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Title:Research development of terahertz waveguides

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Abstract:There are rich scientific connotation and unique features in Terahertz (THz) spectrum, which lead to many important applications such as physics, chemistry, electric information, biomedicine, material science, astronomy, atmosphere and environment monitoring, communication and radar, national security and anti-terrorism, etc. THz waveguides suitable for different applications are urgent due to the strong vapor absorption of THz waves in the open air. Each THz waveguide has its most suitable applications according to its unique advantages and limitations, a rational choice will definitely facilitate the application of THz inscience research, manufactures, and lives efficiently. This paper presents an overview on research development of some typical waveguides such as THz metal cavity waveguides, metal wire waveguides, dielectric waveguides, and so on.

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Main heading:Waveguides

Controlled terms:Atmospheric chemistry - Dielectric waveguides - Electric lines - Laser optics - Optical waveguides - Radar astronomy - Research - Vapors

Uncontrolled terms:Anti-terrorism - Environment monitoring - Material science - Metal cavities - Metal waveguides - Metal wires - National security - Photonic crystal waveguide - Research development - Tera Hertz - Terahertz waveguides - THz waves - Unique features - Vapor absorption

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