367. Title:Terahertz lenses made by compression molding of micropowders
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Abstract:We present a simple and versatile approach for fabricating terahertz lenses based on compression molding of micropowder polymer materials in a tabletop hydraulic press. To demonstrate the feasibility of this approach, a biconvex lens shape is calculated using a ray-tracing algorithm and lenses based on two different micropowders are fabricated. As the powder materials have different refractive indices, the resulting lenses share the same geometric shape but differ in their respective focal length. The focusing properties of the lenses are evaluated by transversal and sagittal beam profile measurements in a fibercoupled terahertz time-domain spectroscopy system, confirming the excellent imaging qualities of the compression molded lenses.