

Title (en)

PEROVSKITE-BASED MULTI-JUNCTION SOLAR CELL AND METHOD FOR PRODUCING SAME

Title (de)

PEROWSKIT-BASIERTE MEHRFACHSOLARZELLE UND VERFAHREN ZU IHRER HERSTELLUNG

Title (fr)

CELLULE SOLAIRE MULTIJONCTION À BASE DE PÉROVSKITE ET SON PROCÉDÉ DE FABRICATION

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Application

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Abstract (en)

[origin: WO2022180170A1] The invention relates to a perovskite-based multi-junction solar cell (110) and to a method for producing same. The method comprises the following steps: a) producing a first layer stack (112), wherein the first layer stack (112) has at least one substrate (116), at least one first electrode (118) and at least one first layer (120); b) producing a second layer stack (114), wherein the second layer stack (114) has at least one absorber layer (130) and at least one second layer (134); wherein in step a) a perovskite layer (124) is introduced into the first layer stack (112) or in step b) the perovskite layer (124) is introduced into the second layer stack (114), wherein the method also has the following steps: c) applying the first layer stack (112) to the second layer stack (114); d) laminating the first layer stack (112) with the second layer stack (114) such that at least one connection selected from the group consisting of a mechanical and an electrical connection is formed between the first layer stack (112) and the second layer stack (114), wherein the perovskite-silicon multi-junction solar cell (110) is formed; wherein the first layer (120) and the second layer (134) are each selected from the group consisting of a hole transport layer (122), an electron transport layer (136), a buffer layer (137), a recombination layer (132) or an electrode layer; wherein the perovskite layer (124) forms a laminate-forming layer of either the first layer stack (112) or the second layer stack (114).

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