

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
Stylesheet Version v1.2

EPAS ID: PAT3874806

SUBMISSION TYPE:	CORRECTIVE ASSIGNMENT
NATURE OF CONVEYANCE:	Corrective Assignment to correct the ASSIGNEE'S NAME previously recorded on Reel 033759 Frame 0954. Assignor(s) hereby confirms the SNU R&DB FOUNDATION SHOULD READ AS "SEOUL NATIONAL UNIVERSITY R&DB FOUNDATION".
RESUBMIT DOCUMENT ID:	503793805

CONVEYING PARTY DATA

Name	Execution Date
BAEK JIN KIM	09/16/2014
JIN KU CHO	09/16/2014
SANGYOUNG KIM	09/16/2014
DO HOON LEE	09/16/2014
YOUNG GYU KIM	09/05/2014
EUN-SIL KANG	09/05/2014
YEON-WOO HONG	09/06/2014
DA WON CHAE	09/06/2014

RECEIVING PARTY DATA

Name:	KOREA INSTITUTE OF INDUSTRIAL TECHNOLOGY
Street Address:	35-3 HONGCHEON-RI, IPJANG-MYEON, SEOBUK-GU
City:	CHEONAN-SI, CHUNGCHEONGNAM-DO
State/Country:	KOREA, REPUBLIC OF
Postal Code:	331-822
Name:	SEOUL NATIONAL UNIVERSITY R&DB FOUNDATION
Street Address:	1, GWANAK-RO, GWANAK-GU
City:	SEOUL
State/Country:	KOREA, REPUBLIC OF
Postal Code:	151-015

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	14385919

CORRESPONDENCE DATA

Fax Number: (212)661-8002

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

PATENT

Phone: 2126618000
Email: info@lmiplaw.com
Correspondent Name: LUCAS & MERCANTI, LLP
Address Line 1: 30 BROAD STREET 21ST FLOOR
Address Line 4: NEW YORK, NEW YORK 10004

ATTORNEY DOCKET NUMBER: 4101-1006

NAME OF SUBMITTER: SOYOUNG RHEE

SIGNATURE: /Soyoung Rhee/

DATE SIGNED: 05/16/2016

Total Attachments: 9

source=4104-1006_MarkedCoverSheet#page1.tif

source=4104-1006_MarkedCoverSheet#page2.tif

source=AssignmentSigned#page1.tif

source=AssignmentSigned#page2.tif

source=AssignmentSigned#page3.tif

source=AssignmentSigned#page4.tif

source=iasr#page1.tif

source=iasr#page2.tif

source=Pages from PCT#page1.tif

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1

Stylesheet Version v1.2

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
CONVEYING PARTY DATA	
Name	Execution Date
BAEK JIN KIM	09/16/2014
JIN KU CHO	09/16/2014
SANGYONG KIM	09/16/2014
DO HOON LEE	09/16/2014
YOUNG GYU KIM	09/05/2014
EUN-SIL KANG	09/05/2014
YEON-WOO HONG	09/06/2014
DA WON CHAE	09/06/2014
RECEIVING PARTY DATA	
Name:	KOREA INSTITUTE OF INDUSTRIAL TECHNOLOGY
Street Address:	35-3 HONGCHEON-RI, IPJANG-MYEON, SEOBUK-GU
City:	CHEONAN-SI, CHUNGCHEONGNAM-DO
State/Country:	KOREA, REPUBLIC OF
Postal Code:	331-822
Name:	SNU R&DB FOUNDATION SEOUL NATIONAL UNIVERSITY R&DB FOUNDATION
Street Address:	1, GWANAK-RO, GWANAK-GU
City:	SEOUL
State/Country:	KOREA, REPUBLIC OF
Postal Code:	151-015
PROPERTY NUMBERS Total: 1	
Property Type	Number

PATENT

REF: 038609 FRAME 0897

Application Number:	14385919
----------------------------	----------

CORRESPONDENCE DATA

Fax Number: (212)661-8002
Phone: 212-661-8000
Email: info@lmiplaw.com

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

Correspondent Name: LUCAS & MERCANTI, LLP
Address Line 1: 30 BROAD STREET
Address Line 2: 21ST FLOOR
Address Line 4: NEW YORK, NEW YORK 10004

ATTORNEY DOCKET NUMBER:	4101-1006
--------------------------------	-----------

NAME OF SUBMITTER:	YUN H. CHOE
---------------------------	-------------

Signature:	/Yun H. Choe/
-------------------	---------------

Date:	09/17/2014
--------------	------------

Total Attachments: 6

source=4101_1006_AssignmentSigned#page1.tif
source=4101_1006_AssignmentSigned#page2.tif
source=4101_1006_AssignmentSigned#page3.tif
source=4101_1006_AssignmentSigned#page4.tif
source=4101_1006_AssignmentSigned#page5.tif
source=4101_1006_AssignmentSigned#page6.tif

RECEIPT INFORMATION

EPAS ID: PAT3026792
Receipt Date: 09/17/2014

PATENT

ASSIGNMENT OF RIGHTS, TITLE AND INTEREST IN INVENTION

This is an assignment of the following rights, title and interest (check all that apply):

- United States of America rights, title and interest in the invention**
Foreign rights, title and interest in the invention
- United States Patent Application Serial No.** 14/385,919
Date of Execution: _____ **Date of Filing:** September 17, 2014
- United States Provisional Patent Application Serial No.** _____
- United States Patent No(s).** _____
- International (PCT) Patent Application Serial No.** PCT/KR2013/002081
- Other (specify)** _____

Title of the Invention:

NOVEL METHOD FOR PREPARING 5-ACETOXYMETHYLFURFURAL USING
 ALKYLAMMONIUM ACETATE

Inventors (assignors):

Name	Address
KIM, Baek Jin	105-1502, Hyundai I-Park, Buldang-dong, Seobuk-gu, Cheonan-si, Chungcheongnam-do 331-735, Republic of Korea
CHO, Jin Ku	209-701, Sinchonmaeul Poshometown 1 Danji Apt., Bojeong-dong, Giheung-gu, Yongin-si, Gyeonggi-do 446-566, Republic of Korea
KIM, Sangyong	208-804, Dongil Hivill, Buldang-dong, Seobuk-gu, Cheonan-si, Chungcheongnam-do 331-230, Republic of Korea
LEE, Do Hoon	16-1503, Sampung Apt., Seocho 4-dong, Seocho-gu, Seoul 137-779, Republic of Korea
KIM, Young Gyu	1123-1101, Baekhap Apt., Sanbon 2-dong, Gunpo-si, Gyeonggi-do 435-743, Republic of Korea
KANG, Eun-Sil	102-1102, Yeonghwa Apt., 475, Gaebongbon-dong, Guro-gu, Seoul 152-090, Republic of Korea
HONG, Yeon-Woo	421-1303, Sibeomdanji Hyundai Apt., 20, Jungangdongwon-ro, Bundang-gu, Seongnam-si, Gyeonggi-do 463-777, Republic of Korea
CHAE, Da Won	724-505, Mokdong 7 Danji Apt., Mok 1-dong, Yangcheon-gu, Seoul 158-757, Republic of Korea

Assignee:

Name	Address
KOREA INSTITUTE OF INDUSTRIAL TECHNOLOGY	35-3 Hongcheon-ri, Ipjang-myeon, Seobuk-gu, Cheonan-si, Chungcheongnam-do 331-822, Republic of Korea
SEOUL NATIONAL UNIVERSITY R&DB FOUNDATION	1, Gwanak-ro, Gwanak-gu, Seoul 151-015, Republic of Korea

Whereas, we, the above-identified Inventors, have invented certain new and useful improvements in the Invention identified above and described in the above-identified patent application(s) and /or patent(s) (hereinafter referred to as "Invention");

And, whereas we desire to assign our above-identified rights, title and interest in the Invention to the above-identified Assignee;

Now, this indenture witnesseth, that for good and valuable consideration, the receipt whereof is hereby acknowledged;


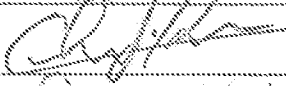
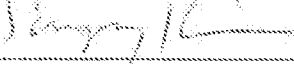

We hereby assign, sell and transfer our above-identified rights, title and interest in said Invention, said application(s) as identified above, including any divisions, continuations, and continuations-in-part thereof, and in and to any and all Letters Patent of the United States, and countries foreign thereto, which may be granted for said Invention, and in and to any and all reissues and reexaminations thereof, which may be granted or have granted for said Invention, and in and to any and all priority rights, Convention rights, and other benefits accruing or to accrue to us with respect to the filing of applications for patents or securing of patents in the United States and countries foreign thereto, unto said Assignee;

And we hereby authorize and request the Commissioner of Patents and Trademarks to issue any United States Letters Patent which may issue for said Invention to said Assignee, as assignee of the whole right, title and interest thereto;

And we further agree to sign and execute all necessary and lawful future documents, including applications for foreign patents, for filing divisions, continuations and continuation-in-part of said application for patent and/or for obtaining any reissue or reissues of any Letters Patent which may be granted for my aforesaid Invention, as the Assignee or its Designee(s) may from time to time require and prepare at its own expense.

The undersigned hereby grant(s) the firm LUCAS & MERCANTI, L.L.P., 30 Broad Street, New York, New York, 10004, the power to insert on this assignment any further identification which may be necessary or desirable in order to comply with the rules of the United States Patent Office for recordation of this document.

Inventors' Signatures:

Name	Signature/Date
KIM, Baek Jin	 Sep. 16, 2014
CHO, Jia Ku	 Sep. 16, 2014
KIM, Sangyong	 Sep 16, 2014
LEE, Do Hoon	 Sep 16, 2014
KIM, Young Gyu	
KANG, Eun-Sil	
HONG, Yeon-Woo	
CHAE, Da Won	

Docket No. 4101-1006

Inventors' Signatures:

Name	Signature/ Date
KIM, Beek Jin	
CHO, Jin Ku	
KIM, Sangyong	
LEE, Do Hoon	
KIM, Young Gyu	<i>Young Gyu Kim, Sep. 5, 2014</i>
KANG, Eun-Sil	<i>Eun-Sil Kang, September 5, 2014</i>
HONG, Yeon-Woo	<i>Yeon Woo Hong, Sep. 6, 2014</i>
CHAE, Da Won	<i>Da Won Chae, Sep. 6, 2014</i>

(12) International Application Status Report

Received at International Bureau: 28 March 2013 (28.03.2013)

Information valid as of: 03 September 2013 (03.09.2013)

Report generated on: 21 April 2016 (21.04.2016)

(10) Publication number:

WO2013/141523

(43) Publication date:

26 September 2013 (26.09.2013)

(26) Publication language:

Korean (KO)

(21) Application Number:

PCT/KR2013/002081

(22) Filing Date:

15 March 2013 (15.03.2013)

(25) Filing language:

Korean (KO)

(31) Priority number(s):

10-2012-0027445 (KR)

(31) Priority date(s):

18 March 2012 (18.03.2012)

(31) Priority status:

Priority document received (in compliance with PCT Rule 17.1)

(51) International Patent Classification:

C07D 307/48 (2006.01)

(71) Applicant(s):

KOREA INSTITUTE OF INDUSTRIAL TECHNOLOGY [KR/KR]; 35-3 Hongcheon-ri, Ipjang-myeon, Seobuk-gu Cheonan-si Chungcheongnam-do 331-822 (KR) (for all designated states)

SEOUL NATIONAL UNIVERSITY R&DB FOUNDATION [KR/KR]; 1, Gwanak-ro Gwanak-gu Seoul 151-015 (KR) (for all designated states)

(72) Inventor(s):

KIM, Baek Jin; 105-1502, Hyundai I-Park, Buldang-dong, Seobuk-gu Cheonan-si Chungcheongnam-do 331-735 (KR)

CHO, Jin Ku; 209-701, Sinchonmaeul Poshometown 1-Danji Apt., Bojeong-dong, Giheung-gu Yongin-si Gyeonggi-do 446-566 (KR)

KIM, Sang Yong; 208-804, Dongil Hivill, Buldang-dong, Seobuk-gu Cheonan-si Chungcheongnam-do 331-230 (KR)

LEE, Do Hoon; 16-1503, Sampung Apt., Seocho 4-dong Seocho-gu Seoul 137-779 (KR)

KIM, Young Gyu; 1123-1101, Baekhap Apt., Sanbon 2-dong Gunpo-si Gyeonggi-do 435-743 (KR)

KANG, Eun Sil; 102-1102, Yeonghwa Apt., 475, Gaebongbon-dong Guro-gu Seoul 152-090 (KR)

HONG, Yeon-Woo; 421-1303, Sibeomdanji Hyundai Apt., 20, Junganggongwon-ro, Bundang-gu, Seongnam-si Gyeonggi-do 463-777 (KR)

CHAE, Da Won; 724-505, Mokdong 7 Danji Apt., Mok 1-dong Yangcheon-gu Seoul 158-757 (KR)

(74) Agent(s):

LEE, Soo Yeol; 4th FL. Artspace Bldg., 13, Banpo-daero 23-gil Seocho-gu Seoul 137-871 (KR)

(54) Title (EN): NOVEL METHOD FOR PREPARING 5-ACETOXYMETHYLFURFURAL USING ALKYLAMMONIUM ACETATE

(54) Title (FR): NOUVEAU PROCÉDÉ DE PRÉPARATION DE 5-ACÉTOXYMÉTHYLFURFURAL À L'AIDE D'ACÉTATE D'ALKYLAMMONIUM

(54) Title (KO): 알킬암모늄아세테이트염을 이용한 새로운 5-아세트옥시메틸푸르푸랄의 제조방법

(57) Abstract:

(EN): The present invention relates to a method for preparing 5-acetoxymethylfurfural, comprising a step of synthesizing 5-acetoxymethylfurfural by reacting 5-halomethyl furfural with alkylammonium acetate. The present invention can provide a method for preparing 5-acetoxymethylfurfural which is economic and has high reaction efficiency even without using an additional base.

(FR): La présente invention concerne un procédé de préparation de 5-acétoxy méthylfurfural, comprenant une étape de synthèse de 5-acétoxy méthylfurfural par réaction de 5-halogénométhylfurfural avec de l'acétate d'alkylammonium. La présente invention permet d'obtenir un procédé de préparation de 5-acétoxy méthylfurfural qui est économique et présente une haute efficacité de réaction même sans utiliser une base supplémentaire.

(KO): 본 발명은 5-할로메틸푸르푸랄을 알킬암모늄아세테이트염과 반응시켜 5-아세트옥시메틸푸르푸랄을 합성하는 단계를 포함하는 5-아세트옥시메틸푸르푸랄의 제조방법에 관한 것으로서, 별도의 염기를 사용하지 않고 경제적이고 높은 반응효율을 보이는, 5-아세트옥시메틸푸르푸랄의 제조방법을 제공할 수 있다.

International search report:

Received at International Bureau: 08 July 2013 (08.07.2013) [KR]

International Report on Patentability (IPRP) Chapter II of the PCT:

Not available

(81) Designated States:

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, KM, KN, KP, 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

European Patent Office (EPO) : 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

African Intellectual Property Organization (OAPI) : BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

African Regional Intellectual Property Organization (ARIPO) : BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, SZ, TZ, UG, ZM, ZW

Eurasian Patent Organization (EAPO) : AM, AZ, BY, KG, KZ, RU, TJ, TM

(12) 특허협력조약에 의하여 공개된 국제출원

(19) 세계지식재산권기구
국제사무국



(43) 국제공개일
2013년 9월 26일 (26.09.2013)

WIPO | PCT

(10) 국제공개번호
WO 2013/141523 A1

- (51) 국제특허분류: C07D 307/48 (2006.01)
- (21) 국제출원번호: PCT/KR2013/002081
- (22) 국제출원일: 2013년 3월 15일 (15.03.2013)
- (25) 출원언어: 한국어
- (26) 공개언어: 한국어
- (30) 우선권정보: 10-2012-0027445 2012년 3월 18일 (18.03.2012) KR
- (71) 출원인: 한국생산기술연구원 (KOREA INSTITUTE OF INDUSTRIAL TECHNOLOGY) [KR/KR]; 331-822 충청남도 천안시 서북구 입장면 호천리 35-3, Chungcheongnam-do (KR). 서울대학교산학협력단 (SEOUL NATIONAL UNIVERSITY R&DB FOUNDATION) [KR/KR]; 151-015 서울시 관악구 관악로 1, Seoul (KR).
- (72) 발명자: 김백진 (KIM, Baek Jin); 331-735 충청남도 천안시 서북구 불당동 현대아이파크 105-1502, Chungcheongnam-do (KR). 조진구 (CHO, Jin Ku); 446-566 경기도 용인시 기흥구 보정동 신촌마을포스홈타운 1단지아파트 209-701, Gyeonggi-do (KR). 김상용 (KIM, Sang Yong); 331-230 충청남도 천안시 서북구 불당동 동일하이빌 208-804, Chungcheongnam-do (KR). 이도훈 (LEE, Do Hoon); 137-779 서울시 서초구 서초4동 삼봉아파트 16-1503, Seoul (KR). 김영규 (KIM, Young Gyu); 435-743 경기도 군포시 산본2동 백합아파트 1123-1101, Gyeonggi-do (KR). 강은실 (KANG, Eun Sil); 152-090 서울시 구로구 개봉본동 475 영하아파트 102-1102, Seoul (KR). 홍연우 (HONG, Yeon-Woo); 463-777 경기도 성남시 분당구 중앙공원로 20 시범단지현대아파트 421-1303, Gyeonggi-do (KR). 채다원 (CHAE, Da Won); 158-757 서울시 양천구 목1동 목동7단지아파트 724-505, Seoul (KR).
- (74) 대리인: 이수열 (LEE, Soo Yeol); 137-871 서울시 서초구 반포대로 23길 13, 아트스페이스빌딩 4층, Seoul (KR).
- (81) 지정국 (별도의 표시가 없는 한, 가능한 모든 종류의 국내 권리의 보호를 위하여): 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, KM, KN, KP, 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) 지정국 (별도의 표시가 없는 한, 가능한 모든 종류의 역내 권리의 보호를 위하여): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, SZ, TZ, UG, ZM, ZW), 유라시아 (AM, AZ, BY, KG, KZ, RU, TJ, TM), 유럽 (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, ML, MR, NE, SN, TD, TG).

공개:

— 국제조사보고서와 함께 (조약 제 21 조(3))



WO 2013/141523 A1

(54) Title: NOVEL METHOD FOR PREPARING 5-ACETOXYMETHYL FURFURAL USING ALKYLAMMONIUM ACETATE

(54) 발명의 명칭 : 알킬암모늄아세테이트염을 이용한 새로운 5-아세트옥시메틸푸르푸랄의 제조방법

(57) Abstract: The present invention relates to a method for preparing 5-acetoxymethylfurfural, comprising a step of synthesizing 5-acetoxymethylfurfural by reacting 5-halomethyl furfural with alkylammonium acetate. The present invention can provide a method for preparing 5-acetoxymethylfurfural which is economic and has high reaction efficiency even without using an additional base.

(57) 요약서: 본 발명은 5-할로메틸푸르푸랄을 알킬암모늄아세테이트염과 반응시켜 5-아세트옥시메틸푸르푸랄을 합성하는 단계를 포함하는 5-아세트옥시메틸푸르푸랄의 제조방법에 관한 것으로서, 별도의 염기를 사용하지 않고 경제적이고 높은 반응효율을 보이는, 5-아세트옥시메틸푸르푸랄의 제조방법을 제공할 수 있다.

PATENT