



New connection on: : 29-09-2020 : 20:45:10 - Last disconnection on: : 29-09-2020 : 20:45:05

V 4.0.0.44803(LP,U,linux) (Rev:43856 2017-04-27 09:03:29 +0200#(D201820)) (RPM D201820)

Welcome to EPOQUE Rebuild under the Production Environment

[EPODOC: SS 44] energy and solar and ccd and gprs and /ic (H04)

Results in EPODOC 0

[SS 45] energy and solar and ccd and gprs and /ic (H04)

Results in EPODOC 0

[SS 46] energy and solar and ccd and gprs

Results in EPODOC 1

[SS 47] ..li



1/1 © EPODOC / EPO

PN - [CN101609053](#) A 20091223

PR - CN20091063312 20090724

AP - [CN20091063312](#) 20090724

DT - I

PA - WUHAN NARI CO LTD [CN]

TI - Intelligent insulator on-line monitoring device and method thereof

AB - The invention relates to an intelligent insulator on-line monitoring device and a method thereof; the device mainly comprises an image collection module, an image processing and distinguishing module, a communication module and a power supply module. The monitoring method is as follows: a programmable logic device (CPLD) in the image collection module controls an image sensor (**CCD**) to shoot the insulator in a pole tower and collect image information, sends information into the image processing and distinguishing module to judge the state of the insulator, and finally the communication module timely sends the information to maintenance personnel and a monitoring center so as to realize the on-line monitoring of the insulator. The invention uses the double back-up power mode of high-tension side electricity getting and **solar energy** power supply, takes **solar energy** power supply mainly and is switched to the high-tension side electricity getting in overcast and rainy and at night, thus guaranteeing high reliability of the power supply of the monitoring device. The information in the communication module is transmitted to the ground firstly by an optical fiber, and then transmitted in a wireless way by **GPRS**. The information transmission combines the

modes of wire and wireless and overcomes the problem that signals are easily disturbed.

[SS 47] energy and solar and panel and ccd

Results in EPODOC 25

[SS 48] ..li



1/25 © EPODOC / EPO

PN - [CN210545958U](#) U 20200519
PR - CN201920875148U 20190612
AP - [CN201920875148U](#) 20190612
DT - I
CCA - [Y02P70/10](#)
CA - Y02P70/10 (EP)
PA - ZHEJIANG SHENQI E COMMERCE CO LTD
TI - Intelligent automobile paint spraying and baking integrated robot
AB - The utility model discloses an intelligent automobile paint spraying and baking integrated robot. The robot comprises a paint spraying and baking room, a robot walking track, an advancing module, a paint spraying mechanical arm unit, a control room, a glass sealing box and a **solar** cell **panel**. A robot walking track is fixedly arranged in the paint spraying and baking room. An advancing module is installed on the robot walking track in a matched mode. A paint spraying mechanical arm unit is fixedly arranged on the advancing module, a **CCD** camera is fixedly arranged on the paint spraying mechanical arm unit, a sealing door is installed at one end of the paint spraying and baking room, a **solar** cell **panel** is fixedly arranged on the paint spraying and baking room, and a glass sealing box is fixedly arranged on the **solar** cell **panel**. The paint spraying and baking room has the beneficial effects that the electric **energy** loss in the paint baking process can be greatly reduced, and the gas exhausted from the paint spraying and baking room can be filtered and recycled through the filtering tank, so that the pollution of paint spraying and baking to the surrounding environment and the harm to the health of workers can be reduced.

2/25 © EPODOC / EPO

PN - [CN210573966U](#) U 20200519
PR - CN201921121174U 20190717
AP - [CN201921121174U](#) 20190717
DT - I
PA - YANGZHOU TIANCHIYUAN ELECTROMECHANICAL MFG CO LTD
TI - **Energy**-saving and environment-friendly electric retractable door with license plate recognition function
AB - The utility model discloses an **energy**-saving and environment-friendly electric retractable door with a license plate recognition function, and belongs to the technical field of retractable doors. A plurality of vertical rods are arranged on one side of the machine head; the vertical rods are connected through folding connecting rods; a bracket is arranged at the upper top of the fixed seat; a CCDcamera is arranged at the

end part of the bracket; an illuminating lamp is arranged on the side wall of the **CCD** camera; the illuminating lamp is electrically connected with the **solar cell panel** assembly. The output end of the image acquisition module is electrically connected with an image preprocessing module; the output end of the image preprocessing module is electrically connected with a license plate positioning module; the electric retractable door with the license plate recognition function has the license plate recognition function, the functionality of the electric retractable door is improved, the use effect is good, and the practicability is high.

3/25 © EPODOC / EPO

PN - [CN210071802U](#) U 20200214
 PR - CN201920630023U 20190506
 AP - [CN201920630023U](#) 20190506
 DT - I
 PA - SHANDONG KANGDUN ECOLOGICAL AGRICULTURE CO LTD
 TI - Ecological fruit planting park water source water quality monitoring device
 AB - The utility model relates to a water source water quality monitoring device for an ecological fruit planting park. The utility model belongs to the technical field of water quality monitoring, mounting base, the mounting base is placed on the water surface; the **solar cell panel** charges the storage battery through the charging and discharging protector. **Energy-saving** and environment-friendly effects, opening switch, the micro water pump pumps water into the water collecting box; water in the water collecting box is discharged through a water outlet pipe; the mounting base floats and moves on the water surface; patrol effect, the PH value sensor is used for detecting the pH value of water in the water collecting box; the **CCD** camera is used for detecting the turbidity in the water; the microprocessor analyzes a detection result; water quality change, the microprocessor turns off the micro water pump and the one-way electromagnetic valve and turns on the buzzer, the LED stroboscope lamp and the waterproof motor, the buzzer and the LED stroboscope lamp are used for reminding quality inspection personnel, the waterproof motor drives the propeller to rotate to push the device to the bankside, and water in the water collecting box is taken out through the water taking pipe for further detection.

4/25 © EPODOC / EPO

PN - [CN208589113U](#) U 20190308
 PR - CN20182149914U 20180704
 AP - [CN20182149914U](#) 20180704
 DT - I
 PA - QIU RUNBO
 TI - Novel home automation alarm devices that communicates
 AB - The utility model discloses a novel home automation alarm devices that communicates, transmission post inboard evenly is provided with an universal joint of taking servo mechanism, and the top of every universal joint is provided with an infra -red transmitter, and the outside of universal joint is provided with thickness from the middle past both sides attenuation gradually of a beam splitter, beam splitter, there is an infrared **CCD panel** inboard of receiving the post through installation rack mount, is provided with the cleaning brush at the top of installation frame, and the cleaning brush inboard is equipped with the brush layer, and the cleaning brush is connected

with step motor, and step motor is connected to the controller through drive arrangement, the transmission post has all been seted up one with the back of receiving the post and has been accomodate the groove, accomodates the inslot and installs a **solar** photovoltaic board through telescopic tube, and the one end that thesolar photovoltaic board passes through rotation axis and telescopic tube links to each other, telescopic tube's the other end through the bolt with accomodate the inner wall fixed connection in groove. The utility model discloses the blind area of having reduced the control, through **solar energy** and storage battery power supply, can normal use under the circumstances that the family expenses power supply was cut off.

5/25 © EPODOC / EPO

- PN - [CN208523359U](#) U 20190222
- PR - CN201821167888U 20180723
- AP - [CN201821167888U](#) 20180723
- DT - I
- CCA - [Y02A40/25](#) ; [Y02P60/12](#) ; [Y02P60/14](#)
- CA - [Y02A40/25](#) (EP)
- [Y02P60/12](#) (EP)
- [Y02P60/14](#) (EP)
- PA - HUBEI XIANCAOGU TRADITIONAL CHINESE MEDICINE CO LTD
- TI - Sealwort seedling cultivation room
- AB - The utility model discloses a sealwort seedling cultivation room, including cultivateing the house owner body, the upper end fixed mounting who cultivates the house owner body has **solar** cell **panel**, and one side surface of cultivateing the house owner body is close to intermediate position fixed mounting and has an observation window, middle the surface of cultivateing the house owner body is provided with the push -and -pull door, and one side of push -and -pull door is provided with control button near the intermediate position, the inside of cultivateing the house owner body is close to intermediate position fixed mounting has the pipe of driping irrigation. A sealwort seedling cultivation room, be equipped with **solar** cell **panel**, **CCD** image sensor and drip irrigation the pipe, can utilizesolar **energy** power generation, effectual the **energy** can be saved to can clear observation cultivate the seedling growth condition in the room, in time pinpoint the problems and take corresponding measure, improve the success rate of cultivation, can also drip a jar seedling when cultivateing, need not to open artifical jar door, save the manpower, bring better use prospect.

6/25 © EPODOC / EPO

- PN - [CN208334907U](#) U 20190104
- PR - CN201820452023U 20180401
- AP - [CN201820452023U](#) 20180401
- DT - I
- PA - WUXI XUDIAN TECH CO LTD
- TI - **Solar energy** exposure machine frame **CCD** positioner
- AB - The utility model discloses a **solar energy** exposure machine frame **CCD** positioner, including camera part, gas cylinder portion branch, the camera part includes the CD camera, the **CCD** camera lens, and annular vision light source, annular vision light source top sets up the infrared lamp and restraints, and **CCD** camera top is connected with the **CCD** camera lens, and the **CCD** camera passes through the camera fixed plate to

be fixed on the camera regulating plate, and the camera regulating plate is fixed on little **panel**, gas cylinder portion branch floats to connect and fixes on little **panel** through the connecting piece including the lift cylinder, and little **panel** is fixed on the slider, slider along slide rail lift slip, the gentle cylinder portion of camera part divides along with the slider slides from top to bottom along the slide rail, picks the setpoint on the frame through **CCD** positioner, and the hi -Fix of platform frame is accomplished through servo motor drive platform frame to feedback counterpoint deviation, and traditional mechanical positioning accuracy that compares is higher, and speed is faster, and not have the circumstances of location wearing and tearing, and reductionartificial intervention has improved the duty cycle that stablizes of machine.

7/25 © EPODOC / EPO

PN - [CN108901310](#) A 20181130

PR - CN201810895955 20180808

AP - [CN201810895955](#) 20180808

DT - I

CI - A01D34/008 (CN)
- A01D34/64 (CN)
- A01D34/78 (CN)
- A01D34/826 (CN)
- A01D69/02 (CN)

PA - YANCHENG INST TECH

TI - Unmanned double-power-supply electric mower

AB - The invention discloses an unmanned double-power-supply electric mower, which comprises a chassis and a vehicle cover which is arranged on the chassis and is used in cooperation with the chassis, thetop of the vehicle cover is provided with a lithium battery, a **solar panel** is installed on the front side of the vehicle cover, and a driving motor is installed in the middle of the chassis, the motoris provided with a blade, and the front side of the chassis is provided with a **CCD** camera, a single-chip microcomputer is arranged on the driving motor, the front end of the chassis is provided witha front shaft, and the rear end of the chassis is provided with a rear shaft, and each of the free ends of the front shaft and the rear shaft is respectively provided with a steering knuckle, the front shaft and the rear shaft are provided with wheels through the steering knuckles, a steering engine is further arranged at the front end of the chassis, a steering engine knuckle arm is arranged on the steering engine, and the free end of the steering engine knuckle arm is connected with the steering knuckle installed at the two ends of the front shaft; a driving mechanism and a gear shifting mechanism used in cooperation with the driving mechanism are installed on one side of the middle of the chassis. According to the invention, unmanned operation is realized, the working noise is low, andthe working time is long, the operation is stable, the **energy** is saved, the environment is protected, the steering is flexible, and the actual use requirements are met.

8/25 © EPODOC / EPO

PN - [CN207937878U](#) U 20181002

PR - CN201820303579U 20180306

AP - [CN201820303579U](#) 20180306

DT - I

PA - UNIV SICHUAN AGRICULTURAL

TI - High -efficient **solar energy** tracer

AB - The utility model provides a high -efficient **solar energy** tracer which characterized in that comprises photoelectricity matrix piece, **solar energy** pursuit module, detection module, control module and drive module, photoelectricity matrix piece comprises photovoltaic array and the strutting arrangement that the **solar** cell **panel** of a plurality of same sizes splices, **solar energy** is tracked the module and comprises carbon nanotube and liquid crystal elastomer, **CCD** laser displacement sensor for the detection module, control module is by AD converting circuit, detection circuitry, STC89C52 singlechip and peripheral circuit are constituted round the clock, drive module comprises pulse distributor, power amplifier and step motor. This device can be accurate pursuit **solar** position's change, improve the generating efficiency.

9/25 © EPODOC / EPO

PN - [CN207379929U](#) U 20180518

PR - CN201721567368U 20171122

AP - [CN201721567368U](#) 20171122

DT - I

CCI - [G01N21/67](#) ; [G01N21/69](#)

CI - G01N21/67 (EP)
- G01N21/69 (EP)

PA - NAT RES CT GEOANALYSIS

TI - Novel portable liquid cathode glow discharge optical emission spectrometry appearance

AB - The utility model relates to a spectral analysis field specifically is a novel portable liquid cathode glow discharge optical emission spectrometry appearance, advance a kind structure, embedded liquid cathode glow discharge structure, **solar panel** power supply unit, **CCD** spectrum appearance and data process system including the gravity flow, this gravity flow sampling device does the support by a scalable pole, and there is the couple on the support top, and the couple is used for placing sample solution bottle, sample solution bottle connects to advance in the bottom one end of kind hose, advances the other end of kind hose and connects embedded liquid cathode glow discharge structure, the negative pole of this embedded liquid cathode glow discharge structure is taper graphite, and the positive pole is the tungsten filament to dress light filter and focus light microscopic, this focus light microscopic links to each other with data process system through fiber connection **CCD** spectrum appearance, **CCD** spectrum appearance, each instrument provides the electric **energy** by **solar panel** power supply unit. Small, the light in weight of portable liquid cathode glow discharge optical emissionspectrometry appearance of design like this, portable can be used to the wild spot analysis of elements such as li in the water, K.

10/25 © EPODOC / EPO

PN - [NZ719549](#) A 20180427

PR - IT2011RM00450 20110826; NZ20120622766 20120314

AP - [NZ20120719549](#) 20120314

DT - I

CCA - [Y02P60/00](#)

CA - Y02P60/00 (EP)

- PA - BEESFREE INC
- TI - Method, apparatus and compositions for the prophylaxis and treatment of colony collapse disorder
- AB - An automated apparatus for the prevention and treatment of the Colony Collapse Disease (CCD) through the administration of nutrients and therapeutic to bee colonies to be treated comprises a box-like container (10) of a material resistant to atmospheric agents which accommodates in its interior at least a first reservoir (9) being liquid-tight fitted with a stirrer (12) and accessible from the outside through a first nozzle (4), an atomizing device (15) of a liquid solution or suspension of nourishment contained in the tank, means for the delivery (2, 1) of the liquid solution or suspension atomized into micrometric drops outside the apparatus, and a control unit (7) programmed for timing the delivery of the solution or suspension to the outside, for the determination of the amount of solution or suspension delivered and for emitting alarm signals in case of malfunctions of the apparatus or reduction of the solution or suspension in a liquid contained in the reservoir (9) below a predetermined level. The apparatus is powered by direct current with the **energy** supplied by a **solar panel** (5) located outside of the container and electrically connected to the control unit (7). Further disclosed is a liquid solution or suspension of nutrients that can be delivered in a spray form through the above described automated apparatus for the prevention and treatment of the Colony Collapse Disease (CCD) . The solution or suspension comprises in a single aqueous solution or suspension of a) tonics and nutritious ingredients, mainly consisting of: milk powder and/or yeasts, sugars and lower organic acids; b) natural antioxidants and antiseptics contained in the extracts of one or more aromatic or medicinal plants selected from: *Crocus sativus*, *Pelargonium graveolens*, *Monarda citriodora*, *Myristica fragrans*, *Origanum vulgare* and *Origanum majorana*; and c) substances medicinal to bees, selected from thymol, oxalic acid, extracts of *Thymus vulgaris*, extracts of *Aloe arborescens*, extracts of *Beta vulgaris* cv. *altissima* and mixtures of two or more of the same. Also disclosed is a method for the prevention and treatment of the Colony Collapse Disease (CCD) through the administration of nutrients and therapeutic to bee colonies to be treated, consisting in using the above described automated apparatus deliver in a spray form, the above described solution or suspension.

11/25 © EPODOC / EPO

- PN - [CN107919080](#) A 20180417
- PR - CN201711307116 20171211
- AP - [CN201711307116](#) 20171211
- DT - I
- CT - // STSE (A)
[CN103647313](#) A 20140319 [Y] (GUANGZHOU CVTE ELECTRONIC TECH)
[Y] 1-5
* 说明书第0006-0040段, 附图2 *;
[CN104734297](#) A 20150624 [Y] (WUXI CHONG AN DISTR TECHNOLOGY ENTREPRENEUR SERVICES CT)
[Y] 1-5
* 说明书第0006-0017段, 附图1-2 *;
[CN105157834](#) A 20151216 [Y] (WUXI EPIC TECHNOLOGY CO LTD)
[Y] 1-5
* 说明书第0007-0020段, 附图1 *;
[CN105181139](#) A 20151223 [A] (WUXI EPIC TECHNOLOGY CO LTD)
[A] 1-5

* 全文 *;

[CN105222893](#) A 20160106 [A] (WUXI EPIC TECHNOLOGY CO LTD)

[A] 1-5

* 全文 *;

[CN105790608](#) A 20160720 [Y] (SUZHOU HEXINMEI ELEC SCI & TEC)

[Y] 2

* 说明书第0009-0020段, 附图1 *;

[CN107221983](#) A 20170929 [A] (BUILDWIN SEMI-CONDUCTOR (SHENZHEN) CO LTD, et al)

[A] 1-5

* 全文 *

- CI - G01J3/28 (CN)
- G09F15/02 (CN)
- PA - JIANGSU FACE MEDIA DEV CO LTD
- TI - Multifunctional advertising board
- AB - The invention discloses a multifunctional advertising board which comprises an advertising board body. A spectral acquisition system is arranged on the advertising board body and comprises a **CCD** (charge coupled device) sampling head, a **CCD** time sequence circuit, a photoelectric multiplier, a high-voltage adjusting circuit, a microcontroller module, a multiplexer switch, an A/D (analog-digital) sampling circuit and a power module, wherein the power module is connected with the **CCD** sampling head, the **CCD** time sequence circuit, the photoelectric multiplier, the high-voltage adjusting circuit, the microcontroller module, the multiplexer switch and the A/D sampling circuit and used for supplying needed electric **energy**. The power module comprises a **solar** light **panel**, a charging control circuit, a storage battery and a discharging control circuit which are sequentially connected. Extremely weak light signals can be detected, response speed is high, effective area is large, and the multifunctional advertising board can be widely applied to the field of light signal measurement.
- 12/25 © EPODOC / EPO
- PN - [CN207112648U](#) U 20180316
- PR - CN20172100632U 20170811
- AP - [CN20172100632U](#) 20170811
- DT - I
- CCA - [Y02B20/72](#) ; [Y02E10/50](#)
- CA - Y02B20/72 (EP)
- Y02E10/50 (EP)
- PA - YANGZHOU QIANGSHENG ELECTRIC CO LTD
- TI - **Solar** street lamp
- AB - The utility model provides a **solar** street lamp, relates to the street lamp field. Including hollow lamp pole, battery, singlechip, charge controllers, install the LED street lamp on the lamp pole, the upper end of lamp pole is connected with **solar** cell **panel** through sun tracer, sun tracer installs pivot through the bearing including connecting the casing on the lamp pole in, still installs drive pivot pivoted motor in the casing, is connected through gear drive between motor and the pivot, and the output of pivot upwards stretches out the casing, and **solar** cell **panel** inclines to install in the upper end of pivot and the **CCD** photosensitive element of being connected with the singlechip is installed in **solar** cell **panel**'s front. The utility model discloses a **solar** cell **panel** is provided with the **CCD** photosensitive element, rotates through **CCD** photosensitive element

control motor, makes **solar** cell towards the Sun's rays and perpendicular with the Sun's rays, has improved **solar** cell's electric **energy** conversion efficiency greatly.

13/25 © EPODOC / EPO

- PN - [CN107356339](#) A 20171117
- PNFP - CN107356339B B 20190809
- PR - CN201710556299 20170710
- AP - [CN201710556299](#) 20170710
- DT - I
- CT - // STSE (A)
[CN104808660](#) A 20150729 [A] (UNIV CENTRAL SOUTH)
[A] 1-8
* 全文 *;
CN206023706U U 20170315 [A] (NANJING LVGU INFORMATION TECH CO LTD)
[A] 1-8
* 全文 *
- CTNP - // STSE (A)
[A] - Mohammadreza Aghaei et al., "Innovative Automated Control System for PV Fields Inspection and Remote Control", 《Proceedings of the IEEE》
[A] 1-8
* 全文 *
[A] - Xiaoxia Li et al., "Corner Detection based Target Tracking and Recognition for UAV-based Patrolling System", 《Proceedings of the IEEE》
[A] 1-8
* 全文 *
[Y] - 陈明澍, "用于光伏厂智能巡检的红外式无人机系统设计", 《仪器仪表用户》
[Y] 1-8
* 第28第1段至第32页最后一段 *
[Y] - 徐博等, "多架次作业植保无人机最小能耗航迹规划算法研究", 《农业机械学报》
[Y] 1-8
* 第36第1段至第41页最后一段 *
- CCA - [Y02E10/50](#)
- CI - G01J5/00 (CN)
- G01N21/95 (CN)
- G01S19/01 (CN)
- H02S50/10 (CN)
- CA - G01J2005/0077 (CN)
- Y02E10/50 (EP)
- PA - (A)
CHANGZHOU INST TECHNOLOGY
- TI - (A)
Unmanned plane photovoltaic power station detection method
- AB - (A)
The invention discloses an unmanned plane photovoltaic power station detection method. The method comprises steps of unmanned plane all-round infrared thermal imaging fault detection, flight path setting and **CCD** camera daytime **solar energy panel** defect detection. According to the method, a visible light and infrared thermal imaging camera is embarked, and the **solar energy panel** can be detected through a preset path;

the infrared camera is employed in an unmanned plane to detect the whole photovoltaic power station surface, thermal imaging images are acquired, through online or offline digital image processing analysis, the position of the heating **solar energy panel** in the image can be rapidly detected. The visible light camera starts in the unmanned plane, the camera is made to arrive the fault **panel** position through manual control, the visible light visual imaging picture information of the fault **solar energy panel** can be acquired, through the GPS positioning information, a fault point is positioned.

14/25 © EPODOC / EPO

- PN - [CN206388330U](#) U 20170808
- PR - CN201621409974U 20161221
- AP - [CN201621409974U](#) 20161221
- DT - I
- PA - SICHUAN JUN TAO LIGHT IND CO LTD
- TI - Intelligent traffic light
- AB - The utility model relates to an intelligent traffic light, which comprises a mounting bas, the top welding of mount pad has an upright section of thick bamboo, the inner chamber bottom fixed mounting who founds a section of thick bamboo has the motor, the top of motor is connected with ball screw, and ball screw goes up the cover and be equipped with screw -nut, the top fixed mounting who founds a section of thick bamboo has the protection casing, and is equipped with the generator in the protection casing, the left side of generator is fixed with the fan, the top of protection casing is equipped with **solar cell panel**, screw -nut's left side is fixed with the horizontal pole, the left end of horizontal pole is fixed with the LED flashing lamp, **CCD** industrial camera machine, infrared detection device, light intensity sensor and controller box are from left to right installed in proper order to the top of horizontal pole, the bottom of LED flashing lamp is fixed with the reader, the utility model discloses can utilize wind **energy** and **solar energy** power generation to provide the power, **energy** -concerning and environment - protective, equipment has raising and lowering functions, is convenient for maintain and the installation, through the reader, can be according to the transit time of flow of the people and vehicle flowrate adjustment traffic lights.

15/25 © EPODOC / EPO

- PN - [CN106740162](#) A 20170531
- PR - CN201610999244 20161114
- AP - [CN201610999244](#) 20161114
- DT - I
- CT - *// STSE (A)*
 CN201733123U U 20110202 [A] (FUNING POWER SUPPLY COMPANY JIANGSU ELECTRIC POWER CO)
 [A] 1-5
 * 全文 *;
[CN104539025](#) A 20150422 [A] (XU YUNFEI)
 [A] 1-5
 * 全文 *;
[CN105356536](#) A 20160224 [Y] (JIANGSU JIUYU IND CO LTD)
 [Y] 1-5
 * 具体实施方式、附图1 *;
[CN105634065](#) A 20160601 [Y] (LIU JIE)

[Y] 1-5

* 具体实施方式、附图1 *

- CCA - [Y02T10/70](#) ; [Y02T10/7072](#) ; [Y02T90/12](#) ; [Y02T90/16](#)
- CI - B60L53/31 (CN)
- B60L53/51 (CN)
- B60L53/52 (CN)
- B60L53/65 (CN)
- H02J7/0027 (CN)
- H02J7/35 (CN)
- CA - Y02T10/70 (EP)
- Y02T10/7072 (EP)
- Y02T90/12 (EP)
- Y02T90/16 (EP)
- PA - ANHUI GERUIKA NEW ENERGY TECH CO LTD
- TI - Electric automobile charging pile matched with Internet of Vehicles
- AB - The invention discloses an electric automobile charging pile matched with Internet of Vehicles. The electric automobile charging pile comprises a charging pile body and a charging gun head. The top end of the charging pile body is provided with a support, the support is provided with a motor and a **solar** cell **panel** respectively, and a power supply device which is matched with the fan and the **solar** cell **panel** to be used and has an electric storage function is arranged in the charging pile body. The charging gun head is arranged on the side wall of the charging pile body and electrically connected with the power supply device. A control system is further arranged in the charging pile body and comprises a single chip microcomputer, and the single chip microcomputer is electrically connected with a target matching device, a radio-frequency identification device, a static storage device, a **CCD** image sensor, an image preprocessing device, a power regulating circuit and an indicating lamp circuit. Adaptability of a charging system and an electric automobile is distributed scientifically, the structure of the charging pile body is improved, charging function efficiency is improved, plenty of loss of electric **energy** is avoided, and actual use requirements are met.

16/25 © EPODOC / EPO

- PN - [CN206055509U](#) U 20170329
- PR - CN201620870157U 20160812
- AP - [CN201620870157U](#) 20160812
- DT - I
- CCA - [Y02B20/72](#)
- CA - Y02B20/72 (EP)
- PA - YANG JIAYOU
- TI - Multifunctional street lamp
- AB - The utility model discloses a multifunctional street lamp, its characterized in that: including lamp body, **solar** charging device and intelligent alarm device, the lamp body includes lamp pole, LED lamp, lamp stand, **solar** charging device includes **solar** cell **panel**, electrical source controller and battery, intelligence alarm device includes **CCD** camera, warning light and video vehicle detector, **CCD** camera and warning light set up on the lighting fixture, the video vehicle detector set up in the lamp stand, video vehicle detector connects **CCD** camera and warning light respectively, still be provided with

wireless communication device in the lamp stand, wireless communication device and video vehicle detector are connected, connect backend server simultaneously. The utility model discloses can provide high -efficient **solar energy** power generation function, the sunshade is taken shelter from rain and intelligent alarming function.

17/25 © EPODOC / EPO

- PN - [CN106102208](#) A 20161109
- PR - CN201610384600 20160602
- AP - [CN201610384600](#) 20160602
- DT - I
- CT - // STSE (A)
[CN105634602](#) A 20160601 [Y] (WENCHENG DAOFENG TECH CO LTD)
[Y] 1-4
* 说明书第0004-0051段, 说明书附图1-2 *;
[CN105634604](#) A 20160601 [Y] (WENCHENG DAOFENG TECH CO LTD)
[Y] 1-4
* 权利要求1-7 *
- CTNP - // STSE (A)
[Y] - 吴波, "基于可见光通信的无线门禁系统设计与实现", 《中国优秀硕士学位论文全文数据库 工程科技II辑》
[Y] 1-4
* 正文第18-47页 *
[Y] - 邓健志等, "基于可见光通信的溶洞景区照明控制方法研究", 《基于可见光通信的无线门禁系统设计与实现》
[Y] 1-4
* 正文第193-194 *
- CCA - [Y02B20/30](#)
- CI - H04B10/116 (CN)
- H05B45/00 (CN)
- CA - Y02B20/30 (EP)
- PA - SUZHOU JIEMUSITE MACHINERY CO LTD
- TI - **CCD** remote illumination control system
- AB - The invention discloses a **CCD** remote illumination control system, which comprises an illuminating end and a wireless controller, wherein wireless control of illuminating light is achieved through visible light communication; the illuminating end comprises an optical receiver module, a micro-control module, a relay set, a communication interface, a decision demodulation module, a central processing unit, a field-programmable gate array circuit, a receiving antenna, an optical detector, a signal processing circuit, a power circuit, an LED lamp, a power circuit and the like, wherein the power circuit is connected with the central processing unit and the field-programmable gate array circuit separately; a **solar** cell **panel**, a voltage stabilizing circuit, a power controller and a DC power supply circuit are arranged in the power circuit; the wireless controller controls the illuminating end through the communication interface; and the illuminating end finishes visible light brightness control through signal collection. By the **CCD** remote illumination control system, the service lifetime of illuminating equipment can be prolonged; the **energy** consumption of an illuminating system is reduced; and the illuminating quality of the illuminating system is improved.

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PN - [CN106100729](#) A 20161109

PR - CN201610380972 20160601

AP - [CN201610380972](#) 20160601

DT - I

CT - // STSE (A)
[CN101453270](#) A 20090610 [Y] (JIANGNAN INST OF COMPUTING TEC [CN])
[Y] 1-7
* 说明书第1-4页 *;
[CN102594460](#) A 20120718 [Y] (FENGLIANG GUO)
[Y] 1-7
* 权利要求4 *;
[CN105306147](#) A 20160203 [A] (U COM TELECOM EQUIPMENT CO LTD)
[A] 1-7
* 全文 *;
[CN105610503](#) A 20160525 [Y] (WENCHENG DAOFENG TECH CO LTD)
[Y] 1-7
* 权利要求1, 说明书第8-16段 *

CTNP - // STSE (A)
[Y] - 王宇, "室外远距离可见光通信系统", 《中国优秀硕士学位论文全文数据库》
[Y] 1-7
* 第3.1节 *
[Y] - 吴波, "基于可见光通信的无线门禁系统设计与实现", 《中国优秀硕士学位论文全文数据库》
[Y] 1-7
* 第5.3节 *

CI - H04B10/116 (CN)
- H04B10/516 (CN)
- H04B10/67 (CN)
- H04B10/691 (CN)

PA - SUZHOU JIEMUSITE MACHINERY CO LTD

TI - Short-range wireless communication **CCD energy** saving control device

AB - The invention discloses a short-range wireless communication **CCD energy** saving control device, comprising: a bridge circuit used for connecting a computer USB interface and an optical transceiver circuit, and receiving or transmitting a signal converted from a computer USB data signal; a central processor, a field-programmable gate array circuit, a power circuit and an optical key circuit, wherein the power circuit is separately connected with the central processor and the field-programmable gate array circuit; and a **solar cell panel**, a voltage stabilizing circuit, a power supply controller and a DC power supply circuit are provided in the power circuit. The system realizes the point-to-point communication mode, and adopts relatively small receiving and transmitting angles during reception and transmission. Only manual coarse alignment is needed when the system is used, the system can be applied to indoor short-range wireless communication and can reach a data communication rate higher than 10Mbps, the transmission distance is about 5 meters, and thus the data communication requirements of offices, laboratories, homes and other indoor environments are basically satisfied.

PR - CN201620292699U 20160408
 AP - [CN201620292699U](#) 20160408
 DT - I
 PA - CHEN QIAOZHEN
 TI - High -tension distributing line is bird repellent device for tower
 AB - The utility model discloses a high -tension distributing line is bird repellent device for tower, the casing passes through the plastics inserting groove and the rubber inserting groove is pegged graft with socket columns, the rubber inserting groove passes through the outer wall of clamp joint in socket columns, **solar panel** is installed on the top of casing, **solar panel**'s upper end slidable mounting has dust collection brush, the telescopic link of cylinder and dust collection brush's lateral wall fixed connection, the internally mounted of casing has the accumulate device, the PLC controller is installed to the top of accumulate device, the lateral wall of casing is inlaid and is had **CCD** camera device, infrared ray camera device is installed to **CCD** camera device's top, time acoustic generator is installed to infrared ray camera device's top, the PLC controller includes CPU treater, birds information extraction module, AD conversion module, the device has: the advantages such as installation, long service life, **energy** -conservation, environmental protection of being convenient for are fit for extensive the popularization.

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PN - [CN104767922](#) A 20150708
 PR - CN201510170179 20150413
 AP - [CN201510170179](#) 20150413
 DT - I
 CT - // STSE (A)
[CN101046913](#) A 20071003 [Y] (CHEN HUAPENG [CN])
 [Y] 1-3
 * 说明书第1-5页, 附图1-2 *;
[CN101697034](#) A 20100421 [Y] (GUANGZHOU JOC TECH CO LTD)
 [Y] 1-3
 * 说明书4-5页, 附图1 *;
[US2011199482](#) A1 20110818 [A] (MORGAN ARTHUR C [US])
 [A] 1-3
 * 全文 *;
 CN202798986U U 20130313 [A] (JIANGSU TRANSP RES INST CO LTD)
 [A] 1-3
 * 全文 *;
[CN104469101](#) A 20150325 [Y] (TIANJIN JIACI SCIENCE & TECHNOLOGY DEV CO LTD)
 [Y] 1-3
 * 说明书第[0008]段-[0011]段, 附图1-2 *

CCA - [Y02E10/56](#)
 CA - Y02E10/56 (EP)
 PA - CHENGDU KOME PHOTOELECTRIC SCIENCE & TECHNOLOGY CO LTD
 TI - Wireless control night-vision device in dual power mode
 AB - The invention discloses a wireless control night-vision device in a dual power mode. The wireless control night-vision device comprises an objective lens, a **CCD** imaging module, a master control ASIC, a wireless receiving and sending module, an infrared illuminator, an illuminance detection head, a microphone, a micro liquid crystal

displayer, an ocular lens, a power module, a **solar** photovoltaic **panel**, a **solar** controller, a current supply interface and an AC/DC converter. In the mode of mounting the **solar** photovoltaic **panel**, **solar energy** can be absorbed and converted into electric **energy** when illumination is sufficient, the converted electric **energy** is transmitted to the power module to be stored through the **solar** controller, the electric **energy** stored by the power module is used for shooting when light is poor or at night, and therefore no external **energy** needs to be provided, the problem that the use time of an existing photographic device is not lasting enough is solved, the service life under the field unmanned state is greatly prolonged, no pollution is generated, and the device can be used for a long time. In the environment without illumination, electric supply can be used for supplying power, the practicality is fully reflected through the dual power mode, and the degree of dependence on the power source is greatly reduced.

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PN - [CN104735331](#) A 20150624

PR - CN201510170195 20150413

AP - [CN201510170195](#) 20150413

DT - I

CT - *// STSE (A)*
[CN101046913](#) A 00000000 [Y]
[Y] 1-3
* 说明书第1页第4行-第14行, 第3页第3行-第9行, 第4页第8行-第5页倒数第1行, 附图1-2 *;
[US2009108180](#) A1 00000000 [A]
[A] 1-3
* 全文 *;
[US2009111454](#) A1 00000000 [A]
[A] 1-3
* 全文 *;
[CN101697034](#) A 00000000 [Y]
[Y] 1-3
* 说明书第[0022]段-[0037]段, 附图1 *;
[CN101719981](#) A 00000000 [A]
[A] 1-3
* 全文 *;
[CN103057471](#) A 00000000 [A]
[A] 1-3
* 全文 *;
[CN104469101](#) A 00000000 [Y]
[Y] 1-3
* 说明书第[0008]段-[0011]段, 附图1-2 *;
CN204598126U U 00000000 [R]
[R] 1-3
* 权利要求1-3 *

PA - CHENGDU KOME PHOTOELECTRIC SCIENCE & TECHNOLOGY CO LTD

TI - Automatic **solar** light supplement night-vision device

AB - The invention discloses an automatic **solar** light supplement night-vision device. The automatic **solar** light supplement night-vision device comprises an objective lens, a **CCD** imaging module, a master control ASIC, a wireless transceiving module, an infrared illuminator, an illuminance detection head, a microphone, a micro liquid crystal display, an eye lens, a power module, a **solar** photovoltaic **panel** and a **solar** controller.

According to the automatic **solar** light supplement night-vision device, the **solar** photovoltaic **panel** is arranged and can absorb **solar energy** when it is sunny and convert the **solar energy** into electric **energy**; the **solar** controller transmits the converted electric **energy** to the power module for storage; the automatic **solar** light supplement night-vision device conducts photographing through the electric **energy** stored in the power module at night or in a bad light without external **energy**, so the problem that an existing camera device can not be used for a long time is solved, the service life of the device in an outdoor unmanned state is greatly prolonged, no pollution is caused, and the device can be used for a long time.

22/25 © EPODOC / EPO

PN - [CN202120102U](#) U 20120118

PR - CN201120188864U 20110601

AP - [CN201120188864U](#) 20110601

DT - I

PA - YUN WU; YAN WU

TI - Intelligent buoy position remote monitoring device

AB - The utility model discloses an intelligent buoy position remote monitoring device, and relates to the field of buoy position remote monitoring technology. The monitoring device is provided with a controller used for the data analysis and processing, a short message receiving and transmitting module used to receive and transmit a short message and an image, a GPS module which is connected with the controller and is used to real-timely detect the buoy geographical position, a **CCD** camera module which is connected with the controller and is used to real-timely shoot the water surface condition, a **solar energy panel** module which is connected with the controller and is used for self-power generation, a liquid crystal module which is connected with the controller and is used to real-timely display the longitude and the latitude. The intelligent buoy position remote monitoring device has the advantages of simple structure, low cost, and high intelligence degree and safety.

23/25 © EPODOC / EPO

PN - [CN202095039U](#) U 20111228

PR - CN201120186328U 20110603

AP - [CN201120186328U](#) 20110603

DT - I

CCA - [Y02B10/70](#) ; [Y02E10/56](#) ; [Y02E10/72](#) ; [Y02E10/76](#)

CA - Y02B10/70 (EP)
- Y02E10/56 (EP)
- Y02E10/72 (EP)
- Y02E10/76 (EP)

PA - JUNLIN SHEN; JIE CHEN

TI - **CCD** (Charge Coupled Device) image monitoring system providing energies through wind and **solar energy** power generating

AB - The utility model discloses a **CCD** (Charge Coupled Device) image monitoring system providing energies through wind and **solar energy** power generating, which consists of a wind driven generator, a **solar** cell **panel**, a rectifier, a power automatic switcher, a storage cell pack, a control switch, a controller and a **CCD** camera electrically connected in sequence; the output end of the wind driven generator is electrically connected with

the input end of the rectifier; the output end of the rectifier is electrically connected with the input end of the power automatic switcher; the output end of the **solar cell panel** is electrically connected with the input end of the power automatic switcher; the output end of the power automatic switcher is electrically connected with the input end of the storage cell pack; and the output end of the storage cell pack is electrically connected with the **CCD** camera through the controller and the control switch. The **CCD** (Charge Coupled Device) image monitoring system providing energies through wind and **solar energy** power generating has a simple structure, can work in all weather, has broad usages, can save **energy**, reduce consumption, protect the environment and realize zero emission. The **CCD** (Charge Coupled Device) image monitoring system providing energies through wind and **solar energy** power generating has high technological concentration and extremely strong applicability.

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- PN - [CN201327488Y](#) 20091014
- PR - CN200820215191U 20081215
- AP - [CN200820215191U](#) 20081215
- DT - I
- PA - WEI XU [CN]
- TI - Digital **solar energy** sperm quality analyzer
- AB - The utility model discloses a digital **solar energy** sperm quality analyzer which is composed of an aluminum alloy box, a sperm quality analyzer host machine, a CPU power supply controller, a **CCD** microscope, a battery jar and a **solar panel**. The analyzer is characterized in that the sperm quality analyzer host machine and the battery jar are arranged in the aluminum alloy box, the CPU power supply controller and the **CCD** microscope are also arranged in the aluminum alloy box, the **solar panel** is arranged at an upper cover of the aluminum alloy box, and the **solar panel** is connected with the CPU power supply controller. One end of the CPU power supply controller is connected with the battery jar, and the other end is connected with the sperm quality analyzer host machine. With the advantages of light weight, small volume and convenient carrying, the digital **solar energy** sperm quality analyzer is suitable for outdoor use.

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- PN - [JP2005328187A](#) 20051124
- PR - JP20040142690 20040512
- AP - [JP20040142690](#) 20040512
- DT - I
- FI - G03B27/52&Z; H04N1/00&C; H04N1/00&885
- FT - 2H109/AA02; 2H109/DA00; 5C062/AB02; 5C062/AB33; 5C062/AB50; 5C062/BA00
- PA - KYOCERA MITA CORP
- TI - IMAGE READING DEVICE
- AB - PROBLEM TO BE SOLVED: To provide an image reading device which raises the generating efficiency of a **solar cell** by utilizing a light effectively, and can attain **energy** saving.
- SOLUTION: A reflecting plate 4 is provided at a scanner lamp 3 so that the light from the scanner lamp 3 provided at the lower part of the original base glass 2 of a scanner unit 1 irradiates only the upper original glass 2 and the **solar cell panel** 10 arranged at the right side. The reflecting light of the original surface is reflected by mirrors 5, 6 and 7 as optical systems, guided to a **CCD** sensor 9 through a lens 8, and image data of the

original is read by the **CCD** sensor 9. The **solar** cell **panel** 10 receives the light from the scanner lamp 3 and generates a power.

- COPYRIGHT: (C) 2006,JPO&NCIPI

[SS 48]