

MODIFICATION OF PHOTOCURRENT OF PHOTODIODE WITH 1D AND 2D PhC PDMS MEMBRANES

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This contribution presents experimental results of fabrication and implementation of thin polydimethylsiloxane (PDMS) membranes with one- (1D) and two- (2D) dimensional photonic crystal (PhC) structures on the photodiode surface. We used patterned photoresist samples with 1D and 2D PhC in the surface created by interference lithography with triangular and square symmetry as a mold. Using liquid PDMS and imprinting techniques, thin PDMS membranes with 1D and 2D PhC with periods of 600 nm and 900 nm and depths up to 100 nm were fabricated. Patterned PDMS membranes were placed on the photodiode surface and their effect on photocurrent measurement was finally studied by far-field measurements.

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