Available Technologies

High Throughput Parallel Backside Contacting and Periodic Texturing for High-efficiency Solar Cells

Applications:

- Solar cells
- Any technology in need of a low stress back-side contacting method

Advantages:

- Enables increased efficiency and decreased weight of solar cells
- Conducive to large-scale fabrication
- Cost effective, one-step method for surface enhancement and selective film ablation
- Method will not stress the silicon or warp the solar cell
- No special conditions needed for operation

Summary:

Technology Description

A laser-interference direct structuring technique that can be applied to the back (or front) of a solar cell without surface damage thereby creating the potential for high-quality contacts resulting in high-performance, low cost solar cells.

The technique does not require special atmospheres, low or high pressure, or vacuum systems to operate, but can operate in a controlled atmosphere if needed.

Technology Application

By reducing cost and maintaining high performance of solar cells, this technology can enable increased use in commercial and residential buildings as well as in mobile applications.

Stage of Development: Proof of Principle

Patent Status: Patent application in progress

Licensing Status: Available for licensing in specific fields of use

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