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09/25/2012

SHEET



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To the Director of the US Patent ar.

is or the new address(es) below.

## 1. Name of conveying party(ies):

Arnold J. Forman  
Zhebo Chen  
Thomas F. JaramilloAdditional name(s) of conveying party(ies) attached? ☐ Yes ☒ No

## 2. Name and address of receiving party(ies):

Name: The Board of Trustees of the Leland Stanford Junior University

Street address: 1705 El Camino Real

City: Palo Alto

State: CA

Zip: 94306

Country: USA

Additional name(s) and address(es) attached? ☐ Yes ☒ No

## 3. Nature of conveyance/Execution Date(s):

☒ Assignment☐ Joint Research Agreement☐ Security Agreement☐ Government Interest Assignment☐ Merger☐ Executive Order 9424m Confirmatory License☐ Change of Name☐ Other

Execution Date(s): 9/10/12

## 4. Application or patent number(s):

A. Patent Application No.(s)  
13/619053

B. Patent No.(s)

C. Agent Ref No.(s)  
S11-172/US☐ This document is being filed together with a new application.Additional numbers attached? ☐ Yes ☒ No

## 5. Name and address to whom correspondence concerning document should be mailed:

Name: Lumen Patent Firm

Street address: 550 S. California Ave., Suite 300

City: Palo Alto

State: CA

Zip: 94306

Country: USA

Phone No.: 650-424-0100

Fax No.: 650-424-0141

Email: admin@lumen.com

## 6. Total number of applications and patents involved: 1

7. Total fee (37 CFR 1.21(h) &amp; 3.41): \$ 40

☒ Authorized to be charged by credit card

## 8. Payment information:

a. Credit Card Last 4 Numbers: 5900

Credit Card Expiration Date: 10/2012

## 9. Signature:

Signature / James E. Parris / Reg.No. 51,135

Printed Name

James E. Parris

Date

9/17/12

Total number of pages including cover sheet,  
attachments and documents: 4

09/20/2012 CCHAU1 00000016 13619053

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PATENT  
REEL: 029072 FRAME: 0936

## ASSIGNMENT OF INVENTION AND PATENT

This Assignment of Invention and Patent (the "Assignment") is made and effective as of **September 10, 2012**, by and between **Thomas F. Jaramillo**, an individual residing in **Menlo Park, CA, USA**, (the "Assignor") and **The Board of Trustees of the Leland Stanford Junior University**, an entity whose address is **1705 El Camino Real, Palo Alto, CA 94306-1106, USA** (the "Assignee").

1) For good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, Assignor hereby sells, assigns and transfers to Assignee and the successors and assigns of Assignee, its entire right, title and interest in and to (i) the invention or inventions described in US patent application filed **herewith**, naming inventor(s) **Arnold J. Forman, Zhebo Chen, Thomas F. Jaramillo**, entitled **Macro-Structured High Surface Area Transparent Conductive Oxide Electrodes** (the "Application") naming Assignor as an inventor, (ii) any and all patent applications (whether provisional or non-provisional) relating to said invention(s), including all continuations, continuations-in-part, divisions, substitutes, reissues or renewals thereof, in any and all countries, (iii) any and all patents relating to such invention(s) in any and all countries that may be granted on any such application(s), including all reissues or extensions of any such patents and (iv) any and all domestic and foreign rights of priority resulting from the filing of the Application.

2) Assignor hereby covenants that no assignment, sale, agreement or encumbrance has been or will be made or entered into by Assignor which would conflict with this Assignment. Assignor represents and warrants to Assignee that at the time of the execution and delivery of this Assignment, Assignor solely owns (or jointly owns, if the invention(s) were jointly made) the entire right, title and interest in and to said invention(s).

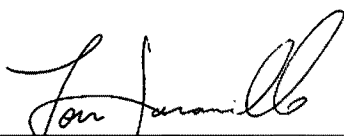
3) Assignor agrees that Assignee may apply for foreign patents relating to said invention(s) and irrevocably authorizes Assignee and grants Assignee the right to do so.

4) Assignor agrees, on request and without further consideration, but at the expense of Assignee, to sign all lawful papers, make all rightful oaths, and give any required testimony in any legal proceedings relating to said invention(s), and to generally aid Assignee, or its successors or assigns to obtain and enforce patent protection for said invention(s) in any and all countries.

5) Assignor authorizes and requests any official whose duty it is to issue patents to issue any patent on said invention(s) to Assignee, as fully and entirely as the same would have been held by Assignor had this assignment and sale not been made.

6) This Assignment shall bind and inure to the benefit of the successors, assigns and personal representatives of the respective parties.

Assignor has executed this Assignment as of the Effective Date of **September 10, 2012**.

Signature:  \_\_\_\_\_

Assignor: **Thomas F. Jaramillo**

Lumen Ref.: S11-172/US  
PID: 17521 IID: 4560

**PATENT**  
**REEL: 029072 FRAME: 0937**

## ASSIGNMENT OF INVENTION AND PATENT

This Assignment of Invention and Patent (the "Assignment") is made and effective as of **September 10, 2012**, by and between **Zhebo Chen**, an individual residing in **Redwood City, CA, U.S.A.** (the "Assignor") and **The Board of Trustees of the Leland Stanford Junior University**, an entity whose address is **1705 El Camino Real, Palo Alto, CA 94306-1106, USA** (the "Assignee").

1) For good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, Assignor hereby sells, assigns and transfers to Assignee and the successors and assigns of Assignee, its entire right, title and interest in and to (i) the invention or inventions described in US patent application filed **herewith**, naming inventor(s) **Arnold J. Forman, Zhebo Chen, Thomas F. Jaramillo**, entitled **Macro-Structured High Surface Area Transparent Conductive Oxide Electrodes** (the "Application") naming Assignor as an inventor, (ii) any and all patent applications (whether provisional or non-provisional) relating to said invention(s), including all continuations, continuations-in-part, divisions, substitutes, reissues or renewals thereof, in any and all countries, (iii) any and all patents relating to such invention(s) in any and all countries that may be granted on any such application(s), including all reissues or extensions of any such patents and (iv) any and all domestic and foreign rights of priority resulting from the filing of the Application.

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Assignor has executed this Assignment as of the Effective Date of **September 10, 2012**.

Signature: \_\_\_\_\_

Assignor: **Zhebo Chen**

Lumen Ref.: S11-172/US  
PID: 17521 IID: 4561

## ASSIGNMENT OF INVENTION AND PATENT

This Assignment of Invention and Patent (the "Assignment") is made and effective as of **September 10, 2012**, by and between **Arnold J. Forman**, an individual residing in **Palo Alto, CA, USA**, (the "Assignor") and **The Board of Trustees of the Leland Stanford Junior University**, an entity whose address is **1705 El Camino Real, Palo Alto, CA 94306-1106, USA** (the "Assignee").

1) For good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, Assignor hereby sells, assigns and transfers to Assignee and the successors and assigns of Assignee, its entire right, title and interest in and to (i) the invention or inventions described in US patent application filed **herewith**, naming inventor(s) **Arnold J. Forman, Zhebo Chen, Thomas F. Jaramillo**, entitled **Macro-Structured High Surface Area Transparent Conductive Oxide Electrodes** (the "Application") naming Assignor as an inventor, (ii) any and all patent applications (whether provisional or non-provisional) relating to said invention(s), including all continuations, continuations-in-part, divisions, substitutes, reissues or renewals thereof, in any and all countries, (iii) any and all patents relating to such invention(s) in any and all countries that may be granted on any such application(s), including all reissues or extensions of any such patents and (iv) any and all domestic and foreign rights of priority resulting from the filing of the Application.

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Assignor has executed this Assignment as of the Effective Date of **September 10, 2012**.

Signature: \_\_\_\_\_

Assignor: **Arnold J. Forman**

Lumen Ref.: S11-172/US  
PID: 17521 IID: 4563