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Title:Highly-confined guiding of terahertz waves along subwavelength grooves

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Abstract:We propose a scheme of guiding and manipulating terahertz waves that features tight confinement and large propagation length, even when the waveguide lateral dimensions are well in the subwavelength regime. In a tapered structure of the proposed groove waveguide, the guided mode can be stopped at different positions for different frequencies when it travels along the waveguide. Additionally, we demonstrate that nearly 100% transmission through a sharp 90° bend can be achieved in this groove waveguide. © 2012 IEEE.

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