339. Title:Characterization of a microstructured Zeonex terahertz fiber
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Abstract:We report on the characterization of Zeonex polymer in the terahertz (THz) region and the fabrication and characterization of a microstructured polymer fiber made of Zeonex. We demonstrate single-mode propagation with highly efficient coupling into the fiber close to the theoretical limit of 80% using specially designed lenses. The THz time domain measurements allow the loss and dispersion properties of the fiber to be determined, showing that for the current fiber the losses are only caused by the material loss. The phase refractive index is calculatedfrom experimental data and compared to values predicted by scalar and vectorial simulations. Results for the dispersion parameter β2 for a THz microstructured fiber are presented for the first time to our knowledge.