## 505599531 07/31/2019

# PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

## **CONVEYING PARTY DATA**

Name	Execution Date
TERRILL ATWATER	07/12/2019
PAULA LATORRE	07/13/2019
MATTHEW LIMPERT	07/12/2019
ASHLEY RUTH	07/15/2019

## **RECEIVING PARTY DATA**

Name:	THE UNITED STATES OF AMERICA AS REPRESENTED BY THE SECRETARY OF THE ARMY
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State/Country:	MARYLAND
Postal Code:	21005

## **PROPERTY NUMBERS Total: 1**

Property Type	Number
Application Number:	16527855

## **CORRESPONDENCE DATA**

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Address Line 2: THIRD FLOOR

Address Line 4: APG, MARYLAND 21005

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NAME OF SUBMITTER:	KIRSTEN HIERA
SIGNATURE:	/Kirsten Hiera/
DATE SIGNED:	07/31/2019

**Total Attachments: 4** 

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GROUP VIII PERIOD 4 ELEMENT (Fe, Co, NI) METAL SITE AND CI "O" SITE MODIFIED LITHIUM Title of Invention: MANGANESE BASED CATHODE MATERIAL, METHOD OF PREPARING THE SAME, AND ELECTROCHEMICAL CELL CONTAINING THE SAME Inventor(s): Terrill B. Atwater, Matthew A. Limpert, Ashley L. Ruth, and Paula C. Latorre Application Serial Number: 16/527855 Filing Date: \_\_7/31/2019

I, the undersigned inventor, for the good and valuable consideration of the Government preparing, prosecuting, and maintaining the above-identified patent application, hereby:

- Assign to the Government of the United States, as represented by the Secretary of the Army, the entire right, title and interest throughout the United States, its Territories, Possessions, and Puerto Rico, in and to the above-entitled invention and application for patent and all Letter Patents issuing thereon, and any continuation, continuation-in-part or division of said application and any reissue or extension of said Letters Patent.
- 2. Agree to assign to the Government upon request, title, and interest in the invention in those foreign countries in which the Government, within eight months of the filling of the United States application for patent, determines to cause an application to be filed in any particular foreign county or fails to make such a determination, within the said eight months, all my right, title and interest in the invention in such foreign country shall remain in me, subject to a nonexclusive, irrevocable, royalty-free license to the Government in any patent which may issue on the invention in such foreign country, including the power to issue sublicenses for use in behalf of the Government and/or furtherance of the foreign policies of the Government.
- 3. Agree to provide any further invention within my knowledge to execute any further documents necessary to the prosecution of patent applications on the invention, the prosecution and settlement of interferences and recording of title to patent applications and patents issuing thereon.
- 4. Authorize any Army patent attorney or agent to insert the filing date and application serial number of the application in the fields above when known.

Typed Name of Inventor: Terrill B. Atwater
Signature of Inventor: 10/10/10/10/10/10
Address: 1143 Sparrow Mill Way, Bel Air, MD 21015
Date Executed: 12 July 19

GROUP VIII PERIOD 4 ELEMENT (Fe, Co, Ni) METAL SITE AND CI "O" SITE MODIFIED LITHIUM Title of Invention: MANGANESE BASED CATHODE MATERIAL, METHOD OF PREPARING THE SAME, AND **ELECTROCHEMICAL CELL CONTAINING THE SAME** Inventor(s): Terrill B. Atwater, Matthew A. Limpert, Ashley L. Ruth, and Paula C. Latorre 16/527855 Application Serial Number: Filing Date: \_\_\_\_\_ I, the undersigned inventor, for the good and valuable consideration of the Government preparing, prosecuting, and maintaining the above-identified patent application, hereby: 1. Assign to the Government of the United States, as represented by the Secretary of the Army, the entire right, title and interest throughout the United States, its Territories, Possessions, and Puerto Rico, in and to the above-entitled invention and application for patent and all Letter Patents issuing thereon, and any continuation, continuation-in-part or division of said application and any reissue or extension of said Letters Patent. 2. Agree to assign to the Government upon request, title, and interest in the invention in those foreign countries in which the Government, within eight months of the filling of the United States application for patent, determines to cause an application to be filed in any particular foreign county or fails to make such a determination, within the said eight months, all my right, title and interest in the invention in such foreign country shall remain in me, subject to a nonexclusive, irrevocable, royalty-free license to the Government in any patent which may issue on the invention in such foreign country, including the power to issue sublicenses for use in behalf of the Government and/or furtherance of the foreign policies of the Government. 3. Agree to provide any further invention within my knowledge to execute any further documents necessary to the prosecution of patent applications on the invention, the prosecution and settlement of interferences and recording of title to patent applications and patents issuing thereon. 4. Authorize any Army patent attorney or agent to insert the filing date and application serial number of the application in the fields above when known. Typed Name of Inventor: Paula C. Latorre Signature of Inventor: 602 Roxburch Terrace, Bel Air, MD 21015 Date Executed: 15 JUL 2019

GROUP VIII PERIOD 4 ELEMENT (Fe, Co, Ni) METAL SITE AND CI "O" SITE MODIFIED LITHIUM Title of Invention: MANGANESE BASED CATHODE MATERIAL, METHOD OF PREPARING THE SAME, AND **ELECTROCHEMICAL CELL CONTAINING THE SAME** Inventor(s): Terrill B. Atwater, Matthew A. Limpert, Ashley L. Ruth, and Paula C. Latorre Application Serial Number: 16/527855 I, the undersigned inventor, for the good and valuable consideration of the Government preparing, prosecuting, and maintaining the above-identified patent application, hereby: 1. Assign to the Government of the United States, as represented by the Secretary of the Army, the entire right, title and interest throughout the United States, its Territories, Possessions, and Puerto Rico, in and to the above-entitled invention and application for patent and all Letter Patents issuing thereon, and any continuation, continuation-in-part or division of said application and any reissue or extension of said Letters Patent. 2. Agree to assign to the Government upon request, title, and interest in the invention in those foreign countries in which the Government, within eight months of the filling of the United States application for patent, determines to cause an application to be filed in any particular foreign county or fails to make such a determination, within the said eight months, all my right, title and interest in the invention in such foreign country shall remain in me, subject to a nonexclusive, irrevocable, royalty-free license to the Government in any patent which may issue on the invention in such foreign country, including the power to issue sublicenses for use in behalf of the Government and/or furtherance of the foreign policies of the Government. 3. Agree to provide any further invention within my knowledge to execute any further documents necessary to the prosecution of patent applications on the invention, the prosecution and settlement of interferences and recording of title to patent applications and patents issuing thereon. 4. Authorize any Army patent attorney or agent to insert the filing date and application serial number of the application in the fields above when known. Typed Name of Inventor: Matthew A. Limpert Signature of Inventor: Manhall Impin Address: 622 D Street, Kennett Square, PA 19048 Date Executed: 7-12-19

GROUP VIII PERIOD 4 ELEMENT (Fe, Co, NI) METAL SITE AND CI "O" SITE MODIFIED LITHIUM Title of Invention: MANGANESE BASED CATHODE MATERIAL, METHOD OF PREPARING THE SAME, AND ELECTROCHEMICAL CELL CONTAINING THE SAME Inventor(s): Terrill B. Atwater, Matthew A. Limpert, Ashley L. Ruth, and Paula C. Latorre Application Serial Number: 16/527855 Filing Date: 7/31/2019 I, the undersigned inventor, for the good and valuable consideration of the Government preparing, prosecuting, and maintaining the above-identified patent application, hereby: 1. Assign to the Government of the United States, as represented by the Secretary of the Army, the entire right, title and interest throughout the United States, its Territories, Possessions, and Puerto Rico, in and to the above-entitled invention and application for patent and all Letter Patents issuing thereon, and any continuation, continuation-in-part or division of said application and any reissue or extension of said Letters Patent. 2. Agree to assign to the Government upon request, title, and interest in the invention in those foreign countries in which the Government, within eight months of the filling of the United States application for patent, determines to cause an application to be filed in any particular foreign county or fails to make such a determination, within the said eight months, all my right, title and interest in the invention in such foreign country shall remain in me, subject to a nonexclusive, irrevocable, royalty-free license to the Government in any patent which may issue on the invention in such foreign country, including the power to issue sublicenses for use in behalf of the Government and/or furtherance of the foreign policies of the Government. 3. Agree to provide any further invention within my knowledge to execute any further documents necessary to the prosecution of patent applications on the invention, the prosecution and settlement of interferences and recording of title to patent applications and patents issuing thereon. 4. Authorize any Army patent attorney or agent to insert the filing date and application serial number of the application in the fields above when known. Typed Name of Inventor: Ashley L. Ruth

Address: 108 East Ring Factory Road, Bel Air, MD 21015

Date Executed: 7/15/2019

Signature of Inventor:

PATENT REEL: 049920 FRAME: 0704

**RECORDED: 07/31/2019**