ABSTRACT

SOLAR CELL AND MANUFACTURING METHOD THEREOF

Disclosed is a solar cell having a silicon monocrystal substrate surface with a textured structure and, near the surface of said substrate, a damage layer reflecting the slice processing history from the time of manufacture of the silicon monocrystal substrate. The damage layer near the surface of the silicon monocrystal substrate is derived from the slice processing history at the time of manufacture of the substrate and functions as a gettering site, contributing to a longer lifetime of the substrate minority carriers. Thanks to this effect, the solar cell characteristics are dramatically increased. Further, new damage need be inflicted, and no additional work is required because damage from the slicing is used.