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

is a true copy of the original document.

David W. Rouille 40,150 Name of Person Signing

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Total number of pages including cover sheet, attachments, and documents:

fail documents to be recorded with required cover sheet information to: Commissioner of Patents & Trademarks, Box Assignments

Washington, D.C. 20231

ASSIGNMENT

Whereas we, the undersigned, Michael R. Watts, Steven G. Johnson, Hermann A. Haus, and John D. Joannopoulos, hereby have made certain inventions or discoveries (or both) set forth in an application for Letters Patent of the United States of America entitled RADIATION-FREE OPTICAL CAVITY, identified as Attorney Docket No. MIT-102AUS which application was executed on February 12, 2003 and filed on October 24, 2002 and Assigned Application No. 10/279,777. In the event that the execution date, filing date and/or Application No. are not entered above at the time we executed this document, and if such information is deemed necessary, we hereby authorize and request our attorneys at Daly, Crowley & Mofford, LLP, 275 Turnpike Street, Suite 101, Canton, MA 02021-2310, to insert above the filing date and/or Application No. of said application.

Whereas, MASSACHUSETTS INSTITUTE OF TECHNOLOGY, a Massachusetts corporation having a place of business at 77 Massachusetts Avenue, Cambridge, MA 02139, and which, together with its successors and assigns, is hereinafter called "Assignee," is desirous of acquiring the title, rights, benefits and privileges hereinafter recited;

Now, therefore, for valuable consideration furnished by Assignee to me/us, receipt and sufficiency of which I/we hereby acknowledge, I/we hereby, without reservation:

- 1. Assign, transfer and convey to Assignee the entire right, title and interest in and to said inventions and discoveries, said application for Letters Patent of the United States of America, any and all other applications for Letters Patent on said inventions and discoveries in whatsoever countries, including all divisional, renewal, substitute, continuation, reissue, re-examination and Convention applications based in whole or in part upon said inventions or discoveries, or upon said applications, and any and all Letters Patent, reissues, reexaminations, and extensions of Letters Patent granted for said inventions and discoveries or upon said applications, and every priority right that is or may be predicated upon or arise from said inventions, said discoveries, said applications and said Letters Patent;
- 2. Authorize Assignee to file patent applications in any or all countries on any or all of said inventions and discoveries in my name or in the name of Assignee or otherwise as Assignee may deem advisable, under the International Convention or otherwise;
- 3. Authorize and request the Commissioner of Patents and Trademarks of the United States of America and the empowered officials of all other governments to issue or transfer all said Letters Patent to Assignee, as assignee of the entire right, title and interest therein or otherwise as Assignee may direct;
- 4. Warrant that I have not knowingly conveyed to others any right in said inventions, discoveries, applications or patents or any license to use the same or to make, use or sell anything embodying or utilizing any of said inventions or discoveries; and that I have good right to assign the same to Assignee without encumbrance;

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5. Bind my heirs, legal representatives and assigns, as well as myself, to do, upon Assignee's request and at Assignee's expense, but without additional consideration to me or them, all acts reasonably serving to assure that the said inventions and discoveries, the said patent applications and the said Letters Patent shall be held and enjoyed by Assignee as fully and entirely as the same could have been held and enjoyed by me, my heirs, legal representatives and assigns if this assignment had not been made; and particularly to execute and deliver to Assignee all lawful application documents including petitions, specifications, and oaths, and all assignments, disclaimers, and lawful affidavits in form and substance as may be requested by Assignee; to communicate to Assignee all facts known to me relating to said inventions and discoveries or the history thereof; and to furnish Assignee with any and all documents, photographs, models, samples and other physical exhibits in my control or in the control of my heirs, legal representatives or assigns which may be useful for establishing the facts of my conceptions, disclosures, and reduction to practice of said inventions and discoveries.

In testimony of which we have executed this Assignment as an instrument under seal on the dates indicated next to my name.

State or Commonwealth of Massachusetts

County USA - IN iddlesex

Dated 2/12/03

Michael R. Watts

Mile Wale

On this \\ \day of \(\subsetext{

Notary Public Wange

CHARLES T. MUNGER
Notary Public
My Commission Expires
December 2, 2005

PATENT

Attorney Docket No.: MIT-102AUS

| State or Commonwealth of | |
|---|---|
| County Middlesy | |
| Dated 2/12/2003 | Hela C. Johnen |
| | Steven G. Johnson |
| On this 12 day of February | , 2003, before me appeared Steven G. |
| Johnson, to me known and known to me as the per foregoing instrument, and he/she acknowledged th | |
| | Stances M. Tage Notary Public |
| | Troping Tuesto |
| State or Commonwealth of Wassachusett | |
| County Widdle sec | t . |
| Dated February 12 2003 | Dennam Allens |
| | Hermann A. Haus |
| On this 12 h day of 12 bruary Haus, to me known and known to me as the person instrument, and he/she acknowledged the same to | n described in and who executed the foregoing |
| | Notary Public |
| | CHARLES T. MUNGER Notary Public My Commission Expires December 2, 2005 |

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PATENT

Attorney Docket No.: MIT-102AUS

State or Commonwealth of MA

Dated Da 12/2003

On this 12 day of February, 2003, before me appeared John D. Joannopoulos, to me known and known to me as the person described in and who executed the foregoing instrument, and he/she acknowledged the same to be his/her free act and deed.

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