PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5419143

SUBMISSION TYPE:	NEW ASSIGNMENT	
NATURE OF CONVEYANCE:	ASSIGNMENT	

CONVEYING PARTY DATA

Name	Execution Date
YEE WEON LIM	01/21/2019
XI ZHANG	02/11/2019
SENTHIL KUMAR BALASUBRAMANIAN	01/31/2019
SUAT TENG TAN	01/24/2019
JIN ZHI LIAO	01/29/2019
DAN SU	01/21/2019
CHEE WEI TOK	01/29/2019
MURALI SARANGAPANI	01/21/2019
JURGEN SCHARF	02/06/2019

RECEIVING PARTY DATA

Name:	HERAEUS MATERIALS SINGAPORE PTE. LTD.	
Street Address:	BLOCK 5014, ANG MO KIO AVENUE 5	
Internal Address: #07-01 TECHPLACE II		
City:	SINGAPORE	
State/Country:	tate/Country: SINGAPORE	
Postal Code:	569871	

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	16312703

CORRESPONDENCE DATA

Fax Number: (202)420-2201

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.

Phone: 202-420-2200

Email: jyeddo@blankrome.com
Correspondent Name: BLANK ROME LLP
Address Line 1: 1825 EYE STREET NW

Address Line 4: WASHINGTON, D.C. 20006-5403

ATTORNEY DOCKET NUMBER: 140891.32900

PATENT 505372351 REEL: 048584 FRAME: 0119

NAME OF SUBMITTER:	JUDY YEDDO		
SIGNATURE:	/Judy Yeddo/		
DATE SIGNED:	03/13/2019		
Total Attachments: 8			
source=Recordation#page1.tif	source=Recordation#page1.tif		
source=Recordation#page2.tif			
source=Declaration#page1.tif			
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PATENT REEL: 048584 FRAME: 0120

Form PTO-1595 (Rev. 6-12) OMB No. 0651-0027 (exp. 06/30/2021) United States Patent and Tr.	U.S. DEPARTMENT OF COMMERCI		
RECORDATION FOR			
PATENTS ONLY			
To the Director of the U.S. Patent and Trademark Office: Please record the attached documents or the new address(es) below.			
Name of conveying party(ies)	Name and address of receiving party(ies)		
Yee W. Lim (01/21/2019), Xi Zhang (02/11/2019), Senthil K. Balasubramanian (01/31/2019), Suat T.	Name: Heraeus Materials Singapore Pte. Ltd.		
Tan (01/24/2019),	Internal Address:		
Additional name(s) of conveying party(ies) attached? X Yes No	Street Address:		
3. Nature of conveyance/Execution Date(s):			
Execution Date(s) in parentheses after inventor name	Block 5014, Ang Mo Kio Avenue 5 #07-01 TechPlace II		
X Assignment Merger Change of Name	Not of footh lase if		
Security Agreement Joint Research Agreement	City: Singapore		
Government Interest Assignment	State:		
Executive Order 9424, Confirmatory License	Country: Republic of Singapore Zip: 569871		
Other	Additional name(s) & address(es) attached? Yes X No		
Other			
Additional numbers attached?	Yes X No		
5. Name and address to whom correspondence concerning document should be mailed:	6. Total number of applications and patents involved:		
Cole T. Duncan Name: BLANK ROME LLP	7. Total fee (37 CFR 1.21(h) & 3.41) \$		
Internal Address:			
	Authorized to be charged to deposit account		
Street Address: 1825 Eye Street, NW	Enclosed		
	None required (government interest not affecting title)		
City: Washington	8. Payment Information		
State: <u>DC</u> Zip: <u>20006</u>			
Phone Number: 202-420-2200			
Docket Number: 140891.32900	Deposit Account Number		
Email Address: WashingtonDocketing@BlankRome.com	Authorized User Name		
9. Signature: / Cole T. Duncan, Ph.D. Signature	/ March 13, 2019 Date		
Cole T. Duncan, Ph.D 71,956	Total number of pages including		
Name of Person Signing	cover sheet, attachments, and documents:		
	eet) should be faxed to (571) 273-0140, or mailed to: of the USPTO, P.O.Box 1450, Alexandria, V.A. 22313-1450		

RECORDATION FORM COVER SHEET (PTO-1595) (Supplemental Sheet) Additional conveying party(ies) and/or Execution Date(s) (1. and/or 3. continued): Jin Z. Liao (01/29/2019), Dan Su (01/21/2019), Chee W. Tok (01/29/2019), Murali Sarangapani (01/21/2019), and Jurgen Scharf (02/06/2019) Additional receiving party(ies) (2. continued): Internal Address: Street Address: City: _____ State: ____ Country: ____ Zip: ____ Name: _____ Internal Address: Street Address: City: _____ State: ____ Country: ____ Zip: ____ Internal Address: Street Address: City: State: Country: Zip: ______ Additional application and/or patent number(s) (4. continued): Additional Patent Application No.(s) Additional Patent No.(s) (4B. continued): (4A. continued):

Additional numbers attached?

Yes

No

140891.32900/115822779v.1

COMBINED ASSIGNMENT & DECLARATION FOR UTILITY OR DESIGN PATENT APPLICATIONS

ASSIGNMENT

THIS ASSIGNMENT, by

Yee Weon Lim residing at No. 20Jln 3/38E Taman Sri Sinar, Segambut Wilayah Persekutuan, Kuala Lumpur 51200, MALAYSIA;

Xi Zhang residing at Block 808, Thomson Road, Thomson 800, \$13-20, Singapore 298190, REPUBLIC OF SINGAPORE;

Senthil Kumar Balasubramanian residing at 308a, Punggol Walk, #04-420, Singapore \$21308, REPUBLIC OF SINGAPORE;

Suat Teng Tan residing at 167, Bishan Street 13, #05-210, Singapore 570167, REPUBLIC OF SINGAPORE:

Jin Zhi Liao residing at 83, Lorong 2 Tao Payoh, #07-455, Singapore 310083, REPUBLIC OF SINGAPORE;

Dan Su residing at 789, Woodlands Avenue 6, #08-633, Singapore 730789, REPUBLIC OF SINGAPORE;

Chee Wei Tok residing at 770, Choa Chu Kang Street 54, #12-07, Singapore 680770, REPUBLIC OF SINGAPORE;

Murali Sarangapani residing at 363, Yishun Ring Road, #08-1560, Singapore 760363, REPUBLIC OF SINGAPORE; and

Jurgen Scharf residing at Karlesberg 1, 63776 Mombris, GERMANY,

(hereinafter referred to as Assignors), respectively;

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WHEREAS, Assignors have invented certain new and useful improvements in COATED WIRE, set forth in a Patent application for which an International Application was filed on August 18, 2017, PCT/SG2017/000008, designating the United States; and

WHEREAS, Heraeus Materials Singapore Ptc. Ltd., a Company organized under and pursuant to the laws of Singapore having its principal place of business at Block 5014, Ang Mo Kio Avenue 5, #07-01 TechPlace II, Singapore 569871, REPUBLIC OF SINGAPORE (hereinafter referred to as Assignee), is desirous of acquiring the entire right, title and interest in and to said inventions and said Application for Letters Patent of the United States, and in and to any Letters Patent of the United States to be obtained therefore and thereon.

NOW, THEREFORE, in consideration of One Dollar (\$1.00) and other good and sufficient consideration, the receipt of which is hereby acknowledged. Assignors have sold, assigned, transferred and set over, and by these presents do sell, assign, transfer and set over, unto Assignee, its successors, legal representatives and assigns, the entire right, title and interest in and to the above-mentioned inventions and application for Letters Patent, and in and to any and all direct and indirect divisions, continuations and continuations-in-part of said application, and any and all Letters Patent in the United States and all foreign countries which may be granted therefore and thereon, and reissues, reexaminations and extensions of said Letters Patent, and all rights under the International Convention for the Protection of Industrial Property, the same to be held and enjoyed by Assignee, for its own use and benefit and the use and benefit of its successors, legal representatives and assigns, to the full end of the term or terms for which Letters Patent may be granted and/or extended, as fully and entirely as the same would have been held and enjoyed by Assignors, had this sale and assignment not been made.

AND for the same consideration, Assignors hereby represent and warrant to Assignee, its successors, legal representatives and assigns, that, at the time of execution and delivery of these presents, except for any rights, titles and/or interests that have arisen to Assignee under law or that have already been transferred to Assignee, Assignors are the sole and lawful owners of the entire right, title and interest in and to the said inventions and application for Letters Patent above-mentioned, and that the same are unencumbered and that Assignors have good and full right and lawful authority to sell and convey the same in the manner herein set forth.

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AND for the same consideration, Assignors hereby covenant and agree to and with Assignee, its successors, legal representatives and assigns, that Assignors will sign all papers and documents, take all lawful oaths and do all acts necessary or required to be done for the procurement, maintenance, enforcement and defense of any Letters Patent and applications for Letters Patent for said inventions, without charge to Assignee, its successors, legal representatives and assigns, whenever counsel of Assignee, or counsel of its successors, legal representatives and assigns, shall advise: that any proceeding in connection with said inventions, or said Patent application for Letters Patent, or any proceeding in connection with any Letters Patent or applications for Letters Patent for said inventions in any country, including but not limited to interference proceedings, is lawful and desirable; or, that any division, continuation or continuation-in-part of any application for Letters Patent, or any reissue, reexamination or extension of any Letters Patent, to be obtained thereon, is lawful and desirable.

AND Assignors hereby request the Commissioner for Patents and Trademarks to issue said Letters Patent of the United States to Assignee, as Assignee of said inventions and the Letters Patent to be issued thereon, for the sole use and benefit of Assignee, its successors, legal representatives and assigns.

AND Assignors acknowledge an obligation of assignment of this invention to Assignee at the time the invention was made.

DECLARATION

As a below named inventor, I hereby declare that:

This declaration is directed to the patent application entitled:

COATED WIRE

the specification of which is attached hereto.

The above-identified application was made or authorized to be made by me.

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I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.

I have reviewed and understand the contents of the above-identified application.

I am aware of the duty to disclose to the Office all information known to me to be material to patentability as defined in 37 C.F.R. 1.56.

I hereby acknowledge that any willful false statement made in this Declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

In the event that the filing date and/or Application No. are not entered above at the time I execute this document, and if such information is deemed necessary, I hereby authorize and request the attorneys/agent(s) at Blank Rome LLP, 717 Texas Avenue, Suite 1400.

Houston, Texas 77002, to insert the filing date and/ or Application No. of said application into this document.

Date: 21/x1/>o14	Signature: Yee Weon Lim
Date: 11/02/2019	Signature: Xi Zhang
Date: 31 01 2019	Signature: Senthil Kumar Balasubramanian
Date: <u>34 / 01 / 2019</u>	Signature:Sign Teng Tan

Date:	<u> 29 /0// > 19</u>	Signature:	加加 Zhi Liao
Date:	21141119	Signature:	Ban Sul
Date:	29/01/2019	Signature:	Chee Wei Tok
Date:	21/1/19	Signature:	/ Murali Sarangapani
Date:		Signature:	Jurgen Scharf

Date:	<u> </u>	Signature:	Jin Zhi Liao
Date:	-1101/19	Signature:	Dan Su
Date:	29/01/2019	Signature:	Chee Wei Tok
Date:	21/1/19	Signature:	Murali Sarangapani
Date:	86/07.79	Signature:	Jurgen Scharf

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RECORDED: 03/13/2019