# **3120.00 607584**

# PATENT ASSIGNMENT

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| SUBMISSION TYPE:      | NEW ASSIGNMENT |
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| NATURE OF CONVEYANCE: | ASSIGNMENT     |

#### **CONVEYING PARTY DATA**

| Name                 | Execution Date |
|----------------------|----------------|
| Mehmet Bayindir      | 01/13/2007     |
| Fabien Sorin         | 12/14/2006     |
| Ayman F. Abouraddy   | 12/14/2006     |
| Ofer Shapira         | 12/14/2006     |
| Jerimy R. Arnold     | 12/14/2006     |
| Yoel Fink            | 12/14/2006     |
| John D. Joannopoulos | 12/20/2006     |

#### RECEIVING PARTY DATA

| Name:           | Massachusetts Institute of Technology |
|-----------------|---------------------------------------|
| Street Address: | 77 Massachusetts Avenue               |
| City:           | Cambridge                             |
| State/Country:  | MASSACHUSETTS                         |
| Postal Code:    | 02139                                 |

#### PROPERTY NUMBERS Total: 3

| Property Type       | Number   |
|---------------------|----------|
| Application Number: | 60758427 |
| Application Number: | 60721277 |
| Application Number: | 11529111 |

#### **CORRESPONDENCE DATA**

Fax Number: (978)369-7101

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Correspondent Name: Theresa A. Lober Address Line 1: 45 Walden Street

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PATENT

REEL: 019492 FRAME: 0703

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| ATTORNEY DOCKET NUMBER:  | MIT11783         |
|--|------------------|
| NAME OF SUBMITTER:   | Theresa A. Lober |
| Total Attachments: 9 source=MIT11783-assignment#page1.tif source=MIT11783-assignment#page2.tif source=MIT11783-assignment#page3.tif source=MIT11783-assignment#page4.tif source=MIT11783-assignment#page5.tif source=MIT11783-assignment#page7.tif source=MIT11783-assignment#page8.tif source=MIT11783-assignment#page8.tif |                  |

PATENT REEL: 019492 FRAME: 0704

Docket No.: MIT11783

# ASSIGNMENT

WHEREAS, we:

Mehmet Bayindir, Fabien Sorin, Ayman F. Abouraddy Ofer Shapira Jerimy Arnold Yoel Fink John D. Joannopoulos

Ankara, TURKEY; Cambridge, Massachusetts; Boston, Massachusetts; Cambridge, Massachusetts; Cambridge, Massachusetts; Brookline, Massachusetts; and Belmont, Massachusetts

have made an invention for:

#### THERMAL SENSING FIBER DEVICES

Described in an application for Letters patent of the United States filed September 28, 2006, as Serial No. 11/529,111; which claims priority under 35 U.S.C. §119(e) from United States Provisional Patent Application Serial No. 60/721,277, filed September 28, 2005, and which claims priority under 35 U.S.C. §119(e) from United States Provisional Patent Application Serial No. 60/758,427, filed January 12, 2006; and

WHEREAS the Massachusetts Institute of Technology, a charitable corporation having a place of business at 77 Massachusetts Avenue, Cambridge, Massachusetts 02139, desires for the benefit of itself and its successors and assigns, all inclusively hereinafter referred to as "Assignee," to acquire the entire right, title and interest in and to said invention, said applications, all inventions disclosed in said applications, and all Letters Patent of the United States and of all other countries which may be granted for said inventions;

NOW, THEREFORE, for good and valuable consideration provided by said Assignee, the receipt whereof is hereby acknowledged, we do hereby sell, assign, and transfer to said Assignee the entire right, title, and interest in and to said invention, inventions, and applications, including all priority rights arising therefrom, all inventions disclosed in said applications, and any and all Letters Patent of the United States, including but not limited to continuations, divisionals, reissues, and reexaminations of said application or such Letters Patent, and patents of all other countries, together with the right to apply for such Letters Patent, which may be granted for said invention and/or inventions;

TO HAVE, HOLD, AND ENJOY said inventions, said applications, and said Letters Patent to said Massachusetts Institute of Technology, its successors and assignees, to its and their own use and behoof to the full end of the term or terms for which said Letters Patent may be granted, as fully and entirely as the same would have been held and enjoyed by us had this assignment and sale not been made;

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AND we hereby authorize and request the Commissioner of Patents of the United States and the appropriate officers of all foreign patent offices to issue any and all Letters Patent which may be granted on said applications above referred to, or for said inventions, or any of them, to said Assignee in accordance with the terms of this assignment;

AND we hereby agree to execute and sign without further consideration any other legal document and any other assignments and any divisional, continuing, renewal, reissue, or other application in and for all patents that may be appropriate and may be deemed necessary by the Assignee to fully secure to said Assignee its interests as aforesaid in and to said inventions or any part therefor and in and to said patents or any of them;

AND we further covenant and agree that we will at any time upon request communicate to said Assignee, its successors, assigns, or other legal representatives, any facts known to us relating to said inventions and any patents that may be granted thereon, and will testify as to the same in any interference or litigation when requested to do so;

AND we hereby covenant for ourselves and our legal representatives that we have not hitherto assigned or granted any license to make, use, or sell said invention, and that we will not henceforth purport to assign, license, or execute any instrument to that effect in conflict with this assignment.

| January 13,2007<br>Date | Mehmet Bayindir    | Witness Name: OGUZ Gilscre |
|-------------------------|--------------------|----------------------------|
|                         |                    | Ogue Octale                |
| Date                    | Fabien Sorin       | Witness Name:              |
| Date                    | Ayman F. Abouraddy | Witness Name:              |
| <br>Date                | Ofer Shapira       | Witness Name:              |

PATENT REEL: 019492 FRAME: 0706

| Date            | Jerimy R. Arnold     | Witness Name: |
|-----------------|----------------------|---------------|
| Date            | Yoel Fink            | Witness Name: |
| 20 De c 06 Date | John D. Joarnopoulos | Witness Name: |

Docket No.: MIT11783

# **ASSIGNMENT**

WHEREAS, we:

Mehmet Bayindir, Fabien Sorin, Ayman F. Abouraddy Ofer Shapira Jerimy Arnold Yoel Fink John D. Joannopoulos Ankara, TURKEY; Cambridge, Massachusetts; Boston, Massachusetts; Cambridge, Massachusetts; Cambridge, Massachusetts; Brookline, Massachusetts; and Belmont, Massachusetts

have made an invention for:

#### THERMAL SENSING FIBER DEVICES

Described in an application for Letters patent of the United States filed <u>September 28, 2006</u>, as Serial No. <u>11/529,111</u>; which claims priority under 35 U.S.C. §119(e) from United States Provisional Patent Application Serial No. <u>60/721,277</u>, filed <u>September 28, 2005</u>, and which claims priority under 35 U.S.C. §119(e) from United States Provisional Patent Application Serial No. <u>60/758,427</u>, filed <u>January 12, 2006</u>; and

WHEREAS the **Massachusetts Institute of Technology**, a charitable corporation having a place of business at 77 Massachusetts Avenue, Cambridge, Massachusetts 02139, desires for the benefit of itself and its successors and assigns, all inclusively hereinafter referred to as "Assignee," to acquire the entire right, title and interest in and to said invention, said applications, all inventions disclosed in said applications, and all Letters Patent of the United States and of all other countries which may be granted for said inventions;

NOW, THEREFORE, for good and valuable consideration provided by said Assignee, the receipt whereof is hereby acknowledged, we do hereby sell, assign, and transfer to said Assignee the entire right, title, and interest in and to said invention, inventions, and applications, including all priority rights arising therefrom, all inventions disclosed in said applications, and any and all Letters Patent of the United States, including but not limited to continuations, divisionals, reissues, and reexaminations of said application or such Letters Patent, and patents of all other countries, together with the right to apply for such Letters Patent, which may be granted for said invention and/or inventions;

TO HAVE, HOLD, AND ENJOY said inventions, said applications, and said Letters Patent to said **Massachusetts Institute of Technology**, its successors and assignees, to its and their own use and behoof to the full end of the term or terms for which said Letters Patent may be granted, as fully and entirely as the same would have been held and enjoyed by us had this assignment and sale not been made;

AND we hereby authorize and request the Commissioner of Patents of the United States and the appropriate officers of all foreign patent offices to issue any and all Letters Patent which may be granted on said applications above referred to, or for said inventions, or any of them, to said Assignee in accordance with the terms of this assignment;

AND we hereby agree to execute and sign without further consideration any other legal document and any other assignments and any divisional, continuing, renewal, reissue, or other application in and for all patents that may be appropriate and may be deemed necessary by the Assignee to fully secure to said Assignee its interests as aforesaid in and to said inventions or any part therefor and in and to said patents or any of them;

AND we further covenant and agree that we will at any time upon request communicate to said Assignee, its successors, assigns, or other legal representatives, any facts known to us relating to said inventions and any patents that may be granted thereon, and will testify as to the same in any interference or litigation when requested to do so;

AND we hereby covenant for ourselves and our legal representatives that we have not hitherto assigned or granted any license to make, use, or sell said invention, and that we will not henceforth purport to assign, license, or execute any instrument to that effect in conflict with this assignment.

| Date              | Mehmet Bayindir    | Witness Name:                                   |
|-------------------|--------------------|---|
| 12/14/06<br>Date  | Embien Sorin       | Genna Freezen<br>Witness Name:<br>Venca Freezen |
| 11/14/06<br>Date  | Ayman F. Abouraddy | Janua Preceri<br>Witness Name:<br>Jerna Preceri |
| /2/14/410<br>Date | Ofer Shapira       | Gennalieeen<br>Witness Name:<br>Venaa Ficceri   |

| Date             | Jerimy R. Arnold     | Witness Name:                                   |
|------------------|----------------------|---|
| 12/14/06<br>Date | Yoel Fink            | Gonna Proposi<br>Witness Name:<br>Jenna Piccer. |
| Date             | John D. Joannopoulos | Witness Name:                                   |

Docket No.: MIT11783

# **ASSIGNMENT**

WHEREAS, we:

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Fabien Sorin,
Ayman F. Abouraddy
Ofer Shapira
Jerimy Arnold
Yoel Fink
John D. Joannopoulos

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NOW, THEREFORE, for good and valuable consideration provided by said Assignee, the receipt whereof is hereby acknowledged, we do hereby sell, assign, and transfer to said Assignee the entire right, title, and interest in and to said invention, inventions, and applications, including all priority rights arising therefrom, all inventions disclosed in said applications, and any and all Letters Patent of the United States, including but not limited to continuations, divisionals, reissues, and reexaminations of said application or such Letters Patent, and patents of all other countries, together with the right to apply for such Letters Patent, which may be granted for said invention and/or inventions;

TO HAVE, HOLD, AND ENJOY said inventions, said applications, and said Letters Patent to said **Massachusetts Institute of Technology**, its successors and assignees, to its and their own use and behoof to the full end of the term or terms for which said Letters Patent may be granted, as fully and entirely as the same would have been held and enjoyed by us had this assignment and sale not been made;

AND we hereby authorize and request the Commissioner of Patents of the United States and the appropriate officers of all foreign patent offices to issue any and all Letters Patent which may be granted on said applications above referred to, or for said inventions, or any of them, to said Assignee in accordance with the terms of this assignment;

AND we hereby agree to execute and sign without further consideration any other legal document and any other assignments and any divisional, continuing, renewal, reissue, or other application in and for all patents that may be appropriate and may be deemed necessary by the Assignee to fully secure to said Assignee its interests as aforesaid in and to said inventions or any part therefor and in and to said patents or any of them;

AND we further covenant and agree that we will at any time upon request communicate to said Assignee, its successors, assigns, or other legal representatives, any facts known to us relating to said inventions and any patents that may be granted thereon, and will testify as to the same in any interference or litigation when requested to do so;

AND we hereby covenant for ourselves and our legal representatives that we have not hitherto assigned or granted any license to make, use, or sell said invention, and that we will not henceforth purport to assign, license, or execute any instrument to that effect in conflict with this assignment.

| Date | Mehmet Bayindir    | Witness Name: |  |
|------|--------------------|---------------|--|
| Date | Fabien Sorin       | Witness Name: |  |
| Date | Ayman F. Abouraddy | Witness Name: |  |
| Date | Ofer Shapira       | Witness Name: |  |

Page 2 of 3

| <u> }  4  2006</u><br>Date | Jerimy R. Arnold     | Witness Name: Bob Syciotatides |
|----------------------------|----------------------|--------------------------------|
| Date                       | Yoel Fink            | Witness Name:                  |
| Date                       | John D. Joannopoulos | Witness Name:                  |