

PATENT ASSIGNMENT

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SUBMISSION TYPE:	NEW ASSIGNMENT										
NATURE OF CONVEYANCE:	ASSIGNMENT										
CONVEYING PARTY DATA											
<table border="1"> <thead> <tr> <th>Name</th> <th>Execution Date</th> </tr> </thead> <tbody> <tr> <td>Irene Georgakoudi</td> <td>11/10/2010</td> </tr> <tr> <td>David L. Kaplan</td> <td>11/10/2010</td> </tr> <tr> <td>Martin Hunter</td> <td>11/10/2010</td> </tr> <tr> <td>Sharad Gupta</td> <td>11/10/2010</td> </tr> </tbody> </table>		Name	Execution Date	Irene Georgakoudi	11/10/2010	David L. Kaplan	11/10/2010	Martin Hunter	11/10/2010	Sharad Gupta	11/10/2010
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Irene Georgakoudi	11/10/2010										
David L. Kaplan	11/10/2010										
Martin Hunter	11/10/2010										
Sharad Gupta	11/10/2010										
RECEIVING PARTY DATA											
Name:	Tufts College										
Street Address:	193 Harrison Avenue										
City:	Medford										
State/Country:	MASSACHUSETTS										
Postal Code:	02155										
PROPERTY NUMBERS Total: 1											
<table border="1"> <thead> <tr> <th>Property Type</th> <th>Number</th> </tr> </thead> <tbody> <tr> <td>Application Number:</td> <td>12873383</td> </tr> </tbody> </table>		Property Type	Number	Application Number:	12873383						
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Application Number:	12873383										
CORRESPONDENCE DATA											
Fax Number:	(617)310-9866										
<i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i>											
Phone:	617-439-2000										
Email:	jso@nutter.com										
Correspondent Name:	Nutter McClennen & Fish LLP										
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ATTORNEY DOCKET NUMBER:	108341-54										
NAME OF SUBMITTER:	Reza Mollaaghababa										

OP \$40.00 12873383

Total Attachments: 15
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ASSIGNMENT BY INVENTORS

THIS ASSIGNMENT, made by Irene Georgakoudi; Sharad Gupta; Martin Hunter; and David L. Kaplan (hereinafter referred to as Assignors), residing at 2 Berry Lane, Acton, Massachusetts 01720; 139 Bowdoin Street, Medford, Massachusetts 02155; 19 Greenleaf Street, Bradford, Massachusetts 01835; and 46 Pond Street, Concord, Massachusetts 01742, respectively;

WHEREAS, Assignors have invented certain new and useful improvements in NON-INVASIVE OPTICAL CHARACTERIZATION OF BIOMATERIAL MINERALIZATION, set forth in a Patent application for Letters Patent of the United States, already filed on as U.S. Application No. 12/867,383; and

WHEREAS, Trustees of Tufts College, a College organized under and pursuant to the laws of Massachusetts having its principal place of business at Office of the Provost, 193 Harrison Avenue, Ballou Hall, Medford, Massachusetts 02155 (hereinafter referred to as Assignee), is desirous of acquiring the entire right, title and interest in and to said inventions and said Application for Letters Patent of the United States, and in and to any Letters Patent of the United States to be obtained therefore and thereon.

NOW, THEREFORE, in consideration of One Dollar (\$1.00) and other good and sufficient consideration, the receipt of which is hereby acknowledged, Assignors have sold, assigned, transferred and set over, and by these presents do sell, assign, transfer and set over, unto Assignee, its successors, legal representatives and assigns, the entire right, title and interest in and to the above-mentioned inventions and application for Letters Patent, and in and to any and all direct and indirect divisions, continuations and continuations-in-part of said application, and any and all Letters Patent in the United States and all foreign countries which may be granted therefor and thereon, and reissues, reexaminations and extensions of said Letters Patent, and all rights under the International Convention for the Protection of Industrial Property, the same to be held and enjoyed by Assignee, for its own use and benefit and the use and benefit of its successors, legal representatives and assigns, to the full end of the term or terms for which Letters Patent may be granted and/or extended, as fully and entirely as the

same would have been held and enjoyed by Assignors, had this sale and assignment not been made.

AND for the same consideration, Assignors hereby represent and warrant to Assignee, its successors, legal representatives and assigns, that, at the time of execution and delivery of these presents, except for any rights, titles and/or interests that have arisen to Assignee under law or that have already been transferred to Assignee, Assignors are the sole and lawful owners of the entire right, title and interest in and to the said inventions and application for Letters Patent above-mentioned, and that the same are unencumbered and that Assignors have good and full right and lawful authority to sell and convey the same in the manner herein set forth.

AND for the same consideration, Assignors hereby covenant and agree to and with Assignee, its successors, legal representatives and assigns, that Assignors will sign all papers and documents, take all lawful oaths and do all acts necessary or required to be done for the procurement, maintenance, enforcement and defense of any Letters Patent and applications for Letters Patent for said inventions, without charge to Assignee, its successors, legal representatives and assigns, whenever counsel of Assignee, or counsel of its successors, legal representatives and assigns, shall advise: that any proceeding in connection with said inventions, or said Patent application for Letters Patent, or any proceeding in connection with any Letters Patent or applications for Letters Patent for said inventions in any country, including but not limited to interference proceedings, is lawful and desirable; or, that any division, continuation or continuation-in-part of any application for Letters Patent, or any reissue, reexamination or extension of any Letters Patent, to be obtained thereon, is lawful and desirable.

AND Assignors hereby request the Commissioner of Patent and Trademarks to issue said Letters Patent of the United States to Assignee, as Assignee of said inventions and the Letters Patent to be issued thereon, for the sole use and benefit of Assignee, its successors, legal representatives and assigns.

AND Assignors hereby grant the following individuals the power to insert on this Assignment any further identification which may be necessary or desirable in order to comply

with the rules of the United States Patent and Trademark Office for recordation of this document:

NUTTER MCCLENNEN & FISH LLP

All practitioners at Customer Number 21125

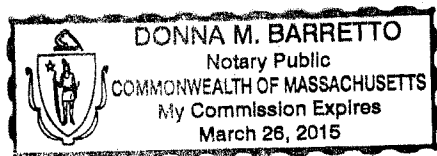
AND Assignors acknowledge an obligation of assignment of this invention to Assignee at the time the invention was made.

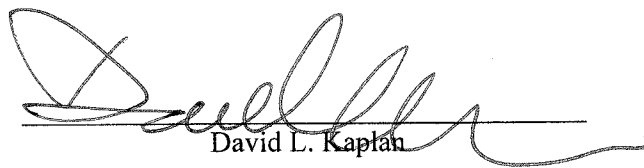
Irene Georgakoudi
Irene Georgakoudi

Date: 11-10-10

On this 10th day of November, 2010 before me, the undersigned notary public, personally appeared Irene Georgakoudi, proved to me through satisfactory evidence of identification, which were U.S. PASSPORT, to be the person whose name is signed on the preceding or attached document, and Acknowledged to me that she signed it voluntarily for its stated purpose.

Donna M. Barretto (official signature and seal of notary)

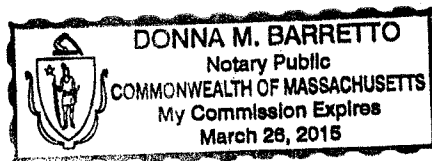



David L. Kaplan

Date: Nov, 10, 2010

On this 10th day of November, 2010 before me, the undersigned notary public, personally appeared David L. Kaplan, proved to me through satisfactory evidence of identification, which were MASS. DRIVER'S LICENSE, to be the person whose name is signed on the preceding or attached document, and Acknowledged to me that he signed it voluntarily for its stated purpose.

Donna M. Barretto (official signature and seal of notary)



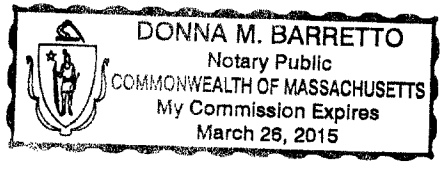
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Martin Hunter
Martin Hunter

Date: 11/10/10

On this 10th day of November, 2010 before me, the undersigned notary public, personally appeared Martin Hunter, proved to me through satisfactory evidence of identification, which were MASSACHUSETTS DRIVER'S LICENSE to be the person whose name is signed on the preceding or attached document, and Acknowledged to me that he signed it voluntarily for its stated purpose.

Donna M. Barretto (official signature and seal of notary)



Sharad Gupta

Date: _____

On this ____ day of _____, _____ before me, the undersigned notary public, personally appeared Sharad Gupta, proved to me through satisfactory evidence of identification, which were _____, to be the person whose name is signed on the preceding or attached document, and Acknowledged to me that he signed it voluntarily for its stated purpose.

_____ (official signature and seal of notary)

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AND Assignors hereby request the Commissioner of Patent and Trademarks to issue said Letters Patent of the United States to Assignee, as Assignee of said inventions and the Letters Patent to be issued thereon, for the sole use and benefit of Assignee, its successors, legal representatives and assigns.

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NUTTER MCCLENNEN & FISH LLP

All practitioners at Customer Number 21125

AND Assignors acknowledge an obligation of assignment of this invention to Assignee at the time the invention was made.

Irene Georgakoudi

Date: _____

On this _____ day of _____, _____ before me, the undersigned notary public, personally appeared Irene Georgakoudi, proved to me through satisfactory evidence of identification, which were _____, to be the person whose name is signed on the preceding or attached document, and Acknowledged to me that she signed it voluntarily for its stated purpose.

_____ (official signature and seal of notary)

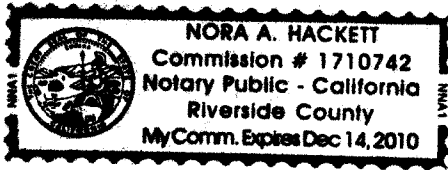
Sharad Gupta

Sharad Gupta

Date: November 10, 2010

On this 10 day of November, 2010 before me, the undersigned notary public, personally appeared Sharad Gupta, proved to me through satisfactory evidence of identification, which were CDL# E 3272919, to be the person whose name is signed on the preceding or attached document, and Acknowledged to me that he signed it voluntarily for its stated purpose.

Nora A. Hackett (official signature and seal of notary)



CALIFORNIA ALL-PURPOSE CERTIFICATE OF ACKNOWLEDGMENT

State of California

County of Riverside

On 10 November 2010 before me, NORA A. HACKETT, NOTARY PUBLIC,
(Here insert name and title of the officer)

personally appeared SHARAD GUPTA

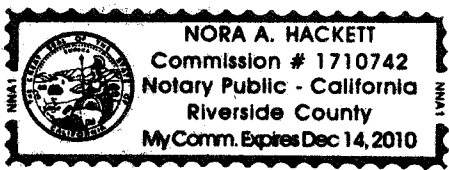
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Nora A. Hackett
Signature of Notary Public

(Notary Seal)



ADDITIONAL OPTIONAL INFORMATION

DESCRIPTION OF THE ATTACHED DOCUMENT

Assignment by Inventors
(Title or description of attached document)

(Title or description of attached document continued)

Number of Pages 3 Document Date _____
+ Signature pages

(Additional information)

CAPACITY CLAIMED BY THE SIGNER

Individual (s)
 Corporate Officer

(Title)

Partner(s)
 Attorney-in-Fact
 Trustee(s)
 Other _____

INSTRUCTIONS FOR COMPLETING THIS FORM

Any acknowledgment completed in California must contain verbiage exactly as appears above in the notary section or a separate acknowledgment form must be properly completed and attached to that document. The only exception is if a document is to be recorded outside of California. In such instances, any alternative acknowledgment verbiage as may be printed on such a document so long as the verbiage does not require the notary to do something that is illegal for a notary in California (i.e. certifying the authorized capacity of the signer). Please check the document carefully for proper notarial wording and attach this form if required.

- State and County information must be the State and County where the document signer(s) personally appeared before the notary public for acknowledgment.
- Date of notarization must be the date that the signer(s) personally appeared which must also be the same date the acknowledgment is completed.
- The notary public must print his or her name as it appears within his or her commission followed by a comma and then your title (notary public).
- Print the name(s) of document signer(s) who personally appear at the time of notarization.
- Indicate the correct singular or plural forms by crossing off incorrect forms (i.e. ~~he/she/they~~, is /are) or circling the correct forms. Failure to correctly indicate this information may lead to rejection of document recording.
- The notary seal impression must be clear and photographically reproducible. Impression must not cover text or lines. If seal impression smudges, re-seal if a sufficient area permits, otherwise complete a different acknowledgment form.
- Signature of the notary public must match the signature on file with the office of the county clerk.
 - ❖ Additional information is not required but could help to ensure this acknowledgment is not misused or attached to a different document.
 - ❖ Indicate title or type of attached document, number of pages and date.
 - ❖ Indicate the capacity claimed by the signer. If the claimed capacity is a corporate officer, indicate the title (i.e. CEO, CFO, Secretary).
- Securely attach this document to the signed document

Martin Hunter

Date: _____

On this _____ day of _____, _____ before me, the undersigned notary public, personally appeared Martin Hunter, proved to me through satisfactory evidence of identification, which were _____, to be the person whose name is signed on the preceding or attached document, and Acknowledged to me that he signed it voluntarily for its stated purpose.

_____ (official signature and seal of notary)

David L. Kaplan

Date: _____

On this ____ day of _____, _____ before me, the undersigned notary public, personally appeared David L. Kaplan, proved to me through satisfactory evidence of identification, which were _____, to be the person whose name is signed on the preceding or attached document, and Acknowledged to me that he signed it voluntarily for its stated purpose.

_____ (official signature and seal of notary)

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