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标题: Characterization and Modeling of Laser Micromachined Periodically Corrugated Metallic Terahertz Wire Waveguides
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摘要: Finite element method simulations of periodically corrugated metal terahertz wire waveguides have been conducted with concurrent analysis done on both the near-field confinement properties and the far-field emission properties at the end of the waveguides. This modeling was used to guide the choice of design parameters for the fabrication of waveguides with laser micromachining. The waveguides were characterized with a fiber-coupled terahertz time-domain spectroscopy and imaging system. The propagation properties as well as the frequency dependent diffraction at the end of the wire waveguides were examined and compared to straight, non-engineered metallic wire waveguides.
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