PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2

EPAS ID: PAT3487145

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
JANET BRADDOCK-WILKING	07/01/2015
TERESA LYNN BANDROWSKY	07/07/2015
JAMES BRYAN CARROLL II	07/14/2015

RECEIVING PARTY DATA

Name:	THE CURATORS OF THE UNIVERSITY OF MISSOURI
Street Address:	316 UNIVERSITY HALL
City:	COLUMBIA
State/Country:	MISSOURI
Postal Code:	65211

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	14406777

CORRESPONDENCE DATA

Fax Number:

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.

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USpatents@armstrongteasdale.com Email:

PATENT DOCKET DEPARTMENT ARMSTRONG TEASD **Correspondent Name:**

Address Line 1: 7700 FORSYTH BOULEVARD

Address Line 2: **SUITE 1800**

Address Line 4: ST. LOUIS, MISSOURI 63105

ATTORNEY DOCKET NUMBER:	33201-4
NAME OF SUBMITTER:	ELIZABETH A. WILL
SIGNATURE:	/Elizabeth A. Will/
DATE SIGNED:	08/18/2015

Total Attachments: 23

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PATENT REEL: 036380 FRAME: 0573

ASSIGNMENT OF PATENT RIGHTS FROM INVENTORS TO UNIVERSITY

This Assignment of Patent Rights from Inventor to University Agreement ("Agreement") is entered into by and between Janet Braddock-Wilking, an individual having an address of 13278 Hobnail Drive, St. Louis, Missouri 63146 and, Teresa Lynn Brandrowsky, an individual having an address of 104 Waterside Crossing, St. Peters, Missouri 63376 ("Assignors") and, James Bryan Carroll, II, an individual having an address of 6435 Dale Avenue, St. Louis, Missouri 63139 and The Curators of the University of Missouri, a public corporation of the State of Missouri having a principal place of business at 316 University Hall, Columbia, Missouri 65211, U.S.A. ("Assignee").

WHEREAS Assignors have contributed to the subject matter of the inventions disclosed, described, and/or claimed one or more of UM Invention Disclosure Nos. (1) 12UMS004 entitled Synthesis of fluorescent blue. green. and red 1,1-substituted-2,3,4,5tetraphenylgermacyclopentadienes and their utility as functional materials as chemical sensors, biological probes, and solid state emitters, (2) 12UMS005 entitled Novel Ge-fluorescein Compounds as Luminescent Materials, (3) 12UMS006 entitled Novel Ge-Rhodamine Compounds as Luminescent Materials, and (4) 12UMS007 entitled Novel Cyclic Germafluorene Compounds as Luminescent Materials (each an "Invention Disclosure Form") which are the subject of United States Patent Application Serial No. 14/406,777 filed on December 10, 2014 and entitled CYCLIC GERMANIUM COMPOUNDS AND APPLICATIONS THEREOF ("Patent Application"); and

WHEREAS, pursuant to Assignors' assignment obligations under the Assignee's Collected Rules and Regulations § 100.020, Assignors have an obligation to convey any and all rights that Assignors have or might have in the aforementioned inventions and Patent Application; and

WHEREAS Assignors have assigned their rights in the inventions and Patent Application pursuant to the Invention Disclosure Forms; and

WHEREAS Braddock-Wilking, Brandrowsky, and Carroll have previously executed assignments dated May 30, 2013, May 30, 2013, and June 4, 2013, respectively, related to the inventions disclosed, described, and/or claimed in Invention Disclosure 12UMS004; and

WHEREAS Braddock-Wilking and Brandrowsky have previously executed assignments dated May 30, 2013 and May 30, 2013, respectively, related to the inventions disclosed, described, and/or claimed in Invention Disclosure 12UMS005; and

WHEREAS Braddock-Wilking and Brandrowsky have previously executed assignments dated May 30, 2013 and June 12, 2013, respectively, related to the inventions disclosed, described, and/or claimed in Invention Disclosure 12UMS006; and

WHEREAS Braddock-Wilking and Brandrowsky have previously executed assignments dated June 7, 2013 and May 30, 2013, respectively, related to the inventions disclosed, described, and/or claimed in Invention Disclosure 12UMS007; and

University of Missouri 1
Assignment of Patent Rights from Inventors to University

WHEREAS Assignors are willing to execute this notarized Agreement in order to confirm the assignment of rights in the Patent Application (and other rights as more fully set forth below) to Assignee.

NOW THEREFORE, in consideration of Assignors' past and continued employment with and use of Assignee's funds and facilities, Assignors' assignment obligations and royalty-sharing rights under the Collected Rules and Regulations § 100.020, the sum of USD \$1.00 in-hand paid, and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties agree as follows:

1. Assignment

Assignors hereby assign, transfer, and convey (and confirm any prior such conveyance as the case may be) to Assignee, and Assignee hereby accepts, Assignors' entire right, title and interest in and to:

- (a) the invention disclosed and/or claimed, in whole or in part, in the Patent Application and any and all improvements therein conceived or reduced to practice by each of Assignors in the course of and the general scope of each of Assignors' employment with Assignee (collectively the "Invention"):
- (b) all patents and patent applications that have been or may hereafter be filed which are based on the Invention in any country, including the Patent Application and any provisional, non-provisional, divisional, continuation, continuation-in-part, extension, renewal, re-examination, reissue, substitute, supplementary protection certificate, utility model, or similar legal protection based on the Invention ("Patents");
- (c) the right to claim priority to any of the Patents under the patent laws of the United States, the International Convention for the Protection of Industrial Property, or any other international agreement or laws of the country in which the Patents are filed, as may be applicable; and
- (d) all rights of action, powers, and benefits arising from ownership of the Patents, including the right to sue for past, present, and future infringement of the Patents, the right to collect royalties, fees, damages, and payments now or hereafter due or payable with respect to the Patents, the right to seek injunctive relief based on the Patents, and the right to pursue all causes of action and all enforcement rights relating to the Patents, whether known or unknown, currently pending or otherwise.

Assignors' rights assigned in (a)-(d) above are referred to collectively in this Agreement as the "Assigned Rights."

Assignors authorize and request the Director of the United States Patent and Trademark Office, and any corresponding entity, agency, or official of any other country whose duty it is to issue patents or similar legal protection, to issue the Patents to Assignee such that the Patents will be held by Assignee for its own use and benefit, for the full term for which the Patents are or may be granted.

Further Assurances

University of Missouri 2
Assignment of Patent Rights from Inventors to University

Upon the reasonable request of Assignee, Assignors agree to execute such documents and perform such acts as may be necessary to give full effect to the terms of this Agreement. Without limiting the generality of the foregoing, Assignors agree to execute any and all assignments and other documents that may be needed to record, vest, or perfect Assignee's right, title, and interest in and to the Assigned Rights as fully and entirely as the same would have been held and enjoyed by Assignors if this assignment had not been made. Assignors also agree to execute any and all declarations, oaths, specifications, and other documents requested by Assignee in connection with prosecution of the Patents. Assignors further agree to cooperate with and assist Assignee with respect to prosecution of the Patents, including communication to Assignee of any facts known to Assignors relating to the Invention and/or any prior art that may be material to patentability of the Invention. Assignors also agree that in the event any of the Patents become involved in an interference, derivation proceeding, re-examination, reissue, opposition, supplemental examination, inter partes review, post grant review, validity, or infringement proceeding or litigation, Assignors will cooperate with and assist Assignee in relation to the proceeding for the benefit of Assignee at Assignee's expense.

Representations and Warranties

Assignors represent and warrant to Assignee that:

- (a) Assignors have the full right and power to enter into and perform their obligations under this Agreement without being in breach of any obligations owed by Assignors to any third party;
- (b) The Assigned Rights are free and clear of any agreement, lien, charges, encumbrances, ownership claim, or other claim or right, either written, oral, or implied, which will impair, interfere or conflict with the rights herein assigned to Assignee; and
- (c) Assignors have not assigned, transferred, or otherwise conveyed and will not assign, transfer, or otherwise convey to any third party any right or license under or with respect to the Assigned Rights or execute any other agreement that is in conflict with this Agreement.

4. Attorney-In-Fact

Assignors hereby irrevocably appoint the President of Assignee, or the President's designee, as each of Assignors' attorney-in-fact with authority to execute for Assignors and on Assignors' behalf any and all assignments, applications, or other instruments and documents required to be executed by Assignors pursuant to this Agreement, if Assignors are unwilling or unable to execute same. This appointment shall be deemed to be a power coupled with an interest, and as such, is irrevocable.

Patent Application Information

Assignors hereby authorize Assignee or its attorneys to insert in this Assignment the serial number and filing date of the Patent Application when known.

Binding Agreement

The provisions of this Agreement are binding upon, and will inure to the benefit of, the parties hereto and their respective heirs, personal representatives, successors and permitted assigns.

University of Missouri Assignment of Patent Rights from Inventors to University

7. Counterparts

This Agreement may be executed in any number of counterparts, including facsimile or scanned PDF documents. Each such counterpart, facsimile or scanned PDF document shall be deemed an original instrument, and all of such counterparts, together, shall constitute one and the same executed Agreement.

[The rest of the page is intentionally left blank]

IN WITNESS WHEREOF, Assignors and Assignee have executed this Assignment Agreement as of the day and year written below.

Janet Braddock-Wilking
By Janet Braddock-Wilking July-1-2015 Title 1 ASSOCIATE PROFESSOR Date
Title / Associate Professor Date
A 3 1 . 3
Acknowledgement
STATE OF <u>M(\$500/L/</u>)) SS COUNTY OF <u>ST. 400/8.5</u>)
COUNTY OF ST. 60%/35
On this
(SEAL)
My Commission Expires: 9/24/18
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Teresa Lynn Bandrowsky	
By	
Title	Date
	Acknowledgement
STATE OF	
COUNTY OF) SS: .)
On this day of State and County aforesaid, person known to me to be the person of the she acknowledged the same to be h	, 20, before me, a Notary Public in and for the onally appeared Teresa Lynn Bandrowsky, to me known and hat name who signed and sealed the foregoing instrument, and her free act and deed.
	Notary Public
(SEAL)	
My Commission Expires:	

University of Missouri
Assignment of Patent Rights from inventors to University

THE CURATORS OF THE UNIVERSITY OF MISSOURI
By Clarkara Wileis 207/08/2015
By ANGLE Wilgers, Date Director, Technology Commercialization and Economic Development
Delegated and Approved as to Legal Form Tamara Wilgers, Director of Technology Commercialization and Economic Development
Acknowledgement
STATE OF MISSOURI)
STATE OF MISSOURI) SS COUNTY OF ST. Lands)
On this day of d
(SEAL) My Commission Expires: 4/24/15
KAREN O. BOYD Notary Public - Notary Seal State of Missouri Commissioned for St. Louis County My Commission Expires: September 29, 2018 Commission Number: 14630382

REEL: 036380 FRAME: 0580

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This Assignment of Patent Rights from Inventor to University Agreement ("Agreement") is entered into by and between Janet Braddock-Wilking, an individual having an address of 13278 Hobnail Drive, St. Louis, Missouri 63146 and, Teresa Lynn Brandrowsky, an individual having an address of 104 Waterside Crossing, St. Peters, Missouri 63376 ("Assignors") and, James Bryan Carroll, II, an individual having an address of 6435 Dale Avenue, St. Louis, Missouri 63139 and The Curators of the University of Missouri, a public corporation of the State of Missouri having a principal place of business at 316 University Hall, Columbia, Missouri 65211, U.S.A. ("Assignee").

WHEREAS Assignors have contributed to the subject matter of the inventions disclosed, described, and/or claimed one or more of UM Invention Disclosure Nos. (1) 12UMS004 entitled Synthesis of fluorescent blue. green. and red 1,1-substituted-2,3,4,5tetraphenylgermacyclopentadienes and their utility as functional materials as chemical sensors. biological probes, and solid state emitters, (2) 12UMS005 entitled Novel Ge-fluorescein Compounds as Luminescent Materials, (3) 12UMS006 entitled Novel Ge-Rhodamine Compounds as Luminescent Materials, and (4) 12UMS007 entitled Novel Cyclic Germafluorene Compounds as Luminescent Materials (each an "Invention Disclosure Form") which are the subject of United States Patent Application Serial No. 14/406,777 filed on December 10, 2014 and entitled CYCLIC GERMANIUM COMPOUNDS AND APPLICATIONS THEREOF ("Patent Application"); and

WHEREAS, pursuant to Assignors' assignment obligations under the Assignee's Collected Rules and Regulations § 100.020, Assignors have an obligation to convey any and all rights that Assignors have or might have in the aforementioned inventions and Patent Application; and

WHEREAS Assignors have assigned their rights in the inventions and Patent Application pursuant to the Invention Disclosure Forms; and

WHEREAS Braddock-Wilking, Brandrowsky, and Carroll have previously executed assignments dated May 30, 2013, May 30, 2013, and June 4, 2013, respectively, related to the inventions disclosed, described, and/or claimed in Invention Disclosure 12UMS004; and

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WHEREAS Assignors are willing to execute this notarized Agreement in order to confirm the assignment of rights in the Patent Application (and other rights as more fully set forth below) to Assignee.

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1. Assignment

Assignors hereby assign, transfer, and convey (and confirm any prior such conveyance as the case may be) to Assignee, and Assignee hereby accepts, Assignors' entire right, title and interest in and to:

- (a) the invention disclosed and/or claimed, in whole or in part, in the Patent Application and any and all improvements therein conceived or reduced to practice by each of Assignors in the course of and the general scope of each of Assignors' employment with Assignee (collectively the "Invention");
- (b) all patents and patent applications that have been or may hereafter be filed which are based on the Invention in any country, including the Patent Application and any provisional, non-provisional, divisional, continuation, continuation-in-part, extension, renewal, re-examination, reissue, substitute, supplementary protection certificate, utility model, or similar legal protection based on the Invention ("Patents");
- (c) the right to claim priority to any of the Patents under the patent laws of the United States, the International Convention for the Protection of Industrial Property, or any other international agreement or laws of the country in which the Patents are filed, as may be applicable; and
- (d) all rights of action, powers, and benefits arising from ownership of the Patents, including the right to sue for past, present, and future infringement of the Patents, the right to collect royalties, fees, damages, and payments now or hereafter due or payable with respect to the Patents, the right to seek injunctive relief based on the Patents, and the right to pursue all causes of action and all enforcement rights relating to the Patents, whether known or unknown, currently pending or otherwise.

Assignors' rights assigned in (a)-(d) above are referred to collectively in this Agreement as the "Assigned Rights."

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2. Further Assurances

Upon the reasonable request of Assignee, Assignors agree to execute such documents and perform such acts as may be necessary to give full effect to the terms of this Agreement. Without limiting the generality of the foregoing, Assignors agree to execute any and all assignments and other documents that may be needed to record, vest, or perfect Assignee's right, title, and interest in and to the Assigned Rights as fully and entirely as the same would have been held and enjoyed by Assignors if this assignment had not been made. Assignors also agree to execute any and all declarations, oaths, specifications, and other documents requested by Assignee in connection with prosecution of the Patents. Assignors further agree to cooperate with and assist Assignee with respect to prosecution of the Patents, including communication to Assignee of any facts known to Assignors relating to the Invention and/or any prior art that may be material to patentability of the Invention. Assignors also agree that in the event any of the Patents become involved in an interference, derivation proceeding, re-examination, reissue, opposition, supplemental examination, inter partes review, post grant review, validity, or infringement proceeding or litigation, Assignors will cooperate with and assist Assignee in relation to the proceeding for the benefit of Assignee at Assignee's expense.

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- (b) The Assigned Rights are free and clear of any agreement, lien, charges, encumbrances, ownership claim, or other claim or right, either written, oral, or implied, which will impair, interfere or conflict with the rights herein assigned to Assignee; and
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Patent Application Information

Assignors hereby authorize Assignee or its attorneys to insert in this Assignment the serial number and filing date of the Patent Application when known.

6. <u>Binding Agreement</u>

The provisions of this Agreement are binding upon, and will inure to the benefit of, the parties hereto and their respective heirs, personal representatives, successors and permitted assigns.

REEL: 036380 FRAME: 0583

7. Counterparts

This Agreement may be executed in any number of counterparts, including facsimile or scanned PDF documents. Each such counterpart, facsimile or scanned PDF document shall be deemed an original instrument, and all of such counterparts, together, shall constitute one and the same executed Agreement.

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IN WITNESS WHEREOF, Assignors and Assignee have executed this Assignment Agreement as of the day and year written below.

Janet Braddock-Wilking	
By	
Title	Date
	Acknowledgement
STATE OF).
COUNTY OF)
On this day of	, 20, before me, a Notary Public in and for the
State and County aforesaid, known to me to be the person	personally appeared Janet Braddock-Wilking, to me known and of that name who signed and sealed the foregoing instrument, and
she acknowledged the same to	be her free the second declaration of the se
(SEAL)	Managa di produce di marino di marin
My Commission Expires:	

Teresa Lynn Bandrowsky
By Live Lynn Bandrowsky 7/7/15 Title Date
Acknowledgement
STATE OF MCSOUNTY OF STATE OF
On this day of day, 20 before me, a Notary Public in and for the State and County aforesaid, personally appeared Teresa Lynn Bandrowsky, to me known an known to me to be the person of that name who signed and scaled the foregoing instrument, an she acknowledged the same to be her free act and deed.
(SEAL) JILL L. SCHANZLE Notary Public-Stotary Seel My Commission Expires: State of Missouri, Saint Lesis Chy Commission & 13483445 My Commission Expires Mar 5, 2017

By	
Title	Date
A	cknowledgement
STATE OF	
) \$8	3
COUNTY OF)	
known to me to be the person of that nar he acknowledged the same to be his free	
	Notary Public
(SEAL)	
My Commission Expires:	

THE CURATORS OF THE UNIVERSITY OF MISSOURI
By 1/1/2 Wy 07/08/2015 Tamara Wilgers, Date
Director, Technology Commercialization and Economic Development
Delegated and Approved as to Legal Form Tamara Wilgers, Director of Technology Commercialization and Economic Development
Acknowledgement
STATE OF MISSOURI)
) SS
STATE OF MISSOURI) (SS) (SUIS)
On this day of , 20/5, before me, a Notary Public in and for the State and County aforesaid, personally appeared Tamara Wilgers, to me known and known to me to be the person of that name who signed and sealed the foregoing instrument, and she acknowledged the same to be her free act and deed on behalf of The Curators of the University of Missouri.
(SEAL)
My Commission Expires: 1/49/15
KAREN O. BCYD Notary Public - Notary Soal Stats of Missouri Commissioned for St. Louis County My Commission Ectres: September 29, 2018 Commission Number: 146303892

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- (d) all rights of action, powers, and benefits arising from ownership of the Patents, including the right to sue for past, present, and future infringement of the Patents, the right to collect royalties, fees, damages, and payments now or hereafter due or payable with respect to the Patents, the right to seek injunctive relief based on the Patents, and the right to pursue all causes of action and all enforcement rights relating to the Patents, whether known or unknown, currently pending or otherwise.

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- (c) Assignors have not assigned, transferred, or otherwise conveyed and will not assign, transfer, or otherwise convey to any third party any right or license under or with respect to the Assigned Rights or execute any other agreement that is in conflict with this Agreement.

4. Attorney-In-Fact

Assignors hereby irrevocably appoint the President of Assignee, or the President's designee, as each of Assignors' attorney-in-fact with authority to execute for Assignors and on Assignors' behalf any and all assignments, applications, or other instruments and documents required to be executed by Assignors pursuant to this Agreement, if Assignors are unwilling or unable to execute same. This appointment shall be deemed to be a power coupled with an interest, and as such, is irrevocable.

5. Patent Application Information

Assignors hereby authorize Assignee or its attorneys to insert in this Assignment the serial number and filing date of the Patent Application when known.

Binding Agreement

The provisions of this Agreement are binding upon, and will inure to the benefit of, the parties hereto and their respective heirs, personal representatives, successors and permitted assigns.

7. <u>Counterparts</u>

This Agreement may be executed in any number of counterparts, including facsimile or scanned PDF documents. Each such counterpart, facsimile or scanned PDF document shall be deemed an original instrument, and all of such counterparts, together, shall constitute one and the same executed Agreement.

[The rest of the page is intentionally left blank]

IN WITNESS WHEREOF, Assignors and Assignee have executed this Assignment Agreement as of the day and year written below.

Janet Braddock-V	Vilking			
By				
Title		;	Date	
		Acknowledg	ement	
STATE OF	·····)		
STATE OF) 38		
State and County	aforesaid, person of the	onally appeared nat name who sig	, before me, a Notary Public in and for th Janet Braddock-Wilking, to me known and the saled the foregoing instrument, and seed.	d
		Notary	Public	
(SEAL)				
My Commission E	expires:			

Teresa Lynn Band	drowsky			
By				
Title			D	ate
		Acknowled	lgen	nent
STATE OF				
STATE OF		_)		
On this	day of	, 20)	, before me, a Notary Public in and for the
State and County	aforesaid, perset the person of t	onally appeared that name who s	Te igne	resa Lynn Bandrowsky, to me known and ad and sealed the foregoing instrument, and
		Nota	ry P	ublic
(SEAL)				
My Commission F	Expires:			

James Bryan Carroll, II						
By 2804 07/14/15						
Title Date						
Acknowledgement						
STATE OF MISSOURI)						
STATE OF MISSOURI) COUNTY OF ST. LOVIS)						
On this day of						
(SEAL)						
My Commission Expires: 9/34//8						
KAREN O. BOYD Notary Public - Notary Sea! State of Missouri Commissioned for St. Louis County My Commission Express September 29, 2018 Commission Number: 14630382						

THE CURATORS OF THE UNIVERSITY OF MISSOURI By					
Delegated and Approved as to Legal Form Tamara Wilgers, Director of Technology Comm	tercialization and Economic Development				
Ack	nowledgement				
STATE OF MISSOURI) SS COUNTY OF ST. LOVIS)					
On this day of , 20 , before me, a Notary Public in and for the State and County aforesaid, personally appeared Tamara Wilgers, to me known and known to me to be the person of that name who signed and sealed the foregoing instrument, and she acknowledged the same to be her free act and deed on behalf of The Curators of the University of Missouri.					
(SEAL) My Commission Expires: 9/24/15	Notary Fublic				
KAREN O. BOYD Notary Public - Notary Seal State of Missouri Commissioned for St. Louis County My Commission Expres: September 29, 2016 Cemmission Number: 14630392					

University of Missouri 8 Assignment of Patent Rights from Inventors to University