

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT2639115

SUBMISSION TYPE:	CORRECTIVE ASSIGNMENT
NATURE OF CONVEYANCE:	Corrective Assignment to correct the MISSING SECOND ASSIGNEE previously recorded on Reel 029882 Frame 0001. Assignor(s) hereby confirms the SECOND ASSIGNEE SHOULD BE POSTECH ACADEMY-INDUSTRY FOUNDATION.

## CONVEYING PARTY DATA

Name	Execution Date
SOO-GHANG IHN	11/21/2012
KIL-WON CHO	02/06/2013
YEONG SUK CHOI	11/21/2012
SAE BYEOK JO	02/06/2013
HEUNG GYU KIM	02/06/2013
MYUNGSUN SIM	02/06/2013

## RECEIVING PARTY DATA

Name:	Samsung Electronics Co., Ltd.
Street Address:	129 Samsung-ro, Yeongtong-gu
City:	Suwon-si, Gyeonggi-do
State/Country:	KOREA, REPUBLIC OF
Postal Code:	443-742

Name:	POSTECH ACADEMY-INDUSTRY FOUNDATION
Street Address:	SAN 31, HYOJA-DONG, NAM-GU
City:	POHANG-SI, GYEONSANGBUK-DO
State/Country:	KOREA, REPUBLIC OF
Postal Code:	790-784

## PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	13777621

## CORRESPONDENCE DATA

Fax Number: (703)668-8200

502592898

PATENT  
 REEL: 031767 FRAME: 0861

CH \$40.00 13777621

Phone: 703-668-8000  
Email: dcmalroom@hdp.com  
*Correspondence will be sent via US Mail when the email attempt is unsuccessful.*  
Correspondent Name: HARNESS, DICKEY & PIERCE, P.L.C.  
Address Line 1: P.O. BOX 8910  
Address Line 4: RESTON, VIRGINIA 20195

ATTORNEY DOCKET NUMBER:	15639-000093-US
NAME OF SUBMITTER:	JOHN A. CASTELLANO
Signature:	/John A. Castellano, Reg. No. 35,094/
Date:	12/06/2013
	This document serves as an Oath/Declaration (37 CFR 1.63).

**Total Attachments: 15**

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Form PTO-1595 (Rev. 6-12)  
OMB No. 0651-0027 (exp. 04/30/2015)

U.S. DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office

RECORDATION FORM COVER SHEET

PATENTS ONLY

To the Director of the U.S. Patent and Trademark Office: Please record the attached documents or the new address(es) below.

1. Name of conveying party(ies):

Soo-Ghang IHN (11/21/2012), Kil-Won CHO (02/06/2013),  
Yeong Suk CHOI (11/21/2012), Sae-Byeok JO (02/06/2013),  
Heung-Gyu KIM (02/08/2013), and Myeong-Seon SIM  
(02/06/2013)

Additional name(s) of conveying party(ies) attached?  Yes  No

2. Name and address of receiving party(ies)

Name: Samsung Electronics Co., Ltd.

Internal Address: \_\_\_\_\_

Street Address: \_\_\_\_\_

129, Samsung-ro, Yeongtong-gu

City: Suwon-Si, Gyeonggi-Do

State: \_\_\_\_\_

Country: Republic of Korea Zip: 443-742

Additional name(s) & address(es) attached?  Yes  No

3. Nature of conveyance/Execution Date(s):

Execution Date(s): In parentheses after inventor name

Assignment  Merger  Change of Name

Security Agreement  Joint Research Agreement

Government Interest Assignment

Executive Order 9424, Confirmatory License

Other \_\_\_\_\_

4. Application or patent number(s):

This document serves as an Oath/Declaration (37 CFR 1.63)

A. Patent Application No.(s)

13/777,621

B. Patent No.(s)

Additional numbers attached?  Yes  No

5. Name and address to whom correspondence concerning document should be mailed:

Name: John A. Castellano  
HARNESS, DICKEY & PIERCE, P.L.C.

Internal Address: Atty. Dkt.: 15639-000093/US

Street Address: P.O. Box 8910

City: Reston

State: VA Zip: 20195

Phone Number: (703) 668-8000

Fax Number: (703) 668-8200

Email Address: dcmalroom@hdp.com

6. Total number of applications and patents involved:

1

7. Total fee (37 CFR 1.21(h) & 3.41) \$ 40.00

Authorized to be charged to deposit account

Enclosed

None required (government interest not affecting title)

8. Payment Information

Deposit Account Number 08-0750

Authorized User Name John A. Castellano

9. Signature:

Signature

February 26, 2013

Date

John A. Castellano - 35,094

Name of Person Signing

Total number of pages including cover sheet, attachments, and documents:

14

Documents to be recorded (including cover sheet) should be faxed to (571) 273-0140, or mailed to:  
Mail Stop Assignment Recordation Services, Director of the USPTO, P.O.Box 1460, Alexandria, VA, 22213-1460

17161301

JAC/gf

SAMSUNG ELECTRONICS CO., LTD.

**COMBINED DECLARATION (37 CFR §1.63) FOR UTILITY PATENT APPLICATION AND  
ASSIGNMENT FORM<sup>1</sup>**

The undersigned acknowledges that this document is being used both as an assignment of the invention and as the declaration (37 CFR 1.63) for a Utility or Design Application.

WHEREAS, the undersigned, hereinafter referred to collectively as Assignor, has invented:

Title: **SOLAR CELL AND METHOD FOR MANUFACTURING THE SAME**

---

for which Assignor is about to make or has made United States or International application for patent.

WHEREAS, as a below named inventor(s), I/(we) hereby declare that:

**Section I. Declaration**

This declaration is directed to:

- The attached U.S. non-provisional patent application, or
- U.S. non-provisional patent application number \_\_\_\_\_, filed on \_\_\_\_\_, or
- PCT international patent application number \_\_\_\_\_, filed on \_\_\_\_\_.

The above-identified application was made or authorized to be made by me (us).

I (we) believe that I am (we are) the original inventor (original joint inventors) of a claimed invention in the above-identified application.

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

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<sup>1</sup> This form requires the use of an Application Data Sheet.

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Samsung Ref No. **RF-201202-502-1-US0** Attorney Ref No. **15639-000093/US**

SAMSUNG ELECTRONICS CO., LTD.

I hereby state that I have reviewed and understand the contents of the above identified application, including the claims.

I acknowledge that I am aware of the duty to disclose information which is material to patentability as defined in 37 CFR § 1.56.

**Section II. Assignment**

In consideration of the sum of One Dollar (\$1.00) and other good and valuable consideration paid to each of the undersigned, the undersigned hereby sell(s) and assign(s) to

Samsung Electronics Co., Ltd.

having an address at 129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do 443-742, Republic of Korea, and

Postech Academy-Industry Foundation

having an address at San 31, Hyoja-dong, Nam-gu, Pohang-si, Gyeongsangbuk-do 790-784, Republic of Korea,

(hereinafter designated as the Assignee), the entire (100%) right, title and interest for the United States as defined in 35 USC §100, in the invention described in the application identified in Section I of this document.

Assignor hereby confirms any prior assignment to Assignee, and to the extent that Assignor has not already done so, agrees to assign, and hereby does, sell, assign and transfer unto Assignee and its successors in interest, the full and exclusive right, title and interest in the United States of America and throughout the world, including the right to claim priority under the laws of the United States, the Paris Convention, and any foreign countries, to the inventions as described in the aforesaid application, to the aforesaid application itself, and all divisions, continuations, continuations-in-part, or other applications claiming priority directly or indirectly from the aforesaid application, and any United States or foreign Letters Patent, utility model, or other similar rights which may be granted thereon, including reissues, reexaminations and extensions thereof, and all copyright rights throughout the world in the aforesaid application and the subject matter disclosed therein, these rights, title and interest to be held and enjoyed by Assignee to the full end of the term for which the Letters Patent, utility model, or other similar rights, are granted and any extensions thereof as fully and entirely as the same would have been held by Assignor had this assignment and sale not been made, and the right to sue for, and recover for past

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Samsung  
Ref No.

RF-201202-502-1-US0

Attorney Ref No.

15639-000093/US

SAMSUNG ELECTRONICS CO., LTD.

infringements of, or liabilities for, any of the rights relating to any of the applications, patents, utility models, or other similar rights, resulting therefrom, and the copyright rights;

Assignor hereby covenants and agrees to execute all instruments or documents required or requested for the making and prosecution of any applications of any type for patent, utility model, or other similar rights, and for copyright, in the United States and in all foreign countries including, but not limited to, any provisional, continuation, continuation-in-part, divisional, renewal or substitute thereof, and as to letters patent any reissue, re-examination, or extension thereof, and for litigation regarding, or for the purpose of protecting title and to the said invention, the United States application for patent, or Letters Patent therefor, and to testify in support thereof, for the benefit of Assignee without further or other compensation than that above set forth;

Assignor hereby covenants that no assignment, sale, license, agreement or encumbrance has been or will be entered into which would conflict with this Assignment; and

Assignor hereby requests the United States Patent and Trademark Office to issue the Letters Patent of the United States of America to Assignee, and requests that any official of any country or countries foreign to the United States, whose duty it is to issue or grant patents and applications as aforesaid, to issue the Letters Patent, Utility Model Registration or other similar right to Assignee.

The undersigned hereby grant(s) the law firm of **Harness, Dickey & Pierce, P.L.C.** the power to insert on this Declaration and Assignment any further identification which may be necessary or desirable in order to comply with the rules of the U.S. Patent and Trademark Office for recordation of this document.

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Samsung  
Ref No.

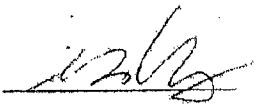
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Attorney Ref No.

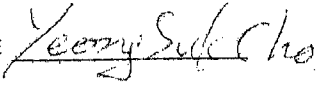
15639-000093/US

SAMSUNG ELECTRONICS CO., LTD.

Section III. Inventor(s)/Assignor(s) Signature(s)

LEGAL NAME OF FIRST INVENTOR/ASSIGNOR	Family Name	First Given Name	Second Given Name
	IHN	Soo-Ghang	
SIGNATURE  DATE <u>Nov 21, 2012</u>			

LEGAL NAME OF SECOND INVENTOR/ASSIGNOR	Family Name	First Given Name	Second Given Name
	CHO	Kil-Won	
SIGNATURE _____ DATE _____			

LEGAL NAME OF THIRD INVENTOR/ASSIGNOR	Family Name	First Given Name	Second Given Name
	CHOI	Yeong Suk	
SIGNATURE  DATE <u>Nov 21, 2012</u>			

Samsung Ref No. RF-201202-502-1-US0 Attorney Ref No. 15639-000093/US

SAMSUNG ELECTRONICS CO., LTD.

\_\_\_\_\_

LEGAL NAME OF FOURTH INVENTOR/ASSIGNOR	Family Name	First Given Name	Second Given Name
	JO	Sae-Byeok	
SIGNATURE _____ DATE _____			

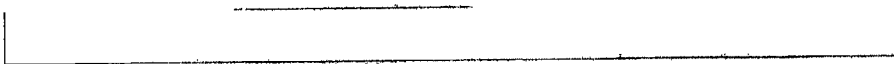
LEGAL NAME OF FIFTH INVENTOR/ASSIGNOR	Family Name	First Given Name	Second Given Name
	KIM	Heung-Gyu	
SIGNATURE _____ DATE _____			

LEGAL NAME OF SIXTH INVENTOR/ASSIGNOR	Family Name	First Given Name	Second Given Name
	SIM	Myeong-Seon	
SIGNATURE _____ DATE _____			

Samsung Ref No. RF-201202-502-1-US0 Attorney Ref No. 15639-000093/US



SAMSUNG ELECTRONICS CO., LTD.



Samsung  
Ref No.

RF-201202-502-1-US0

Attorney Ref No.

15639-000093/US

SAMSUNG ELECTRONICS CO., LTD.

**COMBINED DECLARATION (37 CFR §1.63) FOR UTILITY PATENT APPLICATION AND  
ASSIGNMENT FORM<sup>1</sup>**

The undersigned acknowledges that this document is being used both as an assignment of the invention and as the declaration (37 CFR 1.63) for a Utility or Design Application.

WHEREAS, the undersigned, hereinafter referred to collectively as Assignor, has invented:

Title: SOLAR CELL AND METHOD FOR MANUFACTURING THE SAME

for which Assignor is about to make or has made United States or International application for patent.

WHEREAS, as a below named inventor(s), I/(we) hereby declare that:

**Section I. Declaration**

This declaration is directed to:

- The attached U.S. non-provisional patent application, or
- U.S. non-provisional patent application number \_\_\_\_\_, filed on \_\_\_\_\_, or
- PCT international patent application number \_\_\_\_\_, filed on \_\_\_\_\_.

The above-identified application was made or authorized to be made by me (us).

I (we) believe that I am (we are) the original inventor (original joint inventors) of a claimed invention in the above-identified application.

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

<sup>1</sup> This form requires the use of an Application Data Sheet.

Samsung Ref No. RF-201202-502-1-US0 Attorney Ref No. 15639-010093/US

SAMSUNG ELECTRONICS CO., LTD.

I hereby state that I have reviewed and understand the contents of the above identified application, including the claims.

I acknowledge that I am aware of the duty to disclose information which is material to patentability as defined in 37 CFR § 1.56.

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In consideration of the sum of One Dollar (\$1.00) and other good and valuable consideration paid to each of the undersigned, the undersigned hereby sell(s) and assign(s) to

Samsung Electronics Co., Ltd.

having an address at 129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do 443-742, Republic of Korea, and

Postech Academy-Industry Foundation

having an address at San 31, Hyoja-dong, Nam-gu, Pohang-si, Gyeongsangbuk-do 790-784, Republic of Korea,

(hereinafter designated as the Assignee), the entire (100%) right, title and interest for the United States as defined in 35 USC §100, in the invention described in the application identified in Section I of this document.

Assignor hereby confirms any prior assignment to Assignee, and to the extent that Assignor has not already done so, agrees to assign, and hereby does, sell, assign and transfer unto Assignee and its successors in interest, the full and exclusive right, title and interest in the United States of America and throughout the world, including the right to claim priority under the laws of the United States, the Paris Convention, and any foreign countries, to the inventions as described in the aforesaid application, to the aforesaid application itself, and all divisions, continuations, continuations-in-part, or other applications claiming priority directly or indirectly from the aforesaid application, and any United States or foreign Letters Patent, utility model, or other similar rights which may be granted thereon, including reissues, reexaminations and extensions thereof, and all copyright rights throughout the world in the aforesaid application and the subject matter disclosed therein, these rights, title and interest to be held and enjoyed by Assignee to the full end of the term for which the Letters Patent, utility model, or other similar rights, are granted and any extensions thereof as fully and entirely as the same would have been held by Assignor had this assignment and sale not been made, and the right to sue for, and recover for past

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Samsung Ref No.	RF-201202-502-1-US0	Attorney Ref No.	15639-000093/US
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SAMSUNG ELECTRONICS CO., LTD.

infringements of, or liabilities for, any of the rights relating to any of the applications, patents, utility models, or other similar rights, resulting therefrom, and the copyright rights;

Assignor hereby covenants and agrees to execute all instruments or documents required or requested for the making and prosecution of any applications of any type for patent, utility model, or other similar rights, and for copyright, in the United States and in all foreign countries including, but not limited to, any provisional, continuation, continuation-in-part, divisional, renewal or substitute thereof, and as to letters patent any reissue, re-examination, or extension thereof, and for litigation regarding, or for the purpose of protecting title and to the said invention, the United States application for patent, or Letters Patent therefor, and to testify in support thereof, for the benefit of Assignee without further or other compensation than that above set forth;

Assignor hereby covenants that no assignment, sale, license, agreement or encumbrance has been or will be entered into which would conflict with this Assignment; and

Assignor hereby requests the United States Patent and Trademark Office to issue the Letters Patent of the United States of America to Assignee, and requests that any official of any country or countries foreign to the United States, whose duty it is to issue or grant patents and applications as aforesaid, to issue the Letters Patent, Utility Model Registration or other similar right to Assignee.

The undersigned hereby grant(s) the law firm of Harness, Dickey & Pierce, P.L.C. the power to insert on this Declaration and Assignment any further identification which may be necessary or desirable in order to comply with the rules of the U.S. Patent and Trademark Office for recordation of this document.

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Samsung Ref No.	RF-201202-502-1-US0	Attorney Ref No.	15639-000093/CS
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SAMSUNG ELECTRONICS CO., LTD.

Section III. Inventor(s)/Assignor(s) Signature(s)

LEGAL NAME OF FIRST INVENTOR/ASSIGNOR	Family Name	First Given Name	Second Given Name
	Ihn	Soo-Ghang	
SIGNATURE _____		DATE _____	


LEGAL NAME OF SECOND INVENTOR/ASSIGNOR	Family Name	First Given Name	Second Given Name
	Cho	Kilwon	
SIGNATURE <u>Kilwon Cho</u>		DATE <u>2013.2.6</u>	

LEGAL NAME OF THIRD INVENTOR/ASSIGNOR	Family Name	First Given Name	Second Given Name
	Choi	Yeong Suk	
SIGNATURE _____		DATE _____	

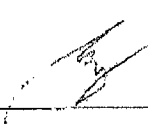
Samsung Ref No. RF-201202-502-1-US0 Attorney Ref No. 15639-000193/US

SAMSUNG ELECTRONICS CO., LTD.


LEGAL NAME OF	Family Name	First Given Name	Second Given Name
FOURTH INVENTOR/ASSIGNOR	Jo	Sae Byeok	

SIGNATURE  DATE 2013-2-6

LEGAL NAME OF	Family Name	First Given Name	Second Given Name
FIFTH INVENTOR/ASSIGNOR	Kim	Heung Gyu	

SIGNATURE  DATE 2013. 2. 6

LEGAL NAME OF	Family Name	First Given Name	Second Given Name
SIXTH INVENTOR/ASSIGNOR	Sim	Myungsun	

SIGNATURE  DATE 2013 2. 6

Samsung Ref No. RF-201202-502-1-US0 Attorney Ref No. 15639-000093/US

SAMSUNG ELECTRONICS CO., LTD.



Samsung  
Ref No.

RF-201202-502-1-US0

Attorney Ref No.

15639-000093/US

COMBINED DECLARATION (37 CFR 1.63) FOR UTILITY PATENT APPLICATION AND ASSIGNMENT FORM  
Page 6 of 6