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Title:Imprinting of Metallic Glasses: A Simple Approach to Making Durable Terahertz High-Pass Filters
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Abstract:An imprint process of Pd-based metallic glass is used to create a high-aspect-ratio two-dimensional wire array structure for filtering terahertz (THz) radiation. By the simplified imprinting process, a 10 × 10 straight wire array with a wire height of ~320μm and a diameter of 100.6μm is produced. The negligibly small expansion of ~0.3% confirms the excellent thermal imprinting property of metallic glass. The periodic wire array is shown to act as a high-pass filter in the THz range, and the transmission property measurement reveals a turn-on frequency of 0.4 THz, suggesting the promising approach and material for robust high-pass filters.
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