

Abstract Submitted  
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**Synthesis of porous silicon on a p-type substrate using a non-contact method**<sup>1</sup> KRISTIN PETERSON, TONI SAUNCY, Angelo State University, TIM DALLAS, Texas Tech U. Electrical Engineering, MARK GRIMSON, Texas Texas U.- Biological Science — We have previously reported on the synthesis of porous silicon (p-Si) on n-type crystalline silicon (c-Si) substrates by using a light-induced hydrofluoric acid (HF) synthesis technique. Now, we will discuss details of recently synthesized p-Si on p-type (Boron doped) c-Si substrates. Both types were treated using the expanded beam of a He-Ne laser to produce a localized electric field on the bulk c-Si wafer while the samples were immersed in hydro-fluoric acid for varying amounts of time. Interestingly, the two sample types are completely different in their formation of the p-Si thin film. The n-type sample displays thin film in the region where the laser is incident on the surface. The p-Si thin film on the p-type samples form on both sides of the sample, but only in regions not illuminated by the laser beam. SEM micrographs of the samples were analyzed to compare differences in surface features.

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