

PATENT ASSIGNMENT

Electronic Version v1.1
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SUBMISSION TYPE:	NEW ASSIGNMENT														
NATURE OF CONVEYANCE:	ASSIGNMENT														
CONVEYING PARTY DATA															
<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:70%;">Name</th> <th>Execution Date</th> </tr> </thead> <tbody> <tr> <td>Hye-young Park</td> <td>06/26/2007</td> </tr> <tr> <td>Sung-lae Cho</td> <td>06/26/2007</td> </tr> <tr> <td>Byoung-jae Bae</td> <td>06/26/2007</td> </tr> <tr> <td>Jin-il Lee</td> <td>06/26/2007</td> </tr> <tr> <td>Ji-eun Lim</td> <td>06/27/2007</td> </tr> <tr> <td>Young-lim Park</td> <td>06/26/2007</td> </tr> </tbody> </table>		Name	Execution Date	Hye-young Park	06/26/2007	Sung-lae Cho	06/26/2007	Byoung-jae Bae	06/26/2007	Jin-il Lee	06/26/2007	Ji-eun Lim	06/27/2007	Young-lim Park	06/26/2007
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Young-lim Park	06/26/2007														
RECEIVING PARTY DATA															
Name:	Samsung Electronics Co., Ltd.														
Street Address:	416 Maetan-dong														
Internal Address:	Yeongtong-gu, Suwon-si														
City:	Gyeonggi-do														
State/Country:	KOREA, REPUBLIC OF														
PROPERTY NUMBERS Total: 1															
<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:30%;">Property Type</th> <th>Number</th> </tr> </thead> <tbody> <tr> <td>Application Number:</td> <td>11772494</td> </tr> </tbody> </table>		Property Type	Number	Application Number:	11772494										
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Application Number:	11772494														
CORRESPONDENCE DATA															
Fax Number:	(919)854-1401														
<i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i>															
Phone:	919-854-1400														
Email:	sfreedman@myersbigel.com														
Correspondent Name:	Susan E. Freedman/MBSS														
Address Line 1:	4140 Parklake Avenue														
Address Line 2:	Suite 600														
Address Line 4:	Raleigh, NORTH CAROLINA 27612														
ATTORNEY DOCKET NUMBER:	5649-2159														

CH \$40.00 11772494

NAME OF SUBMITTER:

Susan E. Freedman

Total Attachments: 7

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ASSIGNMENT

THIS ASSIGNMENT, made by us, **Hye-young Park**, citizen of the Republic of Korea, residing at 104-503, Ssangyong Sweet Dot Home, Taepyeong-dong, Sujeong-gu, Seongnam-si, Gyeonggi-do, Republic of Korea; **Sung-jae Cho**, citizen of the Republic of Korea, residing at 109-203, Byoksan 1-cha Apt., Jukjeon 2-dong, Suji-gu, Yongin-si, Gyeonggi-do, Republic of Korea; **Byoung-jae Bae**, citizen of the Republic of Korea, residing at 402-1203, Sinyeongtong Hyundai 4-cha Apt., Banwol-dong, Hwaseong-si, Gyeonggi-do, Republic of Korea; **Jin-il Lee**, citizen of the Republic of Korea, residing at 110-1306, Saetbyeolmaeul Life Apt., Bundang-dong, Bundang-gu, Seongnam-si, Gyeonggi-do, Republic of Korea; **Ji-eun Lim**, citizen of the Republic of Korea, residing at 109-1808, Sinil Apt., Yeongdoek-dong, Giheung-gu, Yongin-si, Gyeonggi-do, Republic of Korea; and **Young-lim Park**, citizen of the Republic of Korea, residing at A-407, Park Apt., Bisan 3-dong, Dongan-gu, Anyang-si, Gyeonggi-do, Republic of Korea.

WITNESSETH: That,

WHEREAS, we are the joint inventors of certain new and useful improvements in **METAL PRECURSORS FOR LOW TEMPERATURE DEPOSITION AND METHODS OF FORMING A METAL THIN LAYER AND MANUFACTURING A PHASE-CHANGE MEMORY DEVICE USING THE METAL PRECURSORS**, for which an application for United States Letters Patent has been filed, or is being filed concurrently, in the United States Patent and Trademark Office. We hereby authorize and request Myers Bigel Sibley & Sajovec, P.A., to insert here in parentheses (Application No. 11/772,494, filed 07/02/2007) the filing date and application number of said application when known or to file this Assignment concurrently with the application, and

WHEREAS, **Samsung Electronics Co., Ltd.**, a Korean corporation having a principal place of business at 416 Maetan-dong, Yeongtong-gu, Suwon-si, Gyeonggi-do, Republic of Korea, hereinafter referred to as assignee, is desirous of acquiring the entire right, title and interest in and to said invention as described in said application, and in and to any and all Letters Patent which shall be granted therefor in the United States of America and all foreign countries;

NOW, THEREFORE, To Whom It May Concern, be it known that for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, we have sold and by these presents do hereby sell, assign, transfer and convey unto the said assignee, its successors and assigns, the entire right, title and interest in and to the said invention and

ASSIGNMENT - CONTINUED

application, and in and to any and all continuations, continuations-in-part, or divisions thereof, and in and to any and all Letters Patent of the United States of America and all foreign countries or reissues thereof which may be granted therefor or thereon, for the full end of the term for which said Letters Patent may be granted, together with the right to claim the priority of said application in all foreign countries in accordance with the International Convention, the same to be held and enjoyed by said assignee, its successors and assigns, as fully and entirely as the same would have been held and enjoyed by us if this assignment and sale had not been made.

We hereby request that said Letters Patent be issued in accordance with this assignment.

We further covenant and agree that, at the time of the execution and delivery of these presents, we possess full title to the invention and application above-mentioned, and that we have the unencumbered right and authority to make this assignment.

We further covenant and agree to bind our heirs, legal representatives and assigns, promptly to communicate to said assignee or its representatives any facts known to us relating to said invention, to testify in any interference or legal proceedings involving said invention, to execute any additional papers which may be requested to confirm the right of the assignee, its representatives, successors or assigns to secure patent or similar protection for the said invention in all countries and to vest in the assignee complete title to the said invention and Letters Patent, without further compensation, but at the expense of said assignee, its successors, assigns and other legal representatives.

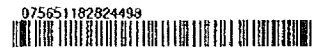
IN WITNESS WHEREOF, I have hereunto set my hand and seal on this 26 day of June, 2007.



Hye-young Park (SEAL)


Witnessed by:

Date: _____



ASSIGNMENT - CONTINUED

IN WITNESS WHEREOF, I have hereunto set my hand and seal on this 26 day
of June, 2007.



Sung-lae Cho (SEAL)

Witnessed by:

Date: _____



ASSIGNMENT - CONTINUED

IN WITNESS WHEREOF, I have hereunto set my hand and seal on this 26th day
of June, 2007.

Byoung-jae Bae (SEAL)
Byoung-jae Bae

Witnessed by:

Date: _____



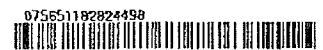
ASSIGNMENT - CONTINUED

IN WITNESS WHEREOF, I have hereunto set my hand and seal on this 26 day
of June, 2007.

Lee-jin-il (SEAL)
Jin-il Lee

Witnessed by:

Date: _____



ASSIGNMENT - CONTINUED

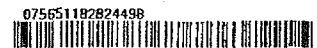
IN WITNESS WHEREOF, I have hereunto set my hand and seal on this 27 day
of June, 2007.



Ji-eun Lim (SEAL)

Witnessed by:

Date: _____



ASSIGNMENT - CONTINUED

IN WITNESS WHEREOF, I have hereunto set my hand and seal on this 26 day
of June, 2007.



Young-lim Park (SEAL)

Witnessed by:

Date: _____

