

Abstract Submitted
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Vertical Photovoltaics AMY BALLS, CARY TIPPETS, Brigham Young University, Provo — We are exploring low cost approaches for fabricating three dimensional nanoscale structures. These vertical structures could significantly improve the efficiency of devices made from low cost photovoltaic materials. The nanoscale vertical structure provides a way to increase optical absorption in thin photovoltaic films without increasing the electronic carrier separation distance. The structure is a high temperature transparent template with a dense array of holes on a 400 -600 nm pitch fabricated by a combination of e-beam lithography and nanoembossing. First a master was fabricated using e-beam lithography and the pattern was transferred into PDMS. The contacts and p-i-n layers were then deposited onto the structure and the optical properties were tested.

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