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Accession number:20115114605859 Title:Semiconductor diode lasers for terahertz technology Authors:Brenner, Carsten (1); Friedrich, Claus-Stefan (1); Hofmann, Martin Rudolf (1) Author affiliation:(1) Ruhr-University, Bochum, Germany Corresponding author:Brenner, C.(carsten.brenner@rub.de) Source title: Journal of Infrared, Millimeter, and Terahertz Waves Abbreviated source title: J. Infrared. Millim. Terahertz Waves Volume:32 Issue:11 Issue date:November 2011 Publication year:2011 Pages:1253-1266 Language:English ISSN:18666892 E-ISSN:18666906 Document type: Journal article (JA) Publisher:Springer New York, 233 Springer Street, New York, NY 10013-1578, United States Abstract:We discuss different concepts for generating terahertz (THz) radiation with

semiconductor diode lasers. Photomixing enables the generation of continuous wave THz radiation by difference frequency generation of two lasers or of two-colour lasers. Pulsed THz radiation for time domain THz spectroscopy is generated with modelocked diode laser systems including amplification and chirp compression. Finally, we analyse the concept of quasi time domain spectroscopy based on broadband diode laser systems.

Number of references:93