195
Accession number:20123715436809
Title:1550 nm ErAs:In(Al)GaAs large area photoconductive emitters
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Source title:Applied Physics Letters
Abbreviated source title:Appl Phys Lett
Volume:101
Issue:10
Issue date:September 3, 2012
Publication year:2012
Article number:101105
Language:English
ISSN:00036951
CODEN:APPLAB
Document type:Journal article (JA)
Publisher:American Institute of Physics, 2 Huntington Quadrangle, Suite N101, Melville, NY 11747-4502, United States
Abstract:We report on high power terahertz (THz) emission from ErAs-enhanced In inf0.52/infAlinf0.48/infAs-Ininf0.53/infGainf0.47/inf As superlattices for operation at 1550 nm. ErAs clusters act as efficient recombination centers. The optical power is distributed among a large, microstructured area in order to reduce the local optical intensity. A THz field strength of 0.7 V/cm (1 V/cm peak-to-peak) at 100 mW average optical power has been obtained, with emission up to about 4 THz in air, limited by the detection crystal used in the system. © 2012 American Institute of Physics.
Number of references:23
Main heading:Physics
Controlled terms:Physical properties
Uncontrolled terms:1550 nm - Detection crystals - GaAs - High-power - Optical intensities - Optical power - Photoconductive emitters - Recombination centers - Terahertz emissions - THz fields
Classification code:931 Classical Physics; Quantum Theory; Relativity - 931.2 Physical Properties of Gases, Liquids and Solids - 932 High Energy Physics; Nuclear Physics; Plasma Physics - 933 Solid State Physics
DOI:10.1063/1.4750244
Database:Compendex