

Title (en)

LASER PROCESSING FOR HIGH-EFFICIENCY THIN CRYSTALLINE SILICON SOLAR CELL FABRICATION

Title (de)

LASERVERARBEITUNG ZUR HERSTELLUNG HOCHEFFIZIENTER DÜNNER SILICIUMKRISTALL-SOLARZELLEN

Title (fr)

TRAITEMENT LASER POUR FABRICATION DE CELLULES SOLAIRES EN SILICIUM CRISTALLIN MINCE À EFFICACITÉ ÉLEVÉE

Publication

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Application

EP 11787543 A 20110527

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Abstract (en)

[origin: WO2011150397A2] Laser processing schemes are disclosed for producing various types of hetero-junction and homo-junction solar cells. The methods include base and emitter contact opening, selective doping, and metal ablation. Also, laser processing schemes are disclosed that are suitable for selective amorphous silicon ablation and selective doping for hetero-junction solar cells. These laser processing techniques may be applied to semiconductor substrates, including crystalline silicon substrates, and further including crystalline silicon substrates which are manufactured either through wire saw wafering methods or via epitaxial deposition processes, that are either planar or textured/three-dimensional. These techniques are highly suited to thin crystalline semiconductor, including thin crystalline silicon films.

IPC 8 full level

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