

100

Accession number:20114114406992

Title:Editorial

Authors:Davies, G. (0); Linfield, E. (0)

Corresponding author:Davies, G.

Source title:Electronics Letters

Abbreviated source title:Electron. Lett.

Volume:46

Issue:26

Issue date:December 23, 2010

Publication year:2010

Pages:S1-S3

Language:English

ISSN:00135194

CODEN:ELLEAK

Document type:Journal article (JA)

Publisher:Institution of Engineering and Technology, Six Hills Way, Stevenage, SG1 2AY, United Kingdom

Abstract:The field of terahertz (THz) frequency science and engineering has witnessed significant growth over the years. The recent progress in guided-wave systems, both via freestanding structures and on-chip, has extended the field further. The realization and subsequent development of the THz frequency quantum cascade laser (QCL), a solid-state device itself based on a layered semiconductor superlattice, has opened the way for the development of the field of THz photonics. The superconducting detectors are widely used in many heterodyne radio astronomical receivers, with high-resolution spectroscopy of molecules, atoms, and ions between 2 and 6 THz being of prime importance in astronomy, planetary research, and earth observation. Multiplexed photo-Dember emitters show a comparable performance to large area photo-conductive emitters, and provide a number of advantages including robustness against local device damage, as they do not require an external electrical bias.

Number of references:5