

Abstract Submitted
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Fabricating metalenses with Nanoscribe YANGHENG JIZHE, Case Western Reserve University — Our group is dedicated to fabricating optical metamaterials using the technique of Two-Photon-Polymerization (TPP) with Nanoscribe. We have tested the limits of Nanoscribe to produce nanopillar structures, reported aspect ratios up to 5, with a minimum lateral resolution of 300 nm, and been using GWL scripts to extend the capabilities of nanoscribe beyond traditional print sets. Furthermore, we have successfully printed structures incorporating large scale arrays of arbitrary 2d elements other than cylindrical pillars (we have printed tori). Pillars and tori have been used in metalenses as building blocks, thus our results will provide a pathway for the reliable and faster deposition (than standard e-beam lithography) of optical metamaterials. We would like to acknowledge Dr. Joel K.W. Yang, Dr. Hao Wang, and their groups for providing us with guidance for gwl scripting.

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