505448916 04/26/2019

PATENT ASSIGNMENT COVER SHEET

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EPAS ID: PAT5495717

| SUBMISSION TYPE: | NEW ASSIGNMENT |
|-----------------------|----------------|
| NATURE OF CONVEYANCE: | ASSIGNMENT |

CONVEYING PARTY DATA

| Name | Execution Date |
|---------------|----------------|
| MOO-RIM KIM | 04/26/2019 |
| JEONG-GUN LEE | 04/22/2019 |
| SHIN-HEE CHO | 04/22/2019 |

RECEIVING PARTY DATA

| Name: | SAMSUNG ELECTRONICS CO., LTD. |
|-----------------|--|
| Street Address: | 129, SAMSUNG-RO, YEONGTONG-GU, GYEONGGI-DO |
| City: | SUWON-SI |
| State/Country: | KOREA, REPUBLIC OF |
| Postal Code: | 16677 |

PROPERTY NUMBERS Total: 1

| Property Type | Number |
|---------------------|----------|
| Application Number: | 16345617 |

CORRESPONDENCE DATA

Fax Number: (202)293-7860

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.

sughrue@sughrue.com, otimoshenko@sughrue.com

SUGHRUE MION, PLLC Correspondent Name:

Address Line 1: 2100 PENNSYLVANIA AVENUE, N.W.

Address Line 2: #800

Address Line 4: WASHINGTON, D.C. 20037

| ATTORNEY DOCKET NUMBER: | Q246761 |
|-------------------------|--|
| NAME OF SUBMITTER: | /OXANA TIMOSHENKO/ |
| SIGNATURE: | /OXANA TIMOSHENKO/ (TEAMS DPT) |
| DATE SIGNED: | 04/26/2019 |
| | This document serves as an Oath/Declaration (37 CFR 1.63). |

Total Attachments: 6

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Docket No.: Q246761 SEC Ref: MK-201609-001-1-US0

Only After Sept 16, 2012

ASSIGNMENT WITH DECLARATION FOR UTILITY OR DESIGN PATENT APPLICATION (37 CFR 1.63)

Whereas, We, the undersigned inventors hereinafter called assignors, have invented certain improvements described in the application identified below; and

Whereas, SAMSUNG ELECTRONICS CO., LTD, of 129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16677, Republic of Korea, (assignee), desires to acquire the entire right, title, and interest in the application and invention, and to any United States patents to be obtained therefor:

Now therefore, for valuable consideration, receipt whereof is hereby acknowledged,

We, the above named assignors, hereby sell, assign and transfer to the above named assignee, its successors and assigns, the entire right, title and interest in the application and the invention disclosed therein for the United States of America and all other countries, including all divisions, and continuations thereof, and all Letters Patent of the United States that may be granted thereon, and all reissues thereof, and including rights of priority under the International Convention of Paris (1883) as amended, the laws of all foreign countries, and the laws of the United States including the right to claim priority under 35 USC 119 and the right to sue for past damages, and we request the Director of the U.S. Patent and Trademark Office to issue any Letters Patent granted upon the invention set forth in the application to the assignee, its successors and assigns; and we hereby agree that the assignee may apply for foreign Letters Patent on the invention and we will execute without further consideration all papers deemed necessary by the assignee in connection with the United States and foreign applications when called upon to do so by the assignee.

| (Legalization not required for record | ing bi | at is prima facie evidence of execution under 35 USC 261) |
|--|--------|---|
| As the below named inventor, I hereb | y de | plare that: |
| This assignment with declaration is directed to: | | The attached application, or |
| The application is entitled: | Ø | United States Application or PCT International Application Number <u>PCT/KR2017/008591</u> filed on <u>August 9, 2017</u> . |

MICRONEEDLE PATCH, AND METHOD AND DEVICE FOR MANUFACTURING MICRONEEDLE

The above identified application was made or was authorized to be made by me.

I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.

I have reviewed and understand the contents of the application for which this assignment with declaration is being submitted.

I am aware of the duty to disclose to the Office all information known to me to be material to patentability as defined in 37 CFR 1.56.

I hereby acknowledge that any willful false statement made in this assignment with declaration is punishable under 18 USC 1001 by fine or imprisonment of not more than five (5) years, or both.

| NAME OF SOLE OR FIRST INVENTOR: | |
|--|--|
| Given Name (first and middle [if any]) Moo-rim | Family Name or Surname KIM |
| Inventor's signature Propal CM | Date Asy: 126,2019 |
| Residence: Suwon-si, Republic of Korea | , |
| Mailing Address: 6007-1403, 36, Central town-ro 22beon-gil, Yeong | tong-gu, Suwon-si, Gyeonggi-do, 16505, Republic of Korea |
| NAME OF SECOND INVENTOR: | |
| Given Name (first and middle [if any]) Jeong-gun | Family Name or Surname LEE |
| Inventor's signature | Date |
| Residence: Seoul, Republic of Korea | |
| Mailing Address: 104-505, 13-10, Seocho-daero 65-gil, Seocho-gu, 5 | Seoul, 06602, Republic of Korea |
| NAME OF THIRD INVENTOR: | |
| Given Name (first and middle [if any]) Shin-hee | Family Name or Surname CHO |
| Inventor's signature | Date |
| Residence: Suwon-si, Republic of Korea | |
| Mailing Address: 425-304, 100, Cheongmyeong-ro, Yeongtong-gu, 5 | Suwon-si, Gyeonggi-do, 16709, Republic of Korea |

PATENT

REEL: 049014 FRAME: 0914

Docket No.: SEC Ref.: MK-201609-001-1-US0

Q246761

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Now therefore, for valuable consideration, receipt whereof is hereby acknowledged,

We, the above named assignors, hereby sell, assign and transfer to the above named assignee, its successors and assigns, the entire right, title and interest in the application and the invention disclosed therein for the United States of America and all other countries, including all divisions, and continuations thereof, and all Letters Patent of the United States that may be granted thereon, and all reissues thereof, and including rights of priority under the International Convention of Paris (1883) as amended, the laws of all foreign countries, and the laws of the United States including the right to claim priority under 35 USC 119 and the right to sue for past damages, and we request the Director of the U.S. Patent and Trademark Office to issue any Letters Patent granted upon the invention set forth in the application to the assignee, its successors and assigns; and we hereby agree that the assignee may apply for foreign Letters Patent on the invention and we will execute without further consideration all papers deemed necessary by the assignee in connection with the United States and foreign applications when called upon to do so by the assignee.

| (Legalization not required for recording | ig but | is prima facie evidence of execution under 35 USC 261) |
|--|--------|--|
| As the below named inventor, I hereby | y decl | are that: |
| This assignment with declaration is | | The attached application, or |
| directed to: | Ø | United States Application or PCT International Application Number <u>PCT/KR2017/00859</u> filed on <u>August 9, 2017</u> . |
| The application is entitled: | | |

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PATENT

REEL: 049014 FRAME: 0915

| NAME OF SOLE OR FIRST INVE | YTOR: | | |
|---|---|---|-----------------------------------|
| Given Name (first and middle [if any]) | Moo-rim | Family Name or Surnan | ne KIM |
| Inventor's signature | 30. 11 11 1 1 200 1 1 200 1 1 200 1 200 200 | | Date |
| Residence: Suwon-si, Republic of F | Corea | | |
| Mailing Address; 6007-1403, 36, Ce | entral town-ro 22heon-gil, Yeo | ngtong-gu, Suwon-si, Gyeor | nggi-do, 16505, Republic of Korea |
| NAME OF SECOND INVENTOR: | | | |
| Given Name (first and middle [if any]) | Jeong-gun | Family Name or Surnage | ne LEE |
| Inventor's signature | -11 | <i>H</i> - | Date April, 20, 2019 |
| Residence: Seoul, Republic of Kon | Aa | | |
| | | # 1 0/289 B EV I | Voun |
| | eocho-daero 65-gil, Seucho-gu | i, Seoui, 00002, Kepubuc oi | PeOSCA |
| NAME OF THIRD INVENTOR: | | 30 | |
| Given Name (first and middle [if any]) | Shin-hee | Family Name or Surnar | ne CHO |
| Inventor's signature | | | Date |
| | W. anna | *************************************** | |
| Residence: Suwon-si, Republic of | Korea | | |
| Mailing Address: 425-304, 100, Che | eongmyeong-ro, Yeongtong-g | ı, Suwon-si, Gyconggi-do, 1 | 6709, Republic of Korea |

Docket No.:

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Now therefore, for valuable consideration, receipt whereof is hereby acknowledged,

We, the above named assignors, hereby sell, assign and transfer to the above named assignee, its successors and assigns, the entire right, title and interest in the application and the invention disclosed therein for the United States of America and all other countries, including all divisions, and continuations thereof, and all Letters Patent of the United States that may be granted thereon, and all reissues thereof. and including rights of priority under the International Convention of Paris (1883) as amended, the laws of all foreign countries, and the laws of the United States including the right to claim priority under 35 USC 119 and the right to sue for past damages, and we request the Director of the U.S. Patent and Trademark Office to issue any Letters Patent granted upon the invention set forth in the application to the assignee, its successors and assigns; and we hereby agree that the assignee may apply for foreign Letters Patent on the invention and we will execute without further consideration all papers deemed necessary by the assignee in connection with the United States and foreign applications when called upon to do so by the assignee,

| As the below named inventor, I herel | y de | clare that: |
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| arected to. | 図 | United States Application or PCT International Application Number <u>PCT/KR2017/008591</u> filed on <u>August 9, 2017</u> . |

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[Page 1]

| NAME OF SOLE OR FIRST INVENTOR: | |
|--|---|
| Given Name (first and middle [if any]) Moo-rim | Family Name or Surname KIM |
| Inventor's signature | Date |
| Residence: Suwon-si, Republic of Korca | |
| Mailing Address: 6007-1403, 36, Central town-ro 22beon-gil, Yeon | gtong-gu, Suwon-si, Gyeonggi-do, 16505, Republic of Korea |
| NAME OF SECOND INVENTOR: | |
| Given Name (first and middle [if any]) Jeong-gun | Family Name or Surname LEE |
| Inventor's signature | Date |
| Residence: Seoul, Republic of Korea | |
| Mailing Address: 104-505, 13-10, Seocho-daero 65-gil, Seocho-gu, | Seoul, 06602, Republic of Korca |
| NAME OF THIRD INVENTOR: | |
| Given Name (first and middle [if any]) Shin-hee | Family Name or Surname CHO |
| Inventor's signature (III SHM 1/27) | Date April 22, 2019 |
| Residence: Suwon-si, Republic of Korea | |
| Mailing Address: 425-304, 100, Cheongmyeong-ro, Yeongtong-gu, | Suwon-si, Gyeonggi-do, 16709, Republic of Korea |

[Page 2]