504911682 05/11/2018

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
YILUN LUO	05/06/2018
RONNIE E. RANDOLPH	05/02/2018
DOUGLAS A. MCKEE	05/02/2018
GRAHAM T. CONWAY	05/03/2018

RECEIVING PARTY DATA

Name:	SOUTHWEST RESEARCH INSTITUTE
Street Address:	6220 CULEBRA ROAD
City:	SAN ANTONIO
State/Country:	TEXAS
Postal Code:	78238-5166

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	15858977

CORRESPONDENCE DATA

Fax Number: (210)522-8365

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: 210-522-5560

Email:shirley.mcdonald@swri.orgCorrespondent Name:SHIRLEY E. MCDONALDAddress Line 1:6220 CULEBRA ROAD

Address Line 4: SAN ANTONIO, TEXAS 78238-5166

ATTORNEY DOCKET NUMBER:	SWR3944
NAME OF SUBMITTER:	SHIRLEY E. MCDONALD
SIGNATURE:	/Shirley E. McDonald/
DATE SIGNED:	05/11/2018

Total Attachments: 6

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PATENT 504911682 REEL: 045783 FRAME: 0771

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PATENT REEL: 045783 FRAME: 0772

ASSIGNMENT OF THE UNITED STATES PATENT APPLICATION

WHEREAS, WE, Yilun LUO, Ronnie E. RANDOLPH, Douglas A. McKEE and Graham T. CONWAY, made certain new and useful inventions and improvements for which we filed, or will be filing, an application for Letters Patent of the United States, identified as U.S. patent application serial number 15/858,977 filed on December 29, 2017, which application is entitled:

Waveguide Antenna For Microwave Enhanced Combustion

AND, WHEREAS, we hereby authorize and request an attorney associated with Customer Number 32047 to insert on the designated lines above, the filing date and application number of said application when known;

AND, WHEREAS, SOUTHWEST RESEARCH INSTITUTE, a corporation organized and existing under and by virtue of the laws of the State of Texas, U.S.A., and having an office and place of business at 6220 Culebra Road, San Antonio, Texas 78238-5166 (hereinafter "Assignee"), is desirous of acquiring the entire right, title and interest in and to said inventions, improvements and application and in and to the Letters Patent to be obtained therefore;

NOW, THEREFORE, to all whom it may concern, be it known that for good and valuable consideration, the receipt and sufficiency whereof is hereby acknowledged, we have sold, assigned, and transferred, and by these presents do sell, assign and transfer unto said Assignee, its successors or assigns, the entire right, title and interest for all countries in and to all inventions and improvements disclosed in the aforesaid application, and in and to the said application, all divisions, continuations, continuations-in-part, or renewals thereof, all Letters Patent which may be granted there from, and all reissues or extensions of such patents, and in and to any and all applications which have been or shall be filed under the Patent Cooperation Treaty, in any regional patent offices and in any foreign countries for Letters Patent on the said inventions and improvements, including an assignment of all rights under the provisions of the International Convention, and all Letters Patent of foreign countries which may be granted there from; and we do hereby authorize and request the Commissioner of Patents and Trademarks to

PATENT REEL: 045783 FRAME: 0773 issue any and all United States Letter Patent for the aforesaid inventions and improvements to the said Assignee as the assignee of the entire right, title and interest in and to the same, for the use of the said Assignee, its successors and assigns.

AND for the consideration aforesaid, we do hereby agree that we and our executors and legal representatives will make, execute and deliver any and all other instruments in writing including any and all further application papers, affidavits, assignments and other documents, and will communicate to said Assignee, its successors and representatives all facts known to us relating to said improvements and the history thereof and will testify in all legal proceedings and generally do all things which may be necessary or desirable more effectually to secure to and vest in said Assignee, its successors or assigns the entire right, title and interest in and to the said improvements, inventions, applications, Letters Patent, rights, titles, benefits, privileges and advantages hereby sold, assigned and conveyed, or intended so to be;

AND, furthermore, we covenant and agree with said Assignee, its successors and assigns, that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been made to others by us and that full right to convey the same as herein expressed is possessed by us.

AND, as a named inventor, I hereby declare that:

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

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 application, including the claims, and I am aware of the duty to disclose to the Office all information known to the person to be material to patentability as defined in 37 C.F.R. § 1.56.

I hereby acknowledge that any wilful 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.

PATENT REEL: 045783 FRAME: 0774

	Graham T. Conway
IN TESTIMONY WHEREOF, I have hereun	to set my hand this day of May, 2018.
	Douglas A. McKee
IN TESTIMONY WHEREOF, I have hereun	to set my hand this day of May, 2018.
	Ronnie E. Randolph
IN TESTIMONY WHEREOF, I have hereun	to set my hand this day of May, 2018.
	Yilun Luo
	Elen ha
IN TESTIMONY WHEREOF, I have hereun	to set my hand this <u>k th</u> day of May, 2018.

IN TESTIMONY WI	HEREOF, I have hereunto set my hand this	day of May, 2018.
	Yilun Luo	
IN TESTIMONY WI	HEREOF, I have hereunto set my hand this	day of May, 2018.
	Konnie E. Rani	dolph
IN TESTIMONY WI	HEREOF, I have hereunto set my hand this	day of May, 2018.
	Douglas A. Mc	Kee
IN TESTIMONY WI	HEREOF, I have hereunto set my hand this	day of May, 2018.
	Graham T. Coi	nway

IN TESTIMONY WHEREOF, I have hereunto	set my hand this	day of May, 2018.
	Yilun Luo	
IN TESTIMONY WHEREOF, I have hereunto	set my hand this	day of May, 2018.
	Ronnie E. Ran	dolph
IN TESTIMONY WHEREOF, I have hereunto	set my hand this	day of May, 2018.
	Douglas A. Mc	- <u>J. 114 l. </u>
IN TESTIMONY WHEREOF, I have hereunto	set my hand this	day of May, 2018.
	Graham T. Co	nway

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IN TESTIMONY WHEREOF, I have hereunto se	t my hand this day of May, 2018.
	Yilun Luo
IN TESTIMONY WHEREOF, I have hereunto se	t my hand this day of May, 2018.
	Ronnic E. Randolph
IN TESTIMONY WHEREOF, I have hereunto se	t my hand this day of May, 2018.
	Douglas A. McKee
IN TESTIMONY WHEREOF, I have hereunto set	t my hand this 3 day of May, 2018.
	Graham T. Conway

PATENT REEL: 045783 FRAME: 0778

RECORDED: 05/11/2018