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Title:THz propagation in kagome hollow-core microstructured fibers

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Abstract:We demonstrate single mode terahertz (THz) guidance in hollow-core kagome microstructured fibers over a broad frequency bandwidth. The fibers are characterized using a THz time-domain spectroscopy (THz-TDS) setup, incorporating specially designed THz lenses to achieve good mode overlap with the fundamental mode field distribution. Losses 20 times lower than the losses of the fiber material are observed in the experiments, as well as broad frequency ranges of low dispersion, characteristic of hollow-core fibers.

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