

## PATENT ASSIGNMENT

Electronic Version v1.1  
 Stylesheet Version v1.1

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>Lei Wang</td> <td>02/07/2013</td> </tr> <tr> <td>Cuiwen Guo</td> <td>02/07/2013</td> </tr> <tr> <td>Raymond Michael Cosimano</td> <td>02/08/2013</td> </tr> <tr> <td>Weiming Zhang</td> <td>02/07/2013</td> </tr> </tbody> </table>		Name	Execution Date	Lei Wang	02/07/2013	Cuiwen Guo	02/07/2013	Raymond Michael Cosimano	02/08/2013	Weiming Zhang	02/07/2013
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RECEIVING PARTY DATA											
<table border="1"> <tr> <td>Name:</td> <td>Heraeus Precious Metals North America Conshohocken, LLC</td> </tr> <tr> <td>Street Address:</td> <td>24 Union Hill Road</td> </tr> <tr> <td>City:</td> <td>West Conshohocken</td> </tr> <tr> <td>State/Country:</td> <td>PENNSYLVANIA</td> </tr> <tr> <td>Postal Code:</td> <td>19428</td> </tr> </table>		Name:	Heraeus Precious Metals North America Conshohocken, LLC	Street Address:	24 Union Hill Road	City:	West Conshohocken	State/Country:	PENNSYLVANIA	Postal Code:	19428
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PROPERTY NUMBERS Total: 1											
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CORRESPONDENCE DATA											
<p>Fax Number: 2027725858  <i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i></p> <p>Phone: 202-772-5800        Email: brickhouse@blankrome.com        Correspondent Name: Blank Rome LLP        Address Line 1: 600 New Hampshire Avenue, NW        Address Line 4: Washington, DISTRICT OF COLUMBIA 20037</p>											
ATTORNEY DOCKET NUMBER:	136617-00501										
NAME OF SUBMITTER:	Charles R. Wolfe, Jr.										
Signature:	/Charles R. Wolfe, Jr./										

Date:

08/01/2013

**Total Attachments: 7**

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## ASSIGNMENT

THIS ASSIGNMENT, made on the date(s) set forth below by **Lei Wang**, residing at **1700 Butler Pike, Apt. 19F, Conshohocken, PA 19428**; **Cuiwen Guo**, residing at **23 Pebble Drive, Horsham, PA 19044**; **Raymond Michael Cosimano**, a citizen of the United States of America residing at **3321 Vista Street, Philadelphia, PA 19136**; and **Weiming Zhang**, a citizen of the United States of America residing at **24 Union Hill Road, West Conshohocken, PA 19428** (hereinafter referred to as "the Assignors"), witnesseth:

WHEREAS, the Assignors have invented certain new and useful improvements (hereinafter referred to as "the Inventions") for which a nonprovisional application for Letters Patent has been filed in the United States Patent and Trademark Office, identified as Application No. **61/589,727**, filed **January 23, 2012** and entitled:

### **Conductive Thick Film Paste For Solar Cell Contacts**

Subsequent non-provisional patent application claiming priority to this provisional application is filed in the United States Patent and Trademark Office (App. No. 13/746,462) ; and

WHEREAS, **Heraeus Precious Metals North America Conshohocken, LLC**, a corporation duly organized under and pursuant to the laws of the Commonwealth of Pennsylvania, having a principal place of business at **24 Union Hill Road, West Conshohocken, PA 19428** (hereinafter referred to as "the Assignee"), is desirous of acquiring the entire right, title, and interest in and to the Inventions and the provisional and nonprovisional applications for Letters Patent, and in and to any Letters Patent or Patents, United States or foreign, to be obtained therefor and therefrom.

NOW, THEREFORE, for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the Assignors have sold, assigned, transferred, and set over, and by these presents do sell, assign, transfer, and set over, unto the Assignee, its successors, legal representatives, and assigns, the entire right, title, and interest in and to the Inventions, in and to the provisional and nonprovisional applications for Letters Patent, in and to any application for Letters Patent claiming benefit of the provisional and nonprovisional applications for Letters Patent, including any and all divisions, continuations, and continuations-in-part of the provisional and nonprovisional applications for Letters Patent, in and to any and all Letters Patent or Patents (hereinafter referred to as "the Letters Patent or Patents") in the United States of America and all foreign countries which may be granted therefor and therefrom, in and to any enhancements, improvements, and extensions thereon, and all rights under the International Convention for the Protection of Industrial Property, the Patent Cooperation Treaty, the European Patent Convention, and all other treaties of like purposes ("Assigned Patent Rights"), the same to be held and enjoyed by the Assignee, for its own use and behoof and the use and behoof of its successors, legal representatives, and assigns, to the full end of the term or terms for which the Letters Patent or Patents may be granted, as fully and entirely as the same would have been held and enjoyed by the Assignors had this sale and assignment not been made;

AND for the same consideration, the Assignors have sold, assigned, transferred, and set over, and by these presents do sell, assign, transfer, and set over, unto the Assignee, its successors,

legal representatives, and assigns, any and all confidential know-how, ideas, concepts, procedures, processes, methods, data, other information, and any proprietary rights that the Assignors may have which are not disclosed in the provisional and nonprovisional applications for Letters Patent and which are necessary or appropriate for, or useful in connection with, the development or commercialization and realization of, or any further research with respect to, the Assigned Patent Rights;

AND for the same consideration, the Assignors hereby represent and warrant that, at the time of execution and delivery of these presents, the Assignors are the sole and lawful owners of the entire right, title, and interest in and to the Assigned Patent Rights and that the same are unencumbered and that the Assignors have good and full right and lawful authority to sell and convey the same in the manner herein set forth;

AND for the same consideration, the Assignors hereby covenant and agree to and with the Assignee, its successors, legal representatives, and assigns, that the Assignors shall execute all papers and documents, take all lawful oaths, make all lawful declarations, and do all acts necessary or required to be done for the procurement, protection, maintenance, enforcement, and defense of the Assigned Patent Rights;

AND for the same consideration, the Assignors hereby covenant and agree to and with the Assignee, its successors, legal representatives, and assigns, that the Assignors shall execute all papers and documents necessary in connection with any interference, reexamination, supplemental examination, reissue, or any post-grant review procedure that may be declared concerning the Letters Patent or Patents and to cooperate with the Assignee in every way possible in obtaining evidence and going forward with such interference, reexamination, supplemental examination, reissue, or post-grant review procedure;

AND for the same consideration, the Assignors hereby covenant and agree to and with the Assignee, its successors, legal representatives, and assigns, that the Assignors shall perform all affirmative acts which may be necessary to obtain or maintain the grant of the Letters Patent or Patents to the Assignee in the United States of America and all foreign countries;

AND for the same consideration, the Assignors hereby covenant and agree to and with the Assignee, its successors, legal representatives, and assigns, that the Assignors shall execute separate assignment documents in connection with the Assigned Patent Rights as the Assignee may deem necessary or expedient.

The Assignors hereby authorize and request the Commissioner of Patents and Trademarks and any counterpart thereto of any and all countries foreign to the United States of America to issue, respectively, any Letters Patent or Patents of the United States and any Letters Patent or Patents of any foreign patent office resulting from the Assigned Patent Rights to the Assignee, as the Assignee of the Assigned Patent Rights, for the sole use and behoof of the Assignee, its successors, legal representatives, and assigns.

This Assignment may be executed in one or more counterparts, each of which shall be considered one and the same Assignment, and shall become effective when the one or more

counterparts have been signed by each of the Assignors and delivered to the Assignee or counsel for the Assignee. Delivery of a counterpart by facsimile or e-mail shall be as effective as physical delivery of an original signed counterpart.


The undersigned hereby grant the firm of **BLANK ROME LLP** the power to insert on this Assignment any further identification which may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark Office or any foreign counterpart thereto for recordation of this document. The undersigned further grant the firm of **BLANK ROME LLP** the power to assemble the one or more counterparts of this Assignment into one document, remove duplicative pages, including unsigned pages, from the one document, and submit the one document to the United States Patent and Trademark Office or any foreign counterpart thereto as the Assignment for recordation or as evidence of ownership of the Assigned Patent Rights.

IN WITNESS WHEREOF, the Assignors have hereunto set their hands as of the dates written below.

IN WITNESS WHEREOF, the Assignor has hereunto set his hands as of the date written below.

Date: 2/7/2013   
Lei Wang

On this 7 day of February, 2013, before me personally appeared Lei Wang, known to me to be the person whose name is subscribed to the within Assignment, and acknowledged that he executed the same for the purposes therein contained, and desires the same might be recorded as such.

Witness: 

IN WITNESS WHEREOF, the Assignor has hereunto set his hands as of the date written below.

Date: 2/7/13 Cuiwen Guo  
Cuiwen Guo

On this 7 day of February, 2013, before me personally appeared Cuiwen Guo, known to me to be the person whose name is subscribed to the within Assignment, and acknowledged that he executed the same for the purposes therein contained, and desires the same might be recorded as such.

Witness: Daniel B. Pienz

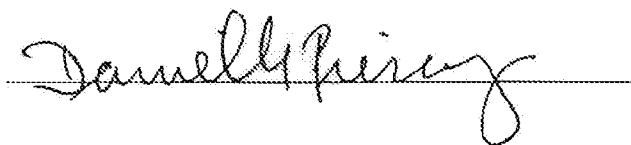
IN WITNESS WHEREOF, the Assignor has hereunto set his hands as of the date written below.

Date: 2-8-2013

  
Raymond Michael Cosimano

On this 8 day of February, 2013, before me personally appeared **Raymond Michael Cosimano**, known to me to be the person whose name is subscribed to the within Assignment, and acknowledged that he executed the same for the purposes therein contained, and desires the same might be recorded as such.

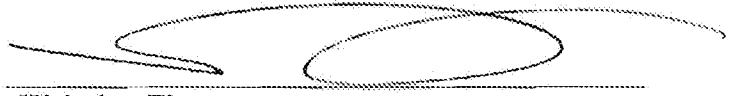
Witness:





IN WITNESS WHEREOF, the Assignor has hereunto set his hands as of the date written below.

Date: 02/7/2013

  
Weiming Zhang

On this 7 day of February, 2013, before me personally appeared **Weiming Zhang**, known to me to be the person whose name is subscribed to the within Assignment, and acknowledged that he executed the same for the purposes therein contained, and desires the same might be recorded as such.

Witness:

