

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
Stylesheet Version v1.2

EPAS ID: PAT3199479

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
HANERGY HOLDING GROUP LTD.	11/25/2014

RECEIVING PARTY DATA

Name:	APOLLO PRECISION FUJIAN LIMITED
Street Address:	JIANGNAN HI-TECH PARK
Internal Address:	NANHUAN ROAD, LICHENG DISTRICT
City:	QUANZHOU, FUJIAN
State/Country:	CHINA
Postal Code:	362000

PROPERTY NUMBERS Total: 39

Property Type	Number
Patent Number:	8251576
Patent Number:	7544884
Patent Number:	8618410
Patent Number:	7897020
Patent Number:	7785921
Patent Number:	8017976
Patent Number:	8076174
Patent Number:	8048707
Patent Number:	7838763
Patent Number:	6974976
Application Number:	11451616
Application Number:	11451604
Application Number:	11812515
Application Number:	12907783
Application Number:	12654808
Application Number:	13334296
Application Number:	12733257
Application Number:	12824605
Application Number:	13038611

PATENT

Property Type	Number
Application Number:	12907762
Application Number:	13173407
Application Number:	13091989
Application Number:	14104203
Application Number:	12907670
Application Number:	13670804
Application Number:	13720238
Application Number:	13525593
Application Number:	13355565
Application Number:	13529317
Application Number:	61272679
Application Number:	61272680
Application Number:	61272681
Application Number:	61274131
Application Number:	61282214
Application Number:	61282297
Application Number:	61397712
Application Number:	61557010
Application Number:	61561981
Application Number:	61578504

CORRESPONDENCE DATA

Fax Number: (703)391-2901

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.

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Address Line 2: 15TH FLOOR

Address Line 4: RESTON, VIRGINIA 20191

ATTORNEY DOCKET NUMBER:	7514-PAT
NAME OF SUBMITTER:	PATRICK MCCONVILLE
SIGNATURE:	/pmcconville/
DATE SIGNED:	01/27/2015

Total Attachments: 7

- source=Assignment - Hanergy to Apollo Precision Fujian Limited and Appendix#page1.tif
- source=Assignment - Hanergy to Apollo Precision Fujian Limited and Appendix#page2.tif
- source=Assignment - Hanergy to Apollo Precision Fujian Limited and Appendix#page3.tif
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ASSIGNMENT AND AGREEMENT

WHEREAS, Hanergy Holding Group Ltd., having its principal place of business at No. 0-A, Anli Road, Chaoyang District, Beijing, P.R. CHINA (hereinafter referred to singularly and collectively as "ASSIGNOR"), states that it owns the entire right, title and interest in the inventions described and/or claimed in the patents and applications listed on the attached Schedule A.

WHEREAS, Apollo Precision Fujian Limited, having its principal place of business at Jiangnan Hi-Tech Park, Nanhuan Road, Licheng District, Quanzhou City, Fujian Province 362000, P.R. CHINA (hereinafter referred to as "ASSIGNEE") is desirous of acquiring the entire interest therein;

NOW THEREFORE, in view of good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, ASSIGNOR has sold, assigned, and transferred, and by these presents hereby sells, assigns, and transfers, unto ASSIGNEE, its successors and assigns, the full and exclusive right, title, and interest in and to (a) the invention or inventions identified in the attached Schedule A, (b) the Letters Patents for invention or inventions identified in the attached Schedule A and all other applications for Letters Patent of the United States and countries foreign thereto for the invention or inventions identified in the attached Schedule A, (c) all Letters Patent which may issue from said applications in the United States and countries foreign thereto, (d) all divisions, continuations, reissues, and extensions of said applications and Letters Patent, and (e) the right to claim for any of said applications the full benefits and priority rights under the International Convention and any other international agreement to which the United States adheres; such right, title, and interest to be held and enjoyed by ASSIGNEE, its successors and assigns, to the full end of the term or terms for which any and all such Letters Patent may be granted as fully and entirely as would have been held and enjoyed by ASSIGNOR had this Assignment not been made.

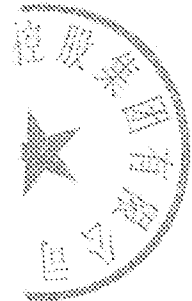
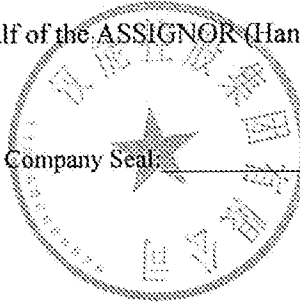
ASSIGNOR HEREBY AUTHORIZES AND REQUESTS the Commissioner of Patents and Trademarks to issue said Letters Patent to ASSIGNEE as assignee of the entire interest, for the sole use and benefit of ASSIGNEE, its successors and assigns.

ASSIGNOR HEREBY AGREES (a) to execute and deliver, upon request by ASSIGNEE, all lawful papers including, but not limited to, original, divisional, continuation, and reissue applications, renewals, assignments, powers of attorney, oaths, affidavits, declarations, depositions; and (b) to provide all reasonable assistance to ASSIGNEE, its successors and assigns, in obtaining and enforcing proper title in and protection for said invention or inventions, improvements, and modifications under the intellectual property laws of the United States and countries foreign thereto.

The undersigned is authorized to act on behalf of the ASSIGNOR (Hanergy Holding Group Ltd.):

Date: _____

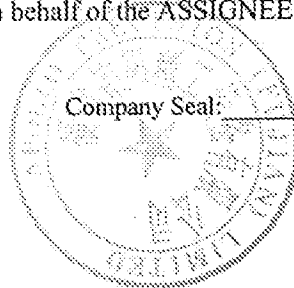
Company Seal: _____



The undersigned is authorized to act on behalf of the ASSIGNEE (Apollo Precision Fujian Limited):

Date: _____

Company Seal: _____



SCHEDULE A

Fujian

Patent/App No.	Country	Filing/Grant Date	Title	Docket No.	Status
1	US	28-Aug-12	Cold Lift-Off Test for Strenght of Film Stack Subjected to Thermal Loading	--	GRANTED
2	US	9-Jun-09	Manufacturing Apparatus and Method for Large-Scale Production of Thin-Film Solar Cells	7512-117DIV	GRANTED
3	US	31-Dec-13	Manufacturing Apparatus and Method for Large-Scale Production of Thin-Film Solar Cells	7512-140/DVIC	GRANTED
4	US	1-Mar-11	Method for Alkali Doping of Thin Film Photovoltaic Materials	7512-143	GRANTED
5	US	15-Nov-11	Thin-Film Photovoltaic Power Element with Integrated Low-Profile High-Efficiency DC-DC Converter	7512-147	GRANTED
6	US	31-Aug-10	Barrier for Doped Molybdenum Targets	7512-150	GRANTED
7	US	13-Sep-11	Barrier for Doped Molybdenum Targets	7512-191/DIV	GRANTED
8	US	13-Dec-11	Method of Forming a Sputtering Target	7512-192/C2	GRANTED
9	US	1-Nov-11	Sulfur Salt Containing CIG Targets, Methods of Making and Methods of Use Thereof	7512-198	GRANTED
10	US	11-Nov-10	Manufacturing Apparatus and Method for Large-Scale Production of Thin-Film Solar Cells	7512-140C	GRANTED
11	China PR	19-Aug-09	Manufacturing Apparatus and Method for Large-Scale Production of Thin-Film Solar Cells	7512-120CN	GRANTED
12	Europe	25-Jan-12	Photovoltaic Module with Integrated Current Collection and Interconnection	7512-123EP	GRANTED
13	France	25-Jan-12	Photovoltaic Module with Integrated Current Collection and Interconnection	7512-123FR	GRANTED
14	Germany	25-Jan-12	Photovoltaic Module with Integrated Current Collection and Interconnection	7512-123DE	GRANTED
15	Italy	25-Jan-12	Photovoltaic Module with Integrated Current Collection and Interconnection	7512-123IT	GRANTED
16	UK	25-Jan-12	Photovoltaic Module with Integrated Current Collection and Interconnection	7512-123GB	GRANTED
17	Germany	12-Aug-10	Photovoltaic Devices Protected From Environment	7512-142DE	GRANTED

SCHEDULE A

Fujian

Patent/App No.	Country	Filing/Grant Date	Title	Docket No.	Status
18	Singapore	30-Dec-11	Method and Apparatus for Controllable Sodium Delivery for Thin Film Photovoltaic Materials	7512-184SG	GRANTED
19	US	13-Dec-05	Thin-Film Solar Cells	7512-116	GRANTED
20	Taiwan	01-Mar-06	Manufacturing Apparatus and Method for Large-Scale Production of Thin-Film Solar Cells	7512-118TW	GRANTED
21	China PR	23-May-12	Manufacturing Apparatus and Method for Large-Scale Production of Thin-Film Solar Cells	7512-149CN	GRANTED
22	US	13-Jun-06	Photovoltaic Module with Integrated Current Collection and Interconnection	7512-102	PENDING
23	US	13-Jun-06	Photovoltaic Module with Insulating Interconnect Carrier	7512-106	PENDING
24	US	19-Jun-07	Photovoltaic Module Utilizing an Integrated Flex Circuit and Incorporating a Bypass Diode	7512-109	PENDING
25	US	19-Oct-10	Method of Making a CIG Target by Spray Forming	7512-155	PENDING
26	US	5-Jan-10	Photovoltaic Materials with Controllable Zinc and Sodium Content and Method of Making Thereof	7512-163	PENDING
27	US	22-Dec-11	Reactive Sputtering of ZnS(O,H) and InS(O,H) for Use as a Buffer Layer	7512-165	PENDING
28	US	11-Jul-08	Photovoltaic Device with a Luminescent Down-Shifting Material	7512-172/US	PENDING
29	US	3-Nov-10	Photovoltaic Device and Method and System for Making Photovoltaic Device	7512-175	PENDING
30	US	28-Jun-10	Protective Layers for a Glass Barrier in a Photovoltaic Device	7512-177	PENDING
31	US	2-Mar-11	Method of Sensing Local Sputtering Target Selenization	7512-189	PENDING
32	US	19-Oct-10	Photovoltaic Cell with Copper Poor CIGS Absorber Layer and Method of Making Thereof	7512-199	PENDING
33	US	30-Jun-11	Photovoltaic Device with Resistive CIGS Layer at the Back Contact	7512-203	PENDING

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Patent/App No.	Country	Filing/Grant Date	Title	Docket No.	Status
34	US	21-Apr-11	Combination Photovoltaic and Wind Power Generation Installation	--	PENDING
35	Canada	27-Feb-09	Interconnect Assembly	7512-202CA	PENDING
36	Taiwan	18-Jun-08	Photovoltaic Module Utilizing an Integrated Flex Circuit and Incorporating a Bypass Diode	7512-131TW	PENDING
37	Taiwan	11-Jul-08	Photovoltaic Module with Integrated Energy Storage	7512-134TW	PENDING
38	Taiwan	11-Jul-08	Rooftop Photovoltaic Systems	7512-136TW	PENDING
39	Europe	10-Feb-10	Thin-Film Photovoltaic Power Element with Integrated Low-Profile High-Efficiency DC-DC Converter	7512-170EP	PENDING
40	Europe	17-Feb-10	Protective Layer for Large-Scale Production of Thin-Film Solar Cells	7512-171EP	PENDING
41	Europe	9-Apr-10	Method and Apparatus for Controllable Sodium Delivery for Thin Film Photovoltaic Materials	7512-184EP	PENDING
42	S. Korea	9-Apr-10	Method and Apparatus for Controllable Sodium Delivery for Thin Film Photovoltaic Materials	7512-184KR	PENDING
43	Europe	27-Feb-09	Interconnect Assembly	7512-202EP	PENDING
44	S. Korea	27-Feb-09	Interconnect Assembly	7512-202KR	PENDING
45	Europe	24-Sep-03	Manufacturing Apparatus and Method for Large-Scale Production of Thin-Film Solar Cells	7512-121EP	PENDING
46	US	12-Dec-13	Manufacturing Apparatus and Method for Large-Scale Production of Thin-Film Solar Cells	7512-140/DC2	PENDING
47	US	19-Oct-10	Method of Making a CIG Target by Gravity Casting	7512-156	PENDING
48	US	7-Nov-12	Solar Panel with Integrated Mounting Clip/Shipping Support	7512-201	PENDING
49	US	19-Dec-12	Photovoltaic Cell with High Efficiency CIGS Absorber Layer with Low Minority Carrier	7512-208	PENDING

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Fujian

Patent/App No.	Country	Filing/Grant Date	Title	Docket No.	Status
50	US	18-Jun-12	Lifetime and Method of Making Thereof Sputtering Target Including a Feature to Reduce Chalcogen Build Up and Arcing on a Backing Tube	7512-210	PENDING
51	Europe	10-Feb-10	Thin-Film Photovoltaic Power System with Integrated Low-Profile High-Efficiency Inverter	7512-169EP	PENDING
52	Japan	9-Apr-10	Method and Apparatus for Controllable Sodium Delivery for Thin Film Photovoltaic Materials	7512-184JP	PENDING
53	US	23-Jan-12	Apparatus And Method Of Forming A Sputtering Target		PENDING
54	US	21-June-12	Flexible Photovoltaic Module With Stiffener Tabs		PENDING
55	US	20-Oct-09	Method Of Making A Cig Target By Cold Spraying	7512-158/P	EXPIRED
56	US	20-Oct-09	Method Of Making A Cig Target By Gravity Casting	7512-156/P	EXPIRED
57	US	20-Oct-09	Method Of Making A Cig Target By Spray Forming	7512-155/P	EXPIRED
58	US	15-Jan-10	System And Method For Reducing Deposition On A View Port Of A Deposition Chamber	7512-166/P	EXPIRED
59	US	31-Dec-09	Tape Applying Apparatus And Method	7512-162/P	EXPIRED
60	US	15-Jan-10	Continuous Web Apparatus And Method Using An Air To Vacuum Seal And Accumulator	7512-164/P	EXPIRED

SCHEDULE A

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Patent/App No.	Country	Filing/Grant Date	Title	Docket No.	Status
61	US	24-Sept-09	Cooling Water Jet Pack For High Power Rotary Cathodes	7512-153/P	EXPIRED
62	US	8-Nov-11	Solar Panel With Integrated Mounting Clip/Shipping Support	7512-201/P	EXPIRED
63	US	21-Nov-11	Sodium Concentration In A Plasma As A Metric Of Field Power Loss In A Thin Film Photovoltaic Cell And Method Of Making Thereof	7512-207/P	EXPIRED
64	US	21-Dec-11	Photovoltaic Cell With High Efficiency Cigs Absorber Layer With Low Minority Carrier Lifetime And Method Of Making Thereof	7512-208/P	EXPIRED