07/26/2019 505591990

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5638791

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
LARS VOSS	06/17/2019
DANIEL MAX DRYDEN	06/17/2019
CLINT FRYE	06/17/2019
SARA ELIZABETH HARRISON	06/17/2019
REBECCA J. NIKOLIC	06/19/2019
QINGHUI SHAO	06/17/2019

RECEIVING PARTY DATA

Name:	LAWRENCE LIVERMORE NATIONAL SECURITY, LLC
Street Address:	2300 FIRST STREET, SUITE 204
City:	LIVERMORE
State/Country:	CALIFORNIA
Postal Code:	94550

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	16446460

CORRESPONDENCE DATA

Fax Number: (408)971-4660

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.

Phone: (408) 971-2573 Email: alma@zilkakotab.com ZILKA-KOTAB, PC **Correspondent Name:** Address Line 1: 1155 N. 1ST ST.

Address Line 2: SUITE 105

Address Line 4: SAN JOSE, CALIFORNIA 95112

ATTORNEY DOCKET NUMBER:	IL-13324/LLNLP200
NAME OF SUBMITTER:	DOMINIC M. KOTAB
SIGNATURE:	/Dominic M. Kotab/
DATE SIGNED:	07/26/2019

Total Attachments: 6 source=IL-13324_LLNLP200_ExecutedAssignment_07-26-2019#page1.tif source=IL-13324_LLNLP200_ExecutedAssignment_07-26-2019#page2.tif source=IL-13324_LLNLP200_ExecutedAssignment_07-26-2019#page3.tif source=IL-13324_LLNLP200_ExecutedAssignment_07-26-2019#page4.tif source=IL-13324_LLNLP200_ExecutedAssignment_07-26-2019#page5.tif

source=IL-13324_LLNLP200_ExecutedAssignment_07-26-2019#page6.tif

<u>ASSIGNMENT</u>

LLNL Record of Invention Case No. 111332	4 , entitled:
GALLIDA'	TION ASSISTED IMPURITY DOPING
For good and valuable consideration, the receip	et of which is hereby acknowledged, ASSIGNOR(s)
1. Lars Voss	2. <u>Daniel Max Dryden</u>
3. Clint Frye	4. Sara Elizabeth Harrison
5. Rebecca J. Nikolic	6. Qinghui Shao
hereby sells, assigns, transfers, and conveys i limited liability company, having a place of l assigns and legal representative of the ASSIGN	to ASSIGNEE, Lawrence Livermore National Security, LLC, a Delaware business at 7000 East Avenue, Livermore, CA 94550 and the successors, VEE all of its right, title and interest throughout the world in and to any and re-listed LLNL Record of Invention Case No. and in:
 U.S. Provisional Application Serial No. 	62/687,635 filed on06/20/2018
	_{se} filed on
	≤ filed on
part, extension or substitute thereof, and any reall International Conventions for the Protection	s by the above application(s) or any continuation, division, continuation-in- sissue, reexamination or extension of said Letters Patent and all rights under of Industrial Property; nment, sale, agreement or encumbrance has been or will be made or entered
documents relating to said invention and said ASSIGNOR and will testify as to the same in a execute and deliver to ASSIGNEE or its legal of for, obtain, maintain, issue or enforce said app which may be necessary or desirable to carry or	IEE will, upon its request, be provided promptly with all pertinent facts and Letters Patent and legal equivalents as may be known and accessible to any interference, litigation, or proceeding relating thereto and will promptly representative any and all papers, instruments or affidavits required to apply dication, said invention and said Letters Patent and said equivalents thereof it the purposes thereof. An attorney of record is authorized and requested by this assignment the filing date and serial number of said application when
AND the <u>ASSIGNOR(S)</u> requests the Commis States and any reissue or extension thereof to th	sioner of Patents and Trademarks to issue said Letters Patent of the United e ASSIGNEE, Lawrence Livermore National Security, LLC.
	%:
executed this	Signature of ASSIGNOR(s)
Of ITIT	Lars Voss
and the second	
executed this	Signature of ASSIGNOR(s)
Date	Daniel Max Dryden

ASSIGNMENT

LLNL Record of Invention Case No. <u>IL-13324</u>	, er	ititled:
GALLIDATIO	ON ASSISTE	D IMPURITY DOPING
For good and valuable consideration, the receipt o	of which is her	eby acknowledged, ASSIGNOR(s)
I. Lars Voss	2.	Daniel Max Dryden
3. Clint Frye	4.	Sara Elizabeth Harrison
5. Rebecca J. Nikolic	6.	Qinghui Shao
limited liability company, having a place of bus	siness at 7000 E all of its rig	Lawrence Livermore National Security, LLC, a Delaware Deast Avenue, Livermore, CA 94550 and the successors, the https://doi.org/10.1001/j.j.c
U.S. Provisional Application Serial No. 6	52/687,635	, filed on 06/20/2018
U.S. Patent Application Serial No.		
International Application Serial No.	******************	, filed on
into which would conflict with this assignment; ASSIGNOR(S) further covenants that ASSIGNED documents relating to said invention and said L ASSIGNOR and will testify as to the same in any execute and deliver to ASSIGNEE or its legal rep	E will, upon it etters Patent y interference, presentative an	ement or encumbrance has been or will be made or entered as request, be provided promptly with all pertinent facts and and legal equivalents as may be known and accessible to litigation, or proceeding relating thereto and will promptly by and all papers, instruments or affidavits required to apply wention and said Letters Patent and said equivalents thereof
which may be necessary or desirable to carry out t	he purposes th	hereof. An attorney of record is authorized and requested by the filing date and serial number of said application when
AND the <u>ASSIGNOR(S)</u> requests the Commission States and any reissue or extension thereof to the A		s and Trademarks to issue said Letters Patent of the United awrence Livermore National Security, LLC.
executed this	Sign	nature of ASSIGNOR(s)
Date	Lar	s Voss
executed this	Sign	nature of ASSIGNOR(s)
17/19</td <td></td> <td></td>		
Date	Dar	rial Mix Drudan

13131313 20030 ((O))	
,	
executed this	Signature of ASSIGNOR(s)
	All I I I I I I I I I I I I I I I I I I
6-17-19	de la companya de la
6 m (7 m /)	A startification of the start o
Date	Clint Free months and the control of
17aic	CASSA & Contribution and the contribution of t
	gran.
executed this	Signature of ASSIGNOR(s)
Date	Sara Elizabeth Harrison
executed this	Signature of ASSIGNOR(s)
excense mis	ordinanc of violacidesides.
Date	Rebecca J. Nikolic
Usaic	p.cocca at ismone
executed this	Signature of ASSIGNOR(s)

Qinghui Shao

Date

REEL: 049872 FRAME: 0732

LLNL Case No.: IL-13324			
executed this	Signature of ASSIGNOR(s)		
*	*	*****************************	
Date	Clint Frye		
executed this	Signature of ASSIGNOR(s)		
<u>unla</u>	<u> </u>		
Date	Sara Elizabeth Harrison		
executed this	Signature of ASSIGNOR(s)		
Date	Rebecca J. Nikolic		
executed this	Signature of ASSIGNOR(s)	-80°	

Qinghui Shao

Date

LLNL Case No.: IL-13324	
executed this	Signature of ASSIGNOR(s)
Date	Clint Frye
executed this	Signature of ASSIGNOR(s)
Date	Sara Elizabeth Harrison
executed this	Signature of ASSIGNOR(s)
Date Executed this	Réfiecca J. Nikolic Signature of ASSIGNOR(s)
and a construction of the	Sec. 19 19 19 19 19 19 19 19 19 19 19 19 19

Qinghui Shao

Date

LLNL Case No.: IL-13324	•	
executed this	Signature of ASSIGNOR(s)	
Date	Clint Prye	:
executed this	Signature of ASSIGNOR(s)	
Date	Sara Elizabeth Harrison	······································
executed this	Signature of ASSIGNOR(s)	
Date	Rebecca J. Nikolic	
executed this 06/17/2019	Signature of ASSIGNOR(s)	

Qinghui Shão

RECORDED: 07/26/2019

Date