

## PATENT ASSIGNMENT COVER SHEET

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<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
GLOBAL SOLAR ENERGY, INC.	04/23/2014
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	HANERGY HI-TECH POWER (HK) LIMITED
<b>Street Address:</b>	AUSTIN ROAD
<b>Internal Address:</b>	UNITS 7606-7607 INTERNATIONAL COMMERCE CENTRE 1
<b>City:</b>	WEST KL
<b>State/Country:</b>	HONG KONG
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	14708118
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(503)295-6679
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<b>ATTORNEY DOCKET NUMBER:</b>	TPG.320CON
<b>NAME OF SUBMITTER:</b>	SHAWN J. KOLITCH
<b>SIGNATURE:</b>	/ Shawn J. Kolitch /
<b>DATE SIGNED:</b>	09/25/2015
<b>Total Attachments: 12</b>	
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## ASSIGNMENT

WHEREAS, GLOBAL SOLAR ENERGY, INC., a corporation organized under the laws of the State of Arizona, having its principal place of business in Tucson, Arizona, is the assignee of 100% interest<sup>1</sup> of the inventions that are the subject of the patents and patent applications listed in the table appended as Exhibit A, hereinafter referred to as “The Inventions”; and

WHEREAS, HANERGY HI-TECH POWER (HK) LIMITED, a corporation organized under the laws of Hong Kong, having its principal place of business in West KL, Hong Kong, is desirous of acquiring an interest therein;

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which hereby are acknowledged, GLOBAL SOLAR ENERGY, INC., has sold, assigned, and transferred, and does hereby sell, assign, and transfer, to HANERGY HI-TECH POWER (HK) LIMITED, its successors and assigns, the full and exclusive right to The Inventions in the United States and its territorial possessions and in all foreign countries, and the entire right, title, and interest in and to any and all Letters Patent that may be granted therefor in the United States and its territorial possessions and in any and all foreign countries, and in and to any and all divisions, continuations, reissues, substitutions, and extensions thereof.

GLOBAL SOLAR ENERGY, INC. hereby authorizes and request the Patent Office officials in the United States and any and all foreign countries to issue any and all of said Letters Patent, when granted, to HANERGY HI-TECH POWER (HK) LIMITED, as the assignee of GLOBAL SOLAR ENERGY, INC.’s entire right, title, and interest in

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<sup>1</sup> Global Solar Energy, Inc. is the assignee of 100% interest in The Inventions with the exception of U.S. Patent Nos. 6,310,280 and 6,372,538, which are co-owned with the University of Delaware. In those cases, the intent of this document is to assign 100% of the interest owned by Global Solar Energy, Inc. to Hanergy Hi-Tech Power (HK) Limited.

and to the same, for the sole use of HANERGY HI-TECH POWER (HK) LIMITED, and its successors and assigns.

Further, GLOBAL SOLAR ENERGY, INC. hereby covenants and agrees to and with HANERGY HI-TECH POWER (HK) LIMITED, and its successors and assigns, at the time of execution and delivery of this document, that GLOBAL SOLAR ENERGY, INC. is the sole and lawful owner of the entire right, title, and interest described in Exhibit A in and to The Inventions, and that the same are unencumbered, and that GLOBAL SOLAR ENERGY, INC. has good and full right and lawful authority to sell and convey the same in the manner herein set forth.

Further, GLOBAL SOLAR ENERGY, INC. agrees that it will communicate to HANERGY HI-TECH POWER (HK) LIMITED, or its representatives, any facts known to it respecting The Inventions, and testify in any legal proceedings, sign all lawful papers, execute all divisional, continuation, reissue, substitution, and extension applications, execute all necessary assignment papers to cause any and all of said Letters Patent to be issued to HANERGY HI-TECH POWER (HK) LIMITED, make all rightful oaths, and generally do everything possible to aid HANERGY HI-TECH POWER (HK) LIMITED, and its successors and assigns, to obtain and enforce proper protection for The Inventions in the United States and in any and all foreign countries.

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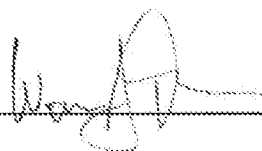
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IN TESTIMONY WHEREOF, I have hereunto set my hand this 23rd  
day of April, 2014.

GLOBAL SOLAR ENERGY, INC.

  
Dr. Jeffrey S. BRITT, President & CEO

Witness:

Signature: 

Name: William J. Trenn

Address: 8500 S. Rita Road

City & State: Tucson, Arizona

Exhibit A to Assignment to HANERGY HI-TECH POWER (HK) LIMITED

*U.S. Patent Applications and Patents*

<b>Kolisch Ref. (Attorney Docket)</b>	<b>Title</b>	<b>Serial No. Filing Date</b>	<b>Patent No. Issued Date</b>
TPG.301	Thin-Film, Flexible Photovoltaic Module	09/527,542 3/16/2000	6,310,281 <sup>1</sup> 10/30/2001
TPG.302	Fabrication Of Thin-Film, Flexible Photovoltaic Module	09/527,316 3/16/2000	6,372,538 <sup>2</sup> 4/16/2002
TPG.303	Vapor-Phase, Plural-Constituent, Co-Deposition Environment for Production of Thin-Film-Device Layer	09/613,950 <sup>3</sup> 7/11/2000	N/A
TPG.304	System for Creating Vapor-Phase, Plural-Constituent, Co-Deposition Environment for Production of Thin-Film-Device Layer	09/614,532 <sup>4</sup> 7/11/2000	N/A
TPG.305	Ceation of Vapor-Phase, Plural-Constituent Co-Deposition Environment for Production of Thin-Film-Device Layer	09/614,539 <sup>5</sup> 7/11/2000	N/A
TPG.306	Nozzle-Based, Vapor-Phase, Plume Delivery Structure For Use In Production Of Thin-Film Deposition Layer	09/613,951 7/11/2000	7,194,197 3/20/2007

<sup>1</sup> U.S. Patent No. 6,310,281 is co-owned with University of Delaware of Newark, Delaware, U.S., Assignment from Hanket, Birkmire and Russell recorded January 8, 2002, at reel 012435, frame 0554.

<sup>2</sup> U.S. Patent No. 6,372,538 is co-owned with University of Delaware of Newark, Delaware, U.S., Assignment from Hanket, Birkmire and Russell recorded February 15, 2002, at reel 012626, frame 0065.

<sup>3</sup> U.S. Patent Application Serial No. 09/613,950 is a continuation of U.S. Patent Application Serial Nos. 09/527,542 and 09/527,316.

<sup>4</sup> U.S. Patent Application Serial No. 09/614,532 is a continuation of U.S. Patent Application Serial Nos. 09/527,542 and 09/527,316.

<sup>5</sup> U.S. Patent Application Serial No. 09/614,539 is a continuation of U.S. Patent Application Serial Nos. 09/527,542 and 09/527,316.

Exhibit A to Assignment to HANERGY HI-TECH POWER (HK) LIMITED

Kolisch Ref. (Attorney Docket)	Title	Serial No. Filing Date	Patent No. Issued Date
TPG.306CON	Nozzle-Based, Vapor-Phase, Plume Delivery Structure For Use In Production Of Thin-Film Deposition Layer	11/725,975 3/19/2007	7,760,992 7/20/2010
TPG.306CON1	Nozzle-Based, Vapor-Phase, Plume Delivery Structure For Use In Production Of Thin-Film Deposition Layer	12/154,548 5/22/2008	8,190,006 5/29/2012
TPG.306CON2	Nozzle-Based, Vapor-Phase, Plume Delivery Structure For Use In Production Of Thin-Film Deposition Layer	12/154,549 5/22/2008	8,059,945 11/15/2011
TPG.306CON3	Nozzle-Based, Vapor-Phase, Plume Delivery Structure For Use In Production Of Thin-Film Deposition Layer	12/154,550 5/22/2008	8,184,963 5/22/2012
TPG.307	Thin Film Solar Cell String	12/364,440 2/2/2009	N/A
TPG.307A	Thin Film Solar Cell String	12/587,111 9/30/2009	N/A
TPG.307CON	Thin Film Solar Cell String	13/482,699 5/29/2012	N/A
TPG.308A	Apparatus And Methods For Manufacturing Thin-Film Solar Cells	12/424,497 4/15/2009	8,202,368 6/19/2012
TPG.308B	Apparatus And Methods For Manufacturing Thin-Film Solar Cells	12/424,500 4/15/2009	N/A

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Kolisch Ref. (Attorney Docket)	Title	Serial No. Filing Date	Patent No. Issued Date
TPG.308C	Apparatus And Methods For Manufacturing Thin-Film Solar Cells	12/424,505 4/15/2009	8,198,123 6/12/2012
TPG.308D	Apparatus And Methods For Manufacturing Thin-Film Solar Cells	12/424,510 4/15/2009	N/A
TPG.308E	Apparatus And Methods For Manufacturing Thin-Film Solar Cells	12/424,512 4/15/2009	7,968,353 6/28/2011
TPG.309	Buffer Layer Deposition For Thin-Film Solar Cells	12/397,846 3/4/2009	8,062,922 11/22/2011
TPG.309A	Solution Containment During Buffer Layer Deposition	12/397,863 3/4/2009	8,609,182 12/17/2013
TPG.309ACIP	Solution Containment During Buffer Layer Deposition	14/108,193 12/16/2013	N/A
TPG.309B	Heating For Buffer Layer Deposition	12/397,873 3/4/2009	8,277,869 10/2/2012
TPG.309C	Feedback For Buffer Layer Deposition	12/397,899 3/4/2009	N/A
TPG.309CON	Buffer Layer Deposition For Thin-Film Solar Cells	13/273,013 10/13/2011	N/A
TPG.311	Apparatus And Methods Of Mixing And Depositing Thin Film Photovoltaic Compositions	12/980,185 12/28/2010	N/A



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Kolisch Ref. (Attorney Docket)	Title	Serial No. Filing Date	Patent No. Issued Date
TPG.311CON	Apparatus And Methods Of Mixing And Depositing Thin Film Photovoltaic Compositions	14/194,407 2/28/2014	N/A
TPG.312	Protective Back Contact Layer For Solar Cells	12/976,976 12/22/2010	N/A
TPG.313	Laminated Solar Cell Interconnection System	12/980,151 12/28/2010	N/A
TPG.313CON	Laminated Solar Cell Interconnection System	14/165,933 1/28/2014	N/A
TPG.314	Integrated Thin Film Solar Cell Interconnection	12/980,201 12/28/2010	N/A
TPG.314CON	Integrated Thin Film Solar Cell Interconnection	14/151,040 1/9/2014	N/A
TPG.315	Thin Film Solar Cell Strings	12/976,911 12/22/2010	N/A
TPG.318	Junction Box Attachment To Solar Module Laminate	13/165,114 6/21/2011	N/A
TPG.319	Multi-Layer Solar Module Backsheet	13/104,568 5/10/2011	N/A
TPG.320	Two-Part Screen Printing For Solar Collection Grid	13/278,584 10/21/2011	N/A
TPG.322	Flexible Building-Integrated Photovoltaic Structure	13/222,991 8/31/2011	N/A

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Kolisch Ref. (Attorney Docket)	Title	Serial No. Filing Date	Patent No. Issued Date
TPG.323	Barrier And Planarization Layer For Thin-Film Photovoltaic Cell	13/351,170 1/16/2012	N/A
TPG.326	Integrated Thin Film Solar Cell Interconnection	13/865,099 4/17/2013	N/A
TPG.327	Mounting Structures For Photovoltaic Cells	14/155,139 1/14/2014	N/A
TPG.328	Photovoltaic Interconnect Systems, Devices, And Methods	14/166,223 1/28/2014	N/A
TPG.329	Monolithically Integrated Diodes In Thin-Film Photovoltaic Devices	10/143,750 5/14/2002	6,690,041 2/10/2004

*Foreign Patent Applications and Patents*

<b>Kolisch Ref. (Attorney Docket)</b>	<b>Title</b>	<b>Country</b>	<b>Serial No. Filing Date</b>	<b>Patent No. Issued Date</b>
TPG.301A	Thin-Film, Flexible Photovoltaic Module	Int'l (PCT)	PCT/US2001/008613 3/15/2001	N/A
TPG.307ADE	Thin Film Solar Cell String	Germany	112009002356.8 9/30/2009	N/A
TPG.307APCT	Thin Film Solar Cell String	Int'l (PCT)	PCT/US2009/005418 9/30/2009	N/A
TPG.307DE	Thin Film Solar Cell String	Germany	212009000025.6 2/2/2009	212009000025.6 9/23/2010
TPG.307PCT	Thin Film Solar Cell String	Int'l (PCT)	PCT/US2009/000690 2/2/2009	N/A
TPG.308CJP	Apparatus And Methods For Manufacturing Thin-Film Solar Cells	Japan	2014-47253 3/11/2014	N/A
TPG.308EJP	Apparatus And Methods For Manufacturing Thin-Film Solar Cells	Japan	2014-47254 3/11/2014	N/A
TPG.308EP	Apparatus And Methods For Manufacturing Thin-Film Solar Cells	Europe	09755549.4-1353 4/15/2009	N/A
TPG.308JP	Apparatus And Methods For Manufacturing Thin-Film Solar Cells	Japan	2011-505185 4/15/2009	N/A
TPG.308PCT	Apparatus And Methods For Manufacturing Thin-Film Solar Cells	Int'l (PCT)	PCT/US2009/040723 4/15/2009	N/A

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Kolisch Ref. (Attorney Docket)	Title	Country	Serial No. Filing Date	Patent No. Issued Date
TPG.309ADE	Solution Containment During Buffer Layer Deposition	Germany	212009000031.0 3/4/2009	212009000031.0 11/4/2010
TPG.309APCT	Solution Containment During Buffer Layer Deposition	Int'l (PCT)	PCT/US2009/001429 3/4/2009	N/A
TPG.309BDE	Heating For Buffer Layer Deposition	Germany	112009000532.2 3/4/2009	N/A
TPG.309BJP	Heating For Buffer Layer Deposition	Japan	2010-549667 3/4/2009	N/A
TPG.309BPCT	Heating For Buffer Layer Deposition	Int'l (PCT)	PCT/US2009/001427 3/4/2009	N/A
TPG.309CDE	Feedback For Buffer Layer Deposition	Germany	212009000032.9 3/4/2009	212009000032.9 11/4/2010
TPG.309CPCT	Feedback For Buffer Layer Deposition	Int'l (PCT)	PCT/US2009/001432 3/4/2009	N/A
TPG.309EP	Buffer Layer Deposition For Thin-Film Solar Cells	Europe	09717247.2 3/4/2009	N/A
TPG.309JP	Buffer Layer Deposition For Thin-Film Solar Cells	Japan	2010-549668 9/3/2010	N/A
TPG.309PCT	Buffer Layer Deposition For Thin-Film Solar Cells	Int'l (PCT)	PCT/US2009/001428 3/4/2009	N/A
TPG.311PCT	Apparatus And Methods Of Mixing And Depositing Thin Film Photovoltaic Compositions	Int'l (PCT)	PCT/US2010/062255 12/28/2010	N/A

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Kolisch Ref. (Attorney Docket)	Title	Country	Serial No. Filing Date	Patent No. Issued Date
TPG.312DE	Protective Back Layer For Thin-Film Solar Cells	Germany	102010056333.1 12/27/2010	N/A
TPG.313PCT	Laminated Solar Cell Interconnection System	Int'l (PCT)	PCT/US2010/062253 12/28/2010	N/A
TPG.314EP	Integrated Thin Film Solar Cell Interconnection	Europe	10844268.2-2308 12/28/2010	N/A
TPG.314PCT	Integrated Thin Film Solar Cell Interconnection	Int'l (PCT)	PCT/US2010/062259 12/28/2010	N/A
TPG.315DE	Thin Film Solar Cells By Folding	Germany	102010056340.4 12/27/2010	N/A
TPG.319PCT	Multi-Layer Solar Module Backsheet	Int'l (PCT)	PCT/US2011/035909 5/10/2011	N/A
TPG.322CN	Flexible Building-Integrated Photovoltaic Structure	China	201180041663.2 2/27/2013	N/A
TPG.322DE	Flexible Building-Integrated Photovoltaic Structure	Germany	112011102882.2 8/31/2011	N/A
TPG.322HK	Flexible Building-Integrated Photovoltaic Structure	Hong Kong	13113799.1 12/11/2013	N/A
TPG.322JP	Flexible Building-Integrated Photovoltaic Structure	Japan	2013-527269 8/31/2011	N/A
TPG.322PCT	Flexible Building-Integrated Photovoltaic Structure	Int'l (PCT)	PCT/US2011/049983 8/31/2011	N/A

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Kolisch Ref. (Attorney Docket)	Title	Country	Serial No. Filing Date	Patent No. Issued Date
TPG.326PCT	Integrated Thin Film Solar Cell Interconnection	Int'l (PCT)	PCT/US2013/037024 4/17/2013	N/A
TPG.327PCT	Mounting Structures For Photovoltaic Cells	Int'l (PCT)	PCT/US2014/011513 1/14/2014	N/A
TPG.328PCT	Photovoltaic Interconnect Systems, Devices, And Methods	Int'l (PCT)	PCT/US2014/013348 1/28/2014	N/A