

RECORDATION FORM COVER SHEET
PATENTS ONLY

Atty Ref/Docket No.: 3000.004US1

Patent and Trademark Office

To the Director of the U.S. Patent and Trademark Office: Please record the attached original documents or copy thereof.

1. Name of conveying party(ies):

Dennis Gray, Thomas D Sharkey

Additional name(s) of conveying party(ies) attached?

☐ Yes ☒ No

3. Nature of conveyance:

☒ Assignment ☐ Merger☐ Security Agreement ☐ Change of Name☐ Other

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

Name: Board of Trustees of Michigan State UniversityStreet Address: 450 Administration BuildingCity: East Lansing State: MI Zip: 48824-1046Country: United States of AmericaAdditional name(s) & address(es) attached? ☐ Yes ☒ NoExecution Date: February 3, 2012, November 14, 2011

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

If this document is being filed together with a new application, the execution date of the application is:

A. Patent Application No.(s)

B. Patent No.(s)

Serial No. 13/321,458, filed November 18, 2011

Additional numbers attached? ☐ Yes ☒ No

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

Name: Monique M. Perdok Shonka

Address:

Schwegman, Lundberg & Woessner, P.A.

P.O. Box 2938

Minneapolis, MN 55402-0938

6. Total number of applications and patents involved: 17. Total fee (37 CFR 3.41): \$ 40.00☐ Enclosed☒ Authorized to be charged to deposit account
19-0743

8. Please charge any additional fees or credit any over payments to our Deposit Account No.: 19-0743

DO NOT USE THIS SPACE

9. Statement and signature.

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

Monique M. Perdok Shonka/Reg. No. 42,989
Name of Person SigningMonique M. Perdok Shonka
SignatureMarch 9, 2012
DateTotal number of pages including cover sheet: 9

Mail documents to be recorded with required cover sheet information to:

Commissioner of Patents and Trademarks

Mail Stop Assignment Recordation Services

P.O. Box 1450

Alexandria, VA 22313-1450

02/03/2012 01:04 9899642717

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Attorney Docket No. 3000.004US1
Client Ref. No. TEC2009-0106-01US

ASSIGNMENT

D6.

WHEREAS, We, Dennis Gray, residing at 307 N Hampton St, Bay City, MI 48708
48906, and Thomas D Sharkey, residing at 1210 Prescott Drive, East Lansing, MI 48823,
made certain new and useful inventions and improvements which are described in an
application for U.S. Letters Patent on November 18, 2011, which application was
assigned U.S. patent application serial number 13/321,458, and is entitled METHYL
BUTENOL SYNTHASE;

WHEREAS, We are governed by Michigan State University (hereinafter "MSU")
Patent Policy (www.hr.msu.edu/documents/facacadhandbooks/facultyhandbook/patents.htm),
and therefore understand that, in exchange for GOOD AND VALUABLE
CONSIDERATION provided by MSU, the receipt, sufficiency and adequacy of which
are hereby acknowledged, the aforementioned new and useful inventions and
improvements are considered "University Inventions." As such, the undersigned does
hereby:

SELL, ASSIGN AND TRANSFER to Board of Trustees of Michigan State
University (the "Assignee"), a corporation of the State of Michigan, having a place of
business at 450 Administration Building, East Lansing, MI 48824-1046, the entire right,
title and interest for the United States and all foreign countries in and to: any and all
inventions and improvements which are disclosed in the identified patent application(s), and
which may be further identified above; such application and all divisional, continuing,
substitute, renewal, reissue and all other applications for patent which have been or shall be
filed in the United States (including all provisional and non-provisional applications), and in
all foreign countries on any of such inventions and/or improvements (including any
applications for utility models); all original and reissued patents which have been or shall be
issued in the United States and all foreign countries on such inventions and/or
improvements; and specifically including the right to claim priority to the identified patent
application(s), including the right to file foreign applications under the provisions of any
convention or treaty;

AUTHORIZE AND REQUEST that any attorney associated with U.S. PTO
Customer No. 21186 may (directly or through his/her designee) delete, insert, or alter any
information identifying this application, or any related application, after execution of this
Assignment;

AUTHORIZE AND REQUEST the issuing authority to issue any and all United
States and foreign patents granted on such improvements to the Assignee;

WARRANT AND COVENANT that no assignment, grant, mortgage, license or
other agreement affecting the rights and/or property herein conveyed has been or will be
made to others by the undersigned, and that the full right to convey the same as herein
expressed is possessed by the undersigned;

ASSIGNMENT

Client Ref. No. TEC2009-0106-01US

Assignors: Dennis Gray et al.

Serial Number: 13/321,458

Title: METHYL BUTENOL SYNTHASE

Page 2 of 4

Docket No: 3000.004US1

COVENANT, that when requested and without compensation, but at the expense of the Assignee, in order to carry out in good faith the intent and purpose of this Assignment, the undersigned will (1) execute all provisional, non-provisional, divisional, continuing, substitute, renewal, reissue, and all other patent applications on any and all such improvements; (2) execute all rightful oaths, declarations, assignments, powers of attorney and other papers; (3) communicate to the Assignee all facts known to the undersigned relating to such improvements and the history thereof; (4) cooperate with the Assignee in any interference, reexamination, reissue, opposition, dispute, or litigation involving any of the applications or patents for such improvements; and (5) take such further actions as the Assignee shall reasonably consider necessary or desirable for vesting title to such improvements in the Assignee, or for securing, maintaining and enforcing proper patent protection for such improvements;

THIS AGREEMENT IS TO BE BINDING on the heirs, assigns, representatives and successors of the undersigned, and is to extend to the benefit of the successors, assigns and nominees of the Assignee.

AGREED as of the date of my signature below:

02/03/2012 01:04 9899642717

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ASSIGNMENT

Client Ref. No. TEC2009-0106-01US

Assignors: Dennis Gray et al.

Serial Number: 13/321,458

Title: METHYL BUTENOL SYNTHASE

Page 3 of 4

Docket No: 3000.004US1

IN TESTIMONY WHEREOF, I have hereunto set my hand this 3 day of
February, 2012.

Dennis Gray

Dennis Gray

STATE OF Michigan)

)ss

COUNTY OF Saginaw)

On this 3rd day of February, 2012 before me personally appeared
Dennis Gray, to me known and known to me to be the person described in and who executed the
foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the
uses and purposes therein set forth.

[SEAL]

Lori M. Lepinski

Notary Public

ASSIGNMENT

Docket No: 3000.004US1

Client Ref. No. TEC2009-0106-01US

Assignors: Dennis Gray et al.

Serial Number: 13/321,458

Title: METHYL BUTENOL SYNTHASE

Page 4 of 4

IN TESTIMONY WHEREOF, I have hereunto set my hand this ____ day of

____, 20____.

Thomas D Sharkey

STATE OF _____)

)ss

COUNTY OF _____)

On this _____ day of _____, 20____ before me personally appeared
Thomas D Sharkey, to me known and known to me to be the person described in and who
executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the
same for the uses and purposes therein set forth.

[SEAL]

Notary Public

Attorney Docket No. 3000.004US1
Client Ref. No. TEC2009-0106-01US

ASSIGNMENT

WHEREAS, We, Dennis Gray, residing at 1628 Indiana Avenue, Lansing, MI 48906, and Thomas D. Sharkey, residing at 1210 Prescott Drive, East Lansing, MI 48823, made certain new and useful inventions and improvements which are described in an application for U.S. Letters Patent on Nov. 18, 2011, which application was assigned U.S. patent application serial number 13/321,458, and is entitled METHYL BUTENOL SYNTHASE;

WHEREAS, We are governed by Michigan State University (hereinafter "MSU") Patent Policy (www.hr.msu.edu/documents/facacadhandbooks/facultyhandbook/patents.htm), and therefore understand that, in exchange for GOOD AND VALUABLE CONSIDERATION provided by MSU, the receipt, sufficiency and adequacy of which are hereby acknowledged, the aforementioned new and useful inventions and improvements are considered "University Inventions." As such, the undersigned does hereby:

SELL, ASSIGN AND TRANSFER to Board of Trustees of Michigan State University (the "Assignee"), a corporation of the State of Michigan, having a place of business at 450 Administration Building, East Lansing, MI 48824-1046, the entire right, title and interest for the United States and all foreign countries in and to: any and all inventions and improvements which are disclosed in the identified patent application(s), and which may be further identified above; such application and all divisional, continuing, substitute, renewal, reissue and all other applications for patent which have been or shall be filed in the United States (including all provisional and non-provisional applications), and in all foreign countries on any of such inventions and/or improvements (including any applications for utility models); all original and reissued patents which have been or shall be issued in the United States and all foreign countries on such inventions and/or improvements; and specifically including the right to claim priority to the identified patent application(s), including the right to file foreign applications under the provisions of any convention or treaty;

AUTHORIZE AND REQUEST that any attorney associated with U.S. PTO Customer No. 21186 may (directly or through his/her designee) delete, insert, or alter any information identifying this application, or any related application, after execution of this Assignment;

Additional Application Information

U.S. Provisional Application Serial No. 61/180,757, filed on May 22, 2009.

No U.S. Non-Provisional claim for priority is being made at this time.

PCT Application Serial No. PCT/US2010/035820, filed on May 21, 2010.

ASSIGNMENT
Client Ref. No. TEC2009-0106-01US
Assignors: Dennis Gray et al.
Title: METHYL BUTENOL SYNTHASE
Page 2 of 4

Docket No: 3000.004US1

Serial Number: Unknown

AUTHORIZE AND REQUEST the issuing authority to issue any and all United States and foreign patents granted on such improvements to the Assignee;

WARRANT AND COVENANT that no assignment, grant, mortgage, license or other agreement affecting the rights and/or property herein conveyed has been or will be made to others by the undersigned, and that the full right to convey the same as herein expressed is possessed by the undersigned;

COVENANT, that when requested and without compensation, but at the expense of the Assignee, in order to carry out in good faith the intent and purpose of this Assignment, the undersigned will (1) execute all provisional, non-provisional, divisional, continuing, substitute, renewal, reissue, and all other patent applications on any and all such improvements; (2) execute all rightful oaths, declarations, assignments, powers of attorney and other papers; (3) communicate to the Assignee all facts known to the undersigned relating to such improvements and the history thereof; (4) cooperate with the Assignee in any interference, reexamination, reissue, opposition, dispute, or litigation involving any of the applications or patents for such improvements; and (5) take such further actions as the Assignee shall reasonably consider necessary or desirable for vesting title to such improvements in the Assignee, or for securing, maintaining and enforcing proper patent protection for such improvements;

THIS AGREEMENT IS TO BE BINDING on the heirs, assigns, representatives and successors of the undersigned, and is to extend to the benefit of the successors, assigns and nominees of the Assignee.

AGREED as of the date of my signature below:

ASSIGNMENT

Client Ref. No. TEC2009-0106-01US

Assignors: Dennis Gray et al.

Title: METHYL BUTENOL SYNTHASE

Page 3 of 4

Docket No: 3000.004US1

Serial Number: Unknown

IN TESTIMONY WHEREOF, I have hereunto set my hand this ____ day of
____, 20__.

Dennis Gray

STATE OF _____)

)ss

COUNTY OF _____)

On this _____ day of _____, 20__ before me personally appeared
Dennis Gray, to me known and known to me to be the person described in and who executed the
foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the
uses and purposes therein set forth.

[SEAL]

Notary Public

ASSIGNMENT

Client Ref. No. TEC2009-0106-01US

Assignors: Dennis Gray et al.

Title: METHYL BUTENOL SYNTHASE

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Docket No: 3000.004US1

Serial Number: Unknown

IN TESTIMONY WHEREOF, I have hereunto set my hand this 14 day of
November, 2011.



Thomas D. Sharkey

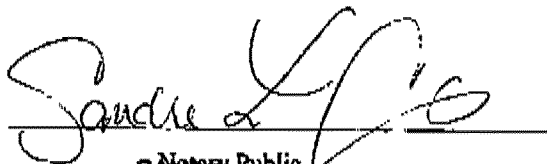
STATE OF Michigan)

)ss

COUNTY OF Ingham)

On this 14th day of November, 2011 before me personally appeared
Thomas D Sharkey, to me known and known to me to be the person described in and who
executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the
same for the uses and purposes therein set forth.

[SEAL]



Notary Public
SANDRA L. CUMMINGS
NOTARY PUBLIC-STATE OF MICHIGAN
COUNTY OF INGHAM
My Commission Expires Mar. 12, 2017