

One-step fabrication of a large area wire-grid polarizer by nanotransfer molding

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We report a method to fabricate a large-area metal nanowire-grid polarizer. Liquid-bridge-mediated nanotransfer molding (LB-nTM) is based on the direct transfer of metal nanowires from a mold to a transparent substrate via liquid layer. A metal particle solution is used as an ink in the LB-nTM, which can be used for the formation of metal nanowires. The nanowires have higher depth are preferred for high transmittance. The height of nanowires that we made is about 140 nm. Large-area WGP is fabricated with good average transmittance of 74.89% in our measuring range.

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