

## PATENT ASSIGNMENT COVER SHEET

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<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
JUN SHI	03/01/2017
<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
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
Application Number:	15446582
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<b>ATTORNEY DOCKET NUMBER:</b>	15448-437 (RCA11785-US)
<b>NAME OF SUBMITTER:</b>	DANIEL P. DAILEY
<b>SIGNATURE:</b>	/Daniel P. Dailey/
<b>DATE SIGNED:</b>	03/03/2017
<b>Total Attachments: 2</b>	
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**ASSIGNMENT**

WHEREAS, Jun Shi, hereinafter called the "Assignor," has made the invention described in the United States patent application entitled CERAMIC MATRIX COMPOSITE COMPONENTS REINFORCED FOR MANAGING MULTI-AXIAL STRESSES AND METHODS FOR FABRICATING THE SAME, executed by Assignor on the same date as, or on a date prior to, this Assignment;

WHEREAS, Rolls-Royce Corporation, a corporation organized and existing under the laws of the State of Delaware, having a place of business at 450 S. Meridian Street, Indianapolis, IN 46225, hereinafter called the "Assignee," desires to acquire the entire right, title and interest in and to the invention and the patent application identified above, and all patents which may be obtained for said invention, as set forth below;

NOW, THEREFORE, in consideration of valuable and legally sufficient consideration, the receipt of which by the Assignor from the Assignee is acknowledged, the Assignor has sold, assigned and transferred, and by these presents sell, assign and transfer to the Assignee, the entire right, title and interest for the United States in the invention and the patent application identified above, and any patents that may issue for the invention in the United States; with the entire right, title and interest in the invention and all patent applications and patents issuing therefrom in all countries foreign to the United States, including the full right to claim for any such application all benefits and priority rights under any applicable convention; with the entire right, title and interest in all continuations, divisions, renewals and extensions of any of the patent applications and patents defined above; with the right to recover all damages, including, but not limited to, a reasonable royalty, by reason of past, present, or future infringement or any other violation of patent or patent application rights; to have and to hold for the sole and exclusive use and benefit of the Assignee, its successors and assigns, to the full end of the term or terms for all such patents.

The Assignor covenants and agrees, for both the Assignor and the Assignor's legal representatives, that the Assignor will assist the Assignee in the prosecution of the patent application identified above; in the making and prosecution of any other patent

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applications that the Assignee may elect to make covering the invention identified above; in vesting in the Assignee exclusive title in all such other patent applications and patents; and that the Assignor will execute and deliver to the Assignee all additional papers which may be requested by the Assignee to carry out the terms of this Assignment.

The Commissioner of Patents and Trademarks is authorized and requested to issue patents to the Assignee under the terms of this Assignment.

IN TESTIMONY WHEREOF, the Assignor has executed this agreement.

DATED:

Shijin

3/1/2017

Jun Shi