

## 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>Sang-Hee Ko Park</td> <td>12/07/2012</td> </tr> <tr> <td>Chi-Sun Hwang</td> <td>12/07/2012</td> </tr> </tbody> </table>		Name	Execution Date	Sang-Hee Ko Park	12/07/2012	Chi-Sun Hwang	12/07/2012				
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<table border="1"> <tr> <td>Name:</td> <td>Electronic and Telecommunications Research Institute</td> </tr> <tr> <td>Street Address:</td> <td>b 138 Gajeongno, Yuseong-gu</td> </tr> <tr> <td>City:</td> <td>Daejeon</td> </tr> <tr> <td>State/Country:</td> <td>KOREA, REPUBLIC OF</td> </tr> <tr> <td>Postal Code:</td> <td>305-700</td> </tr> </table>		Name:	Electronic and Telecommunications Research Institute	Street Address:	b 138 Gajeongno, Yuseong-gu	City:	Daejeon	State/Country:	KOREA, REPUBLIC OF	Postal Code:	305-700
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PROPERTY NUMBERS Total: 1											
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CORRESPONDENCE DATA											
<p>Fax Number: 2123910525  <i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i></p> <p>Phone: 2122780400        Email: jwhite@cooperdunham.com        Correspondent Name: Cooper &amp; Dunham LLP        Address Line 1: 30 Rockefeller Plaza        Address Line 4: New York, NEW YORK 10112</p>											
ATTORNEY DOCKET NUMBER:	5126/84546/JPW/GC										
NAME OF SUBMITTER:	Cindy Shu										
<p>Total Attachments: 3        source=121213_5126_84546_Assignment_to_Electronic_GC_Page_1#page1.tif        source=121213_5126_84546_Assignment_to_Electronic_GC_Page_2#page1.tif        source=121213_5126_84546_Assignment_to_Electronic_GC_Page_3#page1.tif</p>											

CH \$40.00 13640214

VH  
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RES  
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Attorney Docket No. 5126/84546/IPW/GC

**Assignment**

*In consideration of One Dollar (\$1.00), and other good and valuable considerations, the receipt of which is hereby acknowledged, we, the undersigned,*

Sang-Hee KO PARK of c/o Electronic and Telecommunications Research Institute, Transparent Electronics Team, ICCL, b 138 Gajeongno, Yuseong-gu, Daejeon, 305-700, Republic of Korea; and

Chi-Sun HWANG of c/o Electronic and Telecommunications Research Institute, Transparent Electronics Team, ICCL, b 138 Gajeongno, Yuseong-gu, Daejeon, 305-700, Republic of Korea,

*Hereby sell, assign and transfer to Electronic and Telecommunications Research Institute, a corporation of Republic of Korea, having a place of business at 138 Gajeongno, Yuseong-gu, Daejeon, 305-700, Republic of Korea and its successors, assigns and legal representatives, the entire right, title and interest for all countries, in and to any and all inventions which are disclosed and claimed, and any and all inventions which are disclosed but not claimed, in the application for United States Patent, which has been executed by the undersigned on December 5, 2012 and December 5, 2012 and is entitled*

**P-TYPE OXIDE ALLOYS BASED ON COPPER OXIDES, TIN OXIDES, TIN-COPPER ALLOY OXIDES AND METAL ALLOY THEREOF, AND NICKEL OXIDE, WITH EMBEDDED METALS THEREOF, FABRICATION PROCESS AND USE THEREOF**

(U.S. Serial No. 13/640,214, § 371 national stage of PCT International Application No. PCT/IB2011/051487, filed April 6, 2011, claiming priority of Portuguese Patent Application No. 105039, filed April 6, 2010)

*and in and to said application and all divisional, continuing, substitute, renewal, reissue, and all other applications for U.S. Letters Patent or other related property rights in any and all foreign countries which have been or shall be filed on any of said inventions disclosed in said application; and in and to all original and reissued patents or related foreign documents which have been or shall be issued on said inventions;*

JPIV Rev. April 19, 2007

*Authorize and request the Commissioner for Patents of the United States to issue to said Assignee, the corporation above named, its successors, assigns and legal representatives, in accordance with this assignment, any and all United States Letters Patent on said inventions or any of them disclosed in said application;*

*Agree that said Assignee may apply for and receive foreign Letters Patent or rights of any other kind for said inventions, or any of them; and may claim, in applications for said foreign Letters Patent or other rights, the priority of the aforesaid United States patent application under the provisions of the International Convention of 1883 and later modifications thereof, under the Patent Cooperation Treaty, under the European Patent Convention or under any other available international agreement; and that, when requested, without charge to, but at the expense of, said Assignee, its successors, assigns and legal representatives, to carry out in good faith the intent and purpose of this assignment, the undersigned or the undersigned's executors or administrators will, for the United States and all foreign countries, execute all divisional, continuing, substitute, renewal, reissue, and all other patent applications or other documents on any and all said inventions; execute all rightful oaths, assignments, powers of attorney and other papers; communicate to said Assignee, its successors, assigns and representatives, all facts known and documents available to the undersigned relating to said inventions and the history thereof; testify in all legal proceedings; and generally do everything possible which said Assignee, its successors, assigns or representatives shall consider desirable for aiding in securing, maintaining and enforcing proper patent protection for said inventions and for vesting title to said inventions and all applications for patents or related foreign rights and all patents on said inventions, in said Assignee, its successors, assigns and legal representatives; and*

**Covenant with said Assignee, its successors, assigns and legal representatives that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been made to others by the undersigned, and that full right to convey the same as herein expressed is possessed by the undersigned.**

Date: 07 december 2012

Witness: [Signature] (signature)

ANA SOFIA ESTRELLA (printed name)

CAMPUS DE CAPARICA (address)

2829-516 CAPARICA

[Signature] [L.S.]  
Sang-Hee KO PARK

Date: 07 december 2012

Witness: [Signature] (signature)

ANA SOFIA ESTRELLA (printed name)

CAMPUS DE CAPARICA (address)

2829-516 CAPARICA

[Signature] [L.S.]  
Chi-Sun HWANG