

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
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EPAS ID: PAT3790999

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
MICHAEL CYBULSKY	10/29/2015
SEAN E. LANDWEHR	10/08/2015
STEPHANIE GONG	05/19/2015
KENNETH GREEN	12/30/2014
ANN BOLCAVAGE	05/26/2015
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	ROLLS-ROYCE CORPORATION
<b>Street Address:</b>	450 S. MERIDIAN STREET
<b>City:</b>	INDIANAPOLIS
<b>State/Country:</b>	INDIANA
<b>Postal Code:</b>	46225-1103
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
Application Number:	15074522
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(651)735-1102
<i>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.</i>	
<b>Email:</b>	pairedocketing@ssiiplaw.com
<b>Correspondent Name:</b>	SHUMAKER & SIEFFERT, P.A.
<b>Address Line 1:</b>	1625 RADIO DRIVE
<b>Address Line 2:</b>	SUITE 300
<b>Address Line 4:</b>	WOODBURY, MINNESOTA 55125
<b>ATTORNEY DOCKET NUMBER:</b>	1106-136US01/RCA11394
<b>NAME OF SUBMITTER:</b>	KARI GREEN
<b>SIGNATURE:</b>	/Kari Green/
<b>DATE SIGNED:</b>	03/18/2016
<b>Total Attachments: 10</b>	
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ASSIGNMENT

For valuable consideration, we, Michael Cybulsky of 9656 Loganberry Lane, Indianapolis, IN 46256, Sean E. Landwehr of 1920 Shadowridge Run, Avon, IN 46123, Stephanie Gong of 700 N. Alabama St., Apt. 1104, Indianapolis, IN 46204, and Ann Bolcavage of 5353 N. New Jersey Street, Indianapolis, IN 46220 hereby assign to: Rolls-Royce Corporation, having a place of business at: 450 S. Meridian Street, Indianapolis, IN 46225-1103 and its successors and assigns (collectively hereinafter called "the Assignee") the entire right, title and interest throughout the world in the inventions and improvements which are the subject of an application for United States Patent signed by us, entitled DIFFUSION BARRIER LAYERS FOR CERAMIC MATRIX COMPOSITES, filed March 18, 2016, and assigned U.S. Serial Number 15/074,522; this assignment including said application, (and do hereby authorize ASSIGNEE and its representative to hereafter add herein such application number(s) and/or filing date(s) when known), any provisional, non-provisional, continuation, continuation-in-part, divisional, reissue, renewal, extension or other application for any of said inventions or improvements, any and all United States and foreign patents, utility models, and design registrations granted for any of said inventions or improvements, and the right to claim priority based on the filing date of said application 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 and we authorize the Assignee to apply in all countries in our name or in its own name for patents, utility models, design registrations and like rights of exclusion and for inventors' certificates for said inventions and improvements; and we agree for ourselves and our respective heirs, legal representatives and assigns, without further compensation to perform such lawful acts and to sign such further applications, assignments, Preliminary Statements and other lawful documents as the Assignee may reasonably request to effectuate fully this assignment. We hereby authorize Rolls-Royce Corporation, its employees, and its legal representatives to fill in the serial number and filing date above after this document has been executed.

Date: Oct. 29, 2015   
Michael/Cybulsky

Date: \_\_\_\_\_  
Sean E. Landwehr

Date: \_\_\_\_\_  
Stephanie Gong

Date: \_\_\_\_\_  
Ann Bolcavage

ASSIGNMENT

For valuable consideration, we, Michael Cybulsky of 9656 Loganberry Lane, Indianapolis, IN 46256, Sean E. Landwehr of 1920 Shadowridge Run, Avon, IN 46123, Stephanie Gong of 700 N. Alabama St., Apt. 1104, Indianapolis, IN 46204, and Ann Bolcavage of 5353 N. New Jersey Street, Indianapolis, IN 46220 hereby assign to: Rolls-Royce Corporation, having a place of business at: 450 S. Meridian Street, Indianapolis, IN 46225-1103 and its successors and assigns (collectively hereinafter called "the Assignee") the entire right, title and interest throughout the world in the inventions and improvements which are the subject of an application for United States Patent signed by us, entitled DIFFUSION BARRIER LAYERS FOR CERAMIC MATRIX COMPOSITES, filed March 18, 2016, and assigned U.S. Serial Number 15/074,522; this assignment including said application, (and do hereby authorize ASSIGNEE and its representative to hereafter add herein such application number(s) and/or filing date(s) when known), any provisional, non-provisional, continuation, continuation-in-part, divisional, reissue, renewal, extension or other application for any of said inventions or improvements, any and all United States and foreign patents, utility models, and design registrations granted for any of said inventions or improvements, and the right to claim priority based on the filing date of said application 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 and we authorize the Assignee to apply in all countries in our name or in its own name for patents, utility models, design registrations and like rights of exclusion and for inventors' certificates for said inventions and improvements; and we agree for ourselves and our respective heirs, legal representatives and assigns, without further compensation to perform such lawful acts and to sign such further applications, assignments, Preliminary Statements and other lawful documents as the Assignee may reasonably request to effectuate fully this assignment. We hereby authorize Rolls-Royce Corporation, its employees, and its legal representatives to fill in the serial number and filing date above after this document has been executed.

RCA11394

Date: \_\_\_\_\_

\_\_\_\_\_  
Michael Cybulsky

Date: 10/8/15

  
\_\_\_\_\_  
Sean E. Landwehr

Date: \_\_\_\_\_

\_\_\_\_\_  
Stephanie Gong

Date: \_\_\_\_\_

\_\_\_\_\_  
Ann Bolcavage

ASSIGNMENT

For valuable consideration, we, Michael Cybulsky of 9656 Loganberry Lane, Indianapolis, IN 46256, Sean E. Landwehr of 1920 Shadowridge Run, Avon, IN 46123, Stephanie Gong of 700 N. Alabama St., Apt. 1104, Indianapolis, IN 46204, and Ann Bolcavage of 5353 N. New Jersey Street, Indianapolis, IN 46220 hereby assign to: Rolls-Royce Corporation, having a place of business at: 450 S. Meridian Street, Indianapolis, IN 46225-1103 and its successors and assigns (collectively hereinafter called "the Assignee") the entire right, title and interest throughout the world in the inventions and improvements which are the subject of an application for United States Patent signed by us, entitled DIFFUSION BARRIER LAYERS FOR CERAMIC MATRIX COMPOSITES, filed March 18, 2016, and assigned U.S. Serial Number 15/074,522; this assignment including said application, (and do hereby authorize ASSIGNEE and its representative to hereafter add herein such application number(s) and/or filing date(s) when known), any provisional, non-provisional, continuation, continuation-in-part, divisional, reissue, renewal, extension or other application for any of said inventions or improvements, any and all United States and foreign patents, utility models, and design registrations granted for any of said inventions or improvements, and the right to claim priority based on the filing date of said application 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 and we authorize the Assignee to apply in all countries in our name or in its own name for patents, utility models, design registrations and like rights of exclusion and for inventors' certificates for said inventions and improvements; and we agree for ourselves and our respective heirs, legal representatives and assigns, without further compensation to perform such lawful acts and to sign such further applications, assignments, Preliminary Statements and other lawful documents as the Assignee may reasonably request to effectuate fully this assignment. We hereby authorize Rolls-Royce Corporation, its employees, and its legal representatives to fill in the serial number and filing date above after this document has been executed.

RCA11394

Date: \_\_\_\_\_

\_\_\_\_\_  
Michael Cybulsky

Date: \_\_\_\_\_

\_\_\_\_\_  
Sean E. Landwehr

Date: May 19, 2015

Stephanie Long  
Stephanie Long

Date: \_\_\_\_\_

\_\_\_\_\_  
Ann Bolcavage



ASSIGNMENT

For valuable consideration, I, Kenneth Green of 7415 Oak Knoll Dr., Indianapolis, IN 46217 hereby assign to: Rolls-Royce Corporation, having a place of business at: 450 S. Meridian Street, Indianapolis, IN 46225-1103 and its successors and assigns (collectively hereinafter called "the Assignee") the entire right, title and interest throughout the world in the inventions and improvements which are described in an invention disclosure entitled, **DIFFUSION BARRIER SYSTEMS FOR ABRADABLE / ENVIRONMENTAL BARRIER COATINGS FOR CERAMIC MATRIX COMPOSITES**, having a Rolls-Royce docket number RCA11394, this assignment including said invention disclosure, any provisional, continuation, continuation-in-part, divisional, reissue, renewal, extension or other patent application for any of said inventions or improvements, any and all United States and foreign patents, utility models, and design registrations granted for any of said inventions or improvements, and I authorize the Assignee to apply in all countries in my name or in its own name for patents, utility models, design registrations and like rights of exclusion and for inventors' certificates for said inventions and improvements; and I agree for myself and my respective heirs, legal representatives and assigns, without further compensation to perform such lawful acts and to sign such further applications, assignments, declarations, Preliminary Statements and other lawful documents as the Assignee may reasonably request to effectuate fully this assignment.

Date: 12/30/14

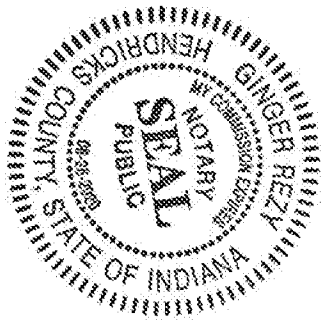
Kenneth Green  
Kenneth Green

State of Indiana )  
                          ) ss:  
County of Marion )

On this 30 day of December, 2014, before me, Ginger Rezy,  
Notary Public, personally appeared Kenneth Green personally known to me (or proved to me on the basis  
of satisfactory evidence) to be the person(s) whose name is/are subscribed to the within instrument and  
acknowledged to me that he/she/they executed the same in his/her/their authorized capacity, and that by  
his/her/their signature on the instrument the person(s), or the entity upon behalf of which the person(s)  
acted, executed the instrument.

WITNESS my hand and official seal.

Ginger Rezy  
Signature of Notary Public  
My Commission Expires



ASSIGNMENT

For valuable consideration, we, Michael Cybulsky of 9656 Loganberry Lane, Indianapolis, IN 46256, Sean E. Landwehr of 1920 Shadowridge Run, Avon, IN 46123, Stephanie Gong of 700 N. Alabama St., Apt. 1104, Indianapolis, IN 46204, and Ann Bolcavage of 5353 N. New Jersey Street, Indianapolis, IN 46220 hereby assign to: Rolls-Royce Corporation, having a place of business at: 450 S. Meridian Street, Indianapolis, IN 46225-1103 and its successors and assigns (collectively hereinafter called "the Assignee") the entire right, title and interest throughout the world in the inventions and improvements which are the subject of an application for United States Patent signed by us, entitled DIFFUSION BARRIER LAYERS FOR CERAMIC MATRIX COMPOSITES, filed March 18, 2016, and assigned U.S. Serial Number 15/074,522; this assignment including said application, (and do hereby authorize ASSIGNEE and its representative to hereafter add herein such application number(s) and/or filing date(s) when known), any provisional, non-provisional, continuation, continuation-in-part, divisional, reissue, renewal, extension or other application for any of said inventions or improvements, any and all United States and foreign patents, utility models, and design registrations granted for any of said inventions or improvements, and the right to claim priority based on the filing date of said application 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 and we authorize the Assignee to apply in all countries in our name or in its own name for patents, utility models, design registrations and like rights of exclusion and for inventors' certificates for said inventions and improvements; and we agree for ourselves and our respective heirs, legal representatives and assigns, without further compensation to perform such lawful acts and to sign such further applications, assignments, Preliminary Statements and other lawful documents as the Assignee may reasonably request to effectuate fully this assignment. We hereby authorize Rolls-Royce Corporation, its employees, and its legal representatives to fill in the serial number and filing date above after this document has been executed.

RCA11394

Date: \_\_\_\_\_

\_\_\_\_\_  
Michael Cybulsky

Date: \_\_\_\_\_

\_\_\_\_\_  
Sean E. Landwehr

Date: \_\_\_\_\_

\_\_\_\_\_  
Stephanie Gong

Date: 5-26-2015

  
\_\_\_\_\_  
Ann Bolcavage