

Title (en)

MICROSTRUCTURE ENHANCED ABSORPTION PHOTOSENSITIVE DEVICES

Title (de)

MIKROSTRUKTURVERBESSERTE LICHTEMPFLINDLICHE ADSORPTIONSVORRICHTUNGEN

Title (fr)

DISPOSITIFS PHOTOSENSIBLES À ABSORPTION AMÉLIORÉS PAR DES MICROSTRUCTURES

Publication

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Application

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- US 201762547728 P 20170818
- US 201762553844 P 20170902
- US 201762556426 P 20170910
- US 201762561869 P 20170922
- US 201762591072 P 20171127
- US 201762599246 P 20171215
- US 201762607860 P 20171219
- US 201862615314 P 20180109
- US 201862623971 P 20180130
- US 201862628764 P 20180209
- US 201862631630 P 20180217
- US 201862633514 P 20180221
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- US 201862651087 P 20180331
- US 201862652830 P 20180404
- US 201862659072 P 20180417
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- US 201862675130 P 20180522
- US 201862677609 P 20180529
- US 201862682909 P 20180609
- US 2018043289 W 20180723

Abstract (en)

[origin: WO2019018846A2] Lateral and vertical micro structure enhanced photodetectors and avalanche photodetectors are monolithically integrated with CMOS/BiCMOS ASICs and can also be integrated with laser devices using fluidic assembly techniques. Photodetectors can be configured in a vertical PIN arrangement or lateral metal- semiconductor-metal arrangement where electrodes are in an inter-digitated pattern. Microstructures, such as holes and protrusions, can improve quantum efficiency in silicon, germanium and III-V materials and can also reduce avalanche voltages for avalanche photodiodes. Applications include optical communications within and between datacenters, telecommunications, LIDAR, and free space data communication.

IPC 8 full level

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CPC (source: EP)

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Citation (search report)

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- See references of WO 2019018846A2

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