

**Development of New *N*-Cyclopropyl Based Electron Transfer Probes
for Cytochrome P-450 and Monoamine Oxidase Catalyzed Reactions**

Michelle L. Grimm

Dissertation submitted to the faculty of the Virginia Polytechnic Institute and State
University in partial fulfillment of the requirements for the degree of

Doctor of Philosophy

In

Chemistry

Dr. James M. Tanko, Committee Chair

Dr. J. Paige Buchanan

Dr. Neal Castagnoli Jr.

Dr. James Mahaney

May 4, 2011
Blacksburg, Virginia

Keywords: Single electron transfer, Hydrogen atom transfer, Cyclopropyl amines,
Radical cation, Cyclopropane ring opening

Copyright 2011, M. L. Grimm

This is a License Agreement between Michelle L Grimm ("You") and American Chemical Society ("American Chemical Society") provided by Copyright Clearance Center ("CCC"). The license consists of your order details, the terms and conditions provided by American Chemical Society, and the payment terms and conditions. All payments must be made in full to CCC. For payment instructions, please see information listed at the bottom of this form.

[License Number](#)

2665061184441

[License Date](#)

May 09, 2011

[Licensed content publisher](#)

American Chemical Society

[Licensed content publication](#)

Journal of the American Chemical Society

[Licensed content title](#)

Model Electrochemical-Mass Spectrometric Studies of the Cytochrome P450-Catalyzed Oxidations of Cyclic Tertiary Allylamines

[Licensed content author](#)

Ulrik Jurva et al.

[Licensed content date](#)

Sep 1, 2005

[Volume number](#)

127

[Issue number](#)

35

[Type of Use](#)

Thesis/Dissertation

[Requestor type](#)

Not specified

[Format](#)

Print and Electronic

[Portion](#)

Table/Figure/Micrograph

[Number of Table/Figure/Micrographs](#)

2

[Author of this ACS article](#)

No

[Order reference number](#)

[Title of the thesis / dissertation](#)

Development of New N-cyclopropyl Based Electron Transfer Probes for Cytochrome P-450 and Monoamine Oxidase Catalyzed Reactions

[Expected completion date](#)

May 2011

Estimated size(pages)

218

Billing Type

Invoice

Billing Address

107 Sunset Blvd.

Blacksburg, VA 24060

United States

Customer reference info

Total

0.00 USD

Terms and Conditions

Thesis/Dissertation

ACS / RIGHTSLINK TERMS & CONDITIONS
THESIS/DISSERTATION

INTRODUCTION

The publisher for this copyrighted material is the American Chemical Society. By clicking "accept" in connection with completing this licensing transaction, you agree that the following terms and conditions apply to this transaction (along with the Billing and Payment terms and conditions established by Copyright Clearance Center, Inc. ("CCC"), at the time that you opened your Rightslink account and that are available at any time at <<http://myaccount.copyright.com>>).

LIMITED LICENSE

Publisher hereby grants to you a non-exclusive license to use this material. Licenses are for one-time use only with a maximum distribution equal to the number that you identified in the licensing process.

GEOGRAPHIC RIGHTS: SCOPE

Licenses may be exercised anywhere in the world.

RESERVATION OF RIGHTS

Publisher reserves all rights not specifically granted in the combination of (i) the license details provided by you and accepted in the course of this licensing transaction, (ii) these terms and conditions and (iii) CCC's Billing and Payment terms and conditions.

PORTION RIGHTS STATEMENT: DISCLAIMER

If you seek to reuse a portion from an ACS publication, it is your responsibility to examine each portion as published to determine whether a credit to, or copyright notice of, a third party owner was published adjacent to the item. You may only obtain permission via Rightslink to use material owned by ACS. Permission to use any material published in an ACS publication, journal, or article which is reprinted with permission of a third party must be obtained from the third party owner. ACS disclaims any responsibility for any use you make of items owned by third parties without their permission.

REVOCATION

The American Chemical Society reserves the right to revoke a license for any reason, including but not limited to advertising and promotional uses of ACS content, third party usage, and incorrect figure source attribution.

LICENSE CONTINGENT ON PAYMENT

While you may exercise the rights licensed immediately upon issuance of the license at the end of the licensing process for the transaction, provided that you have disclosed complete and accurate details of your proposed use, no license is finally effective unless and until full payment is received from you (by CCC) as provided in CCC's Billing and Payment terms and conditions. If full payment is not received on a timely basis, then any license preliminarily granted shall be deemed automatically revoked and shall be void as if never granted. Further, in the event that you breach any of these terms and conditions or any of CCC's Billing and Payment terms and conditions, the license is automatically revoked and shall be void as if never granted. Use of materials as described in a revoked license, as well as any use of the materials beyond the scope of an unrevoked license, may constitute copyright infringement and publisher reserves the right to take any and all action to protect its copyright in the materials.

COPYRIGHT NOTICE: DISCLAIMER

You must include the following copyright and permission notice in connection with any reproduction of the licensed material: "Reprinted ("Adapted" or "in part") with permission from REFERENCE CITATION. Copyright YEAR American Chemical Society."

WARRANTIES: NONE

Publisher makes no representations or warranties with respect to the licensed material.

INDEMNITY

You hereby indemnify and agree to hold harmless publisher and CCC, and their respective officers, directors, employees and agents, from and against any and all claims arising out of your use of the licensed material other than as specifically authorized pursuant to this license.

NO TRANSFER OF LICENSE

This license is personal to you or your publisher and may not be sublicensed, assigned, or transferred by you to any other person without publisher's written permission.

NO AMENDMENT EXCEPT IN WRITING

This license may not be amended except in a writing signed by both parties (or, in the case of publisher, by CCC on publisher's behalf).

OBJECTION TO CONTRARY TERMS

Publisher hereby objects to any terms contained in any purchase order, acknowledgment, check endorsement or other writing prepared by you, which terms are inconsistent with these terms and conditions or CCC's Billing and Payment terms and conditions. These terms and conditions, together with CCC's Billing and Payment terms and conditions (which are incorporated herein), comprise the entire agreement between you and publisher (and CCC) concerning this licensing transaction. In the event of any conflict between your obligations established by these terms and conditions and those established by CCC's Billing and Payment terms and conditions, these terms and conditions shall control.

JURISDICTION

This license transaction shall be governed by and construed in accordance with the laws of the District of Columbia. You hereby agree to submit to the jurisdiction of the courts located in the District of Columbia for purposes of resolving any disputes that may arise in connection with this licensing transaction.

THESES/DISSERTATION TERMS

Regarding your request for permission to include your paper(s) or portions of text from your paper(s) in your thesis/dissertation, permission is now automatically granted; please pay special attention to the implications paragraph below. The Copyright Subcommittee of the Joint Board/Council Committees on Publications approved the following:

Copyright permission for published and submitted material from theses and dissertations ACS extends blanket permission to students to include in their theses and dissertations their own articles, or portions thereof, that have been published in ACS journals or submitted to ACS journals for publication, provided that the ACS copyright credit line is noted on the appropriate page(s).

Publishing implications of electronic publication of theses and dissertation material
Students and their mentors should be aware that posting of theses and dissertation material on the Web prior to submission of material from that thesis or dissertation to an ACS journal may affect publication in that journal. Whether Web posting is considered prior publication may be evaluated on a case-by-case basis by the journal's editor. If an ACS journal editor considers Web posting to be "prior publication", the paper will not be accepted for publication in that journal. If you intend to submit your unpublished paper to ACS for publication, check with the appropriate editor prior to posting your manuscript electronically.

Reuse/Republication of the Entire Work in Theses or Collections: Authors may reuse all or part of the Submitted, Accepted or Published Work in a thesis or dissertation that the author writes and is required to submit to satisfy the criteria of degree-granting institutions. Such reuse is permitted subject to the ACS' "Ethical Guidelines to Publication of Chemical Research" (<http://pubs.acs.org/page/policy/ethics/index.html>); the author should secure written confirmation (via letter or email) from the respective ACS journal editor(s) to avoid potential conflicts with journal prior publication*/embargo policies. Appropriate citation of the Published Work must be made. If the thesis or dissertation to be published is in electronic format, a direct link to the Published Work must also be included using the ACS Articles on Request author-directed link - see <http://pubs.acs.org/page/policy/articlesonrequest/index.html>

* Prior publication policies of ACS journals are posted on the ACS website at <http://pubs.acs.org/page/policy/prior/index.html>

If your paper has not yet been published by ACS, please print the following credit line on the first page of your article: "Reproduced (or 'Reproduced in part') with permission from [JOURNAL NAME], in press (or 'submitted for publication'). Unpublished work copyright [CURRENT YEAR] American Chemical Society." Include appropriate information.

If your paper has already been published by ACS and you want to include the text or portions of the text in your thesis/dissertation in print or microfilm formats, please print the ACS copyright credit line on the first page of your article: "Reproduced (or 'Reproduced in part') with permission from [FULL REFERENCE CITATION.] Copyright [YEAR] American Chemical Society." Include appropriate information.

Submission to a Dissertation Distributor: If you plan to submit your thesis to UMI or to another dissertation distributor, you should not include the unpublished ACS paper in your thesis if the thesis will be disseminated electronically, until ACS has published your paper. After publication of the paper by ACS, you may release the entire thesis (not the individual ACS article by itself) for electronic dissemination through the distributor; ACS's copyright credit line should be printed on the first page of the ACS paper.

v1.2

Gratis licenses (referencing \$0 in the Total field) are free. Please retain this printable license for your reference. No payment is required.

If you would like to pay for this license now, please remit this license along with your payment made payable to "COPYRIGHT CLEARANCE CENTER" otherwise you will be invoiced within 48 hours of the license date. Payment should be in the form of a check or money order referencing your account number and this invoice number RLNK10984219.

Once you receive your invoice for this order, you may pay your invoice by credit card. Please follow instructions provided at that time.

Make Payment To:
Copyright Clearance Center
Dept 001
P.O. Box 843006
Boston, MA 02284-3006

For suggestions or comments regarding this order, contact Rightslink Customer Support:
customercare@copyright.com or +1-877-622-5543 (toll free in the US) or +1-978-646-2777.

This is a License Agreement between Michelle L Grimm ("You") and American Chemical Society ("American Chemical Society") provided by Copyright Clearance Center ("CCC"). The license consists of your order details, the terms and conditions provided by American Chemical Society, and the payment terms and conditions. All payments must be made in full to CCC. For payment instructions, please see information listed at the bottom of this form.

[License Number](#)

2665061400609

[License Date](#)

May 09, 2011

[Licensed content publisher](#)

American Chemical Society

[Licensed content publication](#)

Journal of the American Chemical Society

[Licensed content title](#)

Cytochrome P450-Catalyzed Oxidation of N-Benzyl-N-cyclopropylamine Generates Both Cyclopropanone Hydrate and 3-Hydroxypropionaldehyde via Hydrogen Abstraction, Not Single Electron Transfer

[Licensed content author](#)

Matthew A. Cerny et al.

[Licensed content date](#)

Mar 1, 2006

[Volume number](#)

128

[Issue number](#)

10

[Type of Use](#)

Thesis/Dissertation

[Requestor type](#)

Not specified

[Format](#)

Print and Electronic

[Portion](#)

Table/Figure/Micrograph

[Number of Table/Figure/Micrographs](#)

1

[Author of this ACS article](#)

No

[Order reference number](#)

[Title of the thesis / dissertation](#)

Development of New N-cyclopropyl Based Electron Transfer Probes for Cytochrome P-450 and Monoamine Oxidase Catalyzed Reactions

[Expected completion date](#)

May 2011

Estimated size(pages)

218

Billing Type

Invoice

Billing Address

107 Sunset Blvd.

Blacksburg, VA 24060

United States

Customer reference info

Total

0.00 USD

Terms and Conditions

Thesis/Dissertation

ACS / RIGHTSLINK TERMS & CONDITIONS THESIS/DISSERTATION

INTRODUCTION

The publisher for this copyrighted material is the American Chemical Society. By clicking "accept" in connection with completing this licensing transaction, you agree that the following terms and conditions apply to this transaction (along with the Billing and Payment terms and conditions established by Copyright Clearance Center, Inc. ("CCC"), at the time that you opened your Rightslink account and that are available at any time at <<http://myaccount.copyright.com>>).

LIMITED LICENSE

Publisher hereby grants to you a non-exclusive license to use this material. Licenses are for one-time use only with a maximum distribution equal to the number that you identified in the licensing process.

GEOGRAPHIC RIGHTS: SCOPE

Licenses may be exercised anywhere in the world.

RESERVATION OF RIGHTS

Publisher reserves all rights not specifically granted in the combination of (i) the license details provided by you and accepted in the course of this licensing transaction, (ii) these terms and conditions and (iii) CCC's Billing and Payment terms and conditions.

PORTION RIGHTS STATEMENT: DISCLAIMER

If you seek to reuse a portion from an ACS publication, it is your responsibility to examine each portion as published to determine whether a credit to, or copyright notice of, a third party owner was published adjacent to the item. You may only obtain permission via Rightslink to use material owned by ACS. Permission to use any material published in an ACS publication, journal, or article which is reprinted with permission of a third party must be obtained from the third party owner. ACS disclaims any

responsibility for any use you make of items owned by third parties without their permission.

REVOCATION

The American Chemical Society reserves the right to revoke a license for any reason, including but not limited to advertising and promotional uses of ACS content, third party usage, and incorrect figure source attribution.

LICENSE CONTINGENT ON PAYMENT

While you may exercise the rights licensed immediately upon issuance of the license at the end of the licensing process for the transaction, provided that you have disclosed complete and accurate details of your proposed use, no license is finally effective unless and until full payment is received from you (by CCC) as provided in CCC's Billing and Payment terms and conditions. If full payment is not received on a timely basis, then any license preliminarily granted shall be deemed automatically revoked and shall be void as if never granted. Further, in the event that you breach any of these terms and conditions or any of CCC's Billing and Payment terms and conditions, the license is automatically revoked and shall be void as if never granted. Use of materials as described in a revoked license, as well as any use of the materials beyond the scope of an unrevoked license, may constitute copyright infringement and publisher reserves the right to take any and all action to protect its copyright in the materials.

COPYRIGHT NOTICE: DISCLAIMER

You must include the following copyright and permission notice in connection with any reproduction of the licensed material: "Reprinted ("Adapted" or "in part") with permission from REFERENCE CITATION. Copyright YEAR American Chemical Society."

WARRANTIES: NONE

Publisher makes no representations or warranties with respect to the licensed material.

INDEMNITY

You hereby indemnify and agree to hold harmless publisher and CCC, and their respective officers, directors, employees and agents, from and against any and all claims arising out of your use of the licensed material other than as specifically authorized pursuant to this license.

NO TRANSFER OF LICENSE

This license is personal to you or your publisher and may not be sublicensed, assigned, or transferred by you to any other person without publisher's written permission.

NO AMENDMENT EXCEPT IN WRITING

This license may not be amended except in a writing signed by both parties (or, in the case of publisher, by CCC on publisher's behalf).

OBJECTION TO CONTRARY TERMS

Publisher hereby objects to any terms contained in any purchase order, acknowledgment, check endorsement or other writing prepared by you, which terms are inconsistent with these terms and conditions or CCC's Billing and Payment terms and conditions. These terms and conditions, together with CCC's Billing and Payment terms and conditions (which are incorporated herein), comprise the entire agreement between you and publisher (and CCC) concerning this licensing transaction. In the event of any conflict between your obligations established by these terms and conditions and those established by CCC's Billing and Payment terms and conditions, these terms and conditions shall control.

JURISDICTION

This license transaction shall be governed by and construed in accordance with the laws of the District of Columbia. You hereby agree to submit to the jurisdiction of the courts located in the District of Columbia for purposes of resolving any disputes that may arise in connection with this licensing transaction.

THESES/DISSERTATION TERMS

Regarding your request for permission to include your paper(s) or portions of text from your paper(s) in your thesis/dissertation, permission is now automatically granted; please pay special attention to the implications paragraph below. The Copyright Subcommittee of the Joint Board/Council Committees on Publications approved the following:

Copyright permission for published and submitted material from theses and dissertations ACS extends blanket permission to students to include in their theses and dissertations their own articles, or portions thereof, that have been published in ACS journals or submitted to ACS journals for publication, provided that the ACS copyright credit line is noted on the appropriate page(s).

Publishing implications of electronic publication of theses and dissertation material
Students and their mentors should be aware that posting of theses and dissertation material on the Web prior to submission of material from that thesis or dissertation to an ACS journal may affect publication in that journal. Whether Web posting is considered prior publication may be evaluated on a case-by-case basis by the journal's editor. If an ACS journal editor considers Web posting to be "prior publication", the paper will not be accepted for publication in that journal. If you intend to submit your unpublished paper to ACS for publication, check with the appropriate editor prior to posting your manuscript electronically.

Reuse/Republication of the Entire Work in Theses or Collections: Authors may reuse all or part of the Submitted, Accepted or Published Work in a thesis or dissertation that the author writes and is required to submit to satisfy the criteria of degree-granting institutions. Such reuse is permitted subject to the ACS' "Ethical Guidelines to Publication of Chemical Research" (<http://pubs.acs.org/page/policy/ethics/index.html>); the author should secure written confirmation (via letter or email) from the respective ACS journal editor(s) to avoid potential conflicts with journal prior publication*/embargo policies. Appropriate citation of the Published Work must be made. If the thesis or dissertation to be published is in electronic format, a direct link to the Published Work

must also be included using the ACS Articles on Request author-directed link - see <http://pubs.acs.org/page/policy/articlesonrequest/index.html>

* Prior publication policies of ACS journals are posted on the ACS website at <http://pubs.acs.org/page/policy/prior/index.html>

If your paper has not yet been published by ACS, please print the following credit line on the first page of your article: "Reproduced (or 'Reproduced in part') with permission from [JOURNAL NAME], in press (or 'submitted for publication'). Unpublished work copyright [CURRENT YEAR] American Chemical Society." Include appropriate information.

If your paper has already been published by ACS and you want to include the text or portions of the text in your thesis/dissertation in print or microfilm formats, please print the ACS copyright credit line on the first page of your article: "Reproduced (or 'Reproduced in part') with permission from [FULL REFERENCE CITATION.] Copyright [YEAR] American Chemical Society." Include appropriate information.

Submission to a Dissertation Distributor: If you plan to submit your thesis to UMI or to another dissertation distributor, you should not include the unpublished ACS paper in your thesis if the thesis will be disseminated electronically, until ACS has published your paper. After publication of the paper by ACS, you may release the entire thesis (not the individual ACS article by itself) for electronic dissemination through the distributor; ACS's copyright credit line should be printed on the first page of the ACS paper.

v1.2

Gratis licenses (referencing \$0 in the Total field) are free. Please retain this printable license for your reference. No payment is required.

If you would like to pay for this license now, please remit this license along with your payment made payable to "COPYRIGHT CLEARANCE CENTER" otherwise you will be invoiced within 48 hours of the license date. Payment should be in the form of a check or money order referencing your account number and this invoice number RLNK10984225.

Once you receive your invoice for this order, you may pay your invoice by credit card. Please follow instructions provided at that time.

Make Payment To:
Copyright Clearance Center
Dept 001
P.O. Box 843006
Boston, MA 02284-3006

For suggestions or comments regarding this order, contact Rightslink Customer Support: customercare@copyright.com or +1-877-622-5543 (toll free in the US) or +1-978-646-2777.

This is a License Agreement between Michelle L Grimm ("You") and American Chemical Society ("American Chemical Society") provided by Copyright Clearance Center ("CCC"). The license consists of your order details, the terms and conditions provided by American Chemical Society, and the payment terms and conditions. All payments must be made in full to CCC. For payment instructions, please see information listed at the bottom of this form.

[License Number](#)

2665070353131

[License Date](#)

May 09, 2011

[Licensed content publisher](#)

American Chemical Society

[Licensed content publication](#)

Chemical Reviews

[Licensed content title](#)

Fast kinetics by means of direct and indirect electrochemical techniques

[Licensed content author](#)

Claude P. Andrieux et al.

[Licensed content date](#)

Jul 1, 1990

[Volume number](#)

90

[Issue number](#)

5

[Type of Use](#)

Thesis/Dissertation

[Requestor type](#)

Not specified

[Format](#)

Print and Electronic

[Portion](#)

Table/Figure/Micrograph

[Number of Table/Figure/Micrographs](#)

3

[Author of this ACS article](#)

No

[Order reference number](#)

[Title of the thesis / dissertation](#)

Development of New N-cyclopropyl Based Electron Transfer Probes for Cytochrome P-450 and Monoamine Oxidase Catalyzed Reactions

[Expected completion date](#)

May 2011

Estimated size(pages)

218

Billing Type

Invoice

Billing Address

107 Sunset Blvd.

Blacksburg, VA 24060

United States

Customer reference info

Total

0.00 USD

Terms and Conditions

Thesis/Dissertation

ACS / RIGHTSLINK TERMS & CONDITIONS THESIS/DISSERTATION

INTRODUCTION

The publisher for this copyrighted material is the American Chemical Society. By clicking "accept" in connection with completing this licensing transaction, you agree that the following terms and conditions apply to this transaction (along with the Billing and Payment terms and conditions established by Copyright Clearance Center, Inc. ("CCC"), at the time that you opened your Rightslink account and that are available at any time at <<http://myaccount.copyright.com>>).

LIMITED LICENSE

Publisher hereby grants to you a non-exclusive license to use this material. Licenses are for one-time use only with a maximum distribution equal to the number that you identified in the licensing process.

GEOGRAPHIC RIGHTS: SCOPE

Licenses may be exercised anywhere in the world.

RESERVATION OF RIGHTS

Publisher reserves all rights not specifically granted in the combination of (i) the license details provided by you and accepted in the course of this licensing transaction, (ii) these terms and conditions and (iii) CCC's Billing and Payment terms and conditions.

PORTION RIGHTS STATEMENT: DISCLAIMER

If you seek to reuse a portion from an ACS publication, it is your responsibility to examine each portion as published to determine whether a credit to, or copyright notice of, a third party owner was published adjacent to the item. You may only obtain permission via Rightslink to use material owned by ACS. Permission to use any material published in an ACS publication, journal, or article which is reprinted with permission of a third party must be obtained from the third party owner. ACS disclaims any

responsibility for any use you make of items owned by third parties without their permission.

REVOCATION

The American Chemical Society reserves the right to revoke a license for any reason, including but not limited to advertising and promotional uses of ACS content, third party usage, and incorrect figure source attribution.

LICENSE CONTINGENT ON PAYMENT

While you may exercise the rights licensed immediately upon issuance of the license at the end of the licensing process for the transaction, provided that you have disclosed complete and accurate details of your proposed use, no license is finally effective unless and until full payment is received from you (by CCC) as provided in CCC's Billing and Payment terms and conditions. If full payment is not received on a timely basis, then any license preliminarily granted shall be deemed automatically revoked and shall be void as if never granted. Further, in the event that you breach any of these terms and conditions or any of CCC's Billing and Payment terms and conditions, the license is automatically revoked and shall be void as if never granted. Use of materials as described in a revoked license, as well as any use of the materials beyond the scope of an unrevoked license, may constitute copyright infringement and publisher reserves the right to take any and all action to protect its copyright in the materials.

COPYRIGHT NOTICE: DISCLAIMER

You must include the following copyright and permission notice in connection with any reproduction of the licensed material: "Reprinted ("Adapted" or "in part") with permission from REFERENCE CITATION. Copyright YEAR American Chemical Society."

WARRANTIES: NONE

Publisher makes no representations or warranties with respect to the licensed material.

INDEMNITY

You hereby indemnify and agree to hold harmless publisher and CCC, and their respective officers, directors, employees and agents, from and against any and all claims arising out of your use of the licensed material other than as specifically authorized pursuant to this license.

NO TRANSFER OF LICENSE

This license is personal to you or your publisher and may not be sublicensed, assigned, or transferred by you to any other person without publisher's written permission.

NO AMENDMENT EXCEPT IN WRITING

This license may not be amended except in a writing signed by both parties (or, in the case of publisher, by CCC on publisher's behalf).

OBJECTION TO CONTRARY TERMS

Publisher hereby objects to any terms contained in any purchase order, acknowledgment, check endorsement or other writing prepared by you, which terms are inconsistent with these terms and conditions or CCC's Billing and Payment terms and conditions. These terms and conditions, together with CCC's Billing and Payment terms and conditions (which are incorporated herein), comprise the entire agreement between you and publisher (and CCC) concerning this licensing transaction. In the event of any conflict between your obligations established by these terms and conditions and those established by CCC's Billing and Payment terms and conditions, these terms and conditions shall control.

JURISDICTION

This license transaction shall be governed by and construed in accordance with the laws of the District of Columbia. You hereby agree to submit to the jurisdiction of the courts located in the District of Columbia for purposes of resolving any disputes that may arise in connection with this licensing transaction.

THESES/DISSERTATION TERMS

Regarding your request for permission to include your paper(s) or portions of text from your paper(s) in your thesis/dissertation, permission is now automatically granted; please pay special attention to the implications paragraph below. The Copyright Subcommittee of the Joint Board/Council Committees on Publications approved the following:

Copyright permission for published and submitted material from theses and dissertations ACS extends blanket permission to students to include in their theses and dissertations their own articles, or portions thereof, that have been published in ACS journals or submitted to ACS journals for publication, provided that the ACS copyright credit line is noted on the appropriate page(s).

Publishing implications of electronic publication of theses and dissertation material
Students and their mentors should be aware that posting of theses and dissertation material on the Web prior to submission of material from that thesis or dissertation to an ACS journal may affect publication in that journal. Whether Web posting is considered prior publication may be evaluated on a case-by-case basis by the journal's editor. If an ACS journal editor considers Web posting to be "prior publication", the paper will not be accepted for publication in that journal. If you intend to submit your unpublished paper to ACS for publication, check with the appropriate editor prior to posting your manuscript electronically.

Reuse/Republication of the Entire Work in Theses or Collections: Authors may reuse all or part of the Submitted, Accepted or Published Work in a thesis or dissertation that the author writes and is required to submit to satisfy the criteria of degree-granting institutions. Such reuse is permitted subject to the ACS' "Ethical Guidelines to Publication of Chemical Research" (<http://pubs.acs.org/page/policy/ethics/index.html>); the author should secure written confirmation (via letter or email) from the respective ACS journal editor(s) to avoid potential conflicts with journal prior publication*/embargo policies. Appropriate citation of the Published Work must be made. If the thesis or dissertation to be published is in electronic format, a direct link to the Published Work

must also be included using the ACS Articles on Request author-directed link - see <http://pubs.acs.org/page/policy/articlesonrequest/index.html>

* Prior publication policies of ACS journals are posted on the ACS website at <http://pubs.acs.org/page/policy/prior/index.html>

If your paper has not yet been published by ACS, please print the following credit line on the first page of your article: "Reproduced (or 'Reproduced in part') with permission from [JOURNAL NAME], in press (or 'submitted for publication'). Unpublished work copyright [CURRENT YEAR] American Chemical Society." Include appropriate information.

If your paper has already been published by ACS and you want to include the text or portions of the text in your thesis/dissertation in print or microfilm formats, please print the ACS copyright credit line on the first page of your article: "Reproduced (or 'Reproduced in part') with permission from [FULL REFERENCE CITATION.] Copyright [YEAR] American Chemical Society." Include appropriate information.

Submission to a Dissertation Distributor: If you plan to submit your thesis to UMI or to another dissertation distributor, you should not include the unpublished ACS paper in your thesis if the thesis will be disseminated electronically, until ACS has published your paper. After publication of the paper by ACS, you may release the entire thesis (not the individual ACS article by itself) for electronic dissemination through the distributor; ACS's copyright credit line should be printed on the first page of the ACS paper.

v1.2

Gratis licenses (referencing \$0 in the Total field) are free. Please retain this printable license for your reference. No payment is required.

If you would like to pay for this license now, please remit this license along with your payment made payable to "COPYRIGHT CLEARANCE CENTER" otherwise you will be invoiced within 48 hours of the license date. Payment should be in the form of a check or money order referencing your account number and this invoice number RLNK10984235.

Once you receive your invoice for this order, you may pay your invoice by credit card. Please follow instructions provided at that time.

Make Payment To:
Copyright Clearance Center
Dept 001
P.O. Box 843006
Boston, MA 02284-3006

For suggestions or comments regarding this order, contact Rightslink Customer Support: customer care@copyright.com or +1-877-622-5543 (toll free in the US) or +1-978-646-2777.

This is a License Agreement between Michelle L Grimm ("You") and American Chemical Society ("American Chemical Society") provided by Copyright Clearance Center ("CCC"). The license consists of your order details, the terms and conditions provided by American Chemical Society, and the payment terms and conditions. All payments must be made in full to CCC. For payment instructions, please see information listed at the bottom of this form.

[License Number](#)

2665070647329

[License Date](#)

May 09, 2011

[Licensed content publisher](#)

American Chemical Society

[Licensed content publication](#)

Chemical Reviews

[Licensed content title](#)

Photosensitization by reversible electron transfer: theories, experimental evidence, and examples

[Licensed content author](#)

George J. Kavarnos et al.

[Licensed content date](#)

Apr 1, 1986

[Volume number](#)

86

[Issue number](#)

2

[Type of Use](#)

Thesis/Dissertation

[Requestor type](#)

Not specified

[Format](#)

Print and Electronic

[Portion](#)

Table/Figure/Micrograph

[Number of Table/Figure/Micrographs](#)

2

[Author of this ACS article](#)

No

[Order reference number](#)

[Title of the thesis / dissertation](#)

Development of New N-cyclopropyl Based Electron Transfer Probes for Cytochrome P-450 and Monoamine Oxidase Catalyzed Reactions

[Expected completion date](#)

May 2011

Estimated size(pages)

218

Billing Type

Invoice

Billing Address

107 Sunset Blvd.

Blacksburg, VA 24060

United States

Customer reference info

Total

0.00 USD

Terms and Conditions

Thesis/Dissertation

ACS / RIGHTSLINK TERMS & CONDITIONS THESIS/DISSERTATION

INTRODUCTION

The publisher for this copyrighted material is the American Chemical Society. By clicking "accept" in connection with completing this licensing transaction, you agree that the following terms and conditions apply to this transaction (along with the Billing and Payment terms and conditions established by Copyright Clearance Center, Inc. ("CCC"), at the time that you opened your Rightslink account and that are available at any time at <<http://myaccount.copyright.com>>).

LIMITED LICENSE

Publisher hereby grants to you a non-exclusive license to use this material. Licenses are for one-time use only with a maximum distribution equal to the number that you identified in the licensing process.

GEOGRAPHIC RIGHTS: SCOPE

Licenses may be exercised anywhere in the world.

RESERVATION OF RIGHTS

Publisher reserves all rights not specifically granted in the combination of (i) the license details provided by you and accepted in the course of this licensing transaction, (ii) these terms and conditions and (iii) CCC's Billing and Payment terms and conditions.

PORTION RIGHTS STATEMENT: DISCLAIMER

If you seek to reuse a portion from an ACS publication, it is your responsibility to examine each portion as published to determine whether a credit to, or copyright notice of, a third party owner was published adjacent to the item. You may only obtain permission via Rightslink to use material owned by ACS. Permission to use any material published in an ACS publication, journal, or article which is reprinted with permission of a third party must be obtained from the third party owner. ACS disclaims any

responsibility for any use you make of items owned by third parties without their permission.

REVOCATION

The American Chemical Society reserves the right to revoke a license for any reason, including but not limited to advertising and promotional uses of ACS content, third party usage, and incorrect figure source attribution.

LICENSE CONTINGENT ON PAYMENT

While you may exercise the rights licensed immediately upon issuance of the license at the end of the licensing process for the transaction, provided that you have disclosed complete and accurate details of your proposed use, no license is finally effective unless and until full payment is received from you (by CCC) as provided in CCC's Billing and Payment terms and conditions. If full payment is not received on a timely basis, then any license preliminarily granted shall be deemed automatically revoked and shall be void as if never granted. Further, in the event that you breach any of these terms and conditions or any of CCC's Billing and Payment terms and conditions, the license is automatically revoked and shall be void as if never granted. Use of materials as described in a revoked license, as well as any use of the materials beyond the scope of an unrevoked license, may constitute copyright infringement and publisher reserves the right to take any and all action to protect its copyright in the materials.

COPYRIGHT NOTICE: DISCLAIMER

You must include the following copyright and permission notice in connection with any reproduction of the licensed material: "Reprinted ("Adapted" or "in part") with permission from REFERENCE CITATION. Copyright YEAR American Chemical Society."

WARRANTIES: NONE

Publisher makes no representations or warranties with respect to the licensed material.

INDEMNITY

You hereby indemnify and agree to hold harmless publisher and CCC, and their respective officers, directors, employees and agents, from and against any and all claims arising out of your use of the licensed material other than as specifically authorized pursuant to this license.

NO TRANSFER OF LICENSE

This license is personal to you or your publisher and may not be sublicensed, assigned, or transferred by you to any other person without publisher's written permission.

NO AMENDMENT EXCEPT IN WRITING

This license may not be amended except in a writing signed by both parties (or, in the case of publisher, by CCC on publisher's behalf).

OBJECTION TO CONTRARY TERMS

Publisher hereby objects to any terms contained in any purchase order, acknowledgment, check endorsement or other writing prepared by you, which terms are inconsistent with these terms and conditions or CCC's Billing and Payment terms and conditions. These terms and conditions, together with CCC's Billing and Payment terms and conditions (which are incorporated herein), comprise the entire agreement between you and publisher (and CCC) concerning this licensing transaction. In the event of any conflict between your obligations established by these terms and conditions and those established by CCC's Billing and Payment terms and conditions, these terms and conditions shall control.

JURISDICTION

This license transaction shall be governed by and construed in accordance with the laws of the District of Columbia. You hereby agree to submit to the jurisdiction of the courts located in the District of Columbia for purposes of resolving any disputes that may arise in connection with this licensing transaction.

THESES/DISSERTATION TERMS

Regarding your request for permission to include your paper(s) or portions of text from your paper(s) in your thesis/dissertation, permission is now automatically granted; please pay special attention to the implications paragraph below. The Copyright Subcommittee of the Joint Board/Council Committees on Publications approved the following:

Copyright permission for published and submitted material from theses and dissertations ACS extends blanket permission to students to include in their theses and dissertations their own articles, or portions thereof, that have been published in ACS journals or submitted to ACS journals for publication, provided that the ACS copyright credit line is noted on the appropriate page(s).

Publishing implications of electronic publication of theses and dissertation material
Students and their mentors should be aware that posting of theses and dissertation material on the Web prior to submission of material from that thesis or dissertation to an ACS journal may affect publication in that journal. Whether Web posting is considered prior publication may be evaluated on a case-by-case basis by the journal's editor. If an ACS journal editor considers Web posting to be "prior publication", the paper will not be accepted for publication in that journal. If you intend to submit your unpublished paper to ACS for publication, check with the appropriate editor prior to posting your manuscript electronically.

Reuse/Republication of the Entire Work in Theses or Collections: Authors may reuse all or part of the Submitted, Accepted or Published Work in a thesis or dissertation that the author writes and is required to submit to satisfy the criteria of degree-granting institutions. Such reuse is permitted subject to the ACS' "Ethical Guidelines to Publication of Chemical Research" (<http://pubs.acs.org/page/policy/ethics/index.html>); the author should secure written confirmation (via letter or email) from the respective ACS journal editor(s) to avoid potential conflicts with journal prior publication*/embargo policies. Appropriate citation of the Published Work must be made. If the thesis or dissertation to be published is in electronic format, a direct link to the Published Work

must also be included using the ACS Articles on Request author-directed link - see <http://pubs.acs.org/page/policy/articlesonrequest/index.html>

* Prior publication policies of ACS journals are posted on the ACS website at <http://pubs.acs.org/page/policy/prior/index.html>

If your paper has not yet been published by ACS, please print the following credit line on the first page of your article: "Reproduced (or 'Reproduced in part') with permission from [JOURNAL NAME], in press (or 'submitted for publication'). Unpublished work copyright [CURRENT YEAR] American Chemical Society." Include appropriate information.

If your paper has already been published by ACS and you want to include the text or portions of the text in your thesis/dissertation in print or microfilm formats, please print the ACS copyright credit line on the first page of your article: "Reproduced (or 'Reproduced in part') with permission from [FULL REFERENCE CITATION.] Copyright [YEAR] American Chemical Society." Include appropriate information.

Submission to a Dissertation Distributor: If you plan to submit your thesis to UMI or to another dissertation distributor, you should not include the unpublished ACS paper in your thesis if the thesis will be disseminated electronically, until ACS has published your paper. After publication of the paper by ACS, you may release the entire thesis (not the individual ACS article by itself) for electronic dissemination through the distributor; ACS's copyright credit line should be printed on the first page of the ACS paper.

v1.2

Gratis licenses (referencing \$0 in the Total field) are free. Please retain this printable license for your reference. No payment is required.

If you would like to pay for this license now, please remit this license along with your payment made payable to "COPYRIGHT CLEARANCE CENTER" otherwise you will be invoiced within 48 hours of the license date. Payment should be in the form of a check or money order referencing your account number and this invoice number RLNK10984239.

Once you receive your invoice for this order, you may pay your invoice by credit card. Please follow instructions provided at that time.

Make Payment To:
Copyright Clearance Center
Dept 001
P.O. Box 843006
Boston, MA 02284-3006

For suggestions or comments regarding this order, contact Rightslink Customer Support: customercare@copyright.com or +1-877-622-5543 (toll free in the US) or +1-978-646-2777.

This is a License Agreement between Michelle L Grimm ("You") and American Chemical Society ("American Chemical Society") provided by Copyright Clearance Center ("CCC"). The license consists of your order details, the terms and conditions provided by American Chemical Society, and the payment terms and conditions. All payments must be made in full to CCC. For payment instructions, please see information listed at the bottom of this form.

[License Number](#)

2665090337558

[License Date](#)

May 09, 2011

[Licensed content publisher](#)

American Chemical Society

[Licensed content publication](#)

Journal of the American Chemical Society

[Licensed content title](#)

Microsomal P450-Catalyzed N-Dealkylation of N,N-Dialkylanilines: Evidence for a C α -H Abstraction Mechanism

[Licensed content author](#)

Mehul N. Bhakta et al.

[Licensed content date](#)

Mar 1, 2002

[Volume number](#)

124

[Issue number](#)

9

[Type of Use](#)

Thesis/Dissertation

[Requestor type](#)

Not specified

[Format](#)

Print and Electronic

[Portion](#)

Table/Figure/Micrograph

[Number of Table/Figure/Micrographs](#)

1

[Author of this ACS article](#)

No

[Order reference number](#)

[Title of the thesis / dissertation](#)

Development of New N-cyclopropyl Based Electron Transfer Probes for Cytochrome P-450 and Monoamine Oxidase Catalyzed Reactions

[Expected completion date](#)

May 2011

Estimated size(pages)

218

Billing Type

Invoice

Billing Address

107 Sunset Blvd.

Blacksburg, VA 24060

United States

Customer reference info

Total

0.00 USD

Terms and Conditions

Thesis/Dissertation

ACS / RIGHTSLINK TERMS & CONDITIONS THESIS/DISSERTATION

INTRODUCTION

The publisher for this copyrighted material is the American Chemical Society. By clicking "accept" in connection with completing this licensing transaction, you agree that the following terms and conditions apply to this transaction (along with the Billing and Payment terms and conditions established by Copyright Clearance Center, Inc. ("CCC"), at the time that you opened your Rightslink account and that are available at any time at <<http://myaccount.copyright.com>>).

LIMITED LICENSE

Publisher hereby grants to you a non-exclusive license to use this material. Licenses are for one-time use only with a maximum distribution equal to the number that you identified in the licensing process.

GEOGRAPHIC RIGHTS: SCOPE

Licenses may be exercised anywhere in the world.

RESERVATION OF RIGHTS

Publisher reserves all rights not specifically granted in the combination of (i) the license details provided by you and accepted in the course of this licensing transaction, (ii) these terms and conditions and (iii) CCC's Billing and Payment terms and conditions.

PORTION RIGHTS STATEMENT: DISCLAIMER

If you seek to reuse a portion from an ACS publication, it is your responsibility to examine each portion as published to determine whether a credit to, or copyright notice of, a third party owner was published adjacent to the item. You may only obtain permission via Rightslink to use material owned by ACS. Permission to use any material published in an ACS publication, journal, or article which is reprinted with permission of a third party must be obtained from the third party owner. ACS disclaims any

responsibility for any use you make of items owned by third parties without their permission.

REVOCATION

The American Chemical Society reserves the right to revoke a license for any reason, including but not limited to advertising and promotional uses of ACS content, third party usage, and incorrect figure source attribution.

LICENSE CONTINGENT ON PAYMENT

While you may exercise the rights licensed immediately upon issuance of the license at the end of the licensing process for the transaction, provided that you have disclosed complete and accurate details of your proposed use, no license is finally effective unless and until full payment is received from you (by CCC) as provided in CCC's Billing and Payment terms and conditions. If full payment is not received on a timely basis, then any license preliminarily granted shall be deemed automatically revoked and shall be void as if never granted. Further, in the event that you breach any of these terms and conditions or any of CCC's Billing and Payment terms and conditions, the license is automatically revoked and shall be void as if never granted. Use of materials as described in a revoked license, as well as any use of the materials beyond the scope of an unrevoked license, may constitute copyright infringement and publisher reserves the right to take any and all action to protect its copyright in the materials.

COPYRIGHT NOTICE: DISCLAIMER

You must include the following copyright and permission notice in connection with any reproduction of the licensed material: "Reprinted ("Adapted" or "in part") with permission from REFERENCE CITATION. Copyright YEAR American Chemical Society."

WARRANTIES: NONE

Publisher makes no representations or warranties with respect to the licensed material.

INDEMNITY

You hereby indemnify and agree to hold harmless publisher and CCC, and their respective officers, directors, employees and agents, from and against any and all claims arising out of your use of the licensed material other than as specifically authorized pursuant to this license.

NO TRANSFER OF LICENSE

This license is personal to you or your publisher and may not be sublicensed, assigned, or transferred by you to any other person without publisher's written permission.

NO AMENDMENT EXCEPT IN WRITING

This license may not be amended except in a writing signed by both parties (or, in the case of publisher, by CCC on publisher's behalf).

OBJECTION TO CONTRARY TERMS

Publisher hereby objects to any terms contained in any purchase order, acknowledgment, check endorsement or other writing prepared by you, which terms are inconsistent with these terms and conditions or CCC's Billing and Payment terms and conditions. These terms and conditions, together with CCC's Billing and Payment terms and conditions (which are incorporated herein), comprise the entire agreement between you and publisher (and CCC) concerning this licensing transaction. In the event of any conflict between your obligations established by these terms and conditions and those established by CCC's Billing and Payment terms and conditions, these terms and conditions shall control.

JURISDICTION

This license transaction shall be governed by and construed in accordance with the laws of the District of Columbia. You hereby agree to submit to the jurisdiction of the courts located in the District of Columbia for purposes of resolving any disputes that may arise in connection with this licensing transaction.

THESES/DISSERTATION TERMS

Regarding your request for permission to include your paper(s) or portions of text from your paper(s) in your thesis/dissertation, permission is now automatically granted; please pay special attention to the implications paragraph below. The Copyright Subcommittee of the Joint Board/Council Committees on Publications approved the following:

Copyright permission for published and submitted material from theses and dissertations ACS extends blanket permission to students to include in their theses and dissertations their own articles, or portions thereof, that have been published in ACS journals or submitted to ACS journals for publication, provided that the ACS copyright credit line is noted on the appropriate page(s).

Publishing implications of electronic publication of theses and dissertation material
Students and their mentors should be aware that posting of theses and dissertation material on the Web prior to submission of material from that thesis or dissertation to an ACS journal may affect publication in that journal. Whether Web posting is considered prior publication may be evaluated on a case-by-case basis by the journal's editor. If an ACS journal editor considers Web posting to be "prior publication", the paper will not be accepted for publication in that journal. If you intend to submit your unpublished paper to ACS for publication, check with the appropriate editor prior to posting your manuscript electronically.

Reuse/Republication of the Entire Work in Theses or Collections: Authors may reuse all or part of the Submitted, Accepted or Published Work in a thesis or dissertation that the author writes and is required to submit to satisfy the criteria of degree-granting institutions. Such reuse is permitted subject to the ACS' "Ethical Guidelines to Publication of Chemical Research" (<http://pubs.acs.org/page/policy/ethics/index.html>); the author should secure written confirmation (via letter or email) from the respective ACS journal editor(s) to avoid potential conflicts with journal prior publication*/embargo policies. Appropriate citation of the Published Work must be made. If the thesis or dissertation to be published is in electronic format, a direct link to the Published Work

must also be included using the ACS Articles on Request author-directed link - see <http://pubs.acs.org/page/policy/articlesonrequest/index.html>

* Prior publication policies of ACS journals are posted on the ACS website at <http://pubs.acs.org/page/policy/prior/index.html>

If your paper has not yet been published by ACS, please print the following credit line on the first page of your article: "Reproduced (or 'Reproduced in part') with permission from [JOURNAL NAME], in press (or 'submitted for publication'). Unpublished work copyright [CURRENT YEAR] American Chemical Society." Include appropriate information.

If your paper has already been published by ACS and you want to include the text or portions of the text in your thesis/dissertation in print or microfilm formats, please print the ACS copyright credit line on the first page of your article: "Reproduced (or 'Reproduced in part') with permission from [FULL REFERENCE CITATION.] Copyright [YEAR] American Chemical Society." Include appropriate information.

Submission to a Dissertation Distributor: If you plan to submit your thesis to UMI or to another dissertation distributor, you should not include the unpublished ACS paper in your thesis if the thesis will be disseminated electronically, until ACS has published your paper. After publication of the paper by ACS, you may release the entire thesis (not the individual ACS article by itself) for electronic dissemination through the distributor; ACS's copyright credit line should be printed on the first page of the ACS paper.

v1.2

Gratis licenses (referencing \$0 in the Total field) are free. Please retain this printable license for your reference. No payment is required.

If you would like to pay for this license now, please remit this license along with your payment made payable to "COPYRIGHT CLEARANCE CENTER" otherwise you will be invoiced within 48 hours of the license date. Payment should be in the form of a check or money order referencing your account number and this invoice number RLNK10984289.

Once you receive your invoice for this order, you may pay your invoice by credit card. Please follow instructions provided at that time.

Make Payment To:
Copyright Clearance Center
Dept 001
P.O. Box 843006
Boston, MA 02284-3006

For suggestions or comments regarding this order, contact Rightslink Customer Support: customercare@copyright.com or +1-877-622-5543 (toll free in the US) or +1-978-646-2777.

This is a License Agreement between Michelle L Grimm ("You") and American Chemical Society ("American Chemical Society") provided by Copyright Clearance Center ("CCC"). The license consists of your order details, the terms and conditions provided by American Chemical Society, and the payment terms and conditions. All payments must be made in full to CCC. For payment instructions, please see information listed at the bottom of this form.

[License Number](#)

2665090476008

[License Date](#)

May 09, 2011

[Licensed content publisher](#)

American Chemical Society

[Licensed content publication](#)

The Journal of Organic Chemistry

[Licensed content title](#)

Interplay between conjugative and steric effects in cyclopropylarenes

[Licensed content author](#)

R. E. Drumright et al

[Licensed content date](#)

Jun 1, 1990

[Volume number](#)

55

[Issue number](#)

13

[Type of Use](#)

Thesis/Dissertation

[Requestor type](#)

Not specified

[Format](#)

Print and Electronic

[Portion](#)

Table/Figure/Micrograph

[Number of Table/Figure/Micrographs](#)

1

[Author of this ACS article](#)

No

[Order reference number](#)

[Title of the thesis / dissertation](#)

Development of New N-cyclopropyl Based Electron Transfer Probes for Cytochrome P-450 and Monoamine Oxidase Catalyzed Reactions

[Expected completion date](#)

May 2011

Estimated size(pages)

218

Billing Type

Invoice

Billing Address

107 Sunset Blvd.

Blacksburg, VA 24060

United States

Customer reference info

Total

0.00 USD

Terms and Conditions

Thesis/Dissertation

ACS / RIGHTSLINK TERMS & CONDITIONS THESIS/DISSERTATION

INTRODUCTION

The publisher for this copyrighted material is the American Chemical Society. By clicking "accept" in connection with completing this licensing transaction, you agree that the following terms and conditions apply to this transaction (along with the Billing and Payment terms and conditions established by Copyright Clearance Center, Inc. ("CCC"), at the time that you opened your Rightslink account and that are available at any time at <<http://myaccount.copyright.com>>).

LIMITED LICENSE

Publisher hereby grants to you a non-exclusive license to use this material. Licenses are for one-time use only with a maximum distribution equal to the number that you identified in the licensing process.

GEOGRAPHIC RIGHTS: SCOPE

Licenses may be exercised anywhere in the world.

RESERVATION OF RIGHTS

Publisher reserves all rights not specifically granted in the combination of (i) the license details provided by you and accepted in the course of this licensing transaction, (ii) these terms and conditions and (iii) CCC's Billing and Payment terms and conditions.

PORTION RIGHTS STATEMENT: DISCLAIMER

If you seek to reuse a portion from an ACS publication, it is your responsibility to examine each portion as published to determine whether a credit to, or copyright notice of, a third party owner was published adjacent to the item. You may only obtain permission via Rightslink to use material owned by ACS. Permission to use any material published in an ACS publication, journal, or article which is reprinted with permission of a third party must be obtained from the third party owner. ACS disclaims any

responsibility for any use you make of items owned by third parties without their permission.

REVOCATION

The American Chemical Society reserves the right to revoke a license for any reason, including but not limited to advertising and promotional uses of ACS content, third party usage, and incorrect figure source attribution.

LICENSE CONTINGENT ON PAYMENT

While you may exercise the rights licensed immediately upon issuance of the license at the end of the licensing process for the transaction, provided that you have disclosed complete and accurate details of your proposed use, no license is finally effective unless and until full payment is received from you (by CCC) as provided in CCC's Billing and Payment terms and conditions. If full payment is not received on a timely basis, then any license preliminarily granted shall be deemed automatically revoked and shall be void as if never granted. Further, in the event that you breach any of these terms and conditions or any of CCC's Billing and Payment terms and conditions, the license is automatically revoked and shall be void as if never granted. Use of materials as described in a revoked license, as well as any use of the materials beyond the scope of an unrevoked license, may constitute copyright infringement and publisher reserves the right to take any and all action to protect its copyright in the materials.

COPYRIGHT NOTICE: DISCLAIMER

You must include the following copyright and permission notice in connection with any reproduction of the licensed material: "Reprinted ("Adapted" or "in part") with permission from REFERENCE CITATION. Copyright YEAR American Chemical Society."

WARRANTIES: NONE

Publisher makes no representations or warranties with respect to the licensed material.

INDEMNITY

You hereby indemnify and agree to hold harmless publisher and CCC, and their respective officers, directors, employees and agents, from and against any and all claims arising out of your use of the licensed material other than as specifically authorized pursuant to this license.

NO TRANSFER OF LICENSE

This license is personal to you or your publisher and may not be sublicensed, assigned, or transferred by you to any other person without publisher's written permission.

NO AMENDMENT EXCEPT IN WRITING

This license may not be amended except in a writing signed by both parties (or, in the case of publisher, by CCC on publisher's behalf).

OBJECTION TO CONTRARY TERMS

Publisher hereby objects to any terms contained in any purchase order, acknowledgment, check endorsement or other writing prepared by you, which terms are inconsistent with these terms and conditions or CCC's Billing and Payment terms and conditions. These terms and conditions, together with CCC's Billing and Payment terms and conditions (which are incorporated herein), comprise the entire agreement between you and publisher (and CCC) concerning this licensing transaction. In the event of any conflict between your obligations established by these terms and conditions and those established by CCC's Billing and Payment terms and conditions, these terms and conditions shall control.

JURISDICTION

This license transaction shall be governed by and construed in accordance with the laws of the District of Columbia. You hereby agree to submit to the jurisdiction of the courts located in the District of Columbia for purposes of resolving any disputes that may arise in connection with this licensing transaction.

THESES/DISSERTATION TERMS

Regarding your request for permission to include your paper(s) or portions of text from your paper(s) in your thesis/dissertation, permission is now automatically granted; please pay special attention to the implications paragraph below. The Copyright Subcommittee of the Joint Board/Council Committees on Publications approved the following:

Copyright permission for published and submitted material from theses and dissertations ACS extends blanket permission to students to include in their theses and dissertations their own articles, or portions thereof, that have been published in ACS journals or submitted to ACS journals for publication, provided that the ACS copyright credit line is noted on the appropriate page(s).

Publishing implications of electronic publication of theses and dissertation material
Students and their mentors should be aware that posting of theses and dissertation material on the Web prior to submission of material from that thesis or dissertation to an ACS journal may affect publication in that journal. Whether Web posting is considered prior publication may be evaluated on a case-by-case basis by the journal's editor. If an ACS journal editor considers Web posting to be "prior publication", the paper will not be accepted for publication in that journal. If you intend to submit your unpublished paper to ACS for publication, check with the appropriate editor prior to posting your manuscript electronically.

Reuse/Republication of the Entire Work in Theses or Collections: Authors may reuse all or part of the Submitted, Accepted or Published Work in a thesis or dissertation that the author writes and is required to submit to satisfy the criteria of degree-granting institutions. Such reuse is permitted subject to the ACS' "Ethical Guidelines to Publication of Chemical Research" (<http://pubs.acs.org/page/policy/ethics/index.html>); the author should secure written confirmation (via letter or email) from the respective ACS journal editor(s) to avoid potential conflicts with journal prior publication*/embargo policies. Appropriate citation of the Published Work must be made. If the thesis or dissertation to be published is in electronic format, a direct link to the Published Work

must also be included using the ACS Articles on Request author-directed link - see <http://pubs.acs.org/page/policy/articlesonrequest/index.html>

* Prior publication policies of ACS journals are posted on the ACS website at <http://pubs.acs.org/page/policy/prior/index.html>

If your paper has not yet been published by ACS, please print the following credit line on the first page of your article: "Reproduced (or 'Reproduced in part') with permission from [JOURNAL NAME], in press (or 'submitted for publication'). Unpublished work copyright [CURRENT YEAR] American Chemical Society." Include appropriate information.

If your paper has already been published by ACS and you want to include the text or portions of the text in your thesis/dissertation in print or microfilm formats, please print the ACS copyright credit line on the first page of your article: "Reproduced (or 'Reproduced in part') with permission from [FULL REFERENCE CITATION.] Copyright [YEAR] American Chemical Society." Include appropriate information.

Submission to a Dissertation Distributor: If you plan to submit your thesis to UMI or to another dissertation distributor, you should not include the unpublished ACS paper in your thesis if the thesis will be disseminated electronically, until ACS has published your paper. After publication of the paper by ACS, you may release the entire thesis (not the individual ACS article by itself) for electronic dissemination through the distributor; ACS's copyright credit line should be printed on the first page of the ACS paper.

v1.2

Gratis licenses (referencing \$0 in the Total field) are free. Please retain this printable license for your reference. No payment is required.

If you would like to pay for this license now, please remit this license along with your payment made payable to "COPYRIGHT CLEARANCE CENTER" otherwise you will be invoiced within 48 hours of the license date. Payment should be in the form of a check or money order referencing your account number and this invoice number RLNK10984291.

Once you receive your invoice for this order, you may pay your invoice by credit card. Please follow instructions provided at that time.

Make Payment To:
Copyright Clearance Center
Dept 001
P.O. Box 843006
Boston, MA 02284-3006

For suggestions or comments regarding this order, contact Rightslink Customer Support: customer care@copyright.com or +1-877-622-5543 (toll free in the US) or +1-978-646-2777.

This is a License Agreement between Michelle L Grimm ("You") and Elsevier ("Elsevier") provided by Copyright Clearance Center ("CCC"). The license consists of your order details, the terms and conditions provided by Elsevier, and the payment terms and conditions.

All payments must be made in full to CCC. For payment instructions, please see information listed at the bottom of this form.

Supplier

Elsevier Limited
The Boulevard, Langford Lane
Kidlington, Oxford, OX5 1GB, UK

Registered Company Number

1982084

Customer name

Michelle L Grimm

Customer address

107 Sunset Blvd.
Blacksburg, VA 24060

License number

2665050304722

License date

May 09, 2011

Licensed content publisher

Elsevier

Licensed content publication

Bioorganic & Medicinal Chemistry

Licensed content title

Reaction of benzophenone triplet with aliphatic amines. What a potent neurotoxin can tell us about the reaction mechanism

Licensed content author

Michelle L. Grimm, William J. Allen, Meghan Finn, Neal Castagnoli Jr., James M. Tanko

Licensed content date

15 February 2011

Licensed content volume number

19

Licensed content issue number

4

Number of pages

6

Start Page

1458

End Page

1463

Type of Use

reuse in a thesis/dissertation

Intended publisher of new work

other

Portion

full article

Format

both print and electronic

Are you the author of this Elsevier article?

Yes

Will you be translating?

No

Order reference number

Title of your thesis/dissertation

Development of New N-cyclopropyl Based Electron Transfer Probes for
Cytochrome P-450 and Monoamine Oxidase Catalyzed Reactions

Expected completion date

May 2011

Estimated size (number of pages)

218

Elsevier VAT number

GB 494 6272 12

Permissions price

0.00 USD

VAT/Local Sales Tax

0.0 USD / 0.0 GBP

Total

0.00 USD

Terms and Conditions

INTRODUCTION

1. The publisher for this copyrighted material is Elsevier. By clicking "accept" in connection with completing this licensing transaction, you agree that the following terms and conditions apply to this transaction (along with the Billing and Payment terms and conditions established by Copyright Clearance Center, Inc. ("CCC"), at the time that you opened your Rightslink account and that are available at any time at <http://myaccount.copyright.com>).

GENERAL TERMS

2. Elsevier hereby grants you permission to reproduce the aforementioned material subject to the terms and conditions indicated.

3. Acknowledgement: If any part of the material to be used (for example, figures) has appeared in our publication with credit or acknowledgement to another source, permission must also be sought from that source. If such permission is not obtained then that material may not be included in your publication/copies. Suitable acknowledgement to the source must be made, either as a footnote or in a reference list at the end of your publication, as follows:

“Reprinted from Publication title, Vol /edition number, Author(s), Title of article / title of chapter, Pages No., Copyright (Year), with permission from Elsevier [OR APPLICABLE SOCIETY COPYRIGHT OWNER].” Also Lancet special credit - “Reprinted from The Lancet, Vol. number, Author(s), Title of article, Pages No., Copyright (Year), with permission from Elsevier.”

4. Reproduction of this material is confined to the purpose and/or media for which permission is hereby given.

5. Altering/Modifying Material: Not Permitted. However figures and illustrations may be altered/adapted minimally to serve your work. Any other abbreviations, additions, deletions and/or any other alterations shall be made only with prior written authorization of Elsevier Ltd. (Please contact Elsevier at permissions@elsevier.com)

6. If the permission fee for the requested use of our material is waived in this instance, please be advised that your future requests for Elsevier materials may attract a fee.

7. Reservation of Rights: Publisher reserves all rights not specifically granted in the combination of (i) the license details provided by you and accepted in the course of this licensing transaction, (ii) these terms and conditions and (iii) CCC's Billing and Payment terms and conditions.

8. License Contingent Upon Payment: While you may exercise the rights licensed immediately upon issuance of the license at the end of the licensing process for the transaction, provided that you have disclosed complete and accurate details of your proposed use, no license is finally effective unless and until full payment is received from you (either by publisher or by CCC) as provided in CCC's Billing and Payment terms and conditions. If full payment is not received on a timely basis, then any license preliminarily granted shall be deemed automatically

revoked and shall be void as if never granted. Further, in the event that you breach any of these terms and conditions or any of CCC's Billing and Payment terms and conditions, the license is automatically revoked and shall be void as if never granted. Use of materials as described in a revoked license, as well as any use of the materials beyond the scope of an unrevoked license, may constitute copyright infringement and publisher reserves the right to take any and all action to protect its copyright in the materials.

9. Warranties: Publisher makes no representations or warranties with respect to the licensed material.

10. Indemnity: You hereby indemnify and agree to hold harmless publisher and CCC, and their respective officers, directors, employees and agents, from and against any and all claims arising out of your use of the licensed material other than as specifically authorized pursuant to this license.

11. No Transfer of License: This license is personal to you and may not be sublicensed, assigned, or transferred by you to any other person without publisher's written permission.

12. No Amendment Except in Writing: This license may not be amended except in a writing signed by both parties (or, in the case of publisher, by CCC on publisher's behalf).

13. Objection to Contrary Terms: Publisher hereby objects to any terms contained in any purchase order, acknowledgment, check endorsement or other writing prepared by you, which terms are inconsistent with these terms and conditions or CCC's Billing and Payment terms and conditions. These terms and conditions, together with CCC's Billing and Payment terms and conditions (which are incorporated herein), comprise the entire agreement between you and publisher (and CCC) concerning this licensing transaction. In the event of any conflict between your obligations established by these terms and conditions and those established by CCC's Billing and Payment terms and conditions, these terms and conditions shall control.

14. Revocation: Elsevier or Copyright Clearance Center may deny the permissions described in this License at their sole discretion, for any reason or no reason, with a full refund payable to you. Notice of such denial will be made using the contact information provided by you. Failure to receive such notice will not alter or invalidate the denial. In no event will Elsevier or Copyright Clearance Center be responsible or liable for any costs, expenses or damage incurred by you as a result of a denial of your permission request, other than a refund of the amount(s) paid by you to Elsevier and/or Copyright Clearance Center for denied permissions.

LIMITED LICENSE

The following terms and conditions apply only to specific license types:

15. Translation: This permission is granted for non-exclusive world English rights only unless your license was granted for translation rights. If you licensed translation rights you may only translate this content into the languages you requested. A professional translator must perform all translations and reproduce the content word for word preserving the integrity of the article. If this license is to re-use 1 or 2 figures then permission is granted for non-exclusive world rights in all languages.

16. Website: The following terms and conditions apply to electronic reserve and author websites:

Electronic reserve: If licensed material is to be posted to website, the web site is to be password-protected and made available only to bona fide students registered on a relevant course if:

This license was made in connection with a course,

This permission is granted for 1 year only. You may obtain a license for future website posting,

All content posted to the web site must maintain the copyright information line on the bottom of each image,

A hyper-text must be included to the Homepage of the journal from which you are licensing at <http://www.sciencedirect.com/science/journal/xxxxx> or the Elsevier homepage for books at <http://www.elsevier.com> , and

Central Storage: This license does not include permission for a scanned version of the material to be stored in a central repository such as that provided by Heron/XanEdu.

17. Author website for journals with the following additional clauses:

All content posted to the web site must maintain the copyright information line on the bottom of each image, and

the permission granted is limited to the personal version of your paper. You are not allowed to download and post the published electronic version of your article (whether PDF or HTML, proof or final version), nor may you scan the printed edition to create an electronic version,

A hyper-text must be included to the Homepage of the journal from which you are licensing at <http://www.sciencedirect.com/science/journal/xxxxx> , As part of our normal production process, you will receive an e-mail notice when your article appears on Elsevier's online service ScienceDirect (www.sciencedirect.com).

That e-mail will include the article's Digital Object Identifier (DOI). This number

provides the electronic link to the published article and should be included in the posting of your personal version. We ask that you wait until you receive this e-mail and have the DOI to do any posting.

Central Storage: This license does not include permission for a scanned version of the material to be stored in a central repository such as that provided by Heron/XanEdu.

18. Author website for books with the following additional clauses:

Authors are permitted to place a brief summary of their work online only.

A hyper-text must be included to the Elsevier homepage at

<http://www.elsevier.com>

All content posted to the web site must maintain the copyright information line on the bottom of each image

You are not allowed to download and post the published electronic version of your chapter, nor may you scan the printed edition to create an electronic version.

Central Storage: This license does not include permission for a scanned version of the material to be stored in a central repository such as that provided by Heron/XanEdu.

19. Website (regular and for author): A hyper-text must be included to the

Homepage of the journal from which you are licensing at

<http://www.sciencedirect.com/science/journal/xxxxx>. or for books to the Elsevier homepage at <http://www.elsevier.com>

20. Thesis/Dissertation: If your license is for use in a thesis/dissertation your thesis may be submitted to your institution in either print or electronic form. Should your thesis be published commercially, please reapply for permission. These requirements include permission for the Library and Archives of Canada to supply single copies, on demand, of the complete thesis and include permission for UMI to supply single copies, on demand, of the complete thesis. Should your thesis be published commercially, please reapply for permission.

21. Other Conditions:

v1.6

Gratis licenses (referencing \$0 in the Total field) are free. Please retain this printable license for your reference. No payment is required.

If you would like to pay for this license now, please remit this license along with your payment made payable to "COPYRIGHT CLEARANCE CENTER" otherwise you will be invoiced within 48 hours of the license date. Payment should be in the form of a check or money order referencing your account number and this invoice number RLNK10984191.

Once you receive your invoice for this order, you may pay your invoice by credit card. Please follow instructions provided at that time.

Make Payment To:
Copyright Clearance Center
Dept 001
P.O. Box 843006
Boston, MA 02284-3006

For suggestions or comments regarding this order, contact Rightslink Customer Support: customercare@copyright.com or +1-877-622-5543 (toll free in the US) or +1-978-646-2777.

This is a License Agreement between Michelle L Grimm ("You") and Elsevier ("Elsevier") provided by Copyright Clearance Center ("CCC"). The license consists of your order details, the terms and conditions provided by Elsevier, and the payment terms and conditions.

All payments must be made in full to CCC. For payment instructions, please see information listed at the bottom of this form.

Supplier

Elsevier Limited
The Boulevard, Langford Lane
Kidlington, Oxford, OX5 1GB, UK

Registered Company Number

1982084

Customer name

Michelle L Grimm

Customer address

107 Sunset Blvd.
Blacksburg, VA 24060

License number

2665050600153

License date

May 09, 2011

Licensed content publisher

Elsevier

Licensed content publication

Bioorganic & Medicinal Chemistry

Licensed content title

Studies on the cytochrome P450 catalyzed oxidation of ¹³C labeled 1-cyclopropyl-4-phenyl-1,2,3,6-tetrahydropyridine by ¹³C NMR

Licensed content author

Philippe Bissel, Neal Castagnoli Jr.

Licensed content date

15 April 2005

Licensed content volume number

13

Licensed content issue number

8

Number of pages

6

Start Page

2975

End Page

2980

Type of Use

reuse in a thesis/dissertation

Intended publisher of new work

other

Portion

figures/tables/illustrations

Number of figures/tables/illustrations

3

Format

both print and electronic

Are you the author of this Elsevier article?

No

Will you be translating?

No

Order reference number

Title of your thesis/dissertation

Development of New N-cyclopropyl Based Electron Transfer Probes for
Cytochrome P-450 and Monoamine Oxidase Catalyzed Reactions

Expected completion date

May 201

Estimated size (number of pages)

218

Elsevier VAT number

GB 494 6272 12

Permissions price

0.00 USD

VAT/Local Sales Tax

0.0 USD / 0.0 GBP

Total

0.00 USD

Terms and Conditions

INTRODUCTION

1. The publisher for this copyrighted material is Elsevier. By clicking "accept" in connection with completing this licensing transaction, you agree that the following terms and conditions apply to this transaction (along with the Billing and Payment terms and conditions established by Copyright Clearance Center, Inc. ("CCC"), at the time that you opened your Rightslink account and that are available at any time at <http://myaccount.copyright.com>).

GENERAL TERMS

2. Elsevier hereby grants you permission to reproduce the aforementioned material subject to the terms and conditions indicated.

3. Acknowledgement: If any part of the material to be used (for example, figures) has appeared in our publication with credit or acknowledgement to another source, permission must also be sought from that source. If such permission is not obtained then that material may not be included in your publication/copies. Suitable acknowledgement to the source must be made, either as a footnote or in a reference list at the end of your publication, as follows:

“Reprinted from Publication title, Vol /edition number, Author(s), Title of article / title of chapter, Pages No., Copyright (Year), with permission from Elsevier [OR APPLICABLE SOCIETY COPYRIGHT OWNER].” Also Lancet special credit - “Reprinted from The Lancet, Vol. number, Author(s), Title of article, Pages No., Copyright (Year), with permission from Elsevier.”

4. Reproduction of this material is confined to the purpose and/or media for which permission is hereby given.

5. Altering/Modifying Material: Not Permitted. However figures and illustrations may be altered/adapted minimally to serve your work. Any other abbreviations, additions, deletions and/or any other alterations shall be made only with prior written authorization of Elsevier Ltd. (Please contact Elsevier at permissions@elsevier.com)

6. If the permission fee for the requested use of our material is waived in this instance, please be advised that your future requests for Elsevier materials may attract a fee.

7. Reservation of Rights: Publisher reserves all rights not specifically granted in the combination of (i) the license details provided by you and accepted in the course of this licensing transaction, (ii) these terms and conditions and (iii) CCC's Billing and Payment terms and conditions.

8. License Contingent Upon Payment: While you may exercise the rights licensed immediately upon issuance of the license at the end of the licensing process for the transaction, provided that you have disclosed complete and accurate details of your proposed use, no license is finally effective unless and until full payment is received from you (either by publisher or by CCC) as provided in CCC's Billing and Payment terms and conditions. If full payment is not received on a timely

basis, then any license preliminarily granted shall be deemed automatically revoked and shall be void as if never granted. Further, in the event that you breach any of these terms and conditions or any of CCC's Billing and Payment terms and conditions, the license is automatically revoked and shall be void as if never granted. Use of materials as described in a revoked license, as well as any use of the materials beyond the scope of an unrevoked license, may constitute copyright infringement and publisher reserves the right to take any and all action to protect its copyright in the materials.

9. Warranties: Publisher makes no representations or warranties with respect to the licensed material.

10. Indemnity: You hereby indemnify and agree to hold harmless publisher and CCC, and their respective officers, directors, employees and agents, from and against any and all claims arising out of your use of the licensed material other than as specifically authorized pursuant to this license.

11. No Transfer of License: This license is personal to you and may not be sublicensed, assigned, or transferred by you to any other person without publisher's written permission.

12. No Amendment Except in Writing: This license may not be amended except in a writing signed by both parties (or, in the case of publisher, by CCC on publisher's behalf).

13. Objection to Contrary Terms: Publisher hereby objects to any terms contained in any purchase order, acknowledgment, check endorsement or other writing prepared by you, which terms are inconsistent with these terms and conditions or CCC's Billing and Payment terms and conditions. These terms and conditions, together with CCC's Billing and Payment terms and conditions (which are incorporated herein), comprise the entire agreement between you and publisher (and CCC) concerning this licensing transaction. In the event of any conflict between your obligations established by these terms and conditions and those established by CCC's Billing and Payment terms and conditions, these terms and conditions shall control.

14. Revocation: Elsevier or Copyright Clearance Center may deny the permissions described in this License at their sole discretion, for any reason or no reason, with a full refund payable to you. Notice of such denial will be made using the contact information provided by you. Failure to receive such notice will not alter or invalidate the denial. In no event will Elsevier or Copyright Clearance Center be responsible or liable for any costs, expenses or damage incurred by you as a result of a denial of your permission request, other than a refund of the amount(s) paid

by you to Elsevier and/or Copyright Clearance Center for denied permissions.

LIMITED LICENSE

The following terms and conditions apply only to specific license types:

15. Translation: This permission is granted for non-exclusive world English rights only unless your license was granted for translation rights. If you licensed translation rights you may only translate this content into the languages you requested. A professional translator must perform all translations and reproduce the content word for word preserving the integrity of the article. If this license is to re-use 1 or 2 figures then permission is granted for non-exclusive world rights in all languages.

16. Website: The following terms and conditions apply to electronic reserve and author websites:

Electronic reserve: If licensed material is to be posted to website, the web site is to be password-protected and made available only to bona fide students registered on a relevant course if:

This license was made in connection with a course,

This permission is granted for 1 year only. You may obtain a license for future website posting,

All content posted to the web site must maintain the copyright information line on the bottom of each image,

A hyper-text must be included to the Homepage of the journal from which you are licensing at <http://www.sciencedirect.com/science/journal/xxxxx> or the Elsevier homepage for books at <http://www.elsevier.com> , and

Central Storage: This license does not include permission for a scanned version of the material to be stored in a central repository such as that provided by Heron/XanEdu.

17. Author website for journals with the following additional clauses:

All content posted to the web site must maintain the copyright information line on the bottom of each image, and

the permission granted is limited to the personal version of your paper. You are not allowed to download and post the published electronic version of your article (whether PDF or HTML, proof or final version), nor may you scan the printed edition to create an electronic version,

A hyper-text must be included to the Homepage of the journal from which you are licensing at <http://www.sciencedirect.com/science/journal/xxxxx> , As part of our normal production process, you will receive an e-mail notice when your article appears on Elsevier's online service ScienceDirect (www.sciencedirect.com).

That e-mail will include the article's Digital Object Identifier (DOI). This number provides the electronic link to the published article and should be included in the posting of your personal version. We ask that you wait until you receive this e-mail and have the DOI to do any posting.

Central Storage: This license does not include permission for a scanned version of the material to be stored in a central repository such as that provided by Heron/XanEdu.

18. Author website for books with the following additional clauses:

Authors are permitted to place a brief summary of their work online only.

A hyper-text must be included to the Elsevier homepage at

<http://www.elsevier.com>

All content posted to the web site must maintain the copyright information line on the bottom of each image

You are not allowed to download and post the published electronic version of your chapter, nor may you scan the printed edition to create an electronic version.

Central Storage: This license does not include permission for a scanned version of the material to be stored in a central repository such as that provided by Heron/XanEdu.

19. Website (regular and for author): A hyper-text must be included to the Homepage of the journal from which you are licensing at

<http://www.sciencedirect.com/science/journal/xxxxx>. or for books to the Elsevier homepage at <http://www.elsevier.com>

20. Thesis/Dissertation: If your license is for use in a thesis/dissertation your thesis may be submitted to your institution in either print or electronic form. Should your thesis be published commercially, please reapply for permission. These requirements include permission for the Library and Archives of Canada to supply single copies, on demand, of the complete thesis and include permission for UMI to supply single copies, on demand, of the complete thesis. Should your thesis be published commercially, please reapply for permission.

21. Other Conditions:

v1.6

Gratis licenses (referencing \$0 in the Total field) are free. Please retain this

printable license for your reference. No payment is required.

If you would like to pay for this license now, please remit this license along with your payment made payable to "COPYRIGHT CLEARANCE CENTER" otherwise you will be invoiced within 48 hours of the license date. Payment should be in the form of a check or money order referencing your account number and this invoice number RLNK10984199.

Once you receive your invoice for this order, you may pay your invoice by credit card. Please follow instructions provided at that time.

Make Payment To:
Copyright Clearance Center
Dept 001
P.O. Box 843006
Boston, MA 02284-3006

For suggestions or comments regarding this order, contact Rightslink Customer Support: customer care@copyright.com or +1-877-622-5543 (toll free in the US) or +1-978-646-2777.

Dear Dr Grimm

The Royal Society of Chemistry hereby grants permission for the use of the material specified below in the work described and in all subsequent editions of the work for distribution throughout the world, in all media including electronic and microfilm. You may use the material in conjunction with computer-based electronic and information retrieval systems, grant permissions for photocopying, reproductions and reprints, translate the material and to publish the translation, and authorize document delivery and abstracting and indexing services. The Royal Society of Chemistry is a signatory to the STM Guidelines on Permissions (available on request).

Please note that if the material specified below or any part of it appears with credit or acknowledgement to a third party then you must also secure permission from that third party before reproducing that material.

Please ensure that the published article carries a credit to The Royal Society of Chemistry in the following format:

[Original citation] – Reproduced by permission of The Royal Society of Chemistry

and that any electronic version of the work includes a hyperlink to the article on the Royal Society of Chemistry website. The recommended form for the hyperlink is <http://dx.doi.org/10.1039/DOI suffix>, for example in the link <http://dx.doi.org/10.1039/b110420a> the DOI suffix is 'b110420a'. To find the relevant DOI suffix for the RSC paper in question, go to the Journals section of the website and locate your paper in the list of papers for the volume and issue of your specific journal. You will find the DOI suffix quoted there.

Regards

Gill Cockhead
Contracts & Copyright Executive

Gill Cockhead (Mrs), Contracts & Copyright Executive
Royal Society of Chemistry, Thomas Graham House
Science Park, Milton Road, Cambridge CB4 0WF, UK
Tel +44 (0) 1223 432134, Fax +44 (0) 1223 423623
<http://www.rsc.org>

-----Original Message----- From: mgrimm@vt.edu [<mailto:mgrimm@vt.edu>]
Sent: 10 May 2011 03:24 To: CONTRACTS-COPYRIGHT
(shared) Subject: Permission Request Form: Michelle L Grimm

Name : Michelle L Grimm
Address :
107 Sunset Blvd.
Blacksburg VA 24060
Tel : 540-998-2725
Fax : 540-231-3255
Email : mgrimm@vt.edu

I am preparing the following work for publication:

Article/Chapter Title : Development of New N-cyclopropyl Based Electron
Transfer Probes for Cytochrome P-450 and Monoamine Oxidase Catalyzed
Reactions
Journal/Book Title :
Editor/Author(s) :
Publisher :

I would very much appreciate your permission to use the following material:

Journal/Book Title : Chemical Communications
Editor/Author(s) : X. Li, M. L. Grimm, K. Igarashi, N. Castagnoli, J. M.
Tanko
Volume Number : 25
Year of Publication : 2007
Description of Material : Scheme 1
Page(s) : 2648-2650
Journal/Book Title : Chemical Communications
Editor/Author(s) : X. Li, M. L. Grimm, K. Igarashi, N. Castagnoli, J. M.
Tanko
Volume Number : 25
Year of Publication : 2007
Description of Material : Scheme 3
Page(s) : 2648-2650

Any Additional Comments :

Permissions for these two schemes are requested for the final submission of my dissertation.

DISCLAIMER:

This communication (including any attachments) is intended for the use of the addressee only and may contain confidential, privileged or copyright material. It may not be relied upon or disclosed to any other person without the consent of the RSC. If you have received it in error, please contact us immediately. Any advice given by the RSC has been carefully formulated but is necessarily based on the information available, and the RSC cannot be held responsible for accuracy or completeness. In this respect, the RSC owes no duty of care and shall not be liable for any resulting damage or loss. The RSC acknowledges that a disclaimer cannot restrict liability at law for personal injury or death arising through a finding of negligence. The RSC does not warrant that its emails or attachments are Virus-free: Please rely on your own screening.