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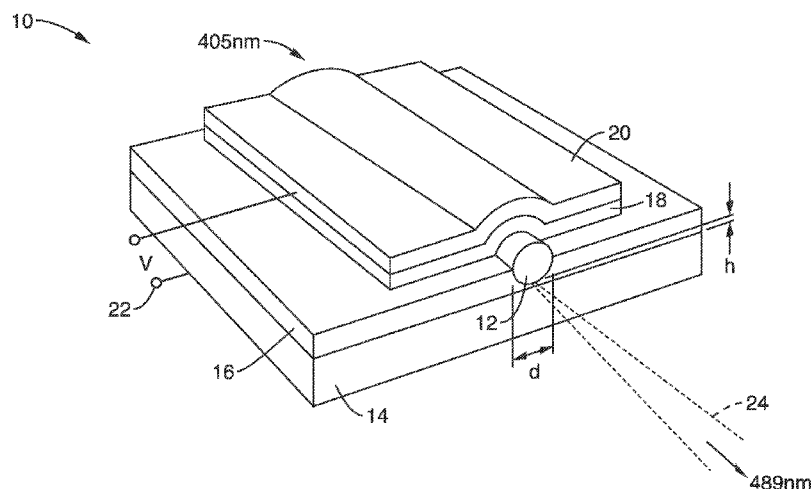


FIG. 1

(57) Abstract: Hybrid plasmonic waveguides are described that employ a high-gain semiconductor nanostructure functioning as a gain medium that is separated from a metal substrate surface by a nanoscale thickness thick low-index gap. The waveguides are capable of efficient generation of sub-wavelength high intensity light and have the potential for large modulation bandwidth >1THz.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2011/045633**A. CLASSIFICATION OF SUBJECT MATTER*****H01S 5/04(2006.01)i, H01S 5/10(2006.01)i, H01S 5/20(2006.01)i***

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 5/04; H01S 3/19; G11B 7/135; G01J 3/44; H01S 5/00

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

Korean utility models and applications for utility models

Japanese utility models and applications for utility models

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

eKOMPASS(KIPO internal) & Keywords: PLASMON LASER SOURCE, SEMICONDUCTOR, REFRACTION INDEX

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 6301282 B1 (CAPASSO; FEDERICO et al.) 09 October 2001 See column 3, line 7 - column 8, line 15.	1-29
A	US 5555255 A (KOCK; ANTON et al.) 10 September 1996 See column 2, line 28 - column 4, line 23.	1-29
A	US 2001-0009541 A1 (KIICHI UBYANAGI) 26 July 2001 See paragraphs [0042]-[0131].	1-29
A	US 2009-0279085 A1 (EBSTEIN STEVEN M.) 12 November 2009 See paragraphs [0081]-[0182].	1-29



Further documents are listed in the continuation of Box C.



See patent family annex.

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INTERNATIONAL SEARCH REPORT

Information on patent family members

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