

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
Stylesheet Version v1.2

EPAS ID: PAT3086290

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
CHEN LING	10/17/2014
RUIGANG ZHANG	10/17/2014
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	TOYOTA MOTOR ENGINEERING & MANUFACTURING NORTH AMERICA, INC.
<b>Street Address:</b>	25 ATLANTIC AVENUE
<b>City:</b>	ERLANGER
<b>State/Country:</b>	KENTUCKY
<b>Postal Code:</b>	41018
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	14517283
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	
<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>	dmejia@patlaw.com
<b>Correspondent Name:</b>	THOMAS E. ANDERSON, GIFFORD KRASS, ET AL
<b>Address Line 1:</b>	2701 TROY CENTER DRIVE
<b>Address Line 2:</b>	SUITE 330
<b>Address Line 4:</b>	TROY, MICHIGAN 48007
<b>ATTORNEY DOCKET NUMBER:</b>	TTC14-11302/08
<b>NAME OF SUBMITTER:</b>	THOMAS E. ANDERSON
<b>SIGNATURE:</b>	/Thomas E. Anderson/
<b>DATE SIGNED:</b>	10/29/2014
<b>Total Attachments: 3</b>	
source=Executed Assignment#page1.tif	
source=Executed Assignment#page2.tif	
source=Executed Assignment#page3.tif	

## ASSIGNMENT BY INVENTORS

**THIS ASSIGNMENT**, made by Chen Ling and Ruigang Zhang (hereinafter referred to as Assignors), residing at 2354 Dahlia Ct., Ann Arbor, Michigan 48103; and 4808 Washtenaw Ave Apt B7, Ann Arbor, Michigan 48108, respectively;

**WHEREAS**, Assignors have invented certain new and useful improvements in TUNE THE OXYGEN STORAGE PROPERTIES OF  $\text{Ca}_2\text{MnAlO}_{5+\delta}$  THROUGH CHEMICAL DOPING, set forth in a Utility application for Letters Patent of the United States, already filed on October 17, 2014 as U.S. Application No. 14/517,283; and

**WHEREAS**, Toyota Motor Engineering & Manufacturing North America, Inc., a Corporation organized under and pursuant to the laws of Kentucky having its principal place of business at 25 Atlantic Avenue, Erlanger, Kentucky 41018 (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**, for good and valuable consideration, the receipt and sufficiency 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 therefor 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.

**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 Utility 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 of Patent 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 hereby grant the following individuals the power to insert on this Assignment any further identification which may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark Office for recordation of this document:

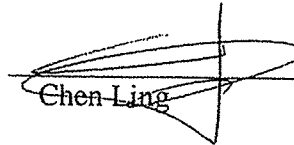
GIFFORD, KRASS, SPRINKLE, ANDERSON & CITKOWSKI, P.C.

All practitioners at Customer Number 25006

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

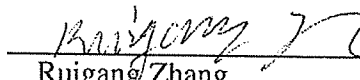
Date: 10/17/14

Signature:

  
Chen Ling

Date: 10/17/14

Signature:

  
Ruigang Zhang