Arab Republic of Egypt
Ministry of State for Scientific Research
Academy of Scientific Research & Technology

GRANTED PATENTS' ABSTRACTS GAZETTE

"PATENTS ISSUED IN DECEMBER 2020 "

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Preface

We are on the verge of a new era which is founded on the basis of technological development and hence, we have to follow it in all fields of national development . Technology has become the basis for the increase in national income and production and hence, scientific research has become our real hope as a way for advancement and as a necessity for life .

Emerging from the responsibility of the Academy of Scientific Research and Technology towards strengthening the pillars of science and technology , I have the pleasure to introduce the Granted Patent's Abstracts of the Publication of Patents monthly, Which includes bibliographical data . This periodical is directed to all those interested in the vital field of Intellectual property which encompasses patents, innovations and creative works .

I hope that this publication meets its targeted objective , namely increasing the welfare , prosperity and advancement for our beloved country, Egypt .

President of Patent Office

Dr. Mona M. Yehia

Bibliographic data

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Patent Number	11
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ZR	Zaire
ZW	Zimbabwe

ABSTRACTS
FOR
GRANTED PATENTS
DECEMBER (2020)

Arab Republic of Egypt **Ministry of State for Scientific Research** **Academy of Scientific Research & Technology** **Egyptian Patent Office**	EGYPT **PCT**	**(22)** **(21)** **(44)** **(45)** **(11)**	**14/06/2015** **0958/2015** **May 2020** **01/12/2020** **30034**

(51)	**Int. Cl. [8] B01J & 31/14, 31/02**
(71)	**1. IFP Energies Nouvelles (FRANCE)** **2.** **3.**
(72)	**1. MAGNA Lionel** **2. OLIVIER-BOURBIGOU Helene** **3.**
(73)	**1.** **2.**
(30)	**1. (FR) 14/56.471 - 04-07-2014** **2.** **3.**
(74)	**MAGDA HAROUN**
(12)	**Patent**

(54)	**CATALYTIC COMPOSITION AND PROCESS FOR THE SELECTIVE DIMERIZATION OF ETHYLENE TO 1-BUTENE**
	Patent Period Started From 04/07/2014 and Will end on 03/07/2034

(57) The invention describes a catalytic composition obtained by interaction of an alkyl titanate on the one hand with a preformed mixture of an alkylaluminium and a Lewis base on the other hand. The invention also describes the use of said composition in a process for the selective dimerization of ethylene to 1-butene.

Arab Republic of Egypt **Ministry of State for Scientific Research** **Academy of Scientific Research & Technology** **Egyptian Patent Office**	EGYPT **PCT**	**(22)** **(21)** **(44)** **(45)** **(11)**	**06/12/2017** **2023/2017** **May 2020** **01/12/2020** **30035**

(51)	**Int. Cl. [8] H02K 41/02**
(71)	**1. Yuzen Sustainable Energy Co., Ltd. (CHINA)** **2.** **3.**
(72)	**1. HSU, Yungshun** **2. HSU, Mingchun** **3. HSU, Wenyu**
(73)	**1.** **2.**
(30)	**1. (PCT/CN2015/081219) - 11-06-2015** **2.** **3.**
(74)	**ASHRAF SAMIR GAYED ZAKY**
(12)	**Patent**

(54)	**ELECTROMAGNETIC DEVICE**
	Patent Period Started From 11/06/2015 and Will end on 10/06/2035

(57) An electromagnetic device is provided to overcome loss of kinetic energy caused by amplification of magnetic attraction under loading. The electromagnetic device includes a stator and a rotor that are movable relative to each other. A movement direction of the rotor is in parallel with magnetic field lines to generate dual magnetic attraction points. A magnetic conductance body of a conductive coil assembly that serves as a stator or a rotor has two ends of which one that is favorable to a forward direction of movement is provided with a diameter-enlarged magnetic yoke, so that the single-side-arranged magnetic yoke can break the balance of amplified magnetic attraction to thereby making amplification of a horizontal component of force, reducing kinetic loos, and thus improving energy conversion rate.

Arab Republic of Egypt **Ministry of State for Scientific Research** **Academy of Scientific Research & Technology** **Egyptian Patent Office**	EGYPT **PCT**	**(22)** **(21)** **(44)** **(45)** **(11)**	**07/03/2018** **0392/2018** **May 2020** **01/12/2020** **30036**

(51)	**Int. Cl. [8] B66B 5/22**
(71)	**1. INVENTIO AG (SWITZERLAND)** **2.** **3.**
(72)	**1. HUSMANN, Josef;** **2.** **3.**
(73)	**1.** **2.**
(30)	**1. (EP) 15186514.4 - 23-09-2015** **2. (PCT/EP2016/071936) - 16-09-2016** **3.**
(74)	**SHEHATA HAROUN AND / OR MAGDA SHEHATA HAROUN AND / OR NADIA SHEHATA HAROUN**
(12)	**Patent**

(54)	**SAFETY CATCH DEVICE FOR A LIFT SYSTEM**
	Patent Period Started From 16/09/2016 and Will end on 15/09/2036

(57) A safety catch device for a lift system comprises a movable brake element that can be adjusted in a pressing direction towards a counter surface, for a braking procedure. In the assembled state, a disc is arranged between the braking element and the counter surface. In addition, a guide arrangement is provided for the braking element, which comprises a guide surface and an individual guide roller unit. The guide roller unit interacts with the guide surface in such a way that in the event of an adjustment of the brake element occurring in a braking action direction, an adjustment of the braking element likewise occurs in the pressing direction. The pressing direction is respectively perpendicular to the braking action direction. The guide roller unit rolls on the guide surface during the braking procedure and the guide surface is designed such that a transformation of the adjustment of the braking element occurring in the braking action direction decreasingly results in the adjustment of the braking element occurring in pressing direction. The invention also relates to a lift system comprising a safety catch device of this type and a method for braking a lift car that can be carried out with a safety catch device of this type.

Arab Republic of Egypt **Ministry of State for Scientific Research** **Academy of Scientific Research & Technology** **Egyptian Patent Office**	**EGYPT** **PCT**	**(22)** **(21)** **(44)** **(45)** **(11)**	**10/04/2014** **0577/2014** **November 2020** **03/12/2020** **30037**

(51)	**Int. Cl. [8] F24H 1/00**
(71)	**1. EMMANOUEIL BISHARA MILAD (EGYPT)** **2. MOHAMED ABD-ELHALIM MOHAMED (EGYPT)** **3. MOHAMED SALAMA ABD-ELHADY (EGYPT)**
(72)	**1. EMMANOUEIL BISHARA MILAD** **2. MOHAMED ABD-ELHALIM MOHAMED** **3. MOHAMED SALAMA ABD-ELHADY**
(73)	**1.** **2.**
(30)	**1.** **2.** **3.**
(74)	
(12)	**Patent**

(54)	
	Patent Period Started From 10/04/2014 and Will end on 09/04/2034

(57) We use water kettles in our life. In these kettles, layers of deposits are formed in the bottom due to heating. These layers of deposits reduce the rate of heat transfer, and thus increase electricity consumption. Therefore, anew kettle has been designed. In this new design, there is a heater inside a cylinder tube put in the middle of the kettle in order to apply thermal shock, and thus cleaning the outer surface of the tube when deposits are formed above the outer surface of the tube, the kettle must be turned on for one minute, and then turned off with adding boiling water. When the tube is cooled due to stopping heating, it contracts leading to the removed of deposits, and thus cleaning the outer surface of the cylinder tube.

Arab Republic of Egypt **Ministry of State for Scientific Research** **Academy of Scientific Research & Technology** **Egyptian Patent Office**	EGYPT **PCT**	**(22)** **(21)** **(44)** **(45)** **(11)**	**16/05/2012** **0892/2012** **November 2020** **03/12/2020** **30038**

(51)	**Int. Cl. [8] E03D 9/08**
(71)	**1. ALI MOHAMED HARS (EGYPT)** **2.** **3.**
(72)	**1. ALI MOHAMED HARS** **2.** **3.**
(73)	**1.** **2.**
(30)	**1.** **2.** **3.**
(74)	
(12)	**Patent**

(54)	**A MOVING TOILET BASE**
	Patent Period Started From 16/05/2012 and Will end on 15/05/2032

(57) This invention relates to a moving toilet base (modern base (fixed on the traditional toilet base (using the same sanitary sewage to save money and space) when it is desired to use the traditional base one can raise the moving one up behind the traditional one.

Arab Republic of Egypt **Ministry of State for Scientific Research** **Academy of Scientific Research & Technology** **Egyptian Patent Office**	EGYPT **PCT**	**(22)** **(21)** **(44)** **(45)** **(11)**	**16/06/2015** **0984/2015** **November 2020** **03/12/2020** **30039**

(51)	**Int. Cl. [8] C08/G 18/06 , 18/28 , C08L 75/04 , D06M 13/395 , 13/02 , 13/322 , 11/00**
(71)	**1. NATIONAL RESEARCH CENTER (EGYPT)** **2.** **3.**
(72)	**1. HESHAM MOSTAFA FAHMY ABD-ELGAWWAD** **2. SHAIMAA MAHMOUD SAYED MOHAMED** **3.**
(73)	**1.** **2.**
(30)	**1.** **2.** **3.**
(74)	**Focal point - NATIONAL RESEARCH CENTER MAGDA MOHASEB ALSAYED, , MONA MOHAMED FAREED**
(12)	**Patent**

(54) A WATER REPELLENT ADDUCT EMULSION FOR FINISHING OF COTTON / POLYESTER FABRICS

Patent Period Started From 16/06/2015 and Will end on 15/06/2035

(57) Water repellent finish which is the aqueous emulsion of sa/tdi/peg adduct was prepared by reacting of 2,4-toluene diisocyanate with stearyl alcohol and polyethylene glycol at 100 ̊c for 90 min followed by converting the produced adduct into an aqueous emulsion. Such emulsion was incorporated in easy care finishing formulation containing dimethyloldihydroxyethylene urea as a crosslinker and ammonium persulphate as a catalyst for imparting polyester/cotton fabric with water repelling properties using padd/dry/cure technique.

Arab Republic of Egypt **Ministry of State for Scientific Research** **Academy of Scientific Research & Technology** **Egyptian Patent Office**	EGYPT **PCT**	**(22)** **(21)** **(44)** **(45)** **(11)**	**02/07/2015** **1075/2015** **November 2020** **03/12/2020** **30040**

(51)	**Int. Cl. [8] A61H 1/02**
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(73)	**1.** **2.**
(30)	**1.** **2.** **3.**
(74)	**NOHA MOHAMMED SAMY MOHAMMED HELMY AFIFI**
(12)	**Patent**

(54) MULTI-FUNCTION 3-DOF PARALLEL MANIPULATOR-BASED LOWER LIMB REHABILITATION AND ASSISTIVE DEVICE

Patent Period Started From 02/07/2015 and Will end on 01/07/2035

(57) Aging and some diseases are always accompanied with deterioration of lower limb muscle strength. Sit-to-stand, walking and transfer are daily life activities that cannot be performed without assistance by patients with lower limb problems. The commercial assistive devices are developed to assist in one or at most two of those activities and are not interactive ones. So, rather than one function device, this patent introduces an indoor multi-function parallel manipulator-based lower limb rehabilitation and assistive device to interactively perform some activities. Walking, sit-to stand and total body lifting and transfer from bed to wheelchair or toilet as well as standing in the upright position to improve blood circulation for severely disabled patients are activities that can be performed by the introduced single device in this patent. The device consists of two modules; namely an active walker for walking and transfer activities and an assisting mechanism for standing and lifting activities. Because of its large load-to-weight ratio and a suitable workspace for those activities, parallel manipulator is introduced as an assisting mechanism to be used for developing the device. The assisting mechanism consists of two identical vertical 3-RPR planar parallel manipulators in a non-conventional structure, one for each side of the active walker, which is a differential drive mobile base, on which the assistive manipulators can be fixed. Each of the assisting parallel manipulator has three degrees of freedom to position point trajectory of the shoulder and orient patient trunk and thus enables performing natural patterns of motion for those activities. The non-conventional structure of the 3-RPR parallel manipulator, in which the last two revolute joints of limbs 1 and 2 coincide and are attached to one pivot of the moving platform while the first two revolute joints of limbs 2 and 3 coincide and are attached to one pivot in the based platform with straight line shape mobile and base platforms, provides partially decoupled motion and only one dimensionless design parameter. This simplifies the control system and the mechanical design.

Arab Republic of Egypt **Ministry of State for Scientific Research** **Academy of Scientific Research & Technology** **Egyptian Patent Office**	**EGYPT** **PCT**	**(22)** **(21)** **(44)** **(45)** **(11)**	**31/12/2015** **2074/2015** **November 2020** **03/12/2020** **30041**

(51)	**Int. Cl. [8] A01D 43/10**	
(71)	**1. NATIONAL RESEARCH CENTER (EGYPT)** **2.** **3.**	
(72)	**1. HANI MOHAMED MOHAMED IBRAHIM MEHANNA** **2. MAHER FATEHI ATEIA** **3. AHMED FARIS EMAM EL-SHAFIE**	**4. OSAMA MOAWAD DEWEDAR** **5. MARWA MAHMOUD ABDEL-BASET**
(73)	**1.** **2.**	
(30)	**1.** **2.** **3.**	
(74)	**MAGDA MOHASEB EL-SAID – focal point NATIONAL RESEARCH CENTER**	
(12)	**Patent**	

(54) DESIGN AND MANUFACTURE JOJOBA AND JATROPHA HARVESTING MACHINE

Patent Period Started From 31/12/2015 and Will end on 30/12/2035

(57) This innovation is related to jatropha and jojoba harvesting machine, it is one of the horticultural harvesting machines which is attached to the moderate power tractors (40 - 60 hp), where it takes its power from the pto of the tractor. It consists of 5 main units, fixing and attaching unit, movement unit, harvesting unit, receiving and collecting unit, and carrying and steering unit. The theory of operating this machine is to gain its movement from the pto to a gear box with 4 differential gears which transforms and makes this movement duple, then to a vertical rational rod with many attached rubber fingers, these fingers force the tree branches during the front movement of the tractor to drop the jatropha or jojoba seeds on a mat under the tree branches then to a seeds transmission belt and at last to a tank. The advantages of this machine are its simplicity and its efficiency of harvesting process.

Arab Republic of Egypt **Ministry of State for Scientific Research** **Academy of Scientific Research & Technology** **Egyptian Patent Office**	EGYPT **PCT**	**(22)** **(21)** **(44)** **(45)** **(11)**	**05/01/2016** **0023/2016** **November 2020** **03/12/2020** **30042**

(51)	**Int. Cl. [8] D06M 11/34, & D 06P 1/44**
(71)	**1. BANSEH MOHAMED MOHAMED ALADHAM (EGYPT)** **2.** **3.**
(72)	**1. BANSEH MOHAMED MOHAMED ALADHAM** **2.** **3.**
(73)	**1.** **2.**
(30)	**1.** **2.** **3.**
(74)	
(12)	**Patent**

(54)	**THICKENER OF PRINTING CRIMP PASTE**
	Patent Period Started From 05/01/2016 and Will end on 04/01/2036

(57) Thickener printing crimp pastes and its preparation method, made from andres powder thickener - rice / corn starch filer - sugar beet powder thickener - grinded date kernel powder (200 g), solution , sodium hydroxide 48: 50% bum (100 - 150) g, potassium carbonate (60) g, solid peel sodium hydroxide (50 - 70) g according to storage, rongalite c (50: 60) g, glycerin (30) g, the paste is characterized by the following: ease of removing it completely from different surfaces (cotton and cotton blended fabrics).

Arab Republic of Egypt **Ministry of State for Scientific Research** **Academy of Scientific Research & Technology** **Egyptian Patent Office**	EGYPT **PCT**	**(22)** **(21)** **(44)** **(45)** **(11)**	**28/03/2016** **0527/2016** **November 2020** **03/12/2020** **30043**

(51)	**Int. Cl. [8] B28B 17/02, & C25D 11/00**
(71)	**1. NATIONAL RESEARCH CENTER (EGYPT)** **2.** **3.**
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(73)	**1.** **2.**
(30)	**1.** **2.** **3.**
(74)	
(12)	**Patent**

(54) MACHINE FOR SURFACE MECHANICAL ATTRITION TREATMENT 'SMAT' FOR MATERIALS

Patent Period Started From 28/03/2016 and Will end on 27/03/2036

(57) New machine for sever plastic deformation “SPD” of metals alloys was designed, by which grain refinement occurs on surface as well as in depth of sample’s metallic sheets. Surface mechanical attrition “SMAT” of metals and alloys is the idea, on which the new machine was based. Frequency of bombardment of hard stainless steel balls, balls size and ductility of metallic samples are effective variable parameters on the resultant sample’s mechanical, physical and chemical properties. SPD metals has induced grain boundaries increase, causing surface reactivity increase, that a passive oxide layers and intermetallic compounds can be easily formed than using other root methods. Then arose in mind a new idea to In-Situ surface SMAT and surface alloying with powder grains previously spread on it, that could be done during surface bombarding with hard stainless steel balls, those should exert pressure on the powder grains and causing inclusions inside sample’s surface. Because of micro-cavities formed in sample’s surface and mechanical pressure exerted by bombarding hard stainless steel balls, powder grains tack up inside surface grains could happen. Further annealing could increase reaction and intermetallic compounds formation and diffusion of included powder grains. Also, cooling of samples during plastic deformation could help in grain size fragmentation increase. Therefore, heat transfer by conduction due to surface contact of sample's back surface with copper shield was a part from the newly designed machine causing In-Situ cooling SPD treatment. Final design has not been published in any books or scientific magazines, so that must be protected as a tool for material's treatment only done in my Laboratory of Metal Physics, Physics Division in National Research Centre, Dokki, Egypt.

Arab Republic of Egypt **Ministry of State for Scientific Research** **Academy of Scientific Research & Technology** **Egyptian Patent Office**	**EGYPT** **PCT**	**(22)** **(21)** **(44)** **(45)** **(11)**	**18/04/2016** **0686/2016** **November 2020** **03/12/2020** **30044**

(51)	**Int. Cl. [8] H01M 4/1395**
(71)	**1. NATIONAL RESEARCH CENTER (EGYPT)** **2.** **3.**
(72)	**1. AHMED MOHAMED AHMED AWAD ABOUELATA** **2. MAHA FARID SHAFFEI** **3. HALA SAEED HUSSEIN**
(73)	**1.** **2.**
(30)	**1.** **2.** **3.**
(74)	
(12)	**Patent**

(54) ELECTRODEPOSITION AND RATIO CONTROL OF TWO OR THREE NANO SIZE METALS OF TIN, NICKEL AND COPPER, INTO NANO POROUS ALUMINUM OXIDE FILM

Patent Period Started From 18/04/2016 and Will end on 17/04/2036

(57) Nano porous aluminum oxide film was prepared by two steps anodization process using aluminum metal as anode in an electrolytic solution of H2SO4. The process was carried out using the subsequent steps, pretreatment, first anodization, chemical detachement, second anodization and then electrolytic deposition of metal ions Cu, Sn and Ni. Electrolytic deposition of two metal ions was carried out using two separated bath of SnSO4 and NiSO4. Then, the second study was accomplished by electrolytic deposition of three nano metals was using three separated bath of CuSO4, SnSO4 and NiSO4, where a constant time 5 min was used for metal deposition for each type. In this study, different ratios of time 3/3/3, 3/1/1, 1/3/1 and 1/1/3 was applied for electrodposition of Sn/Ni/Cu respectively. Investigation and analysis of the surface after electrolytic deposition was done to evaluate the quantity of metal density occupied the porous film and surface coloring development.

Arab Republic of Egypt **Ministry of State for Scientific Research** **Academy of Scientific Research & Technology** **Egyptian Patent Office**	EGYPT  **PCT**	**(22)** **(21)** **(44)** **(45)** **(11)**	**30/08/2016** **1454/2016** **November 2020** **03/12/2020** **30045**

(51)	**Int. Cl. [8] B61F 19/00**
(71)	**1. MAMDOUH EZZ ALARAB ABU SAUD MAHMOUD (EGYPT)** **2.** **3.**
(72)	**1. MAMDOUH EZZ ALARAB ABU SAUD MAHMOUD** **2.** **3.**
(73)	**1.** **2.**
(30)	**1.** **2.** **3.**
(74)	
(12)	**Patent**

(54)	**ANTI-COLLISION CARRIAGE INSTALLED IN THE FRONT SIDE OF THE LOCOMOTIVE**
	Patent Period Started From 30/08/2016 and Will end on 29/08/2036

(57) The present invention relates to an anti - collision carriage installed in the front side of the locomotive, where it pulls the vehicle away from the front of the train and put it on its surface and protect it. Said carriage is made of steel, provided with iron sheet-rear wall, iron pipes & rubber bags mounted on the wall surface which absorbs the impact of the collided object and protecting it. It also has a front edge allows lifting the vehicle collided therewith, i.e. forklift winch and throw it on the carriage surface where it colloids with the rubber bags, during its movement it presses on the lever arm which therefore lifts the lever from the front side, avoiding the reaction of the collided object and thus the collided object kept protected on the carriage until the train stops.

Arab Republic of Egypt **Ministry of State for Scientific Research** **Academy of Scientific Research & Technology** **Egyptian Patent Office**	**EGYPT** **PCT**	**(22)** **(21)** **(44)** **(45)** **(11)**	**23/01/2018** **0141/2018** **November 2020** **03/12/2020** **30046**

(51)	**Int. Cl. [8] C04B 28/04, 111/00**
(71)	**1. OCTOBER UNIVERSITY FOR MODERN SCIENCES AND ARTS (MSA UNIVERSITY)** **2. (MSA University) (EGYPT)** **3.**
(72)	**1. NERMINE ABDEL EL GELIL MOHAMED ABDEL HALIM** **2.** **3.**
(73)	**1.** **2.**
(30)	**1.** **2.** **3.**
(74)	**TICO**
(12)	**Patent**

(54) A MIXTURE AND CURING PROCEDURES TO PRODUCE INTERLOCKING HOLLOW BRICKS FROM STABILIZED COMPRESSED SOIL USING SANDY SOIL IN ORDER TO INCREASE THEIR COMPRESSIVE STRENGTH AND MOISTURE RESISTANCE

Patent Period Started From 23/01/2018 and Will end on 22/01/2038

(57) The mixture consists of 90%-93% sandy soil (by weight) sieved with a 5 mm mesh and 7%-10% (according to soil) ordinary Portland cement grade 52.5 instead of 42.5 to increase the compressive strength the double. Adding 1.1% iron oxide increases the compressive strength and reduces the water absorption. As a non-coloring alternative, 0.4% natural glue is added to the water, which increases the strength by 27% . In addition, the bricks should not be transferred to another place during the curing period. After curing, the drying conditions should be taken into consideration by gradually letting the bricks dry while avoiding sun and wind and keeping them covered for one week; this procedure increases the strength the double. Finally, the wall consisting of hollow interlocking bricks resulting from this mixture and curing procedures should be painted with transparent water-based acrylic to reduce the absorption by half.

Arab Republic of Egypt **Ministry of State for Scientific Research** **Academy of Scientific Research & Technology** **Egyptian Patent Office**	EGYPT **PCT**	**(22)** **(21)** **(44)** **(45)** **(11)**	**20/07/2016** **1196/2016** **May 2020** **03/12/2020** **30047**

(51)	**Int. Cl. [8] C22C 38/00 38/06, 38/60 & C21D 9/46**
(71)	**1. JFE STEEL CORPORATION (JAPAN)** **2.** **3.**
(72)	**1. KIZU, Taro** **2. OKUDA, Kaneharu** **3. SEKIGUCHI, Isao**
(73)	**1.** **2.**
(30)	**1. (JP) 2014-011728 - 24-01-2014** **2. (PCT/JP2015/000088) - 09-01-2015** **3.**
(74)	**SMAS**
(12)	**Patent**

(54) HOT ROLLED STEEL SHEET AND MANUFACTURING METHOD THEREFOR

Patent Period Started From 09/01/2015 and Will end on 08/01/2035

(57) Disclosed is a hot rolled steel sheet used as material for a cold rolled steel sheet that is subjected to a low rolling load during cold rolling. The hot rolled steel sheet according to the present invention has a chemical composition containing, in mass, C: 0.010 % to 0.040 %, Si: 0.05 % or less, Mn: 0.10 % to 0.35 %, P: 0.03 % or less, S: 0.015 % or less, Al: 0.01 % to 0.10 %, N: 0.0050 % or less, and the balance being Fe and incidental impurities. The hot rolled steel sheet also has a microstructure having an average grain size of ferrite greater than 13 μm and a standard deviation of natural logarithms of the size of individual ferrite grains of 0.40 or more.

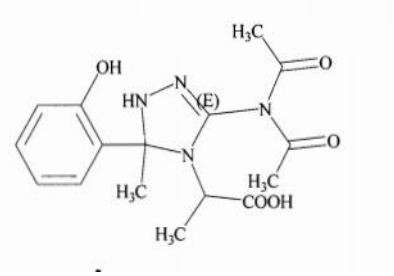
Arab Republic of Egypt **Ministry of State for Scientific Research** **Academy of Scientific Research & Technology** **Egyptian Patent Office**	**EGYPT** **PCT**	**(22)** **(21)** **(44)** **(45)** **(11)**	**25/12/2016** **2094/2016** **August 2020** **03/12/2020** **30048**

(51)	**Int. Cl. [8] C07D 249/14 ; A61P 33/02**
(71)	**1. AHMED MOHAMED AHMED EL-SAGHIER (EGYPT)** **2.** **3.**
(72)	**1. AHMED MOHAMED AHMED EL-SAGHIER** **2. ASMAA MAHMOUD KADRY** **3. ADNAN AHMED BEKHIT**
(73)	**1.** **2.**
(30)	**1.** **2.** **3.**
(74)	
(12)	**Patent**

(54) PROPIONIC ACID COUPLED TRIAZOLE DERIVATIVE AS ANTILEISHMANIAL

Patent Period Started From 25/12/2016 and Will end on 24/12/2036

(57) This patent depend on the preparation of propionic acid coupled Triazole derivative as antileishmanial agent, 2- [3-(N,N-Diacetylamino) 5-(2-hydroxypleyl) 5-methyl -1 , 5- dihydro – [1,2,4] triayzol – 4 – yl] propionic acid. As Biological evaluation of This compomd as antileishmanial, it have highly activity reach to 200 times (two hundred times) more than the drug used “ Miltefosine” or three times more than Drug used “ Amphotericin B” . Also, this compound not to toxic on rats till 150mg/kg.



Arab Republic of Egypt **Ministry of State for Scientific Research** **Academy of Scientific Research & Technology** **Egyptian Patent Office**	EGYPT **PCT**	**(22)** **(21)** **(44)** **(45)** **(11)**	**19/07/2017** **1195/2017** **July 2020** **06/12/2020** **30049**

(51)	**Int. Cl. [8] G05B 19/401 & B23Q 17/27**
(71)	**1. ZERAS S.R.L (ITALY)** **2.** **3.**
(72)	**1. LEVER, Andrea** **2.** **3.**
(73)	**1.** **2.**
(30)	**1. (IT) 102015902324455 - 29-01-2015** **2. (PCT/IB2016/000064) - 29-01-2016** **3.**
(74)	**MOHAMED ABDUL AAL ABDUL ALIM AHMED**
(12)	**Patent**

(54)	**APPARATUS AND PROCEDURE FOR HOMING AND SUBSEQUENT POSITIONING OF AXES OF A NUMERICAL CONTROL MACHINE**
	Patent Period Started From 29/01/2016 and Will end on 28/01/2036

(57) Apparatus for the homing and subsequent positioning of the axes of a numerical control machine, comprising: - motion actuators means, operatively connected to motor means for moving a machine worktable of said apparatus; - a control unit, - an input/output unit, operatively connected to said control unit for the definition of at least one working axis, where said apparatus comprises at least one switching sensor, either of inductive or capacitive type, at least one switching bar for the definition of at least one switching point identified on said at least one worktable by means of said at least one switching sensor, said switching sensors and switching points being fixed or mobile, said at least one switching bar comprising a detection area for said at least one switching sensor, said area being shared into a first, respectively a second detection section, and a plurality of protection and fastening areas, and a sensor housing for the insertion, protection and sliding of one or more switching sensors.

Arab Republic of Egypt **Ministry of State for Scientific Research** **Academy of Scientific Research & Technology** **Egyptian Patent Office**	EGYPT **PCT**	**(22)** **(21)** **(44)** **(45)** **(11)**	**28/12/2016** **2119/2016** **June 2020** **06/12/2020** **30050**

(51)	**Int. Cl. [8] C11D 7/32**
(71)	**1. The PROCTER & GAMBLE (UNITED STATES OF AMERICA)** **2.** **3.**
(72)	**1. TAN, Hong Sing** **2. GENG, Daitao** **3.**
(73)	**1.** **2.**
(30)	**1. (PCT/CN2014/082035) - 11-07-2014** **2.** **3.**
(74)	**AMR MOFEED ELDEEB**
(12)	**Patent**

(54) STRUCTURED PARTICLES COMPRISING ALKOXYLATED POLYALKYLELEIMINE, AND GRANULAR LAUNDRY DETERGENT COMPRISING PARTICLES

Patent Period Started From 11/07/2014 and Will end on 10/07/2034

(57) Structured particles suitable for use in granular laundry detergent compositions which contain an alkoxylated polyalkyleneimine in combination with a water soluble alkali metal carbonate and silica are provided. The composition contains little or no surfactant.

Arab Republic of Egypt **Ministry of State for Scientific Research** **Academy of Scientific Research & Technology** **Egyptian Patent Office**	EGYPT **PCT**	**(22)** **(21)** **(44)** **(45)** **(11)**	**30/01/2017** **0153/2017** **July 2020** **07/12/2020** **30051**

(51)	**Int. Cl. [8] C23C 14/06 & B26B 21/60**	
(71)	**1. BIC-VIOLEX SA (GREECE)** **2.** **3.**	
(72)	**1. LOGOTHETIDIS, Stergios** **2. KALFAGIANNIS, Nikolaos** **3. MAVROIDIS, Constantinos**	**4. PAPACHRISTOS, Vassilis** **5. KAROUSSIS, Michalis**
(73)	**1.** **2.**	
(30)	**1. (PCT/EP2014/066511) – 31-07-2014** **2. (PCT/EP2015/067477) - 30-07-2015** **3.**	
(74)	**SMAS INTELLECTUAL PROPERTY COMPANY - REPRESENTED BY / HALA WAHID MOHAMMED**	
(12)	**Patent**	

(54) RAZOR BLADE COATING

Patent Period Started From 30/07/2015 and Will end on 29/07/2035

(57) Razor blade substrate having a substrate comprising a blade edge portion having a profiled geometry which is covered by a strengthening coating deposited on the razor blade substrate at least at the blade edge portion. The strengthening coating covering the blade edge tip, having a profiled geometry and having a tapering geometry with two coating sides converging toward a blade edge tip. The strengthening coating comprises a strengthening layer made of a titanium-and boron-containing material.

Arab Republic of Egypt **Ministry of State for Scientific Research** **Academy of Scientific Research & Technology** **Egyptian Patent Office**	EGYPT **PCT**	**(22)** **(21)** **(44)** **(45)** **(11)**	**15/06/2017** **1040/2017** **June 2020** **07/12/2020** **30052**

(51)	**Int. Cl. [8] G01N 27/417**	
(71)	**1. JOINT STOCK COMPANY "AKME-ENGINEERING (RUSSIAN FEDERATION)** **2.** **3.**	
(72)	**1. MARTYNOV, Petr Nikiforovich** **2. CHERNOV, Michail Efimovich** **3. STOROZHENKO, Alexsey Nikolaevich**	**4. SHELEMET'EV, Vasiliy Mikhaylovich** **5. SADOVNICHIY, Roman Petrovich**
(73)	**1.** **2.**	
(30)	**1. (RU) 2014150467 - 15-12-2014** **2. (PCT/RU2015/000791) - 16-11-2015** **3.**	
(74)	**SAMAR AHMED EL LABBAD**	
(12)	**Patent**	

(54) SENSOR FOR SENSING HYDROGEN IN GASEOUS MEDIA

Patent Period Started From 16/11/2015 and Will end on 15/11/2035

(57) The present device relates to measuring technology and can be used in the energy industry, metallurgy and the chemical industry for determining the concentration of hydrogen in gaseous media over a wide range of temperatures and pressures. A sensor for sensing hydrogen in gaseous media comprises a working element which, by means of a seal, fits snugly against the upper part of a housing of the sensor. Additional hermeticity is provided by a nut. The lower part of the housing of the sensor is delimited by insulation, which provides close contact with a heater that provides the temperature conditions of a working medium supplied to a hydrogen-permeable membrane of a water-steam chamber. Via a platinum measuring electrode, which lies snugly against the lower part of a ceramic sensor element that is hermetically connected by means of a glass ceramic to a metallic housing of the sensor element, the disturbance caused by a measurement flow is transmitted to a central core of a potential measuring device. A reference electrode is situated inside an inner cavity of the ceramic sensor element. The outer part of the bottom of the ceramic sensor element is coated with a porous platinum electrode layer. The end of the central core of the potential measuring device extends into the body of the reference electrode. The invention achieves the technical result of increasing the service life and operating reliability of a hydrogen sensor over a wide range of parameters of a working medium by providing for the hermeticity of the inner cavity of the ceramic sensor element and the stability of the temperature conditions of the working medium at the inlet to the sensor

Arab Republic of Egypt **Ministry of State for Scientific Research** **Academy of Scientific Research & Technology** **Egyptian Patent Office**	EGYPT **PCT**	**(22)** **(21)** **(44)** **(45)** **(11)**	**15/03/2018** **0459/2018** **July 2020** **07/12/2020** **30053**

(51)	**Int. Cl. [8] C03B 35/18, 35/16 & B65G 23/04**
(71)	**1. VESUVIUS FRANCE SA (FRANCE)** **2.** **3.**
(72)	**1. DUBOIS, Laurent** **2. SCHABAILLIE, Etienne** **3.**
(73)	**1.** **2.**
(30)	**1. (EP) 15185842.0 - 18-09-2015** **2. (PCT/EP2016/071842) - 15-09-2016** **3.**
(74)	**SAMAR AHMED EL LABBAD**
(12)	**Patent**

(54) CONVEYOR ROLL ASSEMBLY, TORQUE TRANSMISSION AND SUPPORT MEANS AND PROCESS FOR MAKING A CONVEYOR ROLL ASSEMBLY USED IN A HIGH TEMPERATURE ENVIRONMENT

Patent Period Started From 15/09/2016 and Will end on 14/09/2036

(57) A conveyor roll assembly for use at high temperature comprising a) a ceramic spool having a flexural strength of at least 15 MPa and an external diameter D and, b) a torque transmission and support means of a general cylindrical shape and having a longitudinal axis, comprising a body and b1. a supporting portion comprising at least one cylindrical supporting surface and, b2.a connecting portion that is mechanically and resiliently deformed, comprising at least two distinct connecting surfaces, frictionally connecting the torque transmission and support means to the ceramic spool, characterized in that at least one end of the ceramic spool has an axial, centered bore of a diameter 10mm ≥ d≥ 3/4 D, preferably≥ 1/3D and a depth Dd >1.5 d and in that the torque transmission and support means is provided in the at least said bore of the ceramic spool.

Arab Republic of Egypt **Ministry of State for Scientific Research** **Academy of Scientific Research & Technology** **Egyptian Patent Office**	EGYPT **PCT**	**(22)** **(21)** **(44)** **(45)** **(11)**	**04/12/2017** **0949/2017** **July 2020** **08/12/2020** **30054**

(51)	**Int. Cl. [8] C10G 47/00, 7/00**	
(71)	**1. AXENS (FRANCE)** **2.** **3.**	
(72)	**1. SAUGE, Thibault** **2. GONZALEZ LLAMAZARES, Roberto** **3. BONNARDOT, Jérôme**	**4. FRECON, Jacinthe**
(73)	**1.** **2.**	
(30)	**1. (FR) 1463096 - 22-12-2014** **2. (PCT/EP2015/080220) - 17-12-2015** **3.**	
(74)	**MAGDA HARON**	
(12)	**Patent**	

(54) METHOD AND DEVICE FOR REDUCING HEAVY POLYCYCLIC AROMATIC COMPOUNDS IN HYDROCRACKING UNITS

Patent Period Started From 17/12/2015 and Will end on 16/12/2035

(57) The invention relates to a method and an apparatus that make it possible to reduce the concentration of heavy polycyclic aromatic compounds (HPNA) in the recycling loop of hydrocracking units comprising a fractioning column. According to the method of the invention, a stream is drawn off from the fractioning column in the region of at least one tray located between the feed tray and the draw-off tray for the heaviest distillate fraction, the stream is stripped in an external stripping step by means of a stripping gas in the presence of a portion of the residue. The separated gaseous effluent is recycled in the column, advantageously as the stripping gas, and the liquid fraction is recycled in the hydrocracking step, a residue is purged in the stripping step.

Arab Republic of Egypt **Ministry of State for Scientific Research** **Academy of Scientific Research & Technology** **Egyptian Patent Office**	EGYPT **PCT**	**(22)** **(21)** **(44)** **(45)** **(11)**	**13/12/2017** **2078/2017** **July 2020** **08/12/2020** **30055**

(51)	**Int. Cl. [8] B05D 1/32, 5/00 & B08B 17/04 & C09D 5/14, 5/20 & F24C 15/20**
(71)	**1. NOVAPHARM RESEARCH (AUSTRALIA) PTY LTD (AUSTRALIA)** **2.** **3.**
(72)	**1. KRITZLER, Steve** **2. VEGERA, Andrey** **3.**
(73)	**1.** **2.**
(30)	**1. (AU) 2015902295 - 16-06-2015** **2. (PCT/AU2016/050496) - 15-06-2016** **3.**
(74)	**SAMAR AHMED EL LABBAD**
(12)	**Patent**

(54)	**METHOD AND COMPOSITIONS FOR CLEANING COOKING RANGE EXHAUST SYSTEMS**
	Patent Period Started From 15/06/2016 and Will end on 14/06/2036

(57) A method for removing fats, oils and cooking effluent from a range exhaust system comprising the steps of applying an adherent but peelable coating composition to the clean surfaces of the range exhaust system, allowing fats, oils or cooking effluent in use of the system to deposit on the surface of said peelable coating for a period, and after said period peeling the coating from the range exhaust system whereby to remove deposited fats, oils or cooking effluent for disposal. The coating may comprising a polyvinyl acetate polymer or copolymer emulsion or dispersion or acrylic polymer or copolymer emulsion or dispersion or a polyepoxy ester emulsion or dispersion or a styrene acrylic copolymer emulsion or dispersion or a polyurethane polymer or copolymer or a polyvinylbutyral polymer or copolymer blends of any of the above and desirably contains a biocide selected to be oil soluble and which migrates into fats, oils and cooking effluent deposited in use on the surface of said peelable coating. The coating may be applied in the form of an emulsion, dispersion or solution and is preferably formulated for dispensation as an aerosol from a pressure pack container and packaged within a pressure pack container.

Arab Republic of Egypt **Ministry of State for Scientific Research** **Academy of Scientific Research & Technology** **Egyptian Patent Office**	EGYPT **PCT**	**(22)** **(21)** **(44)** **(45)** **(11)**	**26/09/2017** **1589/2017** **October 2020** **08/12/2020** **30056**

(51)	**Int. Cl. [8] A61M 15/08, & B05B 11/00**
(71)	**1. MEDA AB (SWEDEN)** **2.** **3.**
(72)	**1. HANS-JOACHIM TRITSCHLER** **2. MARIO WEINGART** **3. JOACHIM MAUS**
(73)	**1.** **2.**
(30)	**1. (DE) 10 2015 004073.1 – 30-03-2015** **2. (PCT/EP2016/054350) - 02-03-2016** **3.**
(74)	**SAMAR AHMED EL LABBAD**
(12)	**Patent**

(54)	**PUMP CAP FOR A PHARMACEUTICAL CONTAINER, INSERT FOR A PUMP CAP FOR A PHARMACEUTICAL CONTAINER, PHARMACEUTICAL CONTAINER WITH THE PUMP CAP, AND COMPUTER PROGRAM PRODUCT**
	Patent Period Started From 02/03/2016 and Will end on 01/03/2036

(57) The disclosed technology relates to in a pump cap for a pharmaceutical container, the pump cap accommodates an electronics unit which is designed to detect an actuation of the pump cap by a user in order to dispense content from the container, to wirelessly output signals representing actuations of the pump cap, and to have operating energy for detecting one or more actuations of the pump cap by a user and for wirelessly outputting signals representing the one or more actuations of the pump cap wirelessly delivered to it from outside by an electronic appliance in the form of a personal digital assistant.

Arab Republic of Egypt **Ministry of State for Scientific Research** **Academy of Scientific Research & Technology** **Egyptian Patent Office**	EGYPT **PCT**	**(22)** **(21)** **(44)** **(45)** **(11)**	**23/10/2016** **1737/2016** **June 2020** **09/12/2020** **30057**

(51)	**Int. Cl. [8] C02F ¼, 1/16, 103/08**
(71)	**1. EL AYI, Alain (FRANCE)** **2.** **3.**
(72)	**1. EL AYI, Alain** **2.** **3.**
(73)	**1.** **2.**
(30)	**1. (PCT/IB2014/000632) - 25-04-2014** **2.** **3.**
(74)	**SHADY FAROUK AL-MUBARAK**
(12)	**Patent**

(54)	**DESALINATION SYSTEM AND METHOD**
	Patent Period Started From 25/04/2014 and Will end on 24/04/2034

(57) The present invention relates to a system and method using a reservoir specially designed for desalinating sea water. The invention makes it possible to evaporate the sea water and condense the resulting vapor at low pressure. Discharges into the sea resulting from said desalination operations have a low salt concentration. The present system and method can be used to recycle energy, even energy which is difficult to recycle, for desalinating sea water, or can be combined with other desalination techniques, for example such as MSF evaporation or MED distillation.

Arab Republic of Egypt **Ministry of State for Scientific Research** **Academy of Scientific Research & Technology** **Egyptian Patent Office**	EGYPT **PCT**	**(22)** **(21)** **(44)** **(45)** **(11)**	**24/06/2018** **1025/2018** **October 2020** **09/12/2020** **30058**

(51)	**Int. Cl. [8] H01F 27/32**
(71)	**1. CHINA XD ELECTRIC CO., LTD (CHINA)** **2.** **3.**
(72)	**1. Wang, Fenshao** **2. Li, Hongqiao** **3. TUO, Yan**
(73)	**1.** **2.**
(30)	**1. (US) 201611201136.4 - 22-12-2016** **2. (PCT/CN2017/114947) - 07-12-2017** **3.**
(74)	**HODA YOUSSEF MOHAMMED HAFEZ**
(12)	**Patent**

(54)	**COUPLING STRUCTURE FOR TAIL PORTION OF VALVE–SIDE BUSHING**
	Patent Period Started From 07/12/2017 and Will end on 06/12/2037

(57) A coupling structure for a tail portion of a valve-side bushing is provided, and the coupling structure includes a tapered shield pipe, a coupling sleeve and a valve-side bushing. A holder is provided on an inside of the tapered shield pipe. A connection plate is provided at a circumference of one end, configured to be connected to the tapered shield pipe, of the coupling sleeve. The coupling sleeve is connected to the holder located on the inside of the tapered shield pipe by the connection plate. A valve-side lead wire is connected to the one end, configured to be connected to the tapered shield pipe, of the coupling sleeve by a terminal, and the valve-side bushing is inserted into another end of the coupling sleeve. The coupling structure for the tail portion of the valve-side bushing according to the present application is simpler and facilitates installation of the valve-side bushing, effectively simplifies the entire installation and operation process, saves installation time, has good economic and social benefits, and makes the installation of the valve bushing easier and faster.

Arab Republic of Egypt **Ministry of State for Scientific Research** **Academy of Scientific Research & Technology** **Egyptian Patent Office**	EGYPT **PCT**	**(22)** **(21)** **(44)** **(45)** **(11)**	**07/06/2017** **0981/2017** **August 2020** **15/12/2020** **30059**

(51)	**Int. Cl. [8] D06N 7/00 & C09D 131/04 & C08L 31/04, 29/04 & C08K 3/26 & A47G 27/02**
(71)	**1. WACKER CHEMIE AG (GERMANY)** **2.** **3.**
(72)	**1. MELCHIN, Timo** **2. DIETRICH, Ulf** **3. KUNSTLE, Holger**
(73)	**1.** **2.**
(30)	**1. (DE) 10 2014 225 773.5 - 12-12-2014** **2. (PCT/EP2015/079321) - 10-12-2015** **3.**
(74)	**SMAS INTELLECTUAL PROPERTY**
(12)	**Patent**

(54) WATER-REDISPERSIBLE POLYMER POWDERS FOR CARPET COATING COMPOSITIONS

Patent Period Started From 10/12/2015 and Will end on 09/12/2035

(57) The invention relates to the use of polymers on the basis of ethylenically unsaturated monomers in carpet coating compositions, characterized in that one or more polymers on the basis of ethylenically unsaturated monomers are used in the form of water-redispersible powders (polymer powders) for the production of the carpet coating compositions.

Arab Republic of Egypt **Ministry of State for Scientific Research** **Academy of Scientific Research & Technology** **Egyptian Patent Office**	EGYPT **PCT**	**(22)** **(21)** **(44)** **(45)** **(11)**	**26/12/2017** **2183/2017** **July 2020** **14/12/2020** **30060**

(51)	**Int. Cl. [8] C08F 2/00, 2/01, 10/02 & C08L 23/04**
(71)	**1. TOTAL RESEARCH & TECHNOLOGY FELUY (BELGIUM)** **2.** **3.**
(72)	**1. VANTOMME, Aurélien** **2. WILLOCQ, Christopher** **3.**
(73)	**1.** **2.**
(30)	**1. (BE)15176886.8 - 15-07-2015** **2. (PCT/EP2016/066677) - 13-07-2016** **3.**
(74)	**SMAS**
(12)	**Patent**

(54) PROCESS FOR PREPARING A POLYETHYLENE PRODUCT

Patent Period Started From 13/07/2016 and Will end on 12/07/2036

(57) The present invention relates to a process for preparing a polyethylene product having a multimodal molecular weight distribution, said process comprising the steps of: (a) feeding ethylene monomer, a diluent, at least one metallocene catalyst, optionally hydrogen, and optionally one or more olefin co-monomers into a first slurry loop reactor; and polymerizing the ethylene monomer, and the optionally one or more olefin co-monomers, in the presence of said at least one metallocene catalyst, and optionally hydrogen, in said first slurry loop reactor thereby producing a first polyethylene fraction; (b) feeding the first polyethylene fraction to a second slurry loop reactor serially connected to the first slurry loop reactor, and in the second slurry loop reactor polymerizing ethylene, and optionally one or more olefin co-monomers, in the presence of the first polyethylene fraction, and optionally hydrogen, thereby producing a second polyethylene fraction; and (c) feeding the second polyethylene fraction to a gas phase reactor serially connected to the second slurry loop reactor, and in the gas phase reactor polymerizing ethylene, and optionally one or more olefin co-monomers, in the presence of the second polyethylene fraction, and optionally hydrogen, thereby producing the polyethylene product, wherein at least 25 % by weight of the polyethylene product is prepared in the first slurry loop reactor.

Arab Republic of Egypt **Ministry of State for Scientific Research** **Academy of Scientific Research & Technology** **Egyptian Patent Office**	EGYPT **PCT**	**(22)** **(21)** **(44)** **(45)** **(11)**	**10/12/2017** **2048/2017** **October 2020** **20/12/2020** **30061**

(51)	**Int. Cl. [8] B01J 19/24**	
(71)	**1. AXENS (FRANCE)** **2. IFP Energies nouvelles (FRANCE)** **3.**	
(72)	**1. BOUTROT Catherine** **2. JANOT Nicolas** **3. LIEGE Xavier** **NIDERKORN Etienne**	**5. PIGOURIER Jérôme** **6. VINEL Daniel-Jean** **7. FAVRE Frederic** **8. MAGNA Lionel**
(73)	**1.** **2.**	
(30)	**1. (FR) 16/63.200 – 22-12-2016** **2.** **3.**	
(74)		
(12)	**Patent**	

(54)	**PROCESS FOR THE OLIGOMERIZATION OF OLEFINS BY MEANS OF A CLEANING DEVICE**
	Patent Period Started From 10/12/2017 and Will end on 09/12/2037

(57) The invention concerns a process for the oligomerization of ethylene into alpha-olefins, comprising a step for the oligomerization of ethylene, a step for deactivation of the catalyst, and step for separation of the products, the reactor being provided with a cooling by means of which at least a portion of the reaction effluent is moved through at least two switchableheat exchangers, said heat exchangers being cleaned alternately by means of an integrated cleaning device.

Arab Republic of Egypt **Ministry of State for Scientific Research** **Academy of Scientific Research & Technology** **Egyptian Patent Office**	EGYPT **PCT**	**(22)** **(21)** **(44)** **(45)** **(11)**	**12/04/2018** **0619/2018** **August 2020** **20/12/2020** **30062**

(51)	**Int. Cl. [8] B01J 8/04, 8/02**	
(71)	**1. IFPEnergies Nouvelles; (FRANCE)** **2.** **3.**	
(72)	**1. PLAIS, Cecile;** **2. BAZER-BACHI, Frederic;** **3. HAROUN, Yacine;** **4. DELTEIL, Jauffray, Salvatore;**	**5. WEISS, Wilfried;** **6. AIDDOUCH, Younes;** **7. BONNARDOT, Jérôme;**
(73)	**1.** **2.**	
(30)	**1.** (FR) **1560714 – 09-11-2015** **2. (FR) 1654396 - 18-05-2016** **3. (PCT/EP2016/074820) - 14-10-2016**	
(74)	**Magda SHEHATA HAROUN**	
(12)	**Patent**	

(54) **FILTERING AND DISTRIBUTION DEVICE FOR A CATALYTIC REACTOR**

Patent Period Started From 14/10/2016 and Will end on 13/10/2036

(57) The present invention concerns a device for filtering and distributing a gas phase and a liquid phase, suitable for being arranged upstream from a fixed catalytic bed of a reactor operating with co-current gas-liquid downflow, comprising: • a solid plate extending in a horizontal plane on which there are attached substantially vertical ducts open at the top and bottom ends of same, said ducts being provided with openings on at least a fraction of the height of same; • a plurality of removable baskets suitable for containing and holding a filtering medium, each removable basket being defined by a vertical ellipsoidal wall or by at least three vertical side walls and a bottom, the vertical walls and/or the bottom being permeable to the gas and to the liquid. Each basket is provided with at least one means (16) for supporting the basket cooperating with a duct of the plate to support the basket.

Arab Republic of Egypt **Ministry of State for Scientific Research** **Academy of Scientific Research & Technology** **Egyptian Patent Office**	EGYPT **PCT**	**(22)** **(21)** **(44)** **(45)** **(11)**	**12/06/2017** **1015/2017** **July 2020** **21/12/2020** **30063**

(51)	**Int. Cl. [8] F24J 2/54**
(71)	**1. COMMISSARIAT A L'ENERGIE ATOMIQUE ET AUX ENERGIES ALTERNATIVES** **2. (FRANCE)** **3.**
(72)	**1. BRU, Pierrik** **2. VIDAL, Frédéric** **3.**
(73)	**1.** **2.**
(30)	**1. (FR) 1462420 - 15-12-2014** **2. (PCT/EP2015/079694) - 15-12-2015** **3.**
(74)	**SAMAR AHMED EL LABBAD**
(12)	**Patent**

(54) SYSTEM FOR ROTATING AN ASSEMBLY OF REFLECTORS OF A CONCENTRATED SOLAR POWER PLANT AND CONCENTRATED SOLAR POWER PLANT COMPRISING SUCH A SYSTEM

Patent Period Started From 15/12/2015 and Will end on 14/12/2035

(57) A system intended for rotating an assembly of reflectors of a concentrated solar power plant, comprising swivel members spread along the reflectors (10i) along a line (L) and providing a pivot link mounting of each reflector (10i), a drive shaft distinctly offset from the swivel members, an actuator rotating the drive shaft, and a plurality of transmission mechanisms distinct from the swivel members, each transmission mechanism being mechanically coupled with the drive shaft and moving at least one reflector (10i) associated with said transmission mechanism, around the pivot axis (Ai) corresponding to said at least one associated reflector (10i), by transmission of a motor torque (CM) to said associated reflector (10i) by said transmission mechanism.

Arab Republic of Egypt **Ministry of State for Scientific Research** **Academy of Scientific Research & Technology** **Egyptian Patent Office**	EGYPT **PCT**	**(22)** **(21)** **(44)** **(45)** **(11)**	**07/05/2018** **0767/2018** **August 2020** **21/12/2020** **30064**

(51)	**Int. Cl. [8] H04W 88/06, 16/14, 28/20, 72/04, 72/12**
(71)	**1. TELEFONAKTIEBOLAGET LM ERICSSON (SWEDEN)** **2.** **3.**
(72)	**1. BALDEMAIR, Robert;** **2. PARKVALL, Stefan;** **3. MILDH, Gunnar**
(73)	**1.** **2.**
(30)	**1. (PCT/SE2015/051187) - 10-11-2015** **2.** **3.**
(74)	**SAMAR AHMED EL LABBAD**
(12)	**Patent**

(54) UPLINK AND/OR DOWNLINK SIGNALING RELATED TO DIFFERENT RADIO ACCESS TECHNOLOGIES

Patent Period Started From 10/11/2015 and Will end on 09/11/2035

(57) There is provided network units operating based on different radio access technologies and one or more associated wireless communication devices. In downlink, DL, a network unit of the first RAT is configured to transmit a 5 DL carrier in a frequency channelof the first RAT that is higher than the frequency channelof the second RAT.Correspondingly, a wireless communication device is configured to receive and demodulate and/or decode the DL carrier of the first RAT in afrequency channelof the first RAT that is higher than the frequency channel of the second RAT.In the uplink, UL, the wireless communication deviceis 10 configured to transmit an UL carrier of the first RAT in an uplink frequency channel overlapping with the uplink frequency channelof thesecond RAT. Correspondingly, the network unit is configured to receive and demodulate and/or decode the uplink, UL, carrier of the first RAT in an uplink frequency channeloverlapping with the uplink frequency channel of a second RAT.

Arab Republic of Egypt **Ministry of State for Scientific Research** **Academy of Scientific Research & Technology** **Egyptian Patent Office**	EGYPT  **PCT**	**(22)** **(21)** **(44)** **(45)** **(11)**	**09/05/2018** **0777/2018** **August 2020** **21/12/2020** **30065**

(51)	**Int. Cl. [8] H04W 76/02, 4/00**
(71)	**1. SHARP KABUSHIKI KAISHA (JAPAN)** **2.** **3.**
(72)	**1. KAWASAKI YUDAI** **2.** **3. ARAMOTO Masafumi**
(73)	**1.** **2.**
(30)	**1. (JP) 2015-220103 - 10-11-2015** **2. (PCT/JP2016/083362) - 10-11-2016** **3.**
(74)	**NAHID WADI RIZK TERZI**
(12)	**Patent**

(54)	**TERMINAL DEVICE, MME, AND COMMUNICATION METHOD**
	Patent Period Started From 10/11/2016 and Will end on 09/11/2036

(57) In order to provide a communication procedure for attachment or the like which is suitable for a CIoT terminal, the present invention is provided with: a step in which an attachment acceptance message is received from a core network; a step in which, in cases when first identification information is not included in the attachment acceptance message, a wireless bearer for transmitting and receiving control messages is used to transmit user data; and a step in which, in cases when the first identification information is included in the attachment acceptance message, a packet data network (PDN) connection and/or a wireless bearer for transmitting and receiving the user data are/is established, and the PDN connection and/or the wireless bearer for transmitting and receiving the user data are/is used to transmit the user data.

Arab Republic of Egypt **Ministry of State for Scientific Research** **Academy of Scientific Research & Technology** **Egyptian Patent Office**	EGYPT **PCT**	**(22)** **(21)** **(44)** **(45)** **(11)**	**01/06/2017** **0937/2017** **August 2020** **21/12/2020** **30066**

(51)	**Int. Cl. [8] H01H 71/62**	
(71)	**1. ZHEJIANG CHINT ELECTRICS CO., LTD (CHINA)** **2.** **3.**	
(72)	**1. LUO, Jingxiang** **2. YANG, Yingjie** **3. WANG, Keming**	**4. MA, Shigang**
(73)	**1.** **2.**	
(30)	**1. (CN) 201420743118.9 - 01-12-2014** **2. (PCT/CN2015/093751) - 04-11-2015** **3.**	
(74)	**SAMAR AHMED EL LABBAD**	
(12)	**Patent**	

(54)	**CIRCUIT BREAKER LOCKING DEVICE**
	Patent Period Started From 04/11/2015 and Will end on 03/11/2035

(57) Disclosed is a circuit breaker locking device, comprising an actuating lever and a pressure plate, wherein the actuating lever is mounted in a base of a circuit breaker in a hole shaft rotation manner, an elastic component is arranged between one end of the actuating lever and the base, the other end of the actuating lever is provided with a locking end capable of being in locking connection with a locking part at one side of the pressure plate, the pressure plate is mounted in the base and can rotate and swing relative to the base, the locking part at one side of the pressure plate comprises an unlocking face and a locking face respectively corresponding to the locking end, the unlocking face and the locking face are adjacent to each other and a slide step is arranged therebetween, the other side of the pressure plate is provided with a contact part capable of being in contact connection with an operating mechanism of the circuit breaker, and a magnetic flux capable of driving the pressure plate to swing is correspondingly arranged above the pressure plate. The circuit breaker locking device is firm in locking structure, stable in motion, and simple in mechanical structure.

Arab Republic of Egypt **Ministry of State for Scientific Research** **Academy of Scientific Research & Technology** **Egyptian Patent Office**	EGYPT **PCT**	**(22)** **(21)** **(44)** **(45)** **(11)**	**02/05/2018** **0738/2018** **August 2020** **21/12/2020** **30067**

(51)	**Int. Cl. [8] H04W 72/12**	
(71)	**1. QUALCOMM INCORPORATED (UNITED STATES OF AMERICA)** **2.** **3.**	
(72)	**1. LEI, Jing** **2. XU, Hao** **3. GAAL, Peter** **WANG, Xiaofeng**	**5. CHEN, Wanshi** **6. WEI, Yongbin** **7. MONTOJO, Juan** **8. RICO ALVARINO, Alberto**
(73)	**1.** **2.**	
(30)	**1. (US) 62/251,637 - 05-11-2015** **2. (US) 62/298,444 - 22-02-2016** **3. (US) 62/322,709 - 14-04-201** **4. (US) 15/245,498 - 24-08-2016** **5. (PCT/US2016/048545) - 25-08-2016**	
(74)	**SAMAR AHMED EL LABBAD**	
(12)	**Patent**	

(54)	**CLEAN-SLATE SYNCHRONIZATION SIGNAL DESIGN AND CELL SEARCH ALGORITHMS**
	Patent Period Started From 25/08/2016 and Will end on 24/08/2036

(57) Aspects of the present disclosure provide techniques for design of synchronization signals for narrowband operation and other clean-slate, OFDM based systems such as enhanced component carrier (eCC) systems. An example method is provided for operations which may be performed by a BS to generate and transmit a dual-layer PSS, and correspondingly, techniques for a UE to detect the dual-layer PSS. The PSS may be generated utilizing a binary code cover and at least one sequence applied to a number of symbols within one or more subframes of a frame..

Arab Republic of Egypt **Ministry of State for Scientific Research** **Academy of Scientific Research & Technology** **Egyptian Patent Office**	EGYPT **PCT**	**(22)** **(21)** **(44)** **(45)** **(11)**	**15/06/2017** **1042/2017** **July 2020** **21/12/2020** **30068**

(51)	**Int. Cl. [8] G01N 27/417**	
(71)	**1. JOINT STOCK COMPANY "AKME-ENGINEERING (RUSSIAN FEDERATION)** **2.** **3.**	
(72)	**1. MARTYNOV, Petr Nikiforovich** **2. CHERNOV, Mi?hail Efimovich** **3. STOROZHENKO, Alexsey Nikolaevich**	**4. SHELEMETYEV, Vasiliy Mihailovich** **5. SADOVNICHIY, Roman Petrovich**
(73)	**1.** **2.**	
(30)	**1. (RU) 2014150468 - 15-12-2014** **2. (PCT/RU2015/000789) - 16-11-2015** **3.**	
(74)	**SAMAR AHMED EL LABBAD**	
(12)	**Patent**	

(54) SENSOR FOR SENSING HYDROGEN IN LIQUID AND GASEOUS MEDIA

Patent Period Started From 16/11/2015 and Will end on 15/11/2035

(57) A sensor for sensing hydrogen in liquid and gaseous media comprises a selective membrane and a housing, a ceramic sensor element, a reference electrode, a porous platinum electrode, a sealed inlet and a potential measuring device. The ceramic sensor element is configured in the form of a cylinder with a bottom. The outer cylindrical surface of the ceramic sensor element is hermetically connected to the inner side surface of the housing. The reference electrode is situated inside an inner cavity of the ceramic sensor element. The outer part of the bottom of the ceramic sensor element is coated with a porous platinum electrode layer. The end of the central core of the potential measuring device extends into the body of the reference electrode. A lower bushing is provided in the form of a tube, which is connected to the lower part of the housing. To the lower end of said bushing there is attached a selective membrane, the free end of which is hermetically sealed with a plug, wherein a cavity delimited by the inner surface of the lower bushing, the outer part of the bottom of the ceramic sensor element and the inner surfaces of the selective membrane and the plug is hermetic. An upper bushing is mounted at the top of the potential measuring device, and an annular cavity between the inner surface of the wall of the upper bushing and the outer surface of the potential measuring device is filled with a glass ceramic.

Arab Republic of Egypt **Ministry of State for Scientific Research** **Academy of Scientific Research & Technology** **Egyptian Patent Office**	EGYPT **PCT**	**(22)** **(21)** **(44)** **(45)** **(11)**	**20/10/2016** **1725/2016** **May 2020** **27/12/2020** **30069**

(51)	**Int. Cl. [8] F16L 9/127 & C08F 2/00,4/659,210/16**
(71)	**1. TOTAL RESEARCH & TECHNOLOGY FELUY (BELGIUM)** **2.** **3.**
(72)	**1. LHOST, Olivier** **2. MICHEL, Jacques** **3.**
(73)	**1.** **2.**
(30)	**1. (EP) 14165701.5 - 23-04-2014** **2. (PCT/EP2015/058824) - 23-04-2015** **3.**
(74)	**SMAS**
(12)	**Patent**

(54) PIPE COMPRISING A METALLOCENE-CATALYZED POLYETHYLENE RESIN

Patent Period Started From 23/04/2015 and Will end on 22/04/2035

(57) The invention relates to a pipe comprising at least one metallocene-catalyzed polyethylene resin, wherein the polyethylene resin has a multimodal molecular weight distribution and comprises at least two metallocene-catalyzed polyethylene fractions A and B, wherein fractions A and B are prepared in different reactors of at least two reactors connected in series, wherein the polyethylene resin comprises: at least 30% by weight and at most 50% by weight of the polyethylene fraction A, based on the total weight of the polyethylene resin, wherein fraction A has a melt index MI2 of at least 50 g/10min as determined on the fluff of fraction A according to ISO 1133:1997 condition D at a temperature of 190°C and under a load of 2.16 kg; wherein fraction B has a density of at most 0.9210 g/cm3; and wherein the polyethylene resin has a melt index MI5 of at least 0.10 g/10min and of at most 1.0 g/10min as determined according to ISO 1133:1997, condition T, at 190°C and under a load of 5 kg; wherein the polyethylene resin has an HLMI of at least 4.0 g/10min and at most 14.0 g/10min, as measured according to the procedure of ISO 1133:1997 condition G with a temperature of 190°C and a load of 21.6 kg; and a density of at least 0.9420 g/cm3 and of at most 0.9460 g/cm3 as determined according to the procedure of ASTM D-1505 at a temperature of 23°C.

Arab Republic of Egypt **Ministry of State for Scientific Research** **Academy of Scientific Research & Technology** **Egyptian Patent Office**	**EGYPT** **PCT**	**(22)** **(21)** **(44)** **(45)** **(11)**	**22/12/2016** **2079/2016** **June 2020** **27/12/2020** **30070**

(51)	**Int. Cl. [8] B01J 21/10, 23/76 & C07C 17/156, 19/045**
(71)	**1. OXY VINYLS, LP (UNITED STATES OF AMERICA)** **2.** **3.**
(72)	**1. Keith KRAMER** **2.** **3.**
(73)	**1.** **2.**
(30)	**1. (US) 62/015,732 - 23-06-2014** **2. (PCT/US2015/037104) - 23-06-2015** **3.**
(74)	**SMAS**
(12)	**Patent**

(54) CATALYST AND PROCESS FOR OXYCHLORINATION OF ETHYLENE TO DICHLOROETHANE

Patent Period Started From 23/06/2015 and Will end on 22/06/2035

(57) In an oxychlorination process of the type where ethylene is converted to 1,2-dichloroethane in the presence of a supported copper catalyst, the improvement comprising: the use of a supported catalyst prepared by (i) impregnating, within a first step, an alumina support with a first aqueous solution including copper, to thereby form a first catalyst component; and (ii) impregnating, within a subsequent step, the first catalyst component with a second aqueous solution including copper and alkaline earth metal, to thereby form the supported catalyst.

Arab Republic of Egypt **Ministry of State for Scientific Research** **Academy of Scientific Research & Technology** **Egyptian Patent Office**	EGYPT **PCT**	**(22)** **(21)** **(44)** **(45)** **(11)**	**02/07/2017** **1121/2017** **October 2020** **27/12/2020** **30071**

(51)	**Int. Cl. [8] E21B 17/042**
(71)	**1. Voestalpine Tubulars GmbH & Co KG (AUSTRIA)** **2.** **3.**
(72)	**1. SCHAFFER, Markus** **2. WINKLER, Peter** **3. LEITNER, Reinhard** **4. SCHALKHAMMER, Thomas**
(73)	**1.** **2.**
(30)	**1. (AT) A 16/2015 - 13-01-2015** **2. (PCT/AT2015/000165) - 29-12-2015** **3.**
(74)	**NAHID WADI RIZK TERZI**
(12)	**Patent**

(54) DETACHABLE THREADED CONNECTION WITH ASYMMETRIC COATING

Patent Period Started From 29/12/2015 and Will end on 28/12/2035

(57) The invention relates to a screw connection with an internal thread and an external thread, both threads being provided with a phosphate layer as a first layer, wherein the internal thread comprises a ceramic material having a friction-reducing effect as a second layer and the external thread comprises a paint layer with a binder of an organic polymer as a second layer, in which solid lubricant particles are distributed.

Arab Republic of Egypt **Ministry of State for Scientific Research** **Academy of Scientific Research & Technology** **Egyptian Patent Office**	EGYPT **PCT**	**(22)** **(21)** **(44)** **(45)** **(11)**	**13/11/2016** **1859/2016** **August 2020** **28/12/2020** **30072**

(51)	**Int. Cl. [8] H04W 72/12**	
(71)	**1. QUALCOMM INCORPORATED (UNITED STATES OF AMERICA)** **2.** **3.**	
(72)	**1. JI, Tingfang** **2. SMEE, John Edward** **3. SORIAGA, Joseph Binamira** **4. BHUSHAN, Naga** **5. GAAL, Peter**	**6. GOROKHOV, Alexei Yurievitch** **7. MUKKAVILLI, Krishna Kiran** **8. HOWARD, Michael Alexander** **9. COOPER, Rotem** **10. ANG, Peter**
(73)	**1.** **2.**	
(30)	**1. (US) 62/000,443 - 19-05-2014** **2. (US) 14/533,954 - 05-11-2014** **3. (PCT/US2015/029649) - 07-05-2015**	
(74)	**SAMAR AHMED EL LABBAD**	
(12)	**Patent**	

(54) APPARATUS AND METHOD FOR SYNCHRONOUS MULTIPLEXING AND MULTIPLE ACCESS FOR DIFFERENT LATENCY TARGETS UTILIZING THIN CONTROL

Patent Period Started From 07/05/2015 and Will end on 06/05/2035

(57) Aspects of the disclosure provide for a thin control channel structure that can be utilized to enable multiplexing of two or more data transmission formats. For example, a thin control channel may carry information that enables ongoing transmissions utilizing a first, relatively long transmission time interval (TTI) to be punctured, and during the punctured portion of the long TTI, a transmission utilizing a second, relatively short TTI may be inserted. This puncturing is enabled by virtue of a thin channel structure wherein a control channel can carry scheduling information, grants, etc., informing receiving devices of the puncturing that is occurring or will occur. Furthermore, the thin control channel can be utilized to carry other control information, not being limited to puncturing information. Other aspects, embodiments, and features are also claimed and described.

Arab Republic of Egypt **Ministry of State for Scientific Research** **Academy of Scientific Research & Technology** **Egyptian Patent Office**	EGYPT **PCT**	**(22)** **(21)** **(44)** **(45)** **(11)**	**04/10/2017** **1636/2017** **August 2020** **28/12/2020** **30073**

(51)	**Int. Cl. [8] B66C 13/08**
(71)	**1. HANS KUNZ GMBH (AUSTRIA)** **2.** **3.**
(72)	**1. BEER, Roman** **2.** **3.**
(73)	**1.** **2.**
(30)	**1. (AT) A 211/2015 - 08-04-2015** **2. (PCT/AT2016/000026) - 10-03-2016** **3.**
(74)	**SMAS**
(12)	**Patent**

(54)	**TRANSPORT UNIT**
	Patent Period Started From 10/03/2016 and Will end on 09/03/2036

(57) A transport unit for transporting at least one container or another load, wherein the transport unit has at least one trolley and at least one load suspension device and at least eight lifting cables, and the load suspension device has connecting means for fastening the container or the other load and is suspended on the trolley such that it can be lifted and lowered by the lifting cables, wherein the lifting cables can be wound up on cable drums which are rotatably mounted on the trolley, wherein each lifting cable can be wound up and/or is wound up at least in part on a separate cable drum, and the rotational speed and/or the direction of rotation for all the cable drums can each be set individually.

Arab Republic of Egypt **Ministry of State for Scientific Research** **Academy of Scientific Research & Technology** **Egyptian Patent Office**	EGYPT **PCT**	**(22)** **(21)** **(44)** **(45)** **(11)**	**12/04/2011** **0566/2011** **October 2020** **28/12/2020** **30074**

(51)	**Int. Cl. [8] E21B 43/08, 43/10**
(71)	**1. BAKER HUGHES INCORPORATED (UNITED STATES OF AMERICA)** **2.** **3.**
(72)	**1. DUAN, Ping** **2.** **3. MCELFRESH, Paul, M.**
(73)	**1.** **2.**
(30)	**1. (US) 12/250.062 - 13-10-2008** **2. (PCT/US2009/059789) - 07-10-2009** **3.**
(74)	**NAHID WADI RIZK TERZI**
(12)	**Patent**

(54) SHAPE MEMORY POLYURETHANE FOAM FOR DOWNHOLE SAND CONTROL FILTRATION DEVICES

Patent Period Started From 07/10/2009 and Will end on 06/10/2029

(57) Filtration devices may include a shape-memory material having a compressed run-in position or shape and an original expanded position or shape. The shape-memory material may include an open cell porous rigid polyurethane foam material held in the compressed run-in position at the temperature below glass transition temperature (T9). The foam material in its compressed run-in position may be covered with a fluid-dissolvable polymeric film and/or a layer of fluid-degradable plastic. Once filtration devices are in place in downhole and are contacted by the fluid for a given amount of time at temperature, the devices may expand and totally conform to the borehole to prevent the production of undesirable solids from the formation.

Arab Republic of Egypt **Ministry of State for Scientific Research** **Academy of Scientific Research & Technology** **Egyptian Patent Office**	EGYPT **PCT**	**(22)** **(21)** **(44)** **(45)** **(11)**	**11/09/2017** **1501/2017** **October 2020** **28/12/2020** **30075**

(51)	**Int. Cl. [8] H04L 1/18**
(71)	**1. Telefonaktiebolaget L M Ericsson (publ) (SWEDEN)** **2.** **3.**
(72)	**1. LIU, Jinhua** **2. LI, Shaohua** **3. SONG, Xinghua**
(73)	**1.** **2.**
(30)	**1. (PCT/CN2015/076317) - 10-04-2015** **2. (PCT/CN2016/071183) - 18-01-2016** **3.**
(74)	**NAHID WADI RIZK TERZI**
(12)	**Patent**

(54) METHOD AND USER EQUIPMENT FOR COMPACTING HARQ FEEDBACK

Patent Period Started From 18/01/2016 and Will end on 17/01/2036

(57) The present disclosure provides a method for operating in a User Equipment (UE) for compacting HARQ feedback transmission in uplink in a wireless communication system. The method comprises: receiving, from a radio network node, an assisting information indicating arrangement of scheduled downlink transmissions; determining, based on the assisting information, number and order of the HARQ feedback bits; and transmitting, to the radio network node, the HARQ feedback in a compacted manner of reduced padding bits based on the number and order of the HARQ feedback bits.

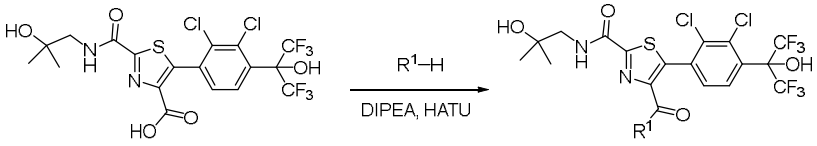
Arab Republic of Egypt **Ministry of State for Scientific Research** **Academy of Scientific Research & Technology** **Egyptian Patent Office**	EGYPT **PCT**	**(22)** **(21)** **(44)** **(45)** **(11)**	**24/04/2017** **0689/2017** **August 2020** **28/12/2020** **30076**

(51)	**Int. Cl. [8] A 61 P 3/10,C 07 D 277/56, 487/08, 417/14, 417/06**	
(71)	**1. JANSSEN PHARMACEUTICALS, N.V. (BELGIUM)** **2.** **3.**	
(72)	**1. VENKATESAN, Hariharan** **2. TANIS, Virginia** **3.** **4. KINZEL, Olaf** **5. GEGE, Christian** **STEENECK, Christoph**	**6. KLEYMANN, Gerald** **7. HOFFMANN, Thomas** **8. GOLDBERG, Steven** **9. FOURIE, Anne, M** **10. XUE, Xiaohua**
(73)	**1.** **2.**	
(30)	**1. (US) 62/072.563 - 30-10-2014** **2. (PCT/US2015/058193) - 30-10-2015** **3.**	
(74)	**NAHID WADI RIZK TERZI**	
(12)	**Patent**	

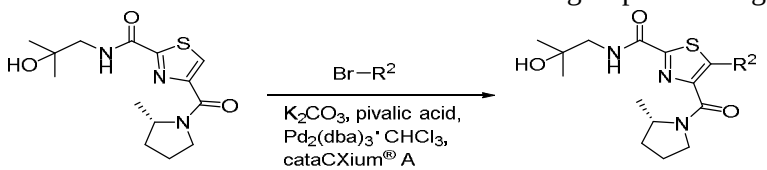
(54) SYNTHETIC METHODS FOR MAKING TRIFLUOROMETHYL ALCOHOLS

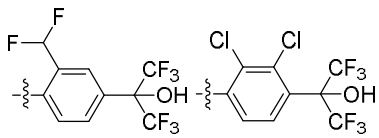
Patent Period Started From 30/10/2015 and Will end on 29/10/2035

(57) The present invention comprises synthetic methods for making trifluoromethyl alcohols, in particular 5-(2,3-dichloro-4-(1,1,1,3,3,3-hexafluoro-2



-hydroxypropan-2-yl)phenyl)-N-(2-hydroxy-2-methylpropyl)-4-(R1-1-carbonyl)thiazole-2-carboxamides wherein R1 is defined in the specification; and (S)-5-(R2)-N-(2-hydroxy-2-methylpropyl)-4-(2-methylpyrrolidine -1-carbonyl)thiazole-2-carboxamides wherein R2 is selected from the group consisting of: and .





Arab Republic of Egypt **Ministry of State for Scientific Research** **Academy of Scientific Research & Technology** **Egyptian Patent Office**	EGYPT **PCT**	**(22)** **(21)** **(44)** **(45)** **(11)**	**15/07/2018** **1124/2018** **September 2020** **28/12/2020** **30077**

(51)	**Int. Cl. [8] H04W 74/08**	
(71)	**1. Telefonaktiebolaget L M Ericsson (publ) (SWEDEN)** **2.** **3.**	
(72)	**1. LIN, Xingqin** **2. SHOKRI RAZAGHI, Hazhir** **3. BERGMAN, Johan Mikael** **4. SUI, Yutao**	**5. GROVLEN, Asbjorn** **6. ADHIKARY, Ansuman** **7. BLANKENSHIP, Yufei** **8. WANG, Yi-Pin Eric**
(73)	**1.** **2.**	
(30)	**1. (US) 62/309,389 - 16-03-2016** **2. (US) 15/295,525 - 17-10-2016** **3. (PCT/SE2017/050237) - 10-03-2017**	
(74)	**NAHID WADI RIZK TERZI**	
(12)	**Patent**	

(54) NETWORK ACCESS OF A WIRELESS DEVICE TO A COMMUNICATIONS NETWORK

Patent Period Started From 10/03/2017 and Will end on 09/03/2037

(57) A communications network is being accessed by a wireless device associated with a coverage class selected from a set of coverage classes. The wireless device performs a method comprising initiating network access to the communications network by transmitting a preamble sequence for random access on a physical random access channel during a starting opportunity defined by the coverage class of the wireless device. Each coverage class may be associated with a unique number of repetitions of the preamble sequence transmission.

Arab Republic of Egypt **Ministry of State for Scientific Research** **Academy of Scientific Research & Technology** **Egyptian Patent Office**	EGYPT **PCT**	**(22)** **(21)** **(44)** **(45)** **(11)**	**25/08/2019** **1332/2019** **October 2020** **28/12/2020** **30078**

(51)	**Int. Cl. [8] H04W 72/04 & H04L 5/00**	
(71)	**1. LG Electronics INC. (REPUBLIC OF KOREA)** **2.** **3.**	
(72)	**1. PARK, Hanjun** **2. YANG, Suckchel** **3. AHN, Joonkui**	**4. KIM, Jaehyung** **5. PARK, Changhwan**
(73)	**1.** **2.**	
(30)	**1. (US) 62/520.685 - 16-06-2017** **2. (US) 62/543.969 - 11-08-2017** **3. (US) 62/556.494 - 10-09-2017** **4. (US) 62/586.916 - 16-11-2017** **5. (US) 10-2018-0069500 - 18-06-2018** **6. (PCT/KR2018/006852) - 18-06-2018**	
(74)	**NAHID WADI RIZK TERZI**	
(12)	**Patent**	

(54) METHODS FOR TRANSMITTING AND RECEIVING PHYSICAL UPLINK CONTROL CHANNEL BETWEEN TERMINAL AND BASE STATION IN WIRELESS COMMUNICATION SYSTEM, AND APPARATUSES FOR SUPPORTING SAME

Patent Period Started From 18/06/2018 and Will end on 17/06/2038

(57) The present invention relates to a method for transmitting a physical uplink control channel, the method comprising: determining a sequence hopping pattern on the basis of a frequency hopping index determined based on whether or not frequency hopping is configured in a slot; and transmitting a first PUCCH including a demodulation reference signal to which the determined sequence hopping pattern is applied, or a second PUCCH to which the determined sequence hopping pattern is applied.

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(54) BASE STATION DEVICE, TERMINAL DEVICE, AND COMMUNICATION METHOD

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(57) Provided are a base station device, a terminal device, and a communication method that enable the improvement of communication performance in a system in which a plurality of frame formats are used. The present invention is provided with a transmission unit that transmits one or a plurality of subframes each defined by a given fixed period length. At least one subframe from among the plurality of subframes includes a shared signal interval, which is an interval shared within a cell for transmitting a signal. The shared signal interval includes a signal generated by a first parameter set. The intervals outside the shared signal interval include a signal generated by the first parameter set or a signal generated by a second parameter set in which at least the subcarrier interval differs from that in the first parameter set.