

TRADEMARK ASSIGNMENT

Electronic Version v1.1  
 Stylesheet Version v1.1

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	SECURITY INTEREST

CONVEYING PARTY DATA

Name	Formerly	Execution Date	Entity Type
GTAT CORPORATION		01/31/2012	CORPORATION: DELAWARE
GT CRYSTAL SYSTEMS, LLC		01/31/2012	LIMITED LIABILITY COMPANY: DELAWARE
GT ADVANCED CZ LLC		01/31/2012	LIMITED LIABILITY COMPANY: DELAWARE

RECEIVING PARTY DATA

Name:	BANK OF AMERICA, N.A.
Street Address:	101 N. TRYON STREET
Internal Address:	ONE INDEPENDENCE CENTER
City:	CHARLOTTE
State/Country:	NORTH CAROLINA
Postal Code:	28255
Entity Type:	NATIONAL ASSOCIATION: UNITED STATES

PROPERTY NUMBERS Total: 8

Property Type	Number	Word Mark
Registration Number:	3523763	HEM
Registration Number:	3596183	FAST
Registration Number:	1150725	CRYSTAL SYSTEMS
Registration Number:	1084417	
Registration Number:	2612767	GT SOLAR
Serial Number:	77720046	SMARTSOLAR
Registration Number:	3881687	CONFLUENCE SOLAR
Registration Number:	3877511	HICZ

CORRESPONDENCE DATA

Fax Number: (650)838-5109

Phone: 650-838-3743  
Email: jlik@shearman.com  
*Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent via US Mail.*  
Correspondent Name: Jordan Altman  
Address Line 1: 599 Lexington Avenue  
Address Line 2: Shearman & Sterling LLP  
Address Line 4: New York, NEW YORK 10022

ATTORNEY DOCKET NUMBER:	37051/35
NAME OF SUBMITTER:	JORDAN ALTMAN
Signature:	/JORDAN ALTMAN/
Date:	02/07/2012

**Total Attachments: 14**

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INTELLECTUAL PROPERTY SECURITY AGREEMENT

This INTELLECTUAL PROPERTY SECURITY AGREEMENT (as amended, amended and restated, supplemented or otherwise modified from time to time, the “*IP Security Agreement*”) dated January 31, 2012, is made by the Persons listed on the signature pages hereof (collectively, the “*U.S. Grantors*”) in favor of BANK OF AMERICA, N.A., as collateral agent (the “*Collateral Agent*”) for the Secured Parties (as defined in the Credit Agreement referred to below).

WHEREAS, GTAT CORPORATION (f/k/a GT Solar Incorporated), a Delaware corporation (the “*U.S. Borrower*”), GT ADVANCED TECHNOLOGIES LIMITED (f/k/a GT Solar Hong Kong Ltd.) a company organized under the laws of Hong Kong (the “*Hong Kong Borrower*”) and together with the U.S. Borrower, the “*Borrowers*” and each a “*Borrower*”), GT ADVANCED TECHNOLOGIES, INC. (f/k/a GT Solar International, Inc.), a Delaware corporation (“*Holdings*”), have entered into a Credit Agreement dated as of January 31, 2012 (as amended, amended and restated, supplemented or otherwise modified from time to time, the “*Credit Agreement*”), with BANK OF AMERICA, N.A., as Administrative Agent, BANK OF AMERICA, N.A., as Collateral Agent, and the Secured Parties party thereto. Terms defined in the Credit Agreement and not otherwise defined herein are used herein as defined in the Credit Agreement.

WHEREAS, as a condition precedent to the making of Loans and the issuance of Letters of Credit by the Secured Parties under the Credit Agreement and the entry into Secured Hedge Agreements by the Hedge Banks from time to time, each U.S. Grantor has executed and delivered that certain U.S. Security Agreement dated January 31, 2012 made by the U.S. Grantors to the Collateral Agent (as amended, amended and restated, supplemented or otherwise modified from time to time, the “*U.S. Security Agreement*”).

WHEREAS, under the terms of the U.S. Security Agreement, the U.S. Grantors have granted to the Collateral Agent, for the ratable benefit of the Secured Parties, a security interest in, among other property, certain intellectual property of the U.S. Grantors, and have agreed as a condition thereof to execute this IP Security Agreement for recording with the U.S. Patent and Trademark Office, the United States Copyright Office and other governmental authorities.

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, each U.S. Grantor agrees as follows:

SECTION 1. Grant of Security. Each U.S. Grantor hereby grants to the Collateral Agent for the ratable benefit of the Secured Parties a security interest in all of such U.S. Grantor’s right, title and interest in and to the following (the “*Collateral*”):

- (i) the patents and patent applications set forth in Schedule A hereto (the “*Patents*”);

(ii) the trademark and service mark registrations and applications set forth in Schedule B hereto (provided that no security interest shall be granted in United States intent-to-use trademark applications to the extent that, and solely during the period in which, the grant of a security interest therein would impair the validity or enforceability of such intent-to-use trademark applications under applicable federal law), together with the goodwill symbolized thereby (the “*Trademarks*”);

(iii) all copyrights now owned or hereafter acquired by such U.S. Grantor, including, without limitation, the copyright registrations and applications and exclusive copyright licenses set forth in Schedule C hereto (the “*Copyrights*”);

(iv) all reissues, divisions, continuations, continuations-in-part, extensions, renewals and reexaminations of any of the foregoing, all rights in the foregoing provided by international treaties or conventions, all rights corresponding thereto throughout the world and all other rights of any kind whatsoever of such U.S. Grantor accruing thereunder or pertaining thereto;

(v) any and all claims for damages and injunctive relief for past, present and future infringement, dilution, misappropriation, violation, misuse or breach with respect to any of the foregoing, with the right, but not the obligation, to sue for and collect, or otherwise recover, such damages; and

(vi) any and all proceeds of, collateral for, income, royalties and other payments now or hereafter due and payable with respect to, and supporting obligations relating to, any and all of the Collateral of or arising from any of the foregoing.

SECTION 2. Security for Obligations. The grant of a security interest in, the Collateral by each U.S. Grantor under this IP Security Agreement secures the payment of all Obligations of such U.S. Grantor now or hereafter existing under or in respect of the Loan Documents, whether direct or indirect, absolute or contingent, and whether for principal, reimbursement obligations, interest, premiums, penalties, fees, indemnifications, contract causes of action, costs, expenses or otherwise. Without limiting the generality of the foregoing, this IP Security Agreement secures, as to each U.S. Grantor, the payment of all amounts that constitute part of the Secured Obligations and that would be owed by such U.S. Grantor to any Secured Party under the Loan Documents but for the fact that such Secured Obligations are unenforceable or not allowable due to the existence of a bankruptcy, reorganization or similar proceeding involving a Loan Party.

SECTION 3. Recordation. Each U.S. Grantor authorizes and requests that the Register of Copyrights, the Commissioner for Patents and the Commissioner for Trademarks and any other applicable government officer record this IP Security Agreement.

SECTION 4. Execution in Counterparts. This IP Security Agreement may be executed in any number of counterparts, each of which when so executed shall be deemed to be an original and all of which taken together shall constitute one and the same agreement.

SECTION 5. Grants, Rights and Remedies. This IP Security Agreement has been entered into in conjunction with the provisions of the U.S. Security Agreement. Each U.S.

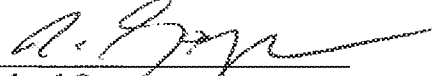
Grantor does hereby acknowledge and confirm that the grant of the security interest hereunder to, and the rights and remedies of, the Collateral Agent with respect to the Collateral are more fully set forth in the U.S. Security Agreement, the terms and provisions of which are incorporated herein by reference as if fully set forth herein.

SECTION 6. Governing Law. This IP Security Agreement shall be governed by, and construed in accordance with, the laws of the State of New York.

*[Signature Page to Follow]*

IN WITNESS WHEREOF, each U.S. Grantor has caused this IP Security Agreement to be duly executed and delivered by its officer thereunto duly authorized as of the date first above written.

GTAT CORPORATION

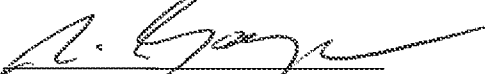
By:   
Name: Richard Gaynor  
Title: Vice President and Chief Financial Officer

Address for Notices:

243 Daniel Webster Highway  
Merrimack, NH 03054  
Attention: Hoil Kim  
Fax: 603-595-6993

GT CRYSTAL SYSTEMS, LLC

By: GTAT Corporation,  
its sole member

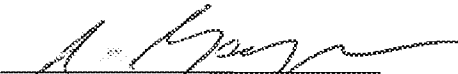
By:   
Name: Richard Gaynor  
Title: Vice President and Chief Financial Officer

Address for Notices:

243 Daniel Webster Highway  
Merrimack, NH 03054  
Attention: Hoil Kim  
Fax: 603-595-6993

GT ADVANCED CZ LLC

By: Lindbergh Acquisition Corp.,  
its sole member

By:   
Name: Richard Gaynor  
Title: Vice President

Address for Notices:

243 Daniel Webster Highway  
Merrimack, NH 03054  
Attention: Hoil Kim  
Fax: 603-595-6993

Accepted and Agreed:

BANK OF AMERICA, N.A.,  
as Collateral Agent

By: 

Name: William S. Rowe

Title: Director

[Signature Page – IP Security Agreement]

TRADEMARK

REEL: 004718 FRAME: 0249

## SCHEDULE A

### Patents and Patent Applications

U.S. Lien Grantor	Patent Titles	Patent/Pub. No.	App. No.	Filing Date	Issue/Pub. Date
GTAT Corporation	Processing of Fine Silicon Powder to Produce Bulk Silicon	7,927,385	12/130,550	5/30/2008	4/19/2011
GT Crystal Systems, LLC	System and Method for Crystal Growing	7,918,936	11/875,078	10/19/2007	4/5/2011
GTAT Corporation	Solidification of Crystalline Silicon From Reusable Crucible Molds	7,540,919	11/394,970	3/31/2006	6/2/2009
GT Crystal Systems, LLC	System and Method for Crystal Growing	7,344,596	11/212,027	8/25/2005	3/18/2008
GTAT Corporation	Dry Conversion of High Purity Ultrafine Silicon Powder to Densified Pellet Form for Silicon Melting Applications	7,175,685	10/413,774	4/15/2003	2/13/2007
GTAT Corporation	Solar Cell Stringing Machine	6,841,728	10/125,329	4/18/2002	1/11/2005
GTAT Corporation	Apparatus for Automatically Measuring the Resistivity of Semiconductor Boules by Using the Method of Four Probes	6,651,014	10/138,835	5/3/2002	1/18/2003
GTAT Corporation	Making and Connecting Bus Bars on Solar Cells	6,620,645	09/993,587	11/16/2001	9/16/2003
GTAT Corporation	Method of Producing Shaped Boules of Semiconductor Materials	6,581,415	09/933,342	8/20/2001	6/24/2003
GTAT Corporation	Release Coating System for Crucibles	6,491,971	09/827,540	4/6/2001	12/10/2002



U.S. Lien Grantor	Patent Titles	Patent/Pub. No.	App. No.	Filing Date	Issue/Pub. Date
GTAT Corporation	Protective Layer for Quartz Crucibles Used for Silicon Crystallization	6,479,108	09/944,790	8/31/2001	11/12/2002
GT Crystal Systems, LLC	Method and Apparatus for Cutting Workpieces	6,418,921	09/768,395	1/24/2001	7/16/2002
GT Crystal Systems, LLC	Method and Apparatus for Purifying Silicon	6,368,403	09/512,947	2/25/2000	4/9/2002
GTAT Corporation	Cold Wall Reactor and Method for Chemical Vapor Deposition of Bulk Polysilicon	6,365,225	09/642,735	8/17/2000	4/2/2002
GTAT Corporation	Method and Apparatus for Chemical Vapor Deposition of Polysilicon	6,284,312	09/507,711	2/18/2000	9/4/2001
GTAT Corporation	Melting Pot with Silicon Protective Layers, Method for Applying Said Layer and the Use Thereof	6,165,425	09/355,813	8/4/1999	12/26/2000
GTAT Corporation	Method and Apparatus for Synthesis and Growth of Semiconductor Crystals	6,019,841	09/046,917	3/24/1998	2/1/2000
GT Crystal Systems, LLC	Method for Purifying Silicon	5,972,107	08/919,895	8/28/1997	10/26/1999
GT Crystal Systems, LLC	Shaped Blades	5,438,973	08/133,602	10/8/1993	8/8/1995
GT Crystal Systems, LLC	Method and Apparatus for Growing Shaped Crystals	5,394,825	07/843,474	2/28/1992	3/7/1995
GTAT Corporation	System and Method of Semiconductor Manufacturing with Energy Recovery	2011/0318909	12/826,446	6/29/2010	12/29/2011
GTAT Corporation	Method of Making Large Surface Area Filaments for the	2011/0271718	13/186,579	7/20/2011	11/10/2011

U.S. Lien Grantor	Patent Titles	Patent/Pub. No.	App. No.	Filing Date	Issue/Pub. Date
	Production of Polysilicon in a CVD Reactor				
GTAT Corporation	System and Methods for Growing Monocrystalline Silicon Ingots by Directional Solidification	2011/0259262	12/999,439	12/16/2010	10/27/2011
GTAT Corporation	System and Method for Polycrystalline Silicon Deposition	2011/0229638	13/051,152	3/18/2011	9/22/2011
GTAT Corporation	Crystal Growth Apparatus with Load-Centered Aperture, and Device and Method for Controlling Heat Extraction from a Crucible	2011/0220012	13/046,166	3/11/2011	9/15/2011
GT Crystal Systems, LLC	Method and Apparatus for Refining Metallurgical Grade Silicon to Produce Solar Grade Silicon	2011/0217225	12/607,773	10/28/2009	9/8/2011
GTAT Corporation	Chuck and Bridge Connection Points for Tube Filaments in a Chemical Vapor Deposition Reactor	2011/0203101	13/000,455	12/21/2010	8/25/2011
GTAT Corporation	System and Method for Arranging Heating Element in Crystal Growth Apparatus	2011/0200496	12/933,300	9/17/2010	8/18/2011
GTAT Corporation	Gold-Coated Polysilicon Reactor System and Method	2011/0159214	12/934,160	9/23/2010	6/30/2011
GT Crystal Systems, LLC	System and Method for Crystal Growing	2011/0146566	13/037,841	3/1/2011	6/23/2011

U.S. Lien Grantor	Patent Titles	Patent/Pub. No.	App. No.	Filing Date	Issue/Pub. Date
GTAT Corporation	Systems and Methods for Distributing Gas in a Chemical Vapor Deposition Reactor	2011/0129621	12/934,393	9/24/2010	6/2/2011
GTAT Corporation	Systems and Methods of Producing Trichlorosilane	2011/0110839	12/614,269	11/6/2009	5/12/2011
GT Crystal Systems, LLC	High-Temperature Process Improvements Using Helium Under Regulated Pressure	2011/0048316	12/873,388	9/1/2010	3/3/2011
GTAT Corporation	Dry Conversion of High Purity Ultrafine Silicon Powder to Densified Pellet Form for Silicon Melting Applications	2011/0044842	12/909,353	10/21/2010	2/24/2011
GTAT Corporation	Thermal Strain Relief Device for High Temperature Furnace	2011/0020054	12/844,319	7/20/2010	1/27/2011
Confluence Solar, Incorporated (now GT Advanced Cz, LLC)	Retractable and Expandable Water Cooled Valve Gate Useful for Sealing a Hot Processing Chamber	2011/0006240	12/786,204	5/24/2010	1/13/2011
Confluence Solar, Incorporated (now GT Advanced Cz, LLC)	Retractable and Expandable Water Cooled Valve Gate Useful for Sealing a Hot Processing Chamber	2011/0006236	12/788,191	5/26/2010	1/13/2011
Confluence Solar, Incorporated (now GT Advanced Cz, LLC)	Retractable and Expandable Valve Gate	2011/0006235	12/499,196	7/8/2009	1/13/2011
GTAT Corporation	Solidification of Crystalline Silicon From Reusable Crucible Molds	2009/0206233	12/419,515	4/7/2009	8/20/2009
GTAT Corporation	Increased Polysilicon Deposition in a CVD Reactor	2007/0251455	11/413,425	4/28/2006	11/1/2007


U.S. Lien Grantor	Patent Titles	Patent/Pub. No.	App. No.	Filing Date	Issue/Pub. Date
GTAT Corporation	Crucible Support Structure	N/A	13/336,495	12/23/2011	N/A
GTAT Corporation	Method and System for Centering a Crucible in a Furnace	N/A	13/248,709	9/29/2011	N/A
GTAT Corporation	Apparatus and Methods for Conversion of Silicon Tetrachloride from Trichlorosilane	N/A	13/246,176	9/27/2011	N/A
GTAT Corporation	Heater and Related Methods Therefor	N/A	13/246,180	9/27/2011	N/A
GT Advanced Cz, LLC	Silicon Single Crystal Doped with Gallium, Indium, or Aluminum	N/A	13/224,019	9/1/2011	N/A
GTAT Corporation	Crystal Growth Apparatus with Ceramic Coating and Methods for Preventing Molten Material Breach in a Crystal Growth Apparatus	N/A	13/205,155	8/8/2011	N/A
GTAT Corporation	Apparatus and Method for Producing a Multicrystalline Material Having Large Grain Sizes	N/A	13/098,989	5/2/2011	N/A
GTAT Corporation	High Temperature Furnace Insulation	N/A	13/069,027	3/22/2011	N/A
GTAT Corporation	Chuck for Chemical Vapor Deposition System and Related Methods Therefor	N/A	12/983,571	1/3/2011	N/A
GTAT Corporation	Hydrochlorination Heater and Related Methods Therefor	N/A	12/913,227	10/27/2010	N/A

U.S. Lien Grantor	Patent Titles	Patent/Pub. No.	App. No.	Filing Date	Issue/Pub. Date
GTAT Corporation	Method of Producing Monocrystalline Silicon	N/A	61/591,474	1/27/2012	N/A
GTAT Corporation	Method of Producing Bricks from a Silicon Ingot	N/A	61/579,856	12/23/2011	N/A
GTAT Corporation	Purification of Trichorosilane	N/A	61/554,712	11/2/2011	N/A
GTAT Corporation	Methods and Apparatus for Removal of Contaminant for CVD Reactors	N/A	61/552,767	10/28/2011	N/A
GTAT Corporation	Method for Producing a Monocrystalline Product	N/A	61/515,124	8/4/2011	N/A
GTAT Corporation	Liquid-Cooled Heat Exchanger	N/A	61/514,019	8/1/2011	N/A
GTAT Corporation	Apparatus and Method for Producing Monocrystalline Material	N/A	61/505,804	7/8/2011	N/A
GTAT Corporation	Heater Assembly for Crystal Growth Apparatus	N/A	61/493,804	6/6/2011	N/A
Confluence Solar, Incorporated (now GT Advanced Cz, LLC)	Growth of Uniformly Doped Silicon Ingot by Doping Only the Initial Charge	N/A	61/483,140	5/6/2011	N/A
Confluence Solar, Incorporated (now GT Advanced Cz, LLC)	Side Feed System for Czochralski Growth of Silicon Ingots	N/A	61/477,435	4/20/2011	N/A
Confluence Solar, Incorporated (now GT Advanced Cz, LLC)	Thermal Treatment of Silicon Wafers Useful for Photovoltaic Applications	N/A	61/476,371	4/18/2011	N/A
Confluence Solar, Incorporated (now GT Advanced Cz, LLC)	Silicon Ingot Having Uniform Multiple Dopants and Method and Apparatus for Producing Same	N/A	61/475,351	4/14/2011	N/A

U.S. Lien Grantor	Patent Titles	Patent/Pub. No.	App. No.	Filing Date	Issue/Pub. Date
GTAT Corporation	System and Method of Semiconductor Manufacturing with Bell Jar Having Integrated Shell and Jacket	N/A	61/469,993	3/31/2011	N/A
GTAT Corporation	Automated Vision System for a Crystal Growth Apparatus	N/A	61/452,919	3/15/2011	N/A

**SCHEDULE B**

**Trademarks and Service Mark Registrations and Applications**

<b><u>U.S. Lien Grantor</u></b>	<b><u>Domain Name/Mark</u></b>	<b><u>Country</u></b>	<b><u>Reg. No.</u></b>	<b><u>Application No.</u></b>	<b><u>Filing Date</u></b>	<b><u>Issue Date</u></b>
GT Crystal Systems, LLC	HEM	USA	3523763	77415220	3/2/2008	10/28/2008
GT Crystal Systems, LLC	FAST	USA	3596183	77376592	1/21/2008	3/24/2009
GT Crystal Systems, LLC	CRYSTAL SYSTEMS	USA	1150725	73163474	3/24/1978	4/14/1981
GT Crystal Systems, LLC		USA	1084417	73092027	6/30/1976	2/7/1978
GT Solar Incorporated	GT SOLAR	USA	2612767	78036356	11/22/2000	8/27/2002
GT Solar Incorporated	SMARTSOLAR	USA	N/A	77720046	N/A	N/A
GT Solar Incorporated/ GTAT Corporation*	ASF	Hong Kong	N/A	301971559	7/12/2011	N/A
GT Solar Incorporated/ GTAT Corporation*	GT Advanced Technologies & Design	Hong Kong	N/A	301971540	7/12/2011	N/A
GT Solar Incorporated/ GTAT Corporation*	MonoCast	Hong Kong	N/A	301971568	7/12/2011	N/A
GT Solar Incorporated	Gtat.com	N/A	N/A	N/A	N/A	N/A
GT Solar Incorporated	Gtsolar.com	N/A	N/A	N/A	N/A	N/A
Confluence Solar, Inc.	Confluence Solar	USA	3881687	77980418	1/21/2009	11/23/2010
Confluence Solar, Inc.	HiCz	USA	3877511	77653805	1/21/2009	11/16/2010

\*Name change in process.

**SCHEDULE C**

**Copyrights**

None.