## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT2875326

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
SEQUENCE:	1

## **CONVEYING PARTY DATA**

Name	Execution Date
HAKFEI POON	05/07/2014

## **RECEIVING PARTY DATA**

Name:	NUOVO FILM, INC.
Street Address:	A4-308 BIOBAY
City:	SUZHOU
State/Country:	CHINA

## **PROPERTY NUMBERS Total: 8**

Property Type	Number
Application Number:	14360896
Application Number:	14360900
Application Number:	14360876
Application Number:	14360886
Application Number:	14360891
Application Number:	14360904
Application Number:	14361057
Application Number:	14361062

## **CORRESPONDENCE DATA**

Fax Number:

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.

Email: info@treasure-ip.com
Correspondent Name: CATHERINE YE
Address Line 1: 106 OAKLAND PL

Address Line 4: LOS GATOS, CALIFORNIA 95032

ATTORNEY DOCKET NUMBER:	111760-65HFP, 111777HF-P
NAME OF SUBMITTER:	QING YE
SIGNATURE:	/Qing Ye/
DATE SIGNED:	05/29/2014

PATENT REEL: 032986 FRAME: 0448

502828730

# **Total Attachments: 24** source=111760HFP\_US\_exeAssignment\_TIP#page1.tif source=111760HFP US exeAssignment TIP#page2.tif source=111760HFP US exeAssignment TIP#page3.tif source=111762HFP\_US\_exeAssignment\_TIP#page1.tif source=111762HFP US exeAssignment TIP#page2.tif source=111762HFP US exeAssignment TIP#page3.tif source=111763HFP US exeAssignment#page1.tif source=111763HFP US exeAssignment#page2.tif source=111763HFP US exeAssignment#page3.tif source=111761HFP US exeAssignment TIP#page1.tif source=111761HFP\_US\_exeAssignment\_TIP#page2.tif source=111761HFP US exeAssignment TIP#page3.tif source=111764HFP US exeAssignment TIP#page1.tif source=111764HFP\_US\_exeAssignment\_TIP#page2.tif source=111764HFP\_US\_exeAssignment\_TIP#page3.tif source=111765HFP\_US\_exeAssignment\_TIP#page1.tif source=111765HFP US exeAssignment TIP#page2.tif source=111765HFP US exeAssignment TIP#page3.tif source=111777HF US Merge Comp exeAssignment TIP#page1.tif source=111777HF US Merge Comp exeAssignment TIP#page2.tif source=111777HF US Merge Comp exeAssignment TIP#page3.tif source=111777HFP US Method exeAssignment#page1.tif source=111777HFP US Method exeAssignment#page2.tif source=111777HFP US Method exeAssignment#page3.tif

PATENT REEL: 032986 FRAME: 0449 Docket No. 111760HFP "Assignment Signature Page"

Transparent conductive electrodes comprising merged metal nanowires, their structure design, and method of making such structures

ASSIGNMENT

WHEREAS I/We, the below named inventor(s),

Hakfei Poon of Mountain View, California

hereby sell and assign to Nuovo Film, Inc., whose post office address is A4-308 Biobay, 218 Xinghu St.SIP, Suzhou, Jiangsu, P.R.China, hereinafter referred to as "Company", its successors and assigns our entire respective rights, titles and interests in and to the invention and improvements invented and originated by us and for United States Patent currently entitled:

Transparent conductive electrodes comprising merged metal nanowires, their structure design, and method of making such structures

Executed concurrently herewith,

and any and all applications for patent and patents therefrom in any and all countries, including all divisions, continuations, reexaminations and reissues thereof, and all rights of priority resulting from the filing of said United States application, and authorize and request any official whose duty it is to issue patents, to issue any patent on said inventions and improvements resulting therefrom to said Company, or its successors or assigns and agree that on request and without further consideration, but at the expense of said Company, we will communicate to said Company or its representatives or nominees any facts known to us respecting said inventions and improvements and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuation, reexamination and reissue applications, make all rightful oaths and generally do everything possible to aid said Company, its successors, assigns, and nominees to obtain and enforce proper patent protection for said invention and its improvements in all countries.

AND We/I hereby authorize and request our/my agents, USPTO customer number 93229, whose address is 106 Oakland PI, Los Gatos, CA 95032, to insert hereon any identification necessary or desirable for recordation of this document, including the filing date and application number of said application when known.

Docket No. 111760HFP "Assignment Signature Page"

Transparent conductive electrodes comprising merged metal nanowires, their structure design, and method of making such structures

AND We/I hereby covenant for ourselves/myself and our/my legal representatives, and agree with said Company, its successors and assigns, that We/I have granted no right or license to make, use, sell or offer to sell said improvements, to anyone except said Company, that prior to the execution of this assignment document, our/my right, title and interest in said improvements had not been otherwise encumbered, and that We/I have not and will not execute any instrument in conflict therewith;

Docket No. 111760HFP "Assignment Signature Page"
Transparent conductive electrodes comprising merged metal nanowires, their structure design, and method of making such structures

INVENTOR 1		
Signature: 3-05/	Date:	6-7-2 <del>0</del> 14
Vitnessed by: <u>なれた</u> Signature	Date:	1-7-2014
Printed Name of Witness	~	
Vitnessed by: <u>ソルカン子</u> Signature	Date:	<u>5-7-2014</u>
rinted Name of Witness		

Docket No. 111762HFP\_US "Assignment Signature Page"

Transparent conductive electrodes comprising merged metal nanowires, their structure design, and method of making such structures

ASSIGNMENT

WHEREAS I/We, the below named inventor(s),

Hakfei Poon of Mountain View, California

hereby sell and assign to Nuovo Film, Inc., whose post office address is A4-308 Biobay, 218 Xinghu St.SIP, Suzhou, Jiangsu, P.R.China, hereinafter referred to as "Company", its successors and assigns our entire respective rights, titles and interests in and to the invention and improvements invented and originated by us and for United States Patent currently entitled:

Transparent conductive electrodes comprising merged metal nanowires, their structure design, and method of making such structures

Executed concurrently herewith,

and any and all applications for patent and patents therefrom in any and all countries, including all divisions, continuations, reexaminations and reissues thereof, and all rights of priority resulting from the filing of said United States application, and authorize and request any official whose duty it is to issue patents, to issue any patent on said inventions and improvements resulting therefrom to said Company, or its successors or assigns and agree that on request and without further consideration, but at the expense of said Company, we will communicate to said Company or its representatives or nominees any facts known to us respecting said inventions and improvements and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuation, reexamination and reissue applications, make all rightful oaths and generally do everything possible to aid said Company, its successors, assigns, and nominees to obtain and enforce proper patent protection for said invention and its improvements in all countries.

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Docket No. 111762HFP\_US "Assignment Signature Page"

Transparent conductive electrodes comprising merged metal nanowires, their structure design, and method of making such structures

AND We/I hereby covenant for ourselves/myself and our/my legal representatives, and agree with said Company, its successors and assigns, that We/I have granted no right or license to make, use, sell or offer to sell said improvements, to anyone except said Company, that prior to the execution of this assignment document, our/my right, title and interest in said improvements had not been otherwise encumbered, and that We/I have not and will not execute any instrument in conflict therewith;

Docket No. 111762HFP\_US "Assignment Signature Page"
Transparent conductive electrodes comprising merged metal nanowires, their structure design, and method of making such structures

ignature:	Date:	(y
lakfei POON	***************************************	
Vitnessed by: <u>ろんかも</u> Signature	Date: <u> </u>	0/4
才才之 rinted Name of Witness		
vitnessed by: 4 & 4 Signature	Date:	<del>~14</del>
3.4 ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~		

Docket No. 111763HFP\_US "Assignment Signature Page"

Transparent conductive electrodes comprising merged metal nanowires, their structure design, and method of making such structures

ASSIGNMENT

WHEREAS I/We, the below named inventor(s),

Hakfei Poon of Mountain View, California

hereby sell and assign to Nuovo Film, Inc., whose post office address is A4-308 Biobay, 218 Xinghu St.SIP, Suzhou, Jiangsu, P.R.China, hereinafter referred to as "Company", its successors and assigns our entire respective rights, titles and interests in and to the invention and improvements invented and originated by us and for United States Patent currently entitled:

Transparent conductive electrodes comprising merged metal nanowires, their structure design, and method of making such structures

Executed concurrently herewith,

and any and all applications for patent and patents therefrom in any and all countries, including all divisions, continuations, reexaminations and reissues thereof, and all rights of priority resulting from the filing of said United States application, and authorize and request any official whose duty it is to issue patents, to issue any patent on said inventions and improvements resulting therefrom to said Company, or its successors or assigns and agree that on request and without further consideration, but at the expense of said Company, we will communicate to said Company or its representatives or nominees any facts known to us respecting said inventions and improvements and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuation, reexamination and reissue applications, make all rightful oaths and generally do everything possible to aid said Company, its successors, assigns, and nominees to obtain and enforce proper patent protection for said invention and its improvements in all countries.

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Docket No. 111763HFP\_US "Assignment Signature Page"

Transparent conductive electrodes comprising merged metal nanowires, their structure design, and method of making such structures

AND We/I hereby covenant for ourselves/myself and our/my legal representatives, and agree with said Company, its successors and assigns, that We/I have granted no right or license to make, use, sell or offer to sell said improvements, to anyone except said Company, that prior to the execution of this assignment document, our/my right, title and interest in said improvements had not been otherwise encumbered, and that We/I have not and will not execute any instrument in conflict therewith;

Docket No. 111763HFP\_US "Assignment Signature Page"
Transparent conductive electrodes comprising merged metal nanowires, their structure design, and method of making such structures

INVENTOR 1	
Signature 5-7-2-14	
Signature: 5-7-20/4	Date: <u> </u>
Hakfei POON	
Witnessed by: <u>オルギ</u> Signature	Date: <u>5-7-7*/4</u>
<u> </u>	
Printed Name of Witness	
Witnessed by: <u>とんなん</u>	Date:
Signature 2例是毕	
Printed Name of Witness	

Docket No. 111761HFP\_US "Assignment Signature Page"

Transparent conductive electrodes comprising merged metal nanowires, their structure design, and method of making such structures

ASSIGNMENT

WHEREAS I/We, the below named inventor(s),

Hakfei Poon of Mountain View, California

hereby sell and assign to Nuovo Film, Inc., whose post office address is A4-308 Biobay, 218 Xinghu St.SIP, Suzhou, Jiangsu, P.R.China, hereinafter referred to as "Company", its successors and assigns our entire respective rights, titles and interests in and to the invention and improvements invented and originated by us and for United States Patent currently entitled:

Transparent conductive electrodes comprising merged metal nanowires, their structure design, and method of making such structures

Executed concurrently herewith,

and any and all applications for patent and patents therefrom in any and all countries, including all divisions, continuations, reexaminations and reissues thereof, and all rights of priority resulting from the filing of said United States application, and authorize and request any official whose duty it is to issue patents, to issue any patent on said inventions and improvements resulting therefrom to said Company, or its successors or assigns and agree that on request and without further consideration, but at the expense of said Company, we will communicate to said Company or its representatives or nominees any facts known to us respecting said inventions and improvements and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuation, reexamination and reissue applications, make all rightful oaths and generally do everything possible to aid said Company, its successors, assigns, and nominees to obtain and enforce proper patent protection for said invention and its improvements in all countries.

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Docket No. 111761HFP\_US "Assignment Signature Page"

Transparent conductive electrodes comprising merged metal nanowires, their structure design, and method of making such structures

AND We/I hereby covenant for ourselves/myself and our/my legal representatives, and agree with said Company, its successors and assigns, that We/I have granted no right or license to make, use, sell or offer to sell said improvements, to anyone except said Company, that prior to the execution of this assignment document, our/my right, title and interest in said improvements had not been otherwise encumbered, and that We/I have not and will not execute any instrument in conflict therewith;

Docket No. 111761HFP\_US "Assignment Signature Page"
Transparent conductive electrodes comprising merged metal nanowires, their structure design, and method of making such structures

INVENTOR 1	
Signature:	Date: <u>5 − 7 - 20 74</u>
Nitnessed by: <u>女化</u> Signature	Date: <u>1-7-2-14</u>
Printed Name of Witness	<b></b>
Nitnessed by: <u>インタ</u> Signature	Date: 5-7-2014
水龙 学rinted Name of Witness	

Docket No. 111764HFP\_US "Assignment Signature Page"

Transparent conductive electrodes comprising surface functionalized metal nanowires, their structure design, and method of making such structures

ASSIGNMENT

WHEREAS I/We, the below named inventor(s),

Hakfei Poon of Mountain View, California

hereby sell and assign to Nuovo Film, Inc., whose post office address is A4-308 Biobay, 218 Xinghu St.SIP, Suzhou, Jiangsu, P.R.China, hereinafter referred to as "Company", its successors and assigns our entire respective rights, titles and interests in and to the invention and improvements invented and originated by us and for United States Patent currently entitled:

Transparent conductive electrodes comprising merged metal nanowires, their structure design, and method of making such structures

Executed concurrently herewith,

and any and all applications for patent and patents therefrom in any and all countries, including all divisions, continuations, reexaminations and reissues thereof, and all rights of priority resulting from the filing of said United States application, and authorize and request any official whose duty it is to issue patents, to issue any patent on said inventions and improvements resulting therefrom to said Company, or its successors or assigns and agree that on request and without further consideration, but at the expense of said Company, we will communicate to said Company or its representatives or nominees any facts known to us respecting said inventions and improvements and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuation, reexamination and reissue applications, make all rightful oaths and generally do everything possible to aid said Company, its successors, assigns, and nominees to obtain and enforce proper patent protection for said invention and its improvements in all countries.

AND We/I hereby authorize and request our/my agents, USPTO customer number 93229, whose address is 106 Oakland PI, Los Gatos, CA 95032, to insert hereon any identification necessary or desirable for recordation of this document, including the filing date and application number of said application when known.

Docket No. 111764HFP\_US "Assignment Signature Page"

Transparent conductive electrodes comprising surface functionalized metal nanowires, their structure design, and method of making such structures

AND We/I hereby covenant for ourselves/myself and our/my legal representatives, and agree with said Company, its successors and assigns, that We/I have granted no right or license to make, use, sell or offer to sell said improvements, to anyone except said Company, that prior to the execution of this assignment document, our/my right, title and interest in said improvements had not been otherwise encumbered, and that We/I have not and will not execute any instrument in conflict therewith;

Docket No. 111764HFP\_US "Assignment Signature Page"
Transparent conductive electrodes comprising surface functionalized metal nanowires, their structure design, and method of making such structures

INVENTOR 1	
Signature:	Date: 37-7-70//
Witnessed by: <u>Ž/⁄2½</u> Signature	Date: <u> </u>
<u> </u>	
Witnessed by: <u>えんなり</u> Signature	Date: <u>5-7-3-14</u>
Printed Name of Witness	

Docket No. 111765HFP\_US "Assignment Signature Page"

Transparent conductive electrodes comprising surface functionalized metal nanowires, their structure design, and method of making such structures

ASSIGNMENT

WHEREAS I/We, the below named inventor(s),

Hakfei Poon of Mountain View, California

hereby sell and assign to Nuovo Film, Inc., whose post office address is A4-308 Biobay, 218 Xinghu St.SIP, Suzhou, Jiangsu, P.R.China, hereinafter referred to as "Company", its successors and assigns our entire respective rights, titles and interests in and to the invention and improvements invented and originated by us and for United States Patent currently entitled:

Transparent conductive electrodes comprising merged metal nanowires, their structure design, and method of making such structures

Executed concurrently herewith,

and any and all applications for patent and patents therefrom in any and all countries, including all divisions, continuations, reexaminations and reissues thereof, and all rights of priority resulting from the filing of said United States application, and authorize and request any official whose duty it is to issue patents, to issue any patent on said inventions and improvements resulting therefrom to said Company, or its successors or assigns and agree that on request and without further consideration, but at the expense of said Company, we will communicate to said Company or its representatives or nominees any facts known to us respecting said inventions and improvements and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuation, reexamination and reissue applications, make all rightful oaths and generally do everything possible to aid said Company, its successors, assigns, and nominees to obtain and enforce proper patent protection for said invention and its improvements in all countries.

AND We/I hereby authorize and request our/my agents, USPTO customer number 93229, whose address is 106 Oakland PI, Los Gatos, CA 95032, to insert hereon any identification necessary or desirable for recordation of this document, including the filing date and application number of said application when known.

Docket No. 111765HFP\_US "Assignment Signature Page"

Transparent conductive electrodes comprising surface functionalized metal nanowires, their structure design, and method of making such structures

AND We/I hereby covenant for ourselves/myself and our/my legal representatives, and agree with said Company, its successors and assigns, that We/I have granted no right or license to make, use, sell or offer to sell said improvements, to anyone except said Company, that prior to the execution of this assignment document, our/my right, title and interest in said improvements had not been otherwise encumbered, and that We/I have not and will not execute any instrument in conflict therewith;

Docket No. 111765HFP\_US "Assignment Signature Page"
Transparent conductive electrodes comprising surface functionalized metal nanowires, their structure design, and method of making such structures

Date: <u>37-2-22/9</u>
Date: <u> </u>
Date: <u>5-7-2014</u>

Docket No. 111777HF\_US\_MergeComp "Assignment Signature Page"

Transparent conductive electrodes comprising merged metal nanowires, their structure design, and method of making such structures

ASSIGNMENT

WHEREAS I/We, the below named inventor(s),

Hakfei Poon of Mountain View, California

hereby sell and assign to Nuovo Film, Inc., whose post office address is A4-308 Biobay, 218 Xinghu St.SIP, Suzhou, Jiangsu, P.R.China, hereinafter referred to as "Company", its successors and assigns our entire respective rights, titles and interests in and to the invention and improvements invented and originated by us and for United States Patent currently entitled:

Transparent conductive electrodes comprising merged metal nanowires, their structure design, and method of making such structures

Executed concurrently herewith,

and any and all applications for patent and patents therefrom in any and all countries, including all divisions, continuations, reexaminations and reissues thereof, and all rights of priority resulting from the filing of said United States application, and authorize and request any official whose duty it is to issue patents, to issue any patent on said inventions and improvements resulting therefrom to said Company, or its successors or assigns and agree that on request and without further consideration, but at the expense of said Company, we will communicate to said Company or its representatives or nominees any facts known to us respecting said inventions and improvements and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuation, reexamination and reissue applications, make all rightful oaths and generally do everything possible to aid said Company, its successors, assigns, and nominees to obtain and enforce proper patent protection for said invention and its improvements in all countries.

AND We/I hereby authorize and request our/my agents, USPTO customer number 93229, whose address is 106 Oakland PI, Los Gatos, CA 95032, to insert hereon any identification necessary or desirable for recordation of this document, including the filing date and application number of said application when known.

Docket No. 111777HF\_US\_MergeComp "Assignment Signature Page"
Transparent conductive electrodes comprising merged metal nanowires, their structure design, and method of making such structures

AND We/I hereby covenant for ourselves/myself and our/my legal representatives, and agree with said Company, its successors and assigns, that We/I have granted no right or license to make, use, sell or offer to sell said improvements, to anyone except said Company, that prior to the execution of this assignment document, our/my right, title and interest in said improvements had not been otherwise encumbered, and that We/I have not and will not execute any instrument in conflict therewith;

Docket No. 111777HF\_US\_MergeComp "Assignment Signature Page"
Transparent conductive electrodes comprising merged metal nanowires, their structure design, and method of making such structures

INVENTOR 1

Signature:	Date:	5-7-2=14
arrei Pouri		
Witnessed by: <u> </u>	Date:	J-7-2014
Britis		
Printed Name of Witness		
Witnessed by: ゲルタン	Date:	5-7-2014
Signature 五长发学		
Printed Name of Witness		

Docket No. 111777HFP\_US\_Method "Assignment Signature Page" Method of making merged junction in metal nanowires

**ASSIGNMENT** 

WHEREAS I/We, the below named inventor(s),

Hakfei Poon of Mountain View, California

hereby sell and assign to Nuovo Film, Inc., whose post office address is A4-308 Biobay, 218 Xinghu St.SIP, Suzhou, Jiangsu, P.R.China, hereinafter referred to as "Company", its successors and assigns our entire respective rights, titles and interests in and to the invention and improvements invented and originated by us and for United States Patent currently entitled:

#### Method of making merged junction in metal nanowires

Executed concurrently herewith,

and any and all applications for patent and patents therefrom in any and all countries, including all divisions, continuations, reexaminations and reissues thereof, and all rights of priority resulting from the filing of said United States application, and authorize and request any official whose duty it is to issue patents, to issue any patent on said inventions and improvements resulting therefrom to said Company, or its successors or assigns and agree that on request and without further consideration, but at the expense of said Company, we will communicate to said Company or its representatives or nominees any facts known to us respecting said inventions and improvements and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuation, reexamination and reissue applications, make all rightful oaths and generally do everything possible to aid said Company, its successors, assigns, and nominees to obtain and enforce proper patent protection for said invention and its improvements in all countries.

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Docket No. 111777HFP\_US\_Method "Assignment Signature Page" Method of making merged junction in metal nanowires

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Docket No. 111777HFP\_US\_Method "Assignment Signature Page" Method of making merged junction in metal nanowires

INVENTOR 1	
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**RECORDED: 05/29/2014** 

Signature:	Towns	_ Date:	5-7-7014
Hakfei POON	i,		
Witnessed by:	<u> </u>	Date:	J-7-7014
	Signature		
	\$113h_		
Printed Name of	VVitness		
Witnessed by:	Signature	Date:	5.7-2014
2.冬。	Signature 4	_	
Printed Name of	Witness		