ABSTRACT

A METHOD OF FORMING A CONTACT FOR A PHOTOVOLTAIC CELL

The present disclosure provides a method of forming a contact for a photovoltaic (PV) cell. The method comprises the step of providing a substrate of a semiconductor material. The substrate has first regions that have a first doping property and are located at first surface portions. The method also comprises depositing a passivation layer on the surface of the substrate including the first surface portions. Further, the method comprises depositing a conductive layer on the passivation layer such that material of the passivation layer is sandwiched between the first regions and the conductive layer. In addition, the method comprises applying an electric field between the first regions and the conductive layer in a manner such that locally a dielectric breakdown of the sandwiched passivation layer material is induced. The first regions have a doping property and the method is conducted such that an electrical resistance is reduced in the passivation layer at the first regions and an electrical contact is formed.

(FIG. 1)