

275

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Title:Effects of terahertz radiation on biological systems

Authors:Hintzsche, Henning (1); Stopper, Helga (1)

Author affiliation:(1) Institut für Pharmakologie und Toxikologie, Universität Würzburg, Versbacher Str. 9, 97078 Würzburg, Germany

Corresponding author:Stopper, H.(Stopper@toxi.uni-wuerzburg.de)

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Abstract:Effects of electromagnetic fields on biological systems of all levels, ranging from isolated biomolecules to whole organisms, have been investigated comprehensively for a long time. Due to a lack of suitable sources and detectors, the terahertz frequency range has not been investigated to the same amount as other frequencies. Even though early reports date back to the 1960s, thorough research has only been conducted during the last decade. The aim of this review is to give a summary of all available publications on this topic. A comprehensive literature research was conducted resulting in 37 identified publications. An overview of publication analysis is presented, followed by a detailed description of theoretical investigations. Subsequently all experimental investigations are described, including details on frequency, exposure time, power density, biological system, and outcome of the studies. © 2012 Taylor & Francis Group, LLC.

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