

Title (en)
FLEXIBLE THIN-LAYER SOLAR CELL

Title (de)
FLEXIBLE DÜNNSCHICHT-SOLARZELLE

Title (fr)
CELLULE SOLAIRE SOUPLE A COUCHE MINCE

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Application
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Abstract (en)
[origin: WO0104964A1] The invention relates to a method for producing a flexible thin-layer solar cell. An intermediate layer (6), known as a sacrificial layer, for example NaCl, is applied to a rigid substrate (7) and a carrier layer (5), for example, a polyimide is deposited thereon. Additional layers are then deposited onto the support layer, for example, Mo (4), a $\text{CuIn}_x\text{Ga}_{1-x}\text{S}_2$ absorber (1) with $x, y, z, u \geq 0$, a CdS-ZnO window layer (2) and a transparent front contact (3), the structuring of the cells is completed and they are optionally provided with a coating. The solar cell structure is separated from the rigid substrate (7) by the dissolution of the sacrificial layer, whereby the resultant solar cell becomes flexible. The invention relates to flexible solar cells produced by this method which have typical thicknesses of 25 μm with approximately 13 % effectiveness. Large-surface cells can be used for energy production both on earth and in space, whilst small-surface cells can be used for powering electronic goods, such as for example, pocket calculators and smart cards.

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