

Title (en)  
MICROSTRUCTURE ENHANCED ABSORPTION PHOTOSENSITIVE DEVICES

Title (de)  
MIKROSTRUKTURVERBESSERTE LICHTEMPFLINDLICHE ADSORPTIONSVORRICHTUNGEN

Title (fr)  
DISPOSITIFS PHOTOSENSIBLES À ABSORPTION AMÉLIORÉE PAR MICROSTRUCTURE

Publication  
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Application  
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Abstract (en)  
[origin: CN109155340A] Techniques for enhancing the quantum efficiency (QE) in photodiodes and avalanche photodiodes with the use of microstructures are described. The microstructures, such as holes, effectively increase the absorption of the photons. QE can be enhanced using heterojunction PIN structures which can result in less light absorbed in the P and/or N regions and more light absorbed in the I region. Various alloys of GeSi can be used for I and/or P regions. The microstructured holes can be funnel shaped, aperiodic, non-circular, textured and/or slanted which can further increase QE.

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