

Abstract Submitted
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Inkjet Printed Wire-Grid Polarizers for the THz Frequency Range¹ A. FARID, N. J. LAURITA, Johns Hopkins Univ, B. TEHRANI, J. HESTER, M. M. TENTZERIS, Georgia Institute of Technology, N. P. ARMITAGE, Johns Hopkins Univ — We have investigated the use of inkjet printing technology for the production of THz range wire-grid polarizers using time-domain terahertz spectroscopy. Such technology affords a cheap and reproducible way of quickly manufacturing THz range metamaterial structures. Thin silver-nanoparticle ink lines were printed using a Dimatix DMP-2831 printer. We investigated the optimal printing geometry of the polarizers by looking at a number of samples with printed wires of varying thickness and spacing. We also investigate the ultimate capabilities of these polarizers by investigating their properties when stacked.

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