

<b>PATENT ASSIGNMENT COVER SHEET</b>
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Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT5452357

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
EDWARD SACHET	03/29/2019
CHRISTOPHER SHELTON	03/29/2019
JON-PAUL MARIA	09/25/2018
KYLE PATRICK KELLEY	05/16/2018
EVAN LARS RUNNERSTROM	05/14/2018
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	NORTH CAROLINA STATE UNIVERSITY
<b>Street Address:</b>	1021 MAIN CAMPUS DRIVE
<b>Internal Address:</b>	2ND FLOOR
<b>City:</b>	RALEIGH
<b>State/Country:</b>	NORTH CAROLINA
<b>Postal Code:</b>	27606
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	15988883
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(919)854-1401
<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>Phone:</b>	9198541400
<b>Email:</b>	mderosa@myersbigel.com
<b>Correspondent Name:</b>	MYERS BIGEL, P.A.
<b>Address Line 1:</b>	4140 PARKLAKE AVENUE
<b>Address Line 2:</b>	SUITE 600
<b>Address Line 4:</b>	RALEIGH, NORTH CAROLINA 27612
<b>ATTORNEY DOCKET NUMBER:</b>	5051-915
<b>NAME OF SUBMITTER:</b>	MEREDITH DEROSA
<b>SIGNATURE:</b>	/mld/
<b>DATE SIGNED:</b>	04/02/2019

**Total Attachments: 7**

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**ASSIGNMENT**

THIS ASSIGNMENT, made by us, **Edward Sachet**, having a mailing address of 1021 Main Campus Drive, 2<sup>nd</sup> Floor, Raleigh, North Carolina 27606; **Christopher Shelton**, having a mailing address of 1021 Main Campus Drive, 2<sup>nd</sup> Floor, Raleigh, North Carolina 27606; **Jon-Paul Maria**, having a mailing address of 1021 Main Campus Drive, 2<sup>nd</sup> Floor, Raleigh, North Carolina 27606; **Kyle Patrick Kelley**, residing at 115 Holly Shelter Way, Lake Lure, North Carolina 28746; and **Evan Lars Runnerstrom**, residing at 2400 W Knox St., Durham, North Carolina 27705;

WITNESSETH: That,

WHEREAS, we are joint inventors of certain new and useful improvements in **HIGH MOBILITY DOPED METAL OXIDE THIN FILMS AND REACTIVE PHYSICAL VAPOR DEPOSITION METHODS OF FABRICATING THE SAME** for which U.S. Patent Application No. 15/988,883 was filed on May 24, 2018 in the United States Patent and Trademark Office; and

WHEREAS, **North Carolina State University**, a constituent institution of The University of North Carolina and an educational institution chartered under the laws of the State of North Carolina, having a principal office at 1021 Main Campus Drive, 2<sup>nd</sup> Floor, Raleigh, North Carolina, 27606, hereinafter referred to as assignee, is desirous of acquiring my entire right, title and interest in and to said invention as described in said application(s), and in and to any and all Letters Patent which shall be granted therefor in the United States of America and all foreign countries;

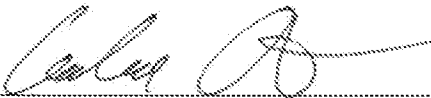
NOW, THEREFORE, To Whom It May Concern, be it known that for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, we have sold and by these presents do hereby sell, assign, transfer and convey unto said assignee, its successors and assigns, the entire right, title, and interest in and to the said invention and application(s), and in and to any and all continuations, continuations-in-part, or divisions thereof, and in and to any and all Letters Patent of the United States of America and all foreign countries or reissues or other forms of protection thereof which may be granted therefor or thereon, for the full end of the term for which said Letters Patent may be granted along with any term extensions thereon or therefor, together with the right to claim the priority of said application in all foreign countries in accordance with the International Convention, the same to be held and enjoyed by said assignee, its successors and assigns, as fully and entirely as the same would have been held and enjoyed by us if this assignment and sale had not been made.

We hereby request that said Letters Patent be issued in accordance with this assignment.

We further covenant and agree that, at the time of the execution and delivery of these presents, and to the extent not already assigned to the assignee, we possess full title to the invention and application above-mentioned, and that we have the unencumbered right and authority to make this assignment.

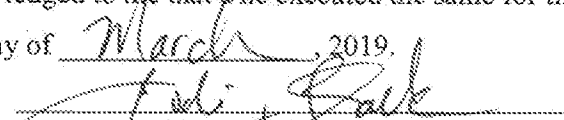
We further covenant and agree to promptly communicate to said assignee or its representatives any facts known to us relating to said invention, to testify in any interference or legal proceedings involving said invention, to execute any additional papers which may be requested to confirm the right of the assignee, its representatives, successors, or assigns to secure patent or similar protection for the said invention in all countries and to vest in the assignee complete title to the said invention and Letters Patent, without further compensation, but at the expense of said assignee, its successors, assigns, and other legal representatives; and we hereby instruct, and further covenant and agree to bind our heirs, legal representatives, and assigns, to do same, without further compensation, but at the expense of said assignee or its representatives.

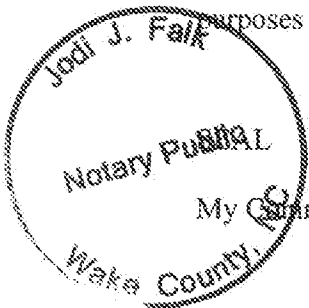
IN WITNESS WHEREOF, I have hereunto set my hand and seal on this \_\_\_\_\_ day of 03/29, 2019.

  
\_\_\_\_\_  
Edward Sachet

STATE OF North Carolina  
COUNTY OF Wake ss:

Before me personally appeared the person described in and who executed the foregoing instrument, and s/he acknowledged to me that s/he executed the same for the purposes therein stated, this 29 day of March, 2019.

  
\_\_\_\_\_  
Notary Public



My Commission Expires: July 29, 2019

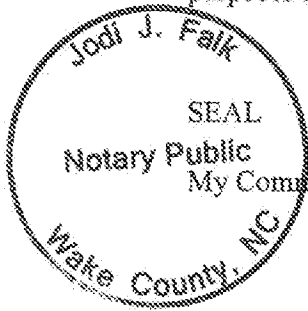
IN WITNESS WHEREOF, I have hereunto set my hand and seal on this 29<sup>th</sup> day of March, 2019.

[Signature]  
Christopher Shelton

STATE OF North Carolina  
COUNTY OF Wake ss:

Before me personally appeared the person described in and who executed the foregoing instrument, and s/he acknowledged to me that s/he executed the same for the purposes therein stated, this 29 day of March, 2019.

[Signature]  
Notary Public



My Commission Expires: July 29, 2019

IN WITNESS WHEREOF, I have hereunto set my hand and seal on this 25 day of September, 2018.

Jon-Paul Maria

Jon-Paul Maria

STATE OF Pennsylvania  
COUNTY OF Centre } ss:

Before me personally appeared the person described in and who executed the foregoing instrument, and s/he acknowledged to me that s/he executed the same for the

Commonwealth of Pennsylvania purposes therein stated, this 25 day of September, 2018.

Notarial Seal  
ERIN L. CLOUSER - Notary Public  
STATE COLLEGE BORO, CENTRE COUNTY  
My Commission Expires Sep 24, 2021  
SEAL

Erin L. Clouser  
Notary Public

My Commission Expires: 9/24/2021



IN WITNESS WHEREOF, I have hereunto set my hand and seal on this 16 day  
of May, 2018.

Kyle Patrick Kelley  
\_\_\_\_\_  
Kyle Patrick Kelley

STATE OF North Carolina  
COUNTY OF Wake ss:

Before me personally appeared the person described in and who executed the  
foregoing instrument, and s/he acknowledged to me that s/he executed the same for the  
purposes therein stated, this 16 day of May, 2018.

Jodi J. Falk  
\_\_\_\_\_  
Notary Public



My Commission Expires: July 29, 2019

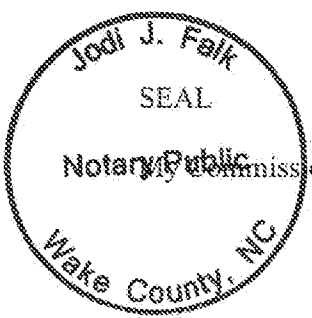
IN WITNESS WHEREOF, I have hereunto set my hand and seal on this 19 day  
of May, 2018.

Evan L. Runnerstrom  
Evan Lars Runnerstrom

STATE OF North Carolina  
COUNTY OF Wake ss:

Before me personally appeared the person described in and who executed the  
foregoing instrument, and s/he acknowledged to me that s/he executed the same for the  
purposes therein stated, this 14<sup>th</sup> day of May, 2018.

Jodi J. Falk  
Notary Public

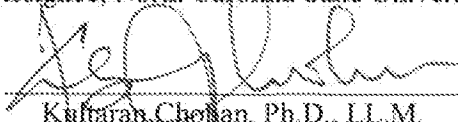


My commission Expires: July 29, 2019



WHEREBY North Carolina State University acknowledges and accepts the assignment;

IN WITNESS WHEREOF, I have hereunto set my hand and seal on this 29 day of March, ~~2018~~<sup>2019</sup>. The undersigned warrants and represents that he has the authority to sign this Assignment on behalf of the Assignee, North Carolina State University.

By:   
Kuffaran Chohan, Ph.D., LL.M.  
Director of Licensing

STATE OF NORTH CAROLINA) ) ss:  
COUNTY OF WAKE ) )

Before me personally appeared the person described in and who executed the foregoing instrument, and he acknowledged to me that he executed the same for the purposes therein stated, this 29 day of March, 2019.

  
Notary Public - Jodi J. Falk



My Commission Expires: July 29, 2019