

**1) Core “Physical Antimicrobial Method”
Patent Technology**

The following table lists the granted invention patents protecting the proprietary "Physical Antimicrobial Method" (non-antibiotic technology) worldwide.

Jurisdiction	Patent No.	Status
WIPO (PCT)	WO 2014/019452 A1	Published (International Phase)
United States	US 9,504,255 号 B2	Granted
European Union	2881122	Granted
Canada	2,878,060	Granted
Australia	2013299182	Granted
Russia	2657532	Granted
Japan	6010224	Granted
South Korea	10-1725175	Granted
Hong Kong	HK 1217648	Granted
China	ZL 2012 1 0271421.9	Granted

Patent No. WO 2014/019452 A1 - Published

(12) 按照专利合作条约所公布的国际申请

(19) 世界知识产权组织
国际局(43) 国际公布日
2014年2月6日 (06.02.2014)(10) 国际公布号
WO 2014/019452 A1

- (51) 国际专利分类号:
A61K 45/00 (2006.01) *A61P 31/00* (2006.01)
A61K 31/695 (2006.01) *A61L 2/232* (2006.01)
A61K 9/70 (2006.01) *A61L 2/16* (2006.01)
A61K 9/14 (2006.01)
- (21) 国际申请号: PCT/CN2013/079433
- (22) 国际申请日: 2013年7月16日 (16.07.2013)
- (25) 申请语言: 中文
- (26) 公布语言: 中文
- (30) 优先权:
201210271421.9 2012年8月1日 (01.08.2012) CN
- (71) 申请人: 南京神奇科技开发有限公司 (NMS TECHNOLOGIES CO., LTD.) [CN/CN]; 中国江苏省南京市浦口区石桥北路8号, Jiangsu 211804 (CN)。
- (72) 发明人: 蔡友良 (CAI, Youliang); 中国江苏省南京市鼓楼区山西路128号和泰国际大厦1701室, Jiangsu 210009 (CN)。
- (74) 代理人: 中国国际贸易促进委员会专利商标事务所 (CCPIT PATENT AND TRADEMARK LAW OFFICE); 中国北京市西城区阜成门外大街2号万通新世界广场8层, Beijing 100037 (CN)。
- (81) 指定国 (除另有指明, 要求每一种可提供的国家保护): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW。
- (84) 指定国 (除另有指明, 要求每一种可提供的地区保护): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, SZ, TZ, UG, ZM, ZW), 欧亚 (AM, AZ, BY, KG, KZ, RU, TJ, TM), 欧洲 (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG)。
- 本国际公布:
 — 包括国际检索报告(条约第21条(3))。
 — 包括经修改的权利要求及声明(条约第19条(1))。

WO 2014/019452 A1

(54) Title: PHYSICAL ANTIMICROBIAL METHOD

(54) 发明名称: 抗微生物的物理方法

(57) Abstract: Disclosed is a physical antimicrobial method, having a microbe extermination or inhibition effect when applied on the surface of a human body or an animal body or an object. The method is safe for the human body, and prevents the development of drug resistance caused by an antibacterial drug.

(57) 摘要: 本文公开了一种物理抗微生物方法, 其施加在人体或动物体或物体表面上时具有杀灭或抑制微生物的作用。所述方法对人体安全, 并且可以避免抗菌药物导致的耐药性产生。



(12) **United States Patent**
Cai

(10) **Patent No.:** US 9,504,255 B2
(45) **Date of Patent:** Nov. 29, 2016

- (54) **PHYSICAL ANTIMICROBIAL METHOD**
- (71) Applicant: **NMS TECHNOLOGIES CO., LTD.**,
Nanjing (CN)
- (72) Inventor: **Youliang Cai**, Nanjing (CN)
- (73) Assignee: **NMS TECHNOLOGIES CO., LTD.**,
Nanjing (CN)
- (*) Notice: Subject to any disclaimer, the term of this
patent is extended or adjusted under 35
U.S.C. 154(b) by 0 days.
- (21) Appl. No.: **14/416,678**
- (22) PCT Filed: **Jul. 16, 2013**
- (86) PCT No.: **PCT/CN2013/079433**
§ 371 (c)(1),
(2) Date: **Jan. 23, 2015**
- (87) PCT Pub. No.: **WO2014/019452**
PCT Pub. Date: **Feb. 6, 2014**

- (65) **Prior Publication Data**
US 2015/0173366 A1 Jun. 25, 2015

- (30) **Foreign Application Priority Data**
Aug. 1, 2012 (CN) 2012 1 0271421

- (51) **Int. Cl.**
A01N 55/00 (2006.01)
A61K 9/70 (2006.01)
A61N 1/40 (2006.01)
A61K 45/06 (2006.01)
A61K 31/695 (2006.01)

- (52) **U.S. Cl.**
CPC *A01N 55/00* (2013.01); *A61K 9/7015*
(2013.01); *A61K 31/695* (2013.01); *A61K*
45/06 (2013.01); *A61N 1/40* (2013.01)

- (58) **Field of Classification Search**
CPC A61K 31/695; A61K 2300/00; A61K

45/06; A61K 9/7015; A01N 55/00; A01N
1/40
See application file for complete search history.

- (56) **References Cited**
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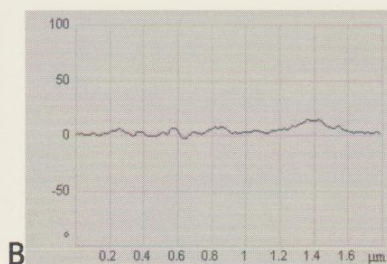
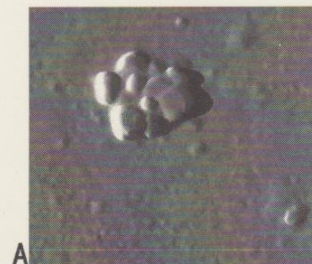
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icone Oil and the Study of the Antimicrobial Effect", Journal of
Soochow University (Engineering Science Edition), Apr. 30, 2007
(Apr. 30, 2007), vol. 27, No. 2, pp. 40-43, ISSN 1673-047X.
(Continued)

Primary Examiner — Aradhana Sasan
(74) Attorney, Agent, or Firm — Miles & Stockbridge
P.C.

- (57) **ABSTRACT**
The present invention relates to a physical antimicrobial
method, which has the action of combating or inhibiting
microorganisms when applied to the surface of human or
animal body or an object. The method is safe for human
body, and can prevent drug resistance caused by an antibac-
terial drug.

21 Claims, 1 Drawing Sheet



EU



URKUNDE

Europäisches Patent

Es wird hiermit bescheinigt, dass für die in der Patentschrift beschriebene Erfindung ein europäisches Patent für die in der Patentschrift bezeichneten Vertragsstaaten erteilt worden ist.

Europäisches Patent Nr.
European patent No.
Brevet européen n°

Patentinhaber
Proprietor(s) of the patent
Titulaire(s) du brevet

CERTIFICATE

European patent

It is hereby certified that a European patent has been granted in respect of the invention described in the patent specification for the Contracting States designated in the specification.

2881122

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8 Qiaobei Road
Shiqiao
Pukou District
Nanjing
Jiangsu 211804/CN

CERTIFICAT

Brevet européen

Il est certifié qu'un brevet européen a été délivré pour l'invention décrite dans le fascicule de brevet, pour les Etats contractants désignés dans le fascicule de brevet.

EPA/EPO/OEB/2031 0218

München, den
Munich, le

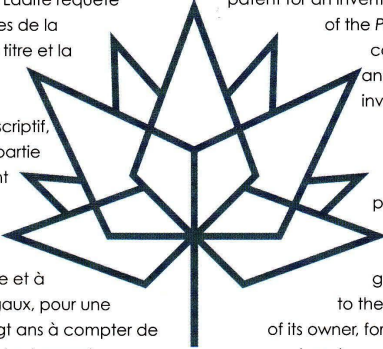
19.05.21

António Campinos

Präsident des Europäischen Patentamts
President of the European Patent Office
Président de l'Office européen des brevets



Brevet canadien / Canadian Patent

<p>★ Le commissaire aux brevets a reçu une demande de délivrance de brevet visant une invention. Ladite requête satisfait aux exigences de la <i>Loi sur les brevets</i>. Le titre et la description de l'invention figurent dans le mémoire descriptif, dont une copie fait partie intégrante du présent document.</p>		<p>★ The Commissioner of Patents has received a petition for the grant of a patent for an invention. The requirements of the <i>Patent Act</i> have been complied with. The title and a description of the invention are contained in the specification, a copy of which forms an integral part of this document.</p>
<p>Le présent brevet confère à son titulaire et à ses représentants légaux, pour une période expirant vingt ans à compter de la date du dépôt de la demande au Canada, le droit, la faculté et le privilège exclusif de fabriquer, construire, exploiter et vendre à d'autres, pour qu'ils l'exploitent, l'objet de l'invention, sauf jugement en l'espèce rendu par un tribunal compétent, et sous réserve du paiement des taxes périodiques.</p>	<p>CANADA 150</p>	<p>The present patent grants to its owner and to the legal representatives of its owner, for a term which expires twenty years from the filing date of the application in Canada, the exclusive right, privilege and liberty of making, constructing and using the invention and selling it to others to be used, subject to adjudication before any court of competent jurisdiction, and subject to the payment of maintenance fees.</p>

Patent No. 2,878,060 - Granted

BREVET CANADIEN **2,878,060** CANADIAN PATENT

Date à laquelle le brevet a été accordé et délivré

2017/12/12

Date on which the patent was granted and issued

Date du dépôt de la demande

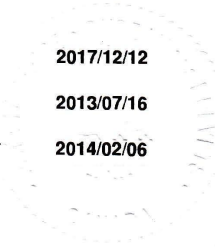
2013/07/16

Filing date of the application

Date à laquelle la demande est devenue accessible au public pour consultation

2014/02/06

Date on which the application was made available for public inspection



Commissaire aux brevets / Commissioner of Patents

Australia



Australian Government
IP Australia

CERTIFICATE OF GRANT STANDARD PATENT

2013299182 **Patent No. 2013299182- Granted**

The Commissioner of Patents has granted the above patent on 12 January 2017, and certifies that the following are the particulars of this patent appearing in the Register of Patents:

Name and Address of Patentee(s):

NMS Technologies Co., Ltd.

8 Qiaobei Road Shiqiao Pukou District Nanjing Jiangsu 211804 China

Name of Actual Inventor(s):

Cai, Youliang

Title of Invention:

Physical antimicrobial method

Term of Patent:

Twenty years from 16 July 2013

Priority Details

<i>Number</i>	<i>Date</i>	<i>Filed with</i>
201210271421.9	1 August 2012	CN



Dated this 12th day of January 2017

Commissioner of Patents

PATENTS ACT 1990

The Australian Patents Register is the official record and should be referred to for the full details pertaining to this IP Right.

Russia

РОССИЙСКАЯ ФЕДЕРАЦИЯ



ПАТЕНТ

НА ИЗОБРЕТЕНИЕ

№ **2657532**

Patent No. 2657532 - Granted

**ФИЗИЧЕСКИЙ СПОСОБ БОРЬБЫ С
МИКРООРГАНИЗМАМИ**

Патентообладатель: **НМС ТЕКНОЛОДЖИС КО., ЛТД. (СН)**

Автор: **ЦАЙ Юлян (СН)**

Заявка № **2014154018**

Приоритет изобретения **01 августа 2012 г.**

Дата государственной регистрации в


Государственном реестре изобретений

Российской Федерации **14 июня 2018 г.**

Срок действия исключительного права

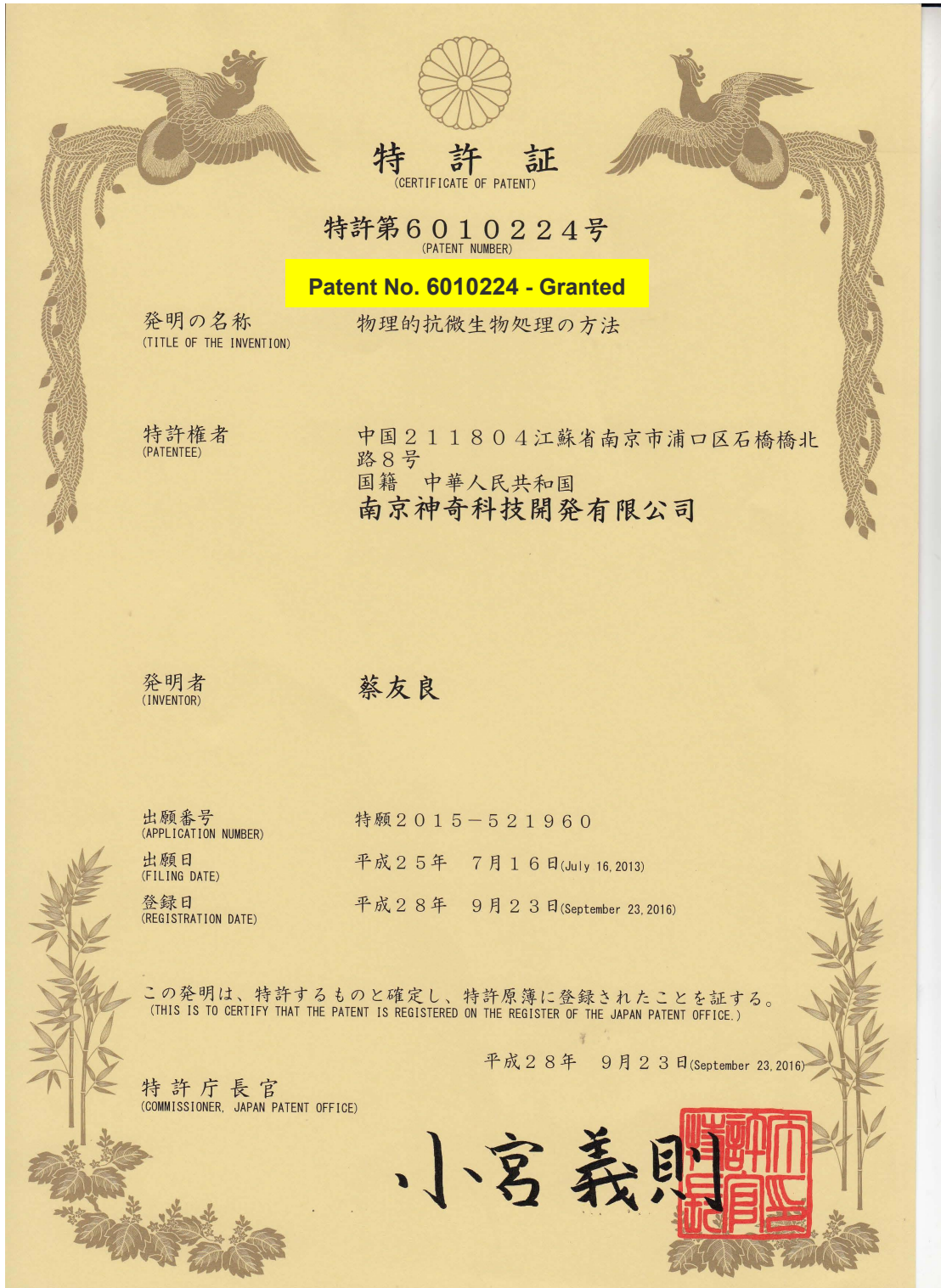
на изобретение истекает **16 июля 2033 г.**

Руководитель Федеральной службы
по интеллектуальной собственности

 **Г.П. Ившин**



Japan



South Korea

특허증

CERTIFICATE OF PATENT

Patent No. 10-1725175- Granted

특허

Patent Number

제 10-1725175 호

출원번호

Application Number

제 10-2014-7036705 호

출원일

Filing Date

2014년 12월 29일

등록일

Registration Date

2017년 04월 04일

발명의 명칭 Title of the Invention

항균 조성물

특허권자 Patentee

엔엠에스 테크놀러지스 컴퍼니 리미티드

중국 211804 장수 난징 스차오 푸커우 디스트릭트 차오베이 로드 8

발명자 Inventor

차이 유량

중국 장수 난징 구로우 디스트릭트 산시 로드 128 허타이 인터내셔널 맨션 알엠 1701

위의 발명은 「특허법」에 따라 특허등록원부에 등록되었음을 증명합니다.

This is to certify that, in accordance with the Patent Act, a patent for the invention has been registered at the Korean Intellectual Property Office.

2017년 04월 04일



특허청

Korean Intellectual
Property Office

특허청장

COMMISSIONER,

KOREAN INTELLECTUAL PROPERTY OFFICE

최동규

Hong Kong

知識產權署專利註冊處
Patents Registry
Intellectual Property Department



香港特別行政區政府
The Government of the Hong Kong
Special Administrative Region

批予轉錄標準專利證明書

《專利條例》(第 514 章)

**CERTIFICATE OF GRANT OF STANDARD PATENT
BY RE-REGISTRATION**

Patents Ordinance (Chapter 514)

茲證明下述轉錄標準專利根據《專利條例》第 2 部在今日批予:

I hereby certify that a standard patent by re-registration with the following particulars has been granted under Part 2 of the Patents Ordinance today:

專利編號 Patent No.: HK1217648

申請編號 Application No.: 16105665.5

專利所有人姓名或名稱及地址 Name and Address of Proprietor:

南京神奇科技开发有限公司
NMS TECHNOLOGIES CO.,LTD.
8 QIAOBEI ROAD, SHIQIAO, PUKOU DISTRICT
NANJING, JIANGSU 211804
CHINA

發明名稱 Title of Invention:

抗微生物的物理方法
PHYSICAL ANTIMICROBIAL METHOD

证书号第 1784523 号



发明专利证书

发明名称: 抗微生物的物理方法

发明人: 蔡友良

专利号: ZL 2012 1 0271421.9

Patent No. ZL 2012 1 0271421.9 - Granted

专利申请日: 2012 年 08 月 01 日

专利权人: 南京神奇科技开发有限公司

授权公告日: 2015 年 09 月 09 日

本发明经过本局依照中华人民共和国专利法进行审查, 决定授予专利权, 颁发本证书并在专利登记簿上予以登记。专利权自授权公告之日起生效。

本专利的专利权期限为二十年, 自申请日起算。专利权人应当依照专利法及其实施细则规定缴纳年费。本专利的年费应当在每年 08 月 01 日前缴纳。未按照规定缴纳年费的, 专利权自应当缴纳年费期满之日起终止。

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局长
申长雨

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