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F49620-03-1-0418

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Name: United States Air Force
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4. Application or patent number(s):

☐ This document is being filed together with a new application.

A. Patent Application No.(s)
11/477,207

B. Patent No.(s)

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Name: United States Air Force
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6. Total number of applications and patents involved: 1

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License to the United States Government

Invention Title: Frequency Conversion with Nonlinear Optical Polymers and High Index Contrast Waveguides

Inventors: Michael J. Hochberg; Tom Baehr-Jones

Patent Application Serial No: 11/477,207

US Filing/Issue Date: 6/28/2006

Grant/Contract Identification No: F49620-03-1-0418

Foreign Applications filed/intended in (countries):

The invention identified above is a Subject Invention under 35 U.S.C. 200, et seq., and the Standard Patent Rights clause at 37 CFR 401.14 or FAR 52.227-11, which are included among the terms of the above-identified grant/contract award from the Air Force (AFOSR). This document is confirmatory of:

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The Government is here by granted an irrevocable power to inspect and make copies of the above-identified patent application.

California Institute of Technology
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Dated: August 15, 2006

Adam Cochran
The Intellectual Property Counsel

CIT File No: 4422

EXPRESS MAIL LABEL No. EV676904461US
PATENT APPLICATION
ATTORNEY DOCKET No. 1338-4422

FREQUENCY CONVERSION WITH NONLINEAR OPTICAL POLYMERS AND HIGH INDEX CONTRAST WAVEGUIDES

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This application claims priority to and the benefit of co-pending U.S. provisional patent application Serial No. 60/694,765, filed June 28, 2005, which application is incorporated herein by reference in its entirety.

STATEMENT REGARDING FEDERALLY FUNDED RESEARCH OR DEVELOPMENT

[0002] The invention described herein was made in the performance of work under Air Force Office of Scientific Research Grant F49620-03-1-0418, and is subject to the provisions of Public Law 96-517 (35 U.S.C. §202) in which the Contractor has elected to retain title.

FIELD OF THE INVENTION

[0003] The invention relates to optical waveguides in general and particularly to optical waveguides, including split waveguides, that employ materials, such as polymers, having large nonlinear optical characteristics.

BACKGROUND OF THE INVENTION

[0004] The field of nonlinear optics is extremely rich in results, and has been around for many years. Basically the premise of nearly all measurements in the field is that one introduces a sufficiently high power flux (or "fluence," a term of art) in an optical material,