Abstract

A method for electrochemically depositing a metal electrode of a solar cell, comprising the steps of: making the surface of the solar cell having a cathode contact with an electrolyte solution, connecting an anode of the solar cell and a solid metal, illuminating the main light-receiving surface of the solar cell, wherein metal ions in the electrolyte solution accept electrons formed on the cathode surface of the solar cell so that a metal is formed and deposited on the cathode surface of the solar cell, meanwhile, the solid metal provides electrons to the anode of the solar cell so that the metal ions are formed and dissolved in the electrolyte solution. By using this method, a problem of a decreased cell efficiency due to a short circuit caused by the deposition of metal on the anode will be solved, meanwhile, a possibility of damaging the solar cell and depositing metal unevenly as a result of using any kind of plating fixtures is avoided, the electrochemical reaction rate is effectively controlled, an evenness of the deposition of metal is guaranteed, and the manufacture of a solar cell having a selective diffusion structure is promoted.

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