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(71) Applicant (for all designated States except US): **NEDERLANDSE ORGANISATIE VOOR TOEGEPAST-NATUURWETENSCHAPPELIJK ONDERZOEK TNO** [NL/NL]; Schoemakerstraat 97, NL-2628 VK Delft (NL).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **YANG, Shangjiong** [NL/NL]; Modastroom 43, NL-2721 BX Zoetermeer (NL). **YOUSEFI, Mirvais** [SE/NL]; Haarlemmerstraat 141, NL-1013 EN Amsterdam (NL).

(74) Agent: **Jansen, C.M.**; Vereenigde, Johan de Wittlaan 7, NL-2517 JR Den Haag (NL).

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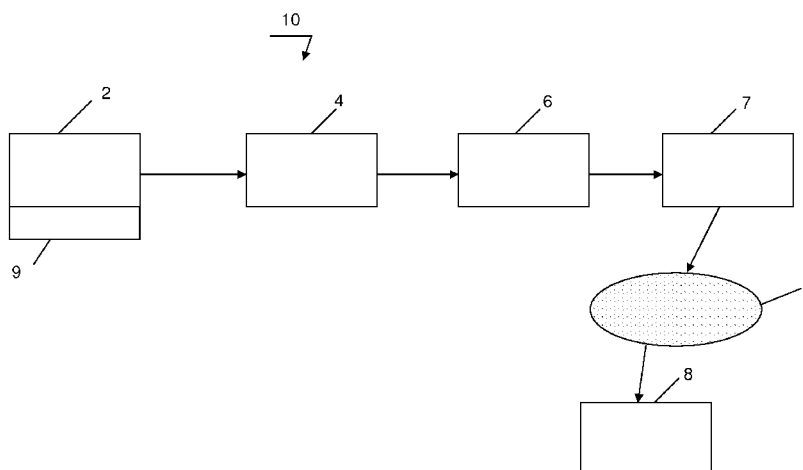


Fig. 1

(57) Abstract: The invention relates to a generator (10) for generating terahertz radiation, comprising an integrated semiconductor mode-locked laser (2), a photonic structure (4), a plasmonic structure (6) and an antenna (7), wherein the semiconductor mode-locked laser, the photonic structure, the plasmonic structure and the antenna are integrated on the same photonic integrated circuit (PIC). The invention further relates to an apparatus comprising the said generator of terahertz radiation.

INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER

INV. H01S5/065 G02F1/35 H01Q9/00
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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)

H01S G02F H01Q

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

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

EPO-Internal, COMPENDEX, INSPEC, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2006/085160 A1 (OUCHI TOSHIHIKO [JP]) 20 April 2006 (2006-04-20) paragraph [0070] - paragraph [0073]; figure 15 paragraph [0057]; figure 10	1-9
A	BORDONALLI A C ET AL: "Generation of Microwave Signals by Active Mode Locking in a Gain Bandwidth Restricted Laser Structure", IEEE PHOTONICS TECHNOLOGY LETTERS, IEEE SERVICE CENTER, PISCATAWAY, NJ, US, vol. 8, no. 1, 1 January 1996 (1996-01-01) , XP011048026, ISSN: 1041-1135 the whole document ----- -/--	1-9



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Name and mailing address of the ISA/

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040,
Fax: (+31-70) 340-3016

Authorized officer

Hervé, Denis

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C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	Room temperature Terahertz generation with semiconductor lasers: In: BRENNER C ET AL: 5 April 2006 (2006-04-05), PROCEEDINGS OF THE SPIE - THE INTERNATIONAL SOCIETY FOR OPTICAL ENGINEERING SPIE - THE INTERNATIONAL SOCIETY FOR OPTICAL ENGINEERING USA, VOL. 6194, PAGE(S) 61940H (8 PP.), XP040223647, ISSN: 0277-786X figure 6 -----	1-9

INTERNATIONAL SEARCH REPORT

Information on patent family members

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
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		EP 1642153 A1	05-04-2006
		EP 1903328 A1	26-03-2008
		WO 2005001505 A1	06-01-2005
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