

## 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>
	SHAILESH N. JOSHI	10/22/2018
	ERCAN MEHMET DEDE	10/03/2018
<b>RECEIVING PARTY DATA</b>		
<b>Name:</b>	TOYOTA MOTOR ENGINEERING & MANUFACTURING NORTH AMERICA, INC.	
<b>Street Address:</b>	6565 HEADQUARTERS DRIVE W1-3C	
<b>City:</b>	PLANO	
<b>State/Country:</b>	TEXAS	
<b>Postal Code:</b>	75024	
<b>PROPERTY NUMBERS Total: 1</b>		
	<b>Property Type</b>	<b>Number</b>
	Application Number:	16170956
<b>CORRESPONDENCE DATA</b>		
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<b>ATTORNEY DOCKET NUMBER:</b>	22562-2609 / 2018-169	
<b>NAME OF SUBMITTER:</b>	BRYAN C. WISECUP	
<b>SIGNATURE:</b>	/Bryan C. Wisecup/	
<b>DATE SIGNED:</b>	10/25/2018	
<b>Total Attachments: 2</b>		
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**ASSIGNMENT**

WHEREAS, we, **Shailesh N. Joshi** of 2035 Churchill Drive, Ann Arbor, Michigan 48103 and **Ercan Mehmet Dede** of 2227 Placid Way, Ann Arbor, Michigan 48105, hereinafter the *ASSIGNOR(S)*, invented certain new and useful **THERMAL COMPENSATION LAYERS WITH CORE-SHELL PHASE CHANGE PARTICLES AND POWER ELECTRONICS ASSEMBLIES INCORPORATING THE SAME** for which we executed an application for a United States Patent and for which said application for United States Patent was filed on October 25, 2018, under

☒ Patent Application Serial No. 16/170,956

☒ Attorney Docket No. 22562-2609 / 2018-169;

WHEREAS, the *ASSIGNOR(S)* hereby authorize(s) and request(s) the attorney(s) and/or agent(s) empowered to act on **Toyota Motor Engineering & Manufacturing North America, Inc.**'s behalf in the aforementioned application, to insert above the filing date and application number of said application, when known;

WHEREAS, **Toyota Motor Engineering & Manufacturing North America, Inc.**, a corporation of the State of Kentucky, with a place of business at 6565 Headquarters Drive W1-3C, Plano, Texas 75024, hereinafter called the *ASSIGNEE*, is desirous of acquiring *ASSIGNOR(S)* entire right, title and interest in and to said application and the inventions therein disclosed and any Letters Patent that may issue thereon;

AND, WHEREAS, it is the intent of the *ASSIGNOR(S)* to assign all rights to the above referenced application to the *ASSIGNEE*, including, but not limited to, all substantive rights in the above-referenced application as well as the right to claim priority, the right to be granted a patent in any and all countries and Regional Patent Offices, including, without limitation, the PCT Contracting States;

NOW, THEREFORE, for good and valuable consideration, receipt whereof is hereby acknowledged, *ASSIGNOR(S)* hereby sell, assign and transfer unto said *ASSIGNEE*, its successors and assigns, the entire right, title and interest, including the right to claim priority in and to said application, the inventions therein disclosed, and any improvements thereon, and in any and all Letters Patent that may be granted therefor in the United States and its territorial possessions and in any and all countries and Regional Patent Offices, including, without limitation, the PCT Contracting States, and in and to any and all divisions, continuations, substitutions, renewals, re-examinations, extensions and reissues thereof;

*ASSIGNOR(S)* hereby authorize and request the Patent Office Officials in the United States and its territorial possessions, and in any and all countries and Regional Patent Offices, including, without limitation, the PCT Contracting States, to issue, when granted, any Letters Patent thereon, and any and all divisions, continuations, substitutions, renewals, re-examinations, extensions and reissues thereof, to said *ASSIGNEE*, its successors and assigns, as the assignee of the entire right title and interest in and to the same, for the sole use and behalf of the *ASSIGNEE* and the *ASSIGNEE*'s successors and assigns, to the full end of the term for which the Letters Patent may be granted, including the term of any and all divisions, continuations, substitutions, renewals, re-examinations, extensions and reissues thereof, as fully and entirely as the same would have been held by the *ASSIGNOR(S)* had this assignment not been made;

*ASSIGNOR(S)* hereby authorize said *ASSIGNEE*, its successors and assigns, to file in its own name applications for patent in foreign countries in connection with the inventions hereby transferred, under the International Convention claiming the priority of said United States application or otherwise, and to secure in its own name the Letters Patent issued thereon, including any and all divisions, continuations, substitutions, renewals, re-examinations, extensions and reissues thereof; and

*ASSIGNOR(S)* hereby agree that, upon request, *ASSIGNOR(S)* will sign all papers, and make all rightful oaths, and do all acts which said *ASSIGNEE*, its successors or assigns, may consider necessary in connection with said United States application, and in connection with any other United States application or foreign applications that may be filed in connection with said inventions, and with any improvements thereon, and in connection with any Letters Patent issued thereon, including any and all divisions, continuations, substitutions, renewals, re-examinations, extensions and reissues thereof.

ASSIGNOR(S):

By: Shailesh N. Joshi  
Shailesh N. Joshi

Date: 10/22/2018

By: Ercan M. Dede  
Ercan Mehmet Dede

Date: 10/3/2018