

Title (en)
HETEROJUNCTION SOLAR CELL WITH ABSORBER HAVING AN INTEGRATED DOPING PROFILE

Title (de)
HETEROJUNCTION-SOLARZELLE MIT ABSORBER MIT INTEGRIERTEM DOTIERPROFIL

Title (fr)
CELLULE SOLAIRE À HÉTÉROJONCTION AVEC ABSORBEUR À PROFIL DE DOPAGE INTÉGRÉ

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Application
EP 09772416 A 20090630

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Abstract (en)
[origin: WO2010000716A2] The invention relates to a heterojunction solar cell (1) and a method for the production thereof. The heterojunction solar cell has an absorber layer (3) made of silicon with a basic doping and at least one heterojunction layer (5, 7) of a doped semiconductor material whose band gap differs from that of the silicon of the absorber layer. The absorber layer (3) has a doped layer at an interface (13, 15) directed toward the heterojunction layer (5, 7), the doping concentration of said doped layer being greater than the basic doping concentration of the absorber layer. As a result of this doping profile, a field effect can be caused which prevents charge carrier pairs produced within the absorber layer from diffusing toward the interface between the absorber layer and the heterojunction layer and from recombining there.

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Citation (search report)
See references of WO 2010000716A2

Citation (examination)
• EP 1320134 A2 20030618 - SANYO ELECTRIC CO [JP]
• EP 0747972 A2 19961211 - SHARP KK [JP]

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