The invention refers to the field of solar-to-electric energy conversion and may be used for the creation of photoelectrochemical regenerating converters.

Summary of the invention consists in that the photoelectrochemical solar battery includes a semiconducting photoelectrode and a counter-electrode, placed into the electrolyte solution. The photoelectrode is made of the compounds A^3B^5 , and in the capacity of electrolyte solution is used an aqueous solution Na₂SiO₃.

The result of the invention consists in the adsorption from the electrolyte solution of the ions SiO_3^{2-} and $HSiO_3^{-}$ on the photoelectrode working surface, that leads to a decrease in the corrosion of the latter.