

## PATENT ASSIGNMENT

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SUBMISSION TYPE:	NEW ASSIGNMENT														
NATURE OF CONVEYANCE:	ASSIGNMENT														
CONVEYING PARTY DATA															
<table border="1"><thead><tr><th>Name</th><th>Execution Date</th></tr></thead><tbody><tr><td>Kyu-sik KIM</td><td>03/08/2008</td></tr><tr><td>Sang-cheol PARK</td><td>03/08/2008</td></tr><tr><td>Young-jun PARK</td><td>03/08/2008</td></tr><tr><td>O-hyun KWON</td><td>03/08/2008</td></tr><tr><td>Jung-gyu NAM</td><td>03/08/2008</td></tr><tr><td>Hye-suk JO</td><td>03/08/2008</td></tr></tbody></table>	Name	Execution Date	Kyu-sik KIM	03/08/2008	Sang-cheol PARK	03/08/2008	Young-jun PARK	03/08/2008	O-hyun KWON	03/08/2008	Jung-gyu NAM	03/08/2008	Hye-suk JO	03/08/2008	
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<table border="1"><tr><td>Name:</td><td>Samsung Electronics Co., Ltd.</td></tr><tr><td>Street Address:</td><td>416, Maetan-dong, Yeongtong-gu, Gyeonggi-do</td></tr><tr><td>City:</td><td>Suwon-si</td></tr><tr><td>State/Country:</td><td>REPUBLIC OF KOREA</td></tr></table>	Name:	Samsung Electronics Co., Ltd.	Street Address:	416, Maetan-dong, Yeongtong-gu, Gyeonggi-do	City:	Suwon-si	State/Country:	REPUBLIC OF KOREA							
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Application Number:	12053740														
CORRESPONDENCE DATA															
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PATENT  
REEL: 020691 FRAME: 0542

Total Attachments: 2  
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### ASSIGNMENT

WHEREAS We, **Kyu-sik KIM** of c/o Samsung Advanced Institute of Technology, San 14-1 Nongseo-dong, Giheung-gu, Yongin-si, Gyeonggi-do, Republic of Korea, **Sang-cheol PARK** of c/o Samsung Advanced Institute of Technology, San 14-1 Nongseo-dong, Giheung-gu, Yongin-si, Gyeonggi-do, Republic of Korea, **Young-jun PARK** of c/o Samsung Advanced Institute of Technology, San 14-1 Nongseo-dong, Giheung-gu, Yongin-si, Gyeonggi-do, Republic of Korea, **O-hyun KWON** of c/o Samsung Advanced Institute of Technology, San 14-1 Nongseo-dong, Giheung-gu, Yongin-si, Gyeonggi-do, Republic of Korea, **Jung-gyu NAM** of c/o Samsung Advanced Institute of Technology, San 14-1 Nongseo-dong, Giheung-gu, Yongin-si, Gyeonggi-do, Republic of Korea and **Hye-suk JO** of c/o Samsung Advanced Institute of Technology, San 14-1 Nongseo-dong, Giheung-gu, Yongin-si, Gyeonggi-do, Republic of Korea (hereinafter referred to as "ASSIGNORS"); have invented certain new and useful improvements in:

### **CMOS IMAGE SENSOR HAVING THIOPHENE DERIVATIVES**

which claims priority to **Korean** Application No. 10-2007-0100944, filed on 8 October 2007, and for which We are about to file an application for Letters Patent of the United States;

AND WHEREAS, **Samsung Electronics Co., Ltd.** (hereinafter referred to as "ASSIGNEE"), a corporation organized and existing under the laws of the Country of **Korea**, having a place of business at **416, Maetan-dong, Yeongtong-gu, Suwon-si, Gyeonggi-do, Republic of Korea**, is desirous of acquiring an interest in the United States and all foreign countries, in and to the said invention and Letters Patent to be obtained therefor;

NOW THEREFORE, TO ALL WHOM IT MAY CONCERN, be it known that, for good and valuable consideration, the receipt of which is hereby acknowledged, We, the said ASSIGNORS have assigned and transferred, and hereby assign and transfer unto the said ASSIGNEE, the entire right, title and interest in and to said invention in the United States and in all foreign countries, including priority rights, as fully set forth and described in said application; and We do hereby authorize and request the Commissioner of Patents to issue said

Letters Patent on said application, and any and all Letters Patent that may be issued upon any and all revivals, refilings, continuations, continuations-in-part, divisions and reissues thereof, to the said ASSIGNEE, an assignee of the entire right, title and interest in and to the same, for the sole use and behoof of ASSIGNEE, its successors and assigns; and We do hereby agree that the said ASSIGNEE, may apply for foreign Letters Patent on said invention and that We will execute all papers necessary in connection with the United States and foreign applications when called upon to do so by the said ASSIGNEE, its successors or assigns, and that We will, at the cost and expense of the said ASSIGNEE fully assist and cooperate in all matters in connection with the United States and foreign applications and patents issuing thereon.

The undersigned declare that all statements made herein of their own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Date: 8/March/2008

Kyu - Sik Kim L.S.  
Kyu-sik KIM

Date: 8/March/2008

[Signature] L.S.  
Sang-cheol PARK

Date: 8/March/2008

[Signature] L.S.  
Young-jun PARK

Date: 8/March/2008

[Signature] L.S.  
O-hyun KWON

Date: 8/March/2008

[Signature] L.S.  
Jung-gyu NAM

Date: 8/March/2008

[Signature] L.S.  
Hye-suk JO