

663

Patent Number(s): CN102412495-A

Title: Method for generating fan-shaped periodic crystal carbon dioxide laser tunable terahertz wave in e.g. medical imaging field, involves translating nonlinear crystal to change crystal period tunable terahertz wave output

Inventor Name(s): LU H; WANG X; RAO Z; CHENG Z

Patent Assignee(s): UNIV HUAZHONG SCI&TECHNOLOGY (UYHZ)

Derwent Primary Accession No.: 2012-E71770

Abstract: NOVELTY - The method involves generating two beams a tunable mid infrared laser utilizing a tunable dual output a carbon dioxide (CO₂) laser. A fan-shaped structure periodically inverted nonlinear crystal is placed on an optical path a laser beam. Reverse cycle length the crystal is continuously changed to meet quasi-phase-matching condition. Infrared laser wavelength is changed by CO₂ laser output. The crystal is continuously translated to change crystal period tunable terahertz wave output.

USE - Method for generating fan-shaped periodic crystal CO₂ laser tunable terahertz wave in medical imaging, safety, environment monitoring, detecting and terahertz communication fields.

ADVANTAGE - The method enables generating the wave with large tuning range, high nonlinear coefficient and large crystal length and increased conversion efficiency.

DETAILED DESCRIPTION - INORGANIC CHEMISTRY - The crystal is provided with gallium arsenide, gallium phosphide, gallium selenide and silicon germanium phosphorus 2 crystals.

DESCRIPTION DRAWING(S) - The drawing shows a graph illustrating a method for generating fan-shaped periodic crystal CO₂ laser tunable terahertz wave. '(Drawing includes non-English language text)'

Derwent Class Code(s): L03 (Electro-(in)organic, chemical features electrical devices); P81 (Optics); V07 (Fibre-optics and Light Control); V08 (Lasers and Masers)

Derwent Manual Code(s): L03-F; L03-G05; L03-H03; L03-X; L04-C18; V07-K04; V08-B01

IPC: G02F-001/35; H01S-001/02

Patent Details:

Patent Number	Publ. Date	Main IPC	Week	Page Count	Language
CN102412495-A	11 Apr 2012	H01S-001/02	201231	Pages: 7	Chinese

Application Details and Date:

CN102412495-A CN10267368 09 Sep 2011

Priority Application Information and Date:

CN10267368 09 Sep 2011