruster** 1

ionizes the gas, and subsequently accelerates both electrons and ions by the magnetized ponderomotive force.

Inventors

EMSELLEM GREGORY

LARIGALDIE SERGE

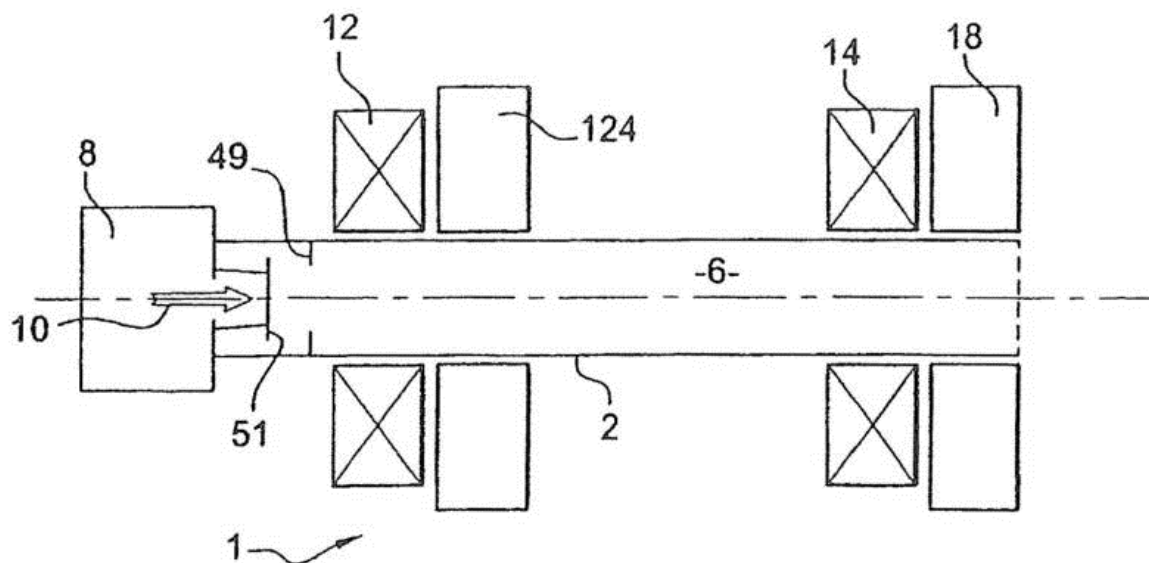
Latest standardized assignees - inventors removed

ELWING

Family 5/25 - FAMPAT - ©Questel

Title

(JP2013137024)

Thruster, system therefor, and propulsion generating method**Images****Publication data including kind & date**[JP2013137024](#)

A

2013-07-11

JP2013137024

**Abstract**

(JP2013137024)

PROBLEM TO BE SOLVED: To provide a space **thruster** with which energy transfer becomes more efficient. **SOLUTION:** A **thruster** 1 has a main chamber 6 defined within a tube 2. The tube has a longitudinal axis which defines an axis of thrust. An injector 8 injects ionizable gas at one end of the main chamber within the tube. An ionizer 124 is adapted to ionize the injected gas within the main chamber 6. A first magnetic field generator 12, 14 and an **electromagnetic** field generator 18 are configured to generate a magnetized ponderomotive accelerating field downstream of the ionizer 124 along the direction of the thrust axis. The **thruster** 1 ionizes the gas, and subsequently accelerates both electrons and ions by the magnetized ponderomotive force.

Inventors

EMSELLEM GREGORY

LARIGALDIE SERGE

Latest standardized assignees - inventors removed

ELWING

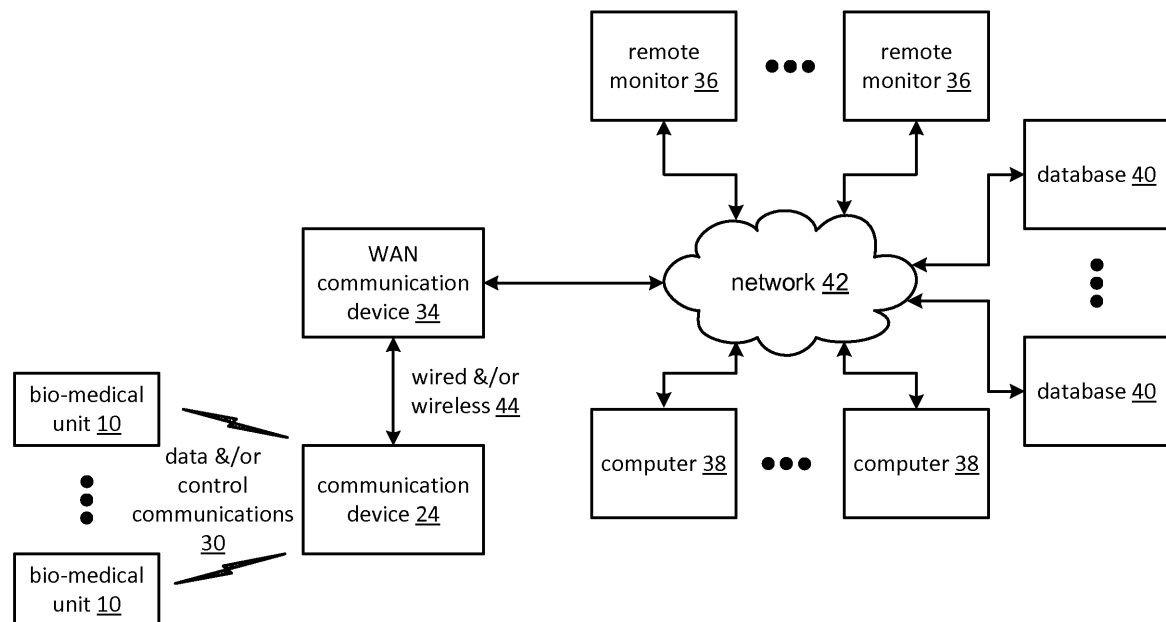
Family 6/25 - FAMPAT - ©Questel

Title

(EP2498196)

Bio-medical unit system for medication control

Images



Publication data including kind & date

US2011077697	A1	2011-03-31	US20110077697
US2011077675	A1	2011-03-31	US20110077675
US2011077502	A1	2011-03-31	US20110077502
US2011077501	A1	2011-03-31	US20110077501
US2011076983	A1	2011-03-31	US20110076983
US2011077716	A1	2011-03-31	US20110077716
US2011077513	A1	2011-03-31	US20110077513
US2011077476	A1	2011-03-31	US20110077476
US2011077459	A1	2011-03-31	US20110077459
US2011077715	A1	2011-03-31	US20110077715
US2011077714	A1	2011-03-31	US20110077714
US2011077623	A1	2011-03-31	US20110077623
US2011077713	A1	2011-03-31	US20110077713
US2011077736	A1	2011-03-31	US20110077736
US2011077700	A1	2011-03-31	US20110077700
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US2011077719	A1	2011-03-31	US20110077719
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US2011137144	A1	2011-06-09	US20110137144
US2011144573	A1	2011-06-16	US20110144573
US2011160802	A1	2011-06-30	US20110160802
KR20120094873	A	2012-08-27	KR20120094873
US8254853	B2	2012-08-28	US8254853
EP2498196	A2	2012-09-12	EP2498196
CN102670306	A	2012-09-19	CN102670306
TW201247180	A	2012-12-01	TW201247180
US2012323088	A1	2012-12-20	US20120323088
US8489199	B2	2013-07-16	US8489199
US8515533	B2	2013-08-20	US8515533
US8515548	B2	2013-08-20	US8515548
US8526894	B2	2013-09-03	US8526894



US2013289382	A1	2013-10-31	US20130289382
US8923967	B2	2014-12-30	US8923967
US9081878	B2	2015-07-14	US9081878
US9111021	B2	2015-08-18	US9111021
US2015314116	A1	2015-11-05	US20150314116

**Abstract**

(EP2498196)

A system includes bio-medical units, a wireless communication module, and a wireless power source. A bio-medical unit includes a power harvesting module, a communication module, a processing module, and a medication control module for performing a medication control function and generating a medication response. The wireless communication module is operable to wirelessly communicate inbound and outbound wireless signals with the bio-medical unit. The wireless power source is operable to generate the **electromagnetic** signal, which the power harvesting module converts into a supply voltage that powers the other modules of the bio-medical unit.

Inventors

ROFOUGARAN AHMADREZA

KARAOGUZ JEYHAN

VORENKAMP PIETER

Latest standardized assignees - inventors removed

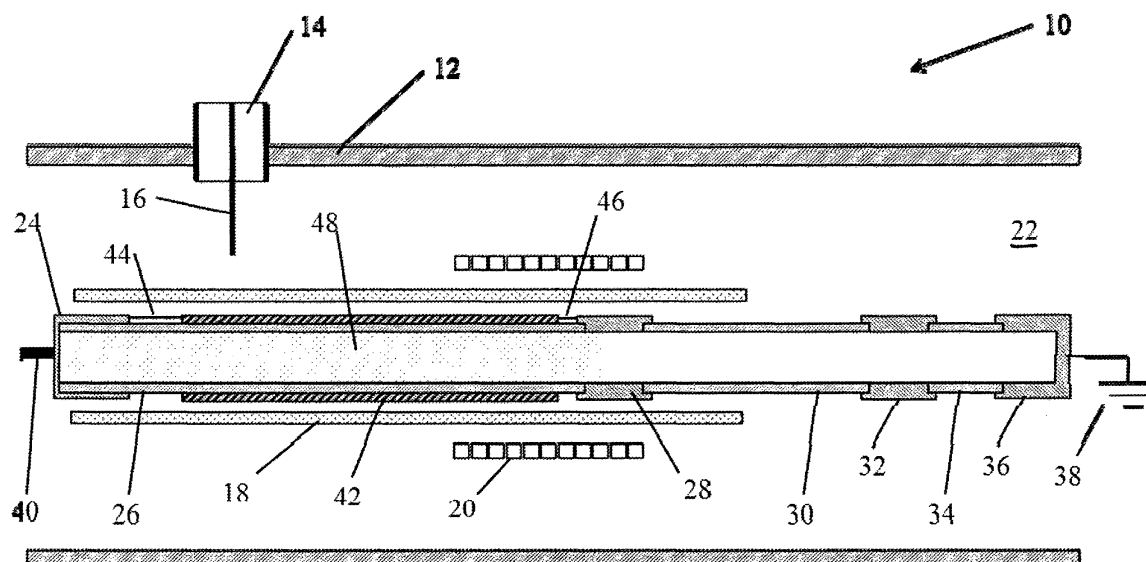
AVAGO TECHNOLOGIES

Family 7/25 - FAMPAT - ©Questel

Title

(EP2973639)

Compact high-voltage plasma source for neutron generation

Images**Publication data including kind & date**

WO2014145726	A1	2014-09-18	WO2014145726
AU2014232725	A1	2015-09-24	AU2014232725
CN105122419	A	2015-12-02	CN105122419
EP2973639	A1	2016-01-20	EP2973639
EP2973639	A4	2016-11-23	EP2973639
US2017196073	A1	2017-07-06	US20170196073
CN105122419	B	2017-08-01	CN105122419B



US9728376	B2	2017-08-08	US9728376
AU2014232725	B2	2018-04-05	AU2014232725
EP2973639	B1	2018-05-16	EP2973639



Abstract

(EP2973639)

Systems and methods are described herein for coupling **electromagnetic** (EM) energy from a remotely-located primary **antenna** into a plasma ion source. The EM energy is radiated by a first by through an intermediary secondary **antenna**. The embodiments described herein enable the elevation of the plasma ion source to a high electric potential bias relative to the primary **antenna**, which can be maintained at or near a grounded electric potential.

Inventors

STUBBERS ROBERT S

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WILLIAMS MICHAEL J

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Latest standardized assignees - inventors removed

STARFIRE INDUSTRY

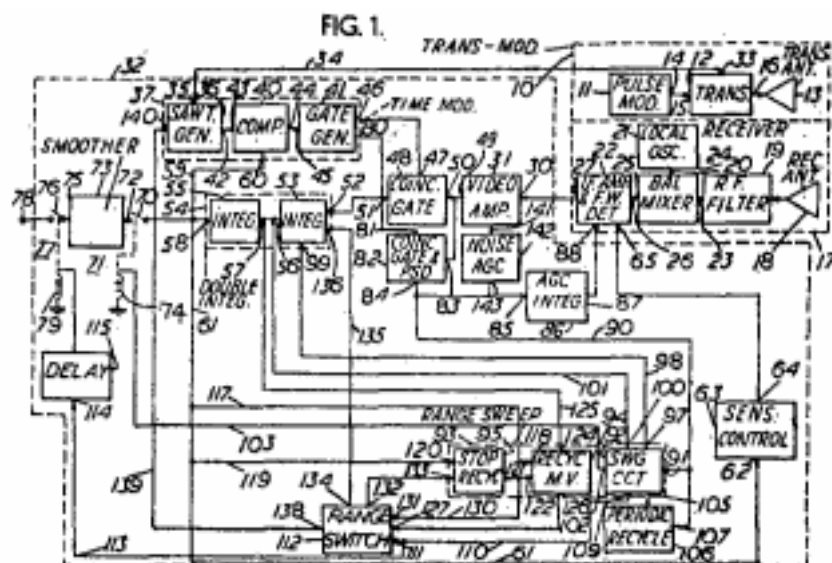
Family 8/25 - FAMPAT - ©Questel

Title

(US3495245)

Radio distance measuring system

Images



Publication data including kind & date

FR1355686	A	1964-03-20	FR1355686
US3242489	A	1966-03-22	US3242489
US3242488	A	1966-03-22	US3242488
GB1039323	A	1966-08-17	GB1039323
US3495245	A	1970-02-10	US3495245
DE1441751	A1	1971-06-24	DE1441751
DE1441751	B2	1972-05-18	DE1441751



Abstract

(US3495245)

1,039,323. Radar. HONEYWELL Inc. Feb. 5, 1963 [Feb. 5, 1962], No. 4677/63. Heading H4D. Electronic distance measuring equipment comprises a transmitter to transmit energy pulses towards a reflecting object the distance of which is to be measured, a receiver for receiving and amplifying reflected pulses and producing a video pulse signal, each pulse having a

sloping leading edge, a time-modulator circuit operated in synchronism with the transmitter and producing a periodic gating signal output that is controllable as regards its timing relative to the transmitted pulse, said gating signal consisting of pulses narrower than the video pulses to intersect the sloping leading edges of the video pulses, a gate circuit that receives the video pulse and the gating pulse as two inputs and passes the video pulse whilst it coincides with the gating pulse, and an integrating network that receives at its input the output of the gate circuit, together with a bias signal and delivers a signal representing the required distance, the bias signal balancing the gate circuit output that occurs when the gating pulse and video pulse intersect at a predetermined track point along the sloping leading edge, and the integrating network output being applied to control the time modulator circuit, such that said track point is continuously tracked. Pulse modulator 11 produces 1000 W. pulses of 10×10^{-9} sec. in width at 40 kc/s.P.R.F. to drive a transmitter 12 to produce 100 W. pulses for transmission by antenna 13. The echo pulses are received by antenna 18, changed to an I.F. signal, amplified and detected in means 22, and the detected resultant pulses are amplified in video amplifier 31. A noise A.G.C. arrangement 142, constructed to ignore the steep echo pulses controls the noise amplification of amplifier 22, via A.G.C. integrator 86. The amplitude of the echo pulse at the output of the amplifier 31 is kept constant by a second A.G.C. circuit incorporated in arrangement 82. The transmitter 12 also produces synchronized timing pulses which are fed to a sawtooth generator 36, to produce a train of sawtooth waves, synchronized with the transmitted pulses, for feeding to one input of a voltage comparator 40. The sawtooth waves are compared with the output of a double integrator 54 to give an output pulse every time the two voltages are equal, for feeding to a gate generator 41, to produce a narrow gating pulse at terminal 46 and a second gating pulse, having its leading edge coincident with that of the narrow pulse, but having a width equal to that of the echo pulses. The two gating pulses are fed respectively to two coincidence gates 48 and 82, the other inputs of which are fed with the video signal from the amplifier 31. The narrow gating pulse tracks along the leading sloping edge of the echo pulse and passes a signal to double integrator 54 representative of delay of the narrow gating pulse with respect to the start of the echo pulse on foot of the leading edge. The output of the first integrator 53 represents the velocity of the target whilst the output of the second integrator 55, which is fed to comparator 40 represents the distance of the target. The narrow gating pulse is thus caused to track the foot of the leading edge of the echo pulse, with velocity and position memory facilities if loss of the echo pulse should occur. The entire echo pulse is passed through gate 82 and is used to control the amplification of I.F. amplifier 22 so that the amplitudes of the pulses are the same as the output of the video amplifier 31, irrespective of their initial amplitude. The output of gate 82 is also passed to a twostate (track and search) switching circuit 92 to hold it in its first (track) state. The circuit then produces a signal, energizing relay 71 to close contact 70, and a signal, energizing relay 77 via delay means 115 to close contact 76. The output from the second integrator 55, representing the altitude of the aircraft, can then be passed to an altitude indicating means via a smoothing circuit 73. The switching circuit 92 also produces in its first state a signal causing a recycle circuit 106 to periodically switch the switching circuit to its second (search) state to make sure that the altimeter is not locked on to a false target. The interval during which the altimeter is searching is so short that the chance of loss of the target during the interval, is negligible. When the echo pulse is lost, no signal appears at the output of gate 82 and the switching circuit 92 is switched to its second (search) state. In this state the switching circuit produces a signal on line 98 inhibiting integrator 53, and output 100 feeds a positive step voltage to the input of integrator 55 to produce a rising ramp voltage at the integrator output. This ramp voltage is passed to the comparator 40 to cause the narrow gating pulse to walk forward in the transmission period to search for an echo pulse. The ramp voltage is also fed to recycle multivibrator means 94, wherein, when the ramp reaches its maximum voltage a negative step voltage is produced by the multivibrator means 94 and is fed to the input of the integrator 55 to produce a falling ramp voltage at the integrator output. This ramp causes the narrow gating pulse to walk backward in the transmission period and repeat the search. When the falling ramp voltage reaches its minimum voltage at the stop recycle input 120, the stop recycle means 95 produces a signal stopping the negative step voltage, allowing the positive step voltage from switching circuit 92 to control the integrator and restart the search. Also, in the search state, the signals energizing the relays 71 and 77 are removed but only after a delay to allow for the case when the loss of the echo signal is only momentary. The smoother circuit 73 contains a memory device and remembers the aircraft's altitude at the moment the contacts 70 open. Range switch 112 operates in three manually selectable modes, short range, long range and automatic. In the automatic mode, in the track state, if the altitude is within the short range but increasing, the output of the integrator 55 causes the recycle multivibrator 94 to pass a signal to the range switch 112, when the maximum of the short range is reached, causing the range switch to change to the long range mode. Appropriate signals are then fed to the sawtooth

generator 36 and first integrator 53. Similarly the stop recycle means 95 passes a pulse to the range switch 112 when the aircraft's altitude decreases from the long range to the short range. In the search state an inhibiting signal at the range switch input 111, from the switching circuit 92 is removed and the range switch periodically changes the range from short to long and back again. A sensitivity control 63 comes into operation when the altitude decreases below a predetermined limit, to reduce the gain of the amplifier 22 to avoid overloading the receiver. The pulse width of the transmitted pulses correspond to about 30 ft., so that below this altitude the transmitted and echo pulses overlap. The A.G.C. circuit, however, reduces the receiver amplifications to make the effect of transmitter leakage small. In addition the separate transmitting and receiving antennae are mounted to minimize leakage effects. The transmitter/modulator circuit, Fig. 11 (not shown), includes a blocking oscillator 1030, comprising a parallel connected double triode 1031, tuned feedback transformer 1041 and P.R.F. varying potentiometer 1063, directly feeding the input of a resonant cavity 1071, which in turn produces an R.F. pulse for radiation by antenna 1077.

(From GB1039323 A)

Inventors

LEYDE WARREN L

Latest standardized assignees - inventors removed

HONEYWELL

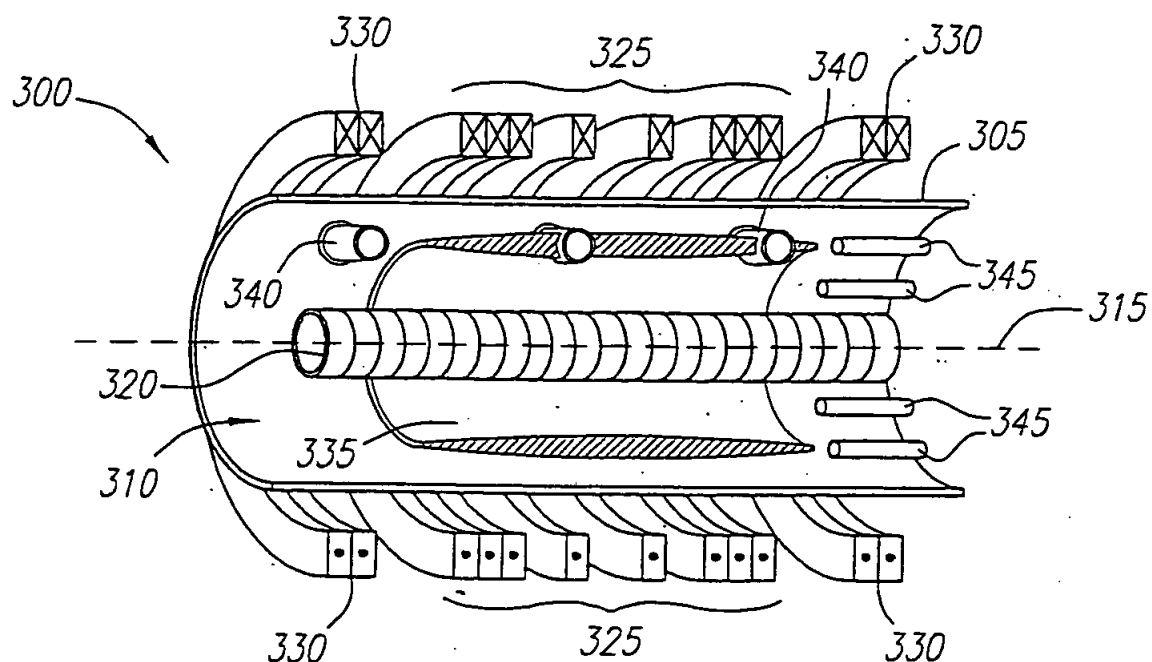
Family 9/25 - FAMPAT - ©Questel

Title

(EP2389048)

Plasma electric generation system

Images



Publication data including kind & date

US2006198485	A1	2006-09-07	US20060198485
WO2006096772	A2	2006-09-14	WO200696772
CA2600421	A1	2006-09-14	CA2600421
AU2006220546	A1	2006-09-14	AU2006220546
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KR20070110403	A	2007-11-16	KR20070110403
EP1856702	A2	2007-11-21	EP1856702
MX2007010891	A	2007-11-23	MX2007010891



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EA200701919	A1	2008-10-30	EA200701919				
EP1856702	A4	2009-07-15	EP1856702				
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BRPI0609290	A2	2010-03-09	BR200609290				
BRPI0609290	A2	2010-03-09	BRPI0609290				
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JP2010237222	A	2010-10-21	JP2010237222				
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CN102291925	A	2011-12-21	CN102291925				
UA97091	C2	2012-01-10	UA--97091				
AU2006220546	B2	2012-06-14	AU2006220546				
EP1856702	B1	2012-07-18	EP1856702				
DK1856702	T3	2012-09-03	DK1856702T				
PT1856702	E	2012-10-04	PT1856702				
SI1856702	T1	2012-11-30	SI1856702T				
ES2390786	T3	2012-12-17	ES2390786				
HK1115471	A1	2013-03-08	HK1115471				
CN101189684	B	2013-04-24	CN101189684B				
JP2013101134	A	2013-05-23	JP2013101134				
JP5319273	B2	2013-10-16	JP5319273				
EA018812	B1	2013-10-30	EA--18812				
IL185168	B	2014-02-27	IL-185168				
JP5717206	B2	2015-05-13	JP5717206				
CY1113150	T1	2016-04-13	CY1113150				
CA2600421	C	2016-05-03	CA2600421				
BRPI0609290	B1	2018-03-13	BRPI0609290				
BRPI0609290	B1	2018-03-13	BR200609290				

Abstract

(EP2389048)

A system and apparatus for controlled fusion in a field reversed configuration (FRC) magnetic topology and conversion of fusion product energies directly to electric power. Preferably, plasma ions are magnetically confined in the FRC while plasma electrons are electrostatically confined in a deep energy well, created by tuning an externally applied magnetic field. In this configuration, ions and electrons may have adequate density and temperature so that upon collisions they are fused together by the nuclear force, thus forming fusion products that emerge in the form of an annular beam. Energy is removed from the fusion product ions as they spiral past electrodes of an inverse cyclotron converter. Advantageously, the fusion fuel plasmas that can be used with the present confinement and energy conversion system include advanced (aneutronic) fuels.

Inventors

ROSTOKER NORMAN

KR20130138358	A	2013-12-18	KR20130138358				
US8777901	B2	2014-07-15	US8777901				
RU2013118718	A	2014-10-27	RU2013118718				
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US9320849	B2	2016-04-26	US9320849				
EP2618867	A4	2016-05-04	EP2618867				
US9381300	B2	2016-07-05	US9381300				
CN103228303	B	2016-08-24	CN103228303B				
CN106139310	A	2016-11-23	CN106139310				
JP2017006706	A	2017-01-12	JP2017006706				
KR101763985	B1	2017-08-01	KR101763985				
US9750875	B2	2017-09-05	US9750875				
CA2812458	C	2018-01-16	CA2812458				

Abstract

(EP2618867)

Ambulatory infusion pumps, pump assemblies, cartridges, baseplates, cannulas, insertion tools, and related components as well as combinations thereof and related methods. An exemplary medicament cartridge may comprise: a barrel defining at least a substantial portion of a medicament reservoir that has a total filled volume; and a plunger movable with respect to the barrel to controllably dispense out of the reservoir an amount of medicament of 0.1% or less of the total filled volume of the reservoir and with a single-dose precision of better than plus or minus 20%; and the precision is obtained within a dispensing period of less than eight hours.

Inventors

SMITH ROGER E

CAUSEY JAMES

GIBSON SCOTT R

HE TOM XIAOHAI

FOGARTY THOMAS G

RING LAWRENCE SCOTT

LOFTIN SCOTT M

Latest standardized assignees - inventors removed

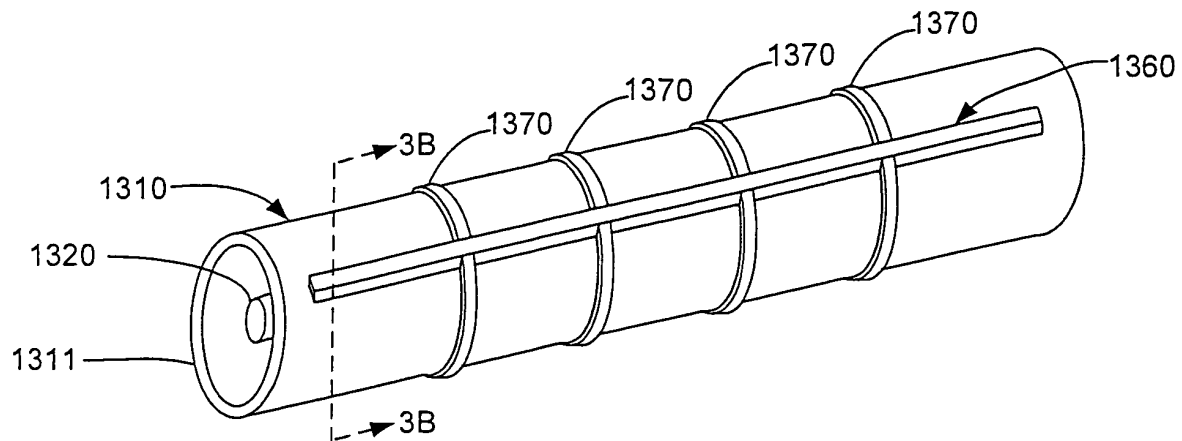
PERQFLO

Family 11/25 - FAMPAT - ©Questel

Title

(US9123512)

RF current drive for plasma electric generation system**Images**

**Publication data including kind & date**

US2006254520	A1	2006-11-16	US20060254520
US9123512	B2	2015-09-01	US9123512
US2016042814	A1	2016-02-11	US20160042814

**Abstract**

(US9123512)

A system and apparatus for controlled fusion in a field reversed configuration (FRC) magnetic topology and conversion of fusion product energies directly to electric power. Preferably, plasma ions are magnetically confined in the FRC while plasma electrons are electrostatically confined in a deep energy well, created by tuning an externally applied magnetic field. In this configuration, ions and electrons may have adequate density and temperature so that upon collisions ions are fused together by the nuclear force, thus forming fusion products that emerge in the form of an annular beam. Energy is removed from the fusion product ions as they spiral past electrodes of an inverse cyclotron converter. Advantageously, the fusion fuel plasmas that can be used with the present confinement and energy conversion system include advanced (aneutronic) fuels.

Inventors

ROSTOKER NORMAN

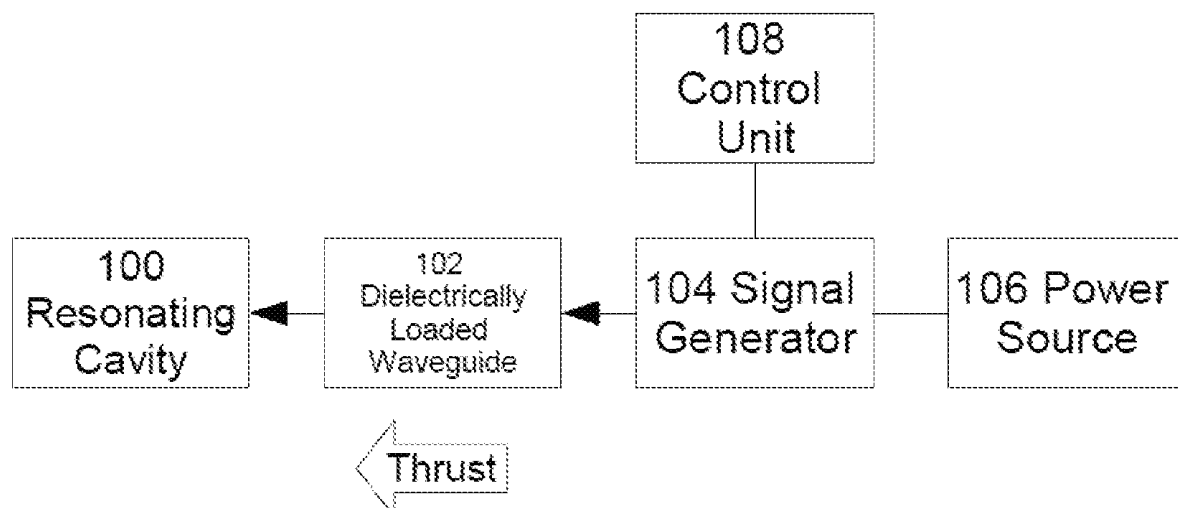
Latest standardized assignees - inventors removed

UNIVERSITY OF CALIFORNIA

Family 12/25 - FAMPAT - ©Questel

Title

(WO201604044)

Electromagnetic thrusting system**Images**

Publication data including kind & date[WO2016004044](#)

A1 2016-01-07

WO201604044

[US2017158359](#)

A1 2017-06-08

US20170158359

**Abstract**

(WO201604044)

Thrusting systems and vehicles are disclosed. One thrusting system includes a signal generator (104) and a waveguide (102). The signal generator is configured to generate an **electromagnetic** wave. The waveguide is coupled to the signal generator to receive the **electromagnetic** wave such that at least a portion of electric and magnetic components of the **electromagnetic** wave extend in a direction transverse to a wave axis of the **electromagnetic** wave. The waveguide includes a dielectric material (202) positioned to extend in a direction of the wave axis along a portion of the waveguide. An interaction between the **electromagnetic** wave and the waveguide induces a net force on the waveguide. One vehicle includes a thrusting system substantially as described above.

Inventors

FETTA GUIDO PAUL

Latest standardized assignees - inventors removed

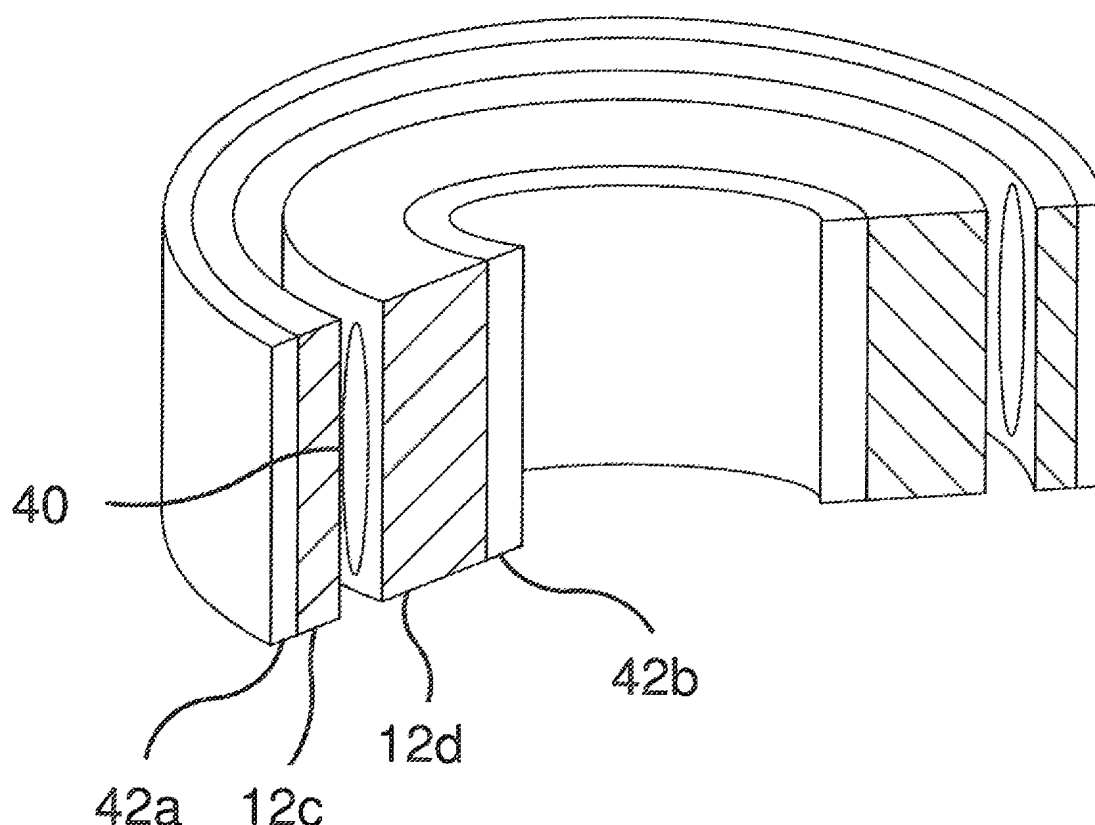
CANNAE

Family 13/25 - FAMPAT - ©Questel

Title

(EP2974559)

Plasma generator using dielectric resonator

Images**Publication data including kind & date**[CA2905929](#)

A1 2014-10-02

CA2905929

[CA2905931](#)

A1 2014-10-02

CA2905931

[WO2014159588](#)

A1 2014-10-02

WO2014159588

[WO2014159590](#)

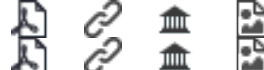
A1 2014-10-02

WO2014159590

[WO2014159590](#)

A9 2015-02-19

WO2014159590



AU2014240385	A1	2015-10-01	AU2014240385				
AU2014240387	A1	2015-10-01	AU2014240387				
SG11201507579U	A	2015-10-29	SG11201507579U				
SG11201507580U	A	2015-10-29	SG11201507580U				
KR20150128841	A	2015-11-18	KR20150128841				
CN105122042	A	2015-12-02	CN105122042				
CN105122951	A	2015-12-02	CN105122951				
EP2974559	A1	2016-01-20	EP2974559				
EP2972241	A1	2016-01-20	EP2972241				
US2016029472	A1	2016-01-28	US20160029472				
US2016025656	A1	2016-01-28	US20160025656				
JP2016520797	A	2016-07-14	JP2016520797				
IN8777/DELNP/2015	A	2016-07-22	IN2015DN08777				
IN8770/DELNP/2015	A	2016-07-22	IN2015DN08770				
JP2016522533	A	2016-07-28	JP2016522533				
EP2974559	A4	2016-09-21	EP2974559				
EP2972241	A4	2016-09-21	EP2972241				
US9491841	B2	2016-11-08	US9491841				
US2017027051	A1	2017-01-26	US20170027051				
US9706635	B2	2017-07-11	US9706635				
AU2014240387	B2	2017-11-30	AU2014240387				
AU2014240385	B2	2018-02-15	AU2014240385				
CN105122951	B	2018-05-04	CN105122951B				

Abstract

(EP2974559)

A dielectric resonator is excited at its natural **resonant** frequency to produce highly uniform electric field for the generation of plasma. The plasma may be used optical or mass spectrometer.

Inventors

JEVTIC JOVAN

MENON ASHOK

PIKELJA VELIBOR

Latest standardized assignees - inventors removed

RADOM

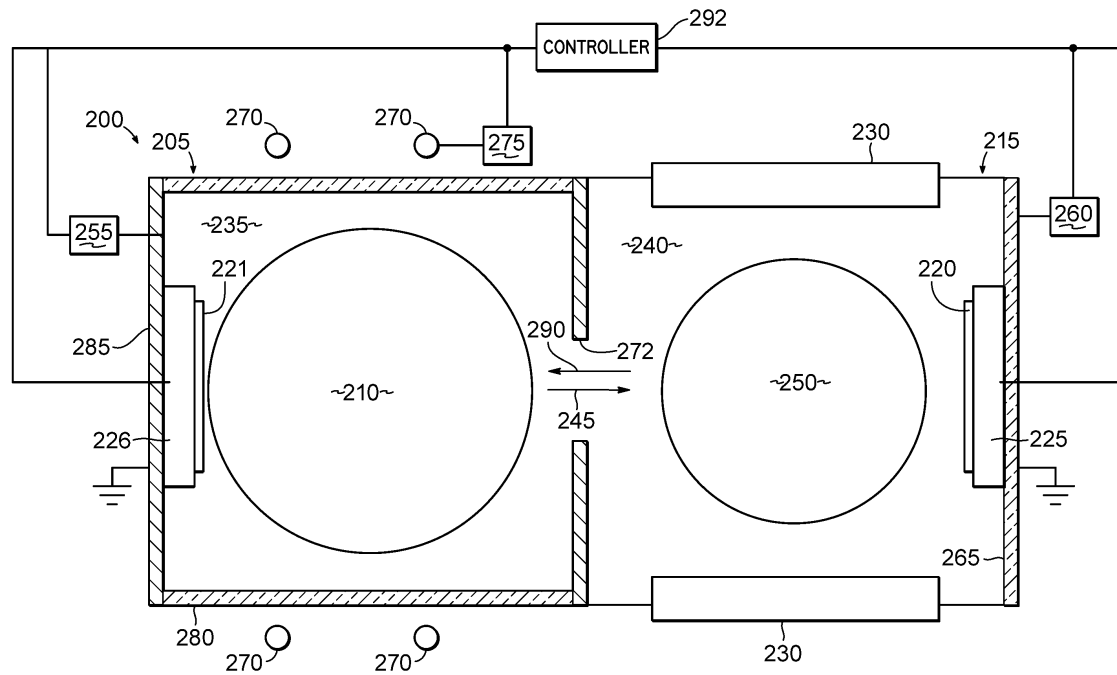
Family 14/25 - FAMPAT - ©Questel

Title

(WO201523361)

Self-sustained non-ambipolar direct current (dc) plasma at low power

Images



Publication data including kind & date

US2015041432	A1	2015-02-12	US20150041432
WO2015023361	A1	2015-02-19	WO201523361
TW201521069	A	2015-06-01	TW201521069
KR20160042124	A	2016-04-18	KR20160042124
TWI553687	B	2016-10-11	TWI553687



Abstract

(WO201523361)

A processing system is disclosed, having an electron beam source chamber that excites plasma to generate an electron beam, and an ion beam source chamber that houses a substrate and also excites plasma to generate an ion beam. The processing system also includes a dielectric injector coupling the electron beam source chamber to the ion beam source chamber that simultaneously injects the electron beam and the ion beam and propels the electron beam and the ion beam in opposite directions. The voltage potential gradient between the electron beam source chamber and the ion beam source chamber generates an energy field that is sufficient to maintain the electron beam and ion beam as a plasma treats the substrate so that radio frequency (RF) power initially applied to the processing system to generate the electron beam can be terminated thus improving the power efficiency of the processing system.

Inventors

CHEN ZHIYING

CHEN LEE

FUNK MERRITT

Latest standardized assignees - inventors removed

TOKYO ELECTRON

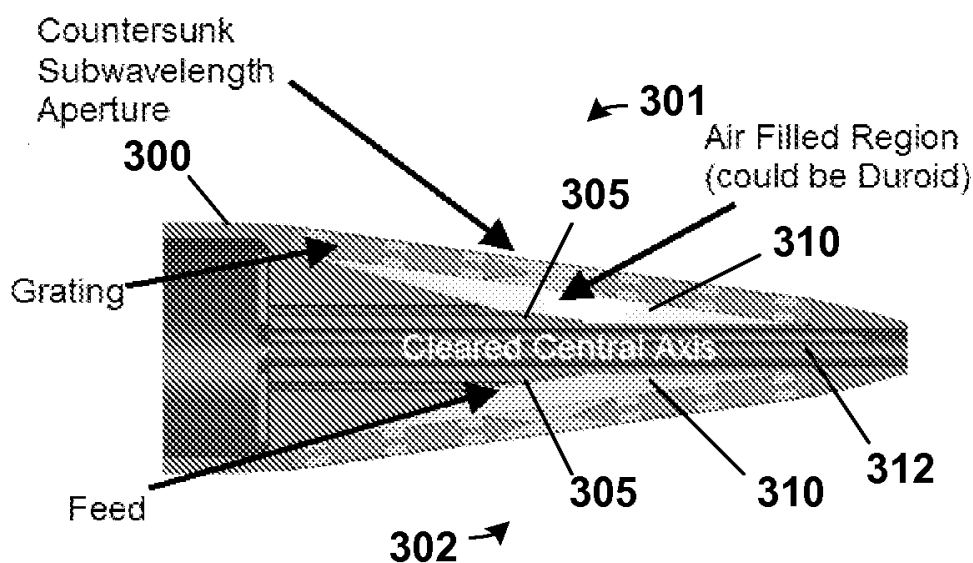
Family 15/25 - FAMPAT - ©Questel

Title

(WO2008123896)

Subwavelength aperture monopulse conformal antenna

Images



Publication data including kind & date

US2008174509	A1	2008-07-24	US20080174509
WO2008123896	A2	2008-10-16	WO2008123896
WO2008123896	A3	2008-12-18	WO2008123896
US2011102245	A1	2011-05-05	US20110102245
US8354953	B2	2013-01-15	US8354953
US8581775	B2	2013-11-12	US8581775



Abstract

(WO2008123896)

In various aspects and embodiments, incident **electromagnetic** radiation is received through a subwavelength aperture in a lens, the subwavelength aperture being defined by a substrate encased in a dielectric medium.

Inventors

WILLIAMS BRETT A

Latest standardized assignees - inventors removed

LOCKHEED MARTIN

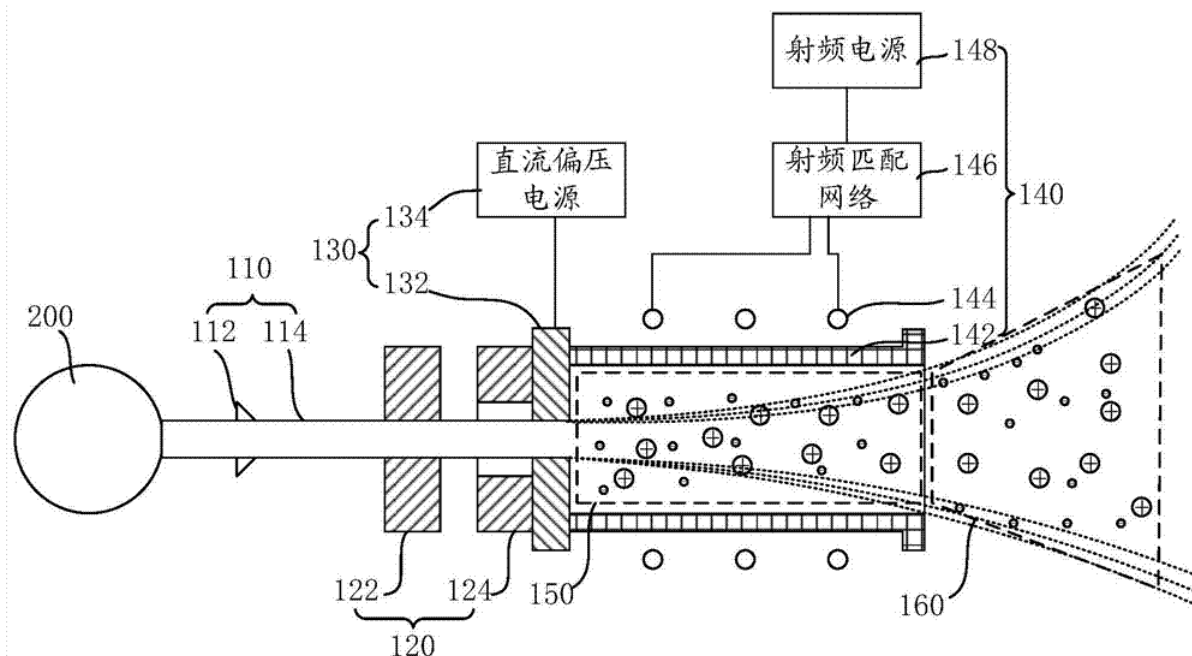
Family 16/25 - FAMPAT - ©Questel

Title

(CN104411082)

Plasma source system and plasma generating method

Images



Publication data including kind & date

CN104411082	A	2015-03-11	CN104411082
CN104411082	B	2017-12-19	CN104411082B



Abstract

(CN104411082B)

The invention discloses a plasma source system and a plasma generating method. The system comprises pipeline transmission equipment for transporting to-be-reacted gas, an annular magnetic field generator and direct-current biasing equipment with adjustable potentials, magnetic penetration and electric conduction as well as plasma reaction equipment with a cylindrical cavity; the middle axes of the magnetic field generator and the plasma reaction equipment coincide with each other; a strong electric field is formed in the cylindrical cavity; an opening is formed at one end of the plasma reaction equipment away from the direct-current biasing equipment; and the magnetic field generator and the plasma reaction equipment form a divergent magnetic field at the opening. A quasi-neutral high-energy plasma beam is generated in the use of the energy supplying of electromagnetic waves and the rational design of the magnetic field; a divergent magnetic field structure is obtained at the opening of the plasma reaction equipment; plasmas and electrons can be ejected simultaneously; as the high-energy ion beams are obtained, the quasi-neutrality of the beam is guaranteed, so that the structure of a cathode electron source is omitted; the cost is reduced, the structure is simplified and the pollution of the cathode is avoided.

Inventors

TANG YONGBING
ZHU YU

Latest standardized assignees - inventors removed

SHENZHEN INSTITUTE OF ADVANCED TECHNOLOGY CAS

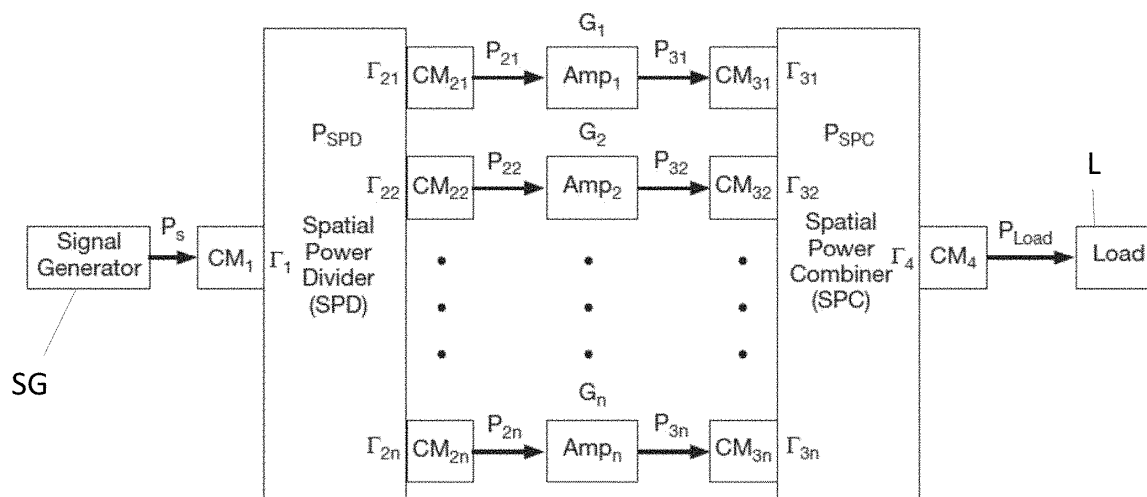
Family 17/25 - FAMPAT - ©Questel

Title

(US20170317654)

Spatial power combining mechanism (spcm) for the generation and amplification of electromagnetic radiation

Images

**Publication data including kind & date**

US2017317654

A1 2017-11-02

US20170317654

**Abstract**

(US20170317654)

A Spatial Power Combining Amplifier (SPCA) exhibiting a new concept for the amplification of coherent (e.g., microwave) radiation. A general description of the SPCA a power analysis at various SPCA stages is provided. A successfully tested S-band SPCA example was able to deliver 120 W of power with a gain of 50 dB and 50 percent efficiency.

Inventors

VELAZCO JOSE E

Latest standardized assignees - inventors removed

CALIFORNIA INSTITUTE OF TECHNOLOGY

Family 18/25 - FAMPAT - ©Questel

Title

(EP3071518)

Power generation systems and methods regarding same

Images

hydrogen; and a material to cause the solid fuel to be highly conductive, (iii) at least one set of electrodes that confine the fuel and an electrical power source that provides a short burst of low-voltage, high-current electrical energy to initiate rapid kinetics of the hydrino reaction and an energy gain due to forming hydrinos, (iv) a product recovery systems such as a condenser, (v) a reloading system, (vi) at least one of hydration, thermal, chemical, and electrochemical systems to regenerate the fuel from the reaction products, (vii) a heat sink that accepts the heat from the power-producing reactions, (viii) a power conversion system that may comprise a direct plasma to electric converter such as a plasmadynamic converter, magnetohydrodynamic converter, **electromagnetic** direct (crossed field or drift) converter, direct converter, and charge drift converter or a thermal to electric power converter such as a Rankine or Brayton-type power plant.

Inventors

MILLS RANDELL

Latest standardized assignees - inventors removed

BRILLIANT LIGHT POWER

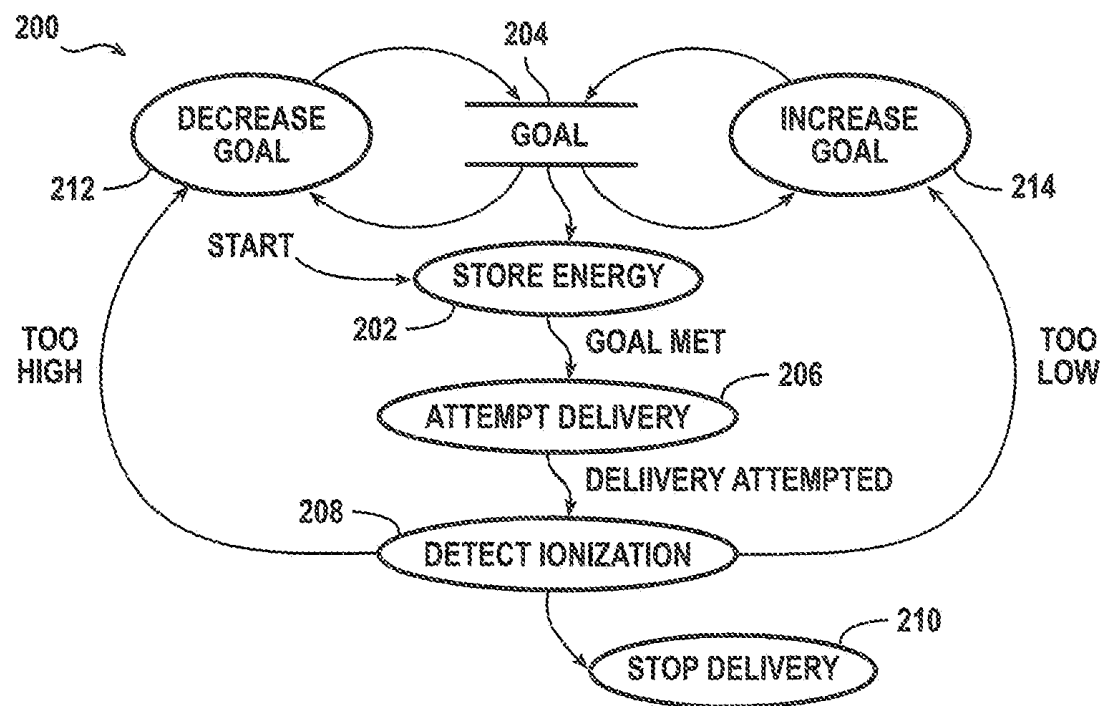
Family 19/25 - FAMPAT - ©Questel

Title

(EP1924818)

Deployment unit for electronic weaponry with independent propellant

Images



Publication data including kind & date

EP1762814	A1	2007-03-14	EP1762814
EP1762813	A1	2007-03-14	EP1762813
EP1762812	A1	2007-03-14	EP1762812
WO2007033181	A2	2007-03-22	WO200733181
US2007070574	A1	2007-03-29	US20070070574
US2007070573	A1	2007-03-29	US20070070573
US2007075261	A1	2007-04-05	US20070075261
US2007081293	A1	2007-04-12	US20070081293
US2007079538	A1	2007-04-12	US20070079538
US2007081292	A1	2007-04-12	US20070081292



TW200722703	A	2007-06-16	TW200722703				
TW200724850	A	2007-07-01	TW200724850				
TW200726954	A	2007-07-16	TW200726954				
US2007188972	A1	2007-08-16	US20070188972				
US2007214993	A1	2007-09-20	US20070214993				
WO2007130844	A2	2007-11-15	WO2007130844				
US2007297116	A1	2007-12-27	US20070297116				
WO2008030242	A2	2008-03-13	WO2008030242				
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WO2008051194	A2	2008-05-02	WO2008051194				
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EP1924818	A2	2008-05-28	EP1924818				
US2008137260	A2	2008-06-12	US20080137260				
WO2007130844	A3	2008-06-26	WO2007130844				
EP1762813	B1	2008-08-20	EP1762813				
US2008204965	A1	2008-08-28	US20080204965				
IN0682/MUMNP/2008	A	2008-09-05	IN2008MN00682				
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WO2008051194	A3	2008-10-09	WO2008051194				
WO2008030242	A3	2008-11-06	WO2008030242				
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US2009323248	A1	2009-12-31	US20090323248				
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US9010003	B2	2015-04-21	US9010003				
US9025304	B2	2015-05-05	US9025304				
US9228808	B2	2016-01-05	US9228808				

Abstract

(EP1924818)

A cartridge (108, 304) for use with an electronic control device includes an electrode (342, 343), a propellant (340), a first conductor, and a second conductor. The electrode conducts a current through the target to stun the target. The propellant, when activated, propels the electrode toward the target. The first conductor couples the launch device to the propellant to activate the propellant. The second conductor couples the launch device to the electrode for supplying the current. The propellant is not coupled to the second conductor.

Inventors

NERHEIM MAGNE H

SMITH PATRICK W

BRUNDULA STEVEN N D

CEROVIC MILAN

Latest standardized assignees - inventors removed

TASER INTERNATIONAL

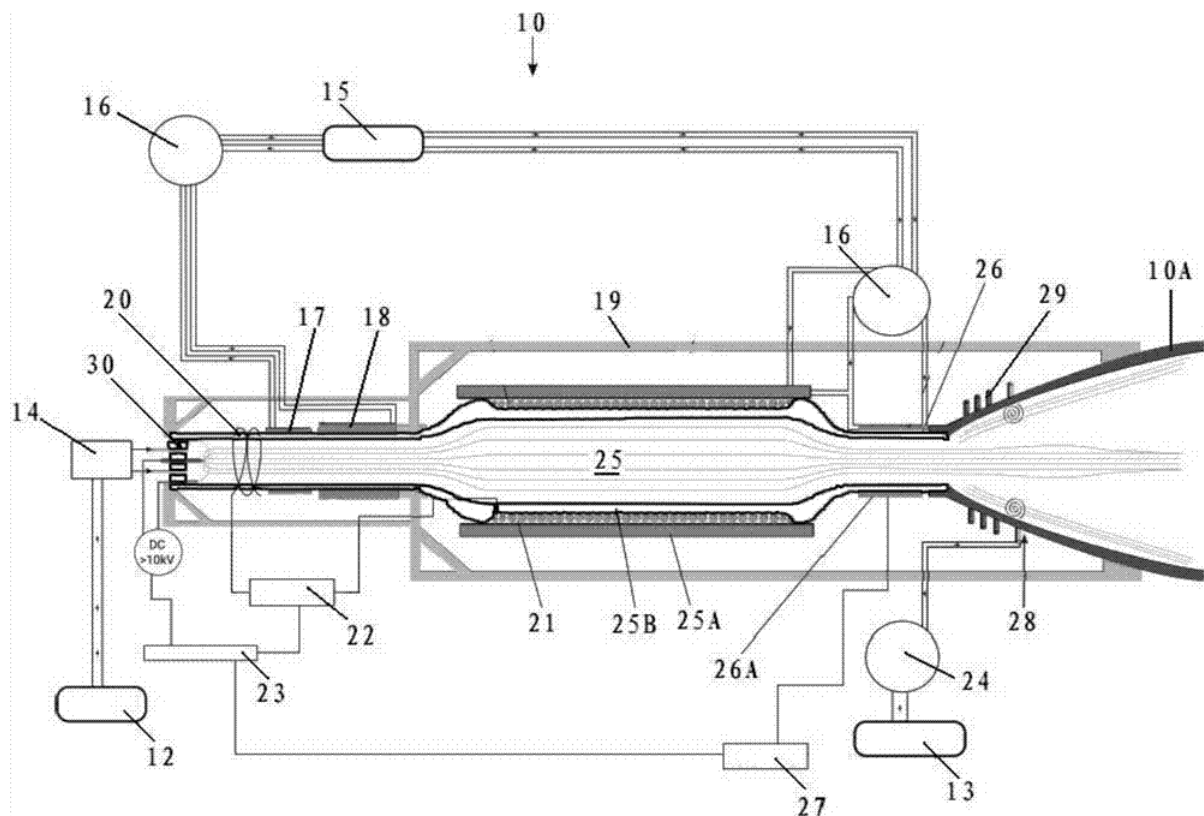
Family 20/25 - FAMPAT - ©Questel

Title

(CN206487598U)

Plasma engine

Images



Publication data including kind & date

CN206487598

U 2017-09-12 CN206487598U



Abstract

(CN206487598U)

The utility model relates to a plasma engine, it includes plasma generator, heater and emission end, and this plasma generator includes that input and plasma generate the room, and this heater arranges in plasma generator's low reaches and is used for heating plasma along plasma's flow direction, should emissions holds the flow direction of following plasma to arrange in the low reaches of heater and be used for the plasma discharge plasma engine after heating. According to the utility model discloses, plasma generator is the plasma generator of spiral wave mode, and its plasma generates the room to be kept apart with heater physics to its input is provided with ion propelling module, and this ion propelling module can light under ambient pressure plasma generates the plasma who generates in the room. The utility model discloses a plasma

engine has the work efficiency height and the good advantage of economic nature.

Inventors

DAVID ELRIC ALEXA LANZENDOERFER

ZHIYU LIU

Latest standardized assignees - inventors removed

SHENZHEN LANCEVILLE ELECTRONIC TECHNOLOGY

Family 21/25 - FAMPAT - ©Questel

Title

(WO2017149526)

A method and apparatus for cooperative usage of multiple distance meters

Images

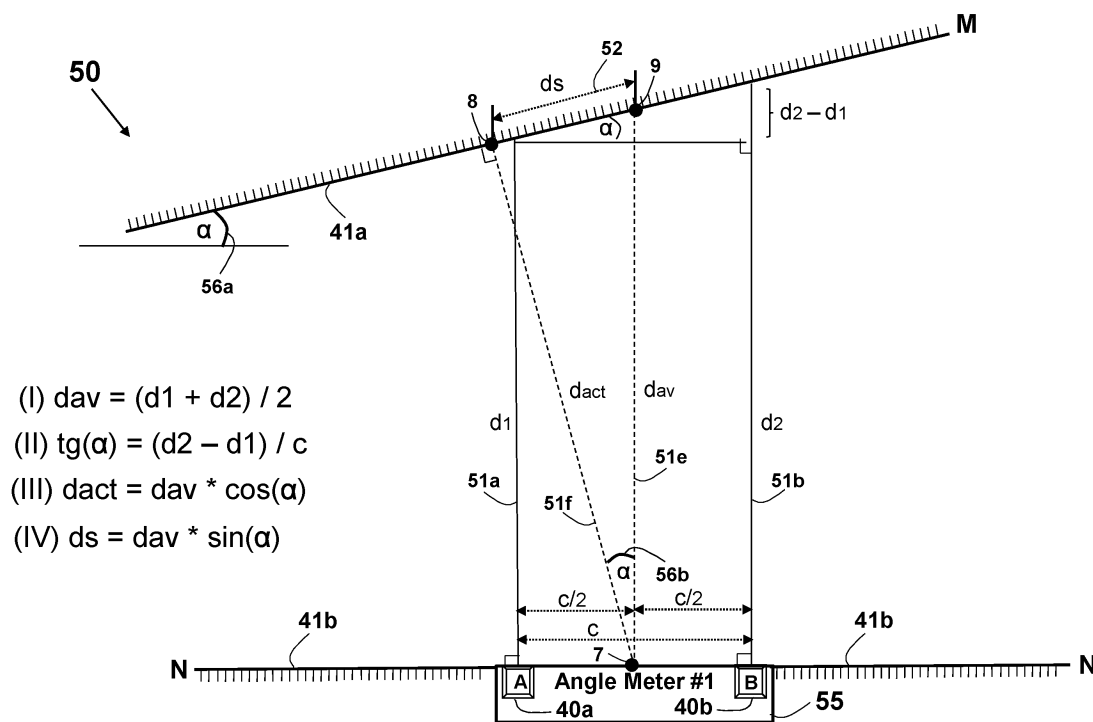


FIG. 5

Publication data including kind & date

WO2017149526 A2 2017-09-08 WO2017149526

WO2017149526 A3 2017-10-05 WO2017149526



Abstract

(WO2017149526)

A method and apparatus for an angle meter cooperatively using two or more non-contact distance meters for measuring distances to a surface along substantially parallel lines. The measured distances are used for estimating or calculating the angle to the surface and the distance to the surface. The distance meters may use optical means, where a visible or non-visible light or laser beam is emitted and received, acoustical means, where an audible or ultrasound sound is emitted and received, or an electro-magnetic scheme, where radar beam is transmitted and received. The distances may be estimated using a Time-of-Flight (TOF), homodyne or heterodyne phase detection schemes. The distance meters may share the same correlator, signal conditioning circuits, or the same sensor. Two or more angle meters may be used defining parallel or perpendicular measurement planes, for measuring angles between surfaces, and for estimating physical dimensions such as length, area or volume.

Inventors

BINDER YEHUDA

Latest standardized assignees - inventors removed

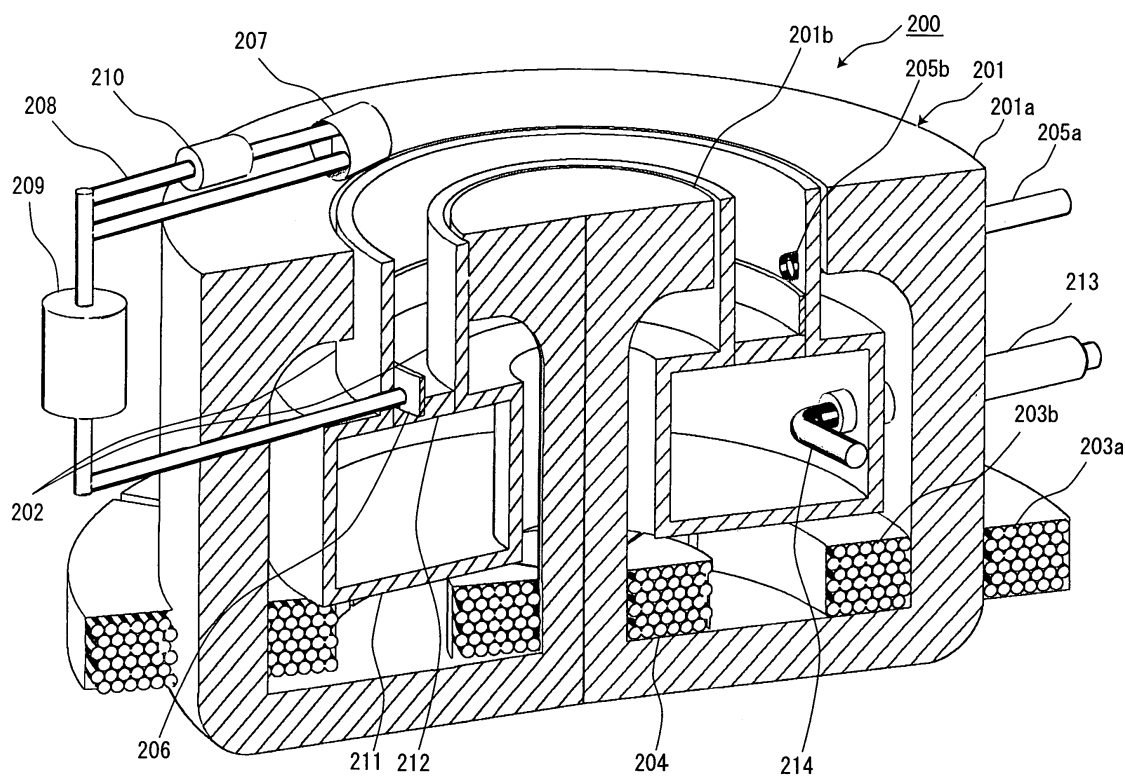
MAY PATENTS

Family 22/25 - FAMPAT - ©Questel

Title

(US7294969)

Two-stage hall effect plasma accelerator including plasma source driven by high-frequency discharge

Images**Publication data including kind & date**[JP2006147449](#)

A 2006-06-08

JP2006147449

[US2006290287](#)

A1 2006-12-28

US20060290287

[US7294969](#)

B2 2007-11-13

US7294969

**Abstract**

(US7294969)

Disclosed is a high-frequency discharge plasma generation-based two-stage Hall-effect plasma accelerator, which comprises an annular acceleration channel having a gas inlet port, a high-frequency wave supply section, an anode, a cathode, a neutralizing electron generation portion and a magnetic-field generation element, wherein: gas introduced from the gas inlet port into the annular acceleration channel is ionized by a high-frequency wave supplied from the high-frequency wave supply section, to generate plasma; a positive ion included in the generated plasma is accelerated by an acceleration voltage applied between the anode and cathode, and ejected outside; and an electron included in the generated plasma is restricted in its movement in the axial direction of the annular acceleration channel by an interaction with a magnetic field. The two-stage Hall-effect plasma accelerator is designed to control a degree of ion acceleration in accordance with the acceleration voltage serving as an acceleration control parameter, and control an amount of plasma generation in accordance with the high-frequency wave output serving as a plasma-generation control parameter. The two-stage Hall-effect plasma accelerator of the present invention can control the ion acceleration and the plasma generation in a highly independent manner.

Inventors

KUNINAKA HITOSHI

Latest standardized assignees - inventors removed

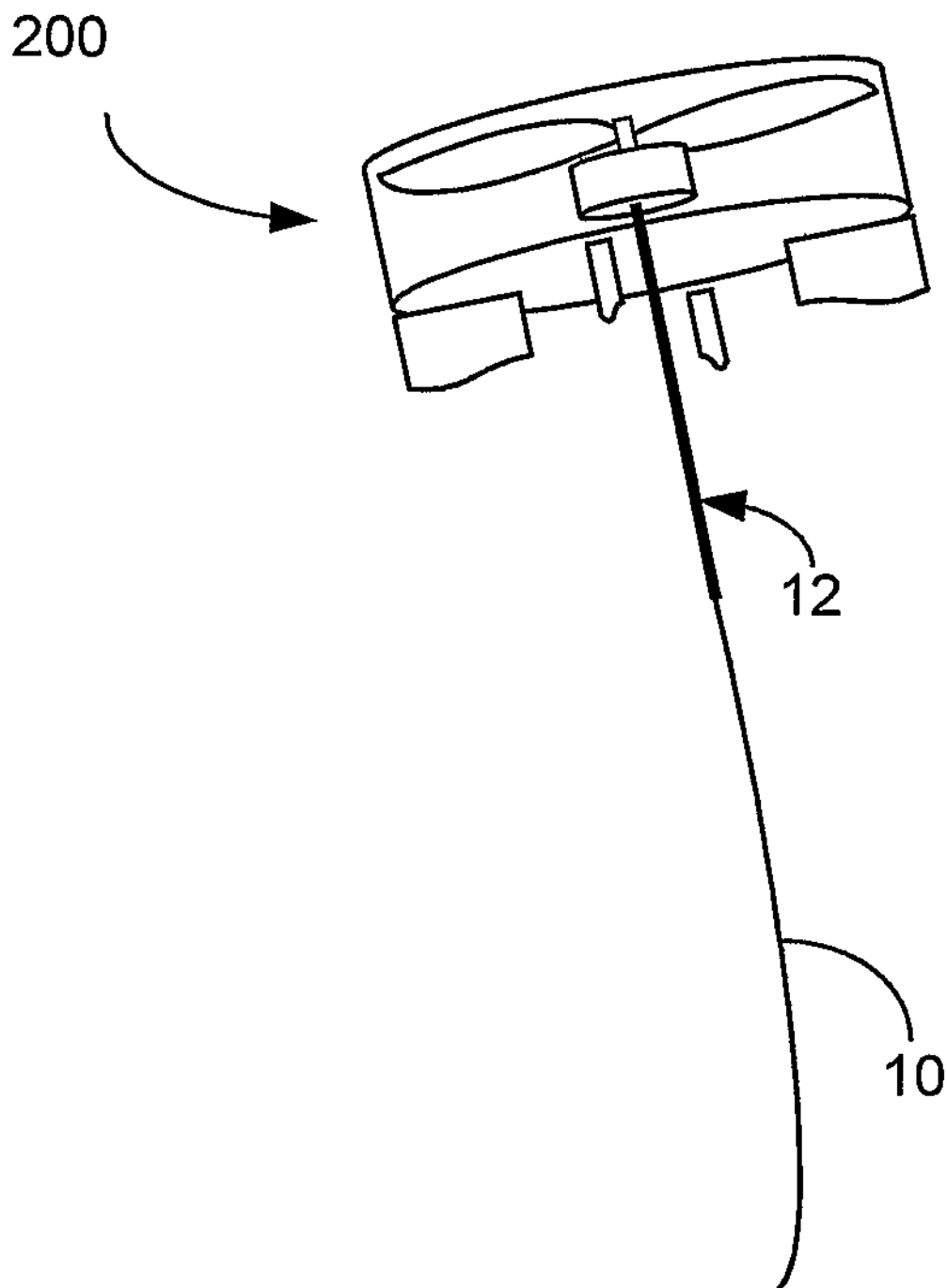
JAPAN AEROSPACE EXPLORATION AGENCY

Family 23/25 - FAMPAT - ©Questel

Title

(WO2010116362)

System, floating unit and method for elevating payloads

Images**Publication data including kind & date**

WO2010116362	A1	2010-10-14	WO2010116362
IL215541	A	2011-12-29	IL-215541
US2012091258	A1	2012-04-19	US20120091258



CN102458987	A	2012-05-16	CN102458987				
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US8590829	B2	2013-11-26	US8590829				
CN102458987	B	2015-10-07	CN102458987B				
IL215541	B	2016-04-21	IL-215541				
BRPI1006265	A2	2017-08-22	BRPI1006265				
BRPI1006265	A8	2018-03-27	BRPI1006265				

Abstract

(WO2010116362)

A method, system and a floating unit. The floating unit includes a propeller, a frame, a propeller motor that is configured to rotate the propeller about a first axis; wherein the propeller motor is coupled to the frame, a movable steering element; a controller, for controlling at least one of the propeller motor and the movable steering unit to affect at least one of a location and an orientation of the floating unit; and an interfacing module for coupling a payload to the floating unit and for receiving power from a connecting element that couples the floating unit to a ground unit; wherein the power received by the power interface is utilized to power the propeller motor and the controller.

Inventors

KEIDAR RONEN

Latest standardized assignees - inventors removed

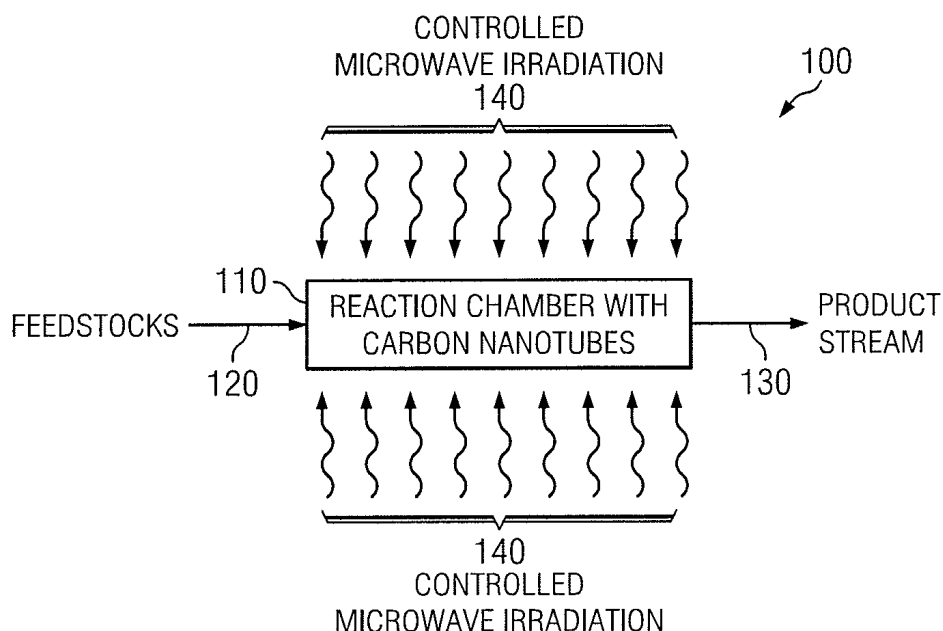
SKY SAPIENCE

Family 24/25 - FAMPAT - ©Questel

Title

(US20110180385)

Control of Catalytic Chemical Processes

Images**Publication data including kind & date**

US2011180385	A1	2011-07-28	US20110180385				
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Abstract

(US20110180385)

According to one embodiment, a method for controlling a chemical process comprises receiving a catalytic materials composition. The catalytic materials composition comprise at least one catalyst material and at least one reactant

material. Nanostructure material is added to the catalytic materials composition. The nanostructure material comprises at least one nanoscale-sized space therein. The nanostructure material is irradiated with **electromagnetic** radiation such that the nanostructure material facilitates energy transfer between the nanostructure material and the catalytic materials composition.

Inventors

IMHOLT TIMOTHY J

Latest standardized assignees - inventors removed

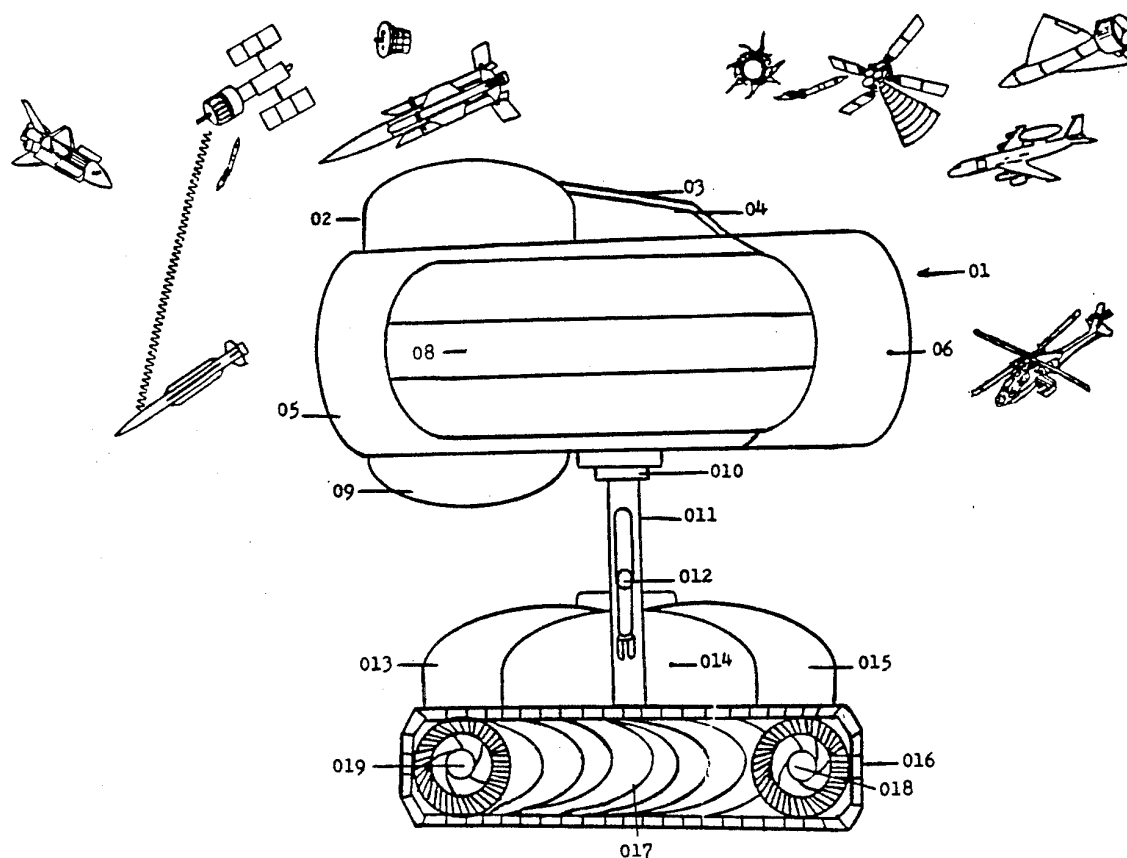
RAYTHEON

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Title

(US5020411)

Mobile assault logistic kinetmatic engagement device

Images**Publication data including kind & date**[US5020411](#)

A 1991-06-04 US5020411

**Abstract**

(US5020411)

A portable-mobile-self propelled weapons platform. Said platform being propelled by an automated array of plasma engines coupled to a plasma source, energy source and further being coupled to energy weapon systems.

Inventors

ROWAN LARRY