

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
1 February 2007 (01.02.2007)

PCT

(10) International Publication Number
WO 2007/014130 A3

(51) International Patent Classification:

A61L 2/00 (2006.01)

(21) International Application Number:

PCT/US2006/028616

(22) International Filing Date: 21 July 2006 (21.07.2006)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

60/701,896 21 July 2005 (21.07.2005) US

60/711,091 23 August 2005 (23.08.2005) US

60/780,998 9 March 2006 (09.03.2006) US

60/789,090 4 April 2006 (04.04.2006) US

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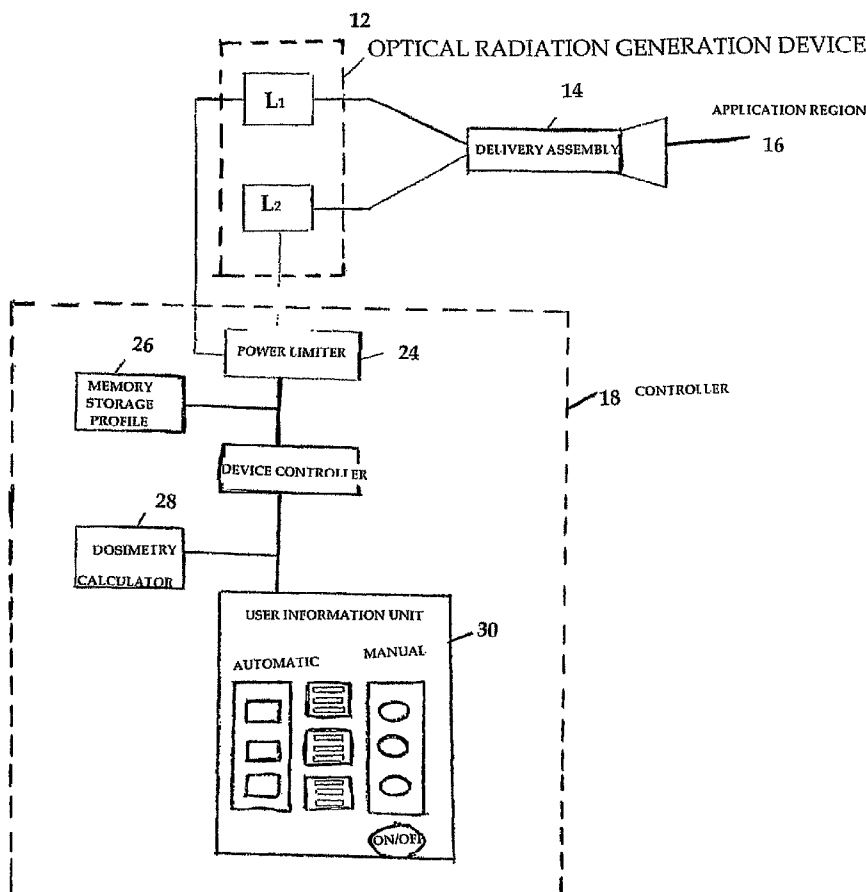
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(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT,

[Continued on next page]

(54) Title: NEAR INFRARED MICROBIAL ELIMINATION LASER SYSTEM (NIMELS)



(57) Abstract: Methods, systems, and apparatus for Near Infrared Microbial Elimination Laser Systems (NIMELS) are disclosed that can apply near infrared radiant energy of certain wavelengths and dosimetries capable of impairing biological contaminants, for example fungus, without intolerable risks and/or adverse effects to biological moieties other than a targeted biological contaminant. Lasers including diode lasers may be used as one or more light sources. A delivery assembly can be used to deliver the optical radiation produced by the source(s) produced to an application region that can include patient tissue. A flat top lens can be included to produce a flat top beam distribution. Exemplary embodiments utilize laser light in a near infrared range of 850nm-900nm and/or 905nm-945nm at suitable NIMELS dosimetries. For certain applications, laser light in two spectral ranges including 870 nm and 930 nm, respectively, can be utilized.



RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(88) Date of publication of the international search report:
22 November 2007

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US 06/28616

A. CLASSIFICATION OF SUBJECT MATTER

USPC: 422/22;

IPC(8): A61L 02/00 (2007.01)

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

USPC: 422/22; 604/20

IPC(8): A61L 02/00 (2007.01)

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
USPC: 704/200, 231, 235; 455/511, 67.6, 79, 563 (text search - see terms below)

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

WEST (USPT,USOC,EPAB,JPAB; PLUR) and Google Patents (<http://www.google.com/patents>).

Search terms: "laser" and "microbial" and "nm" and "infrared" and "elimination" or "eliminate."

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2004/0126272 A1 (BORNSTEIN) 1 July 2004 (01.06.2004): para. 0011; para. 0036; para. 0030.	1-23

☐ Further documents are listed in the continuation of Box C.

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"&" document member of the same patent family

Date of the actual completion of the international search

25 May 2007 (25.05.2007)

Date of mailing of the international search report

25 SEP 2007

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PCT OSP: 571-272-7774