EFFECT OF BACK-SIDE LIGHT REFLECTOR ON SILICON SOLAR CELLS EFFICIENCY

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Our paper presents a study of solar cells efficiency improvement by using a light reflector on the back side of the solar cell. Investigation is based on an analytical model of a non-ideal diffuse (Lambertian) back reflector, which diffuses light according to a cosine law, thus producing full-hemisphere light scattering.
The purpose of introducing a Lambertian back reflector is to increase light confinement in solar cells in order to improve carrier photogeneration, and consequently their electrical properties.
The results shown in this paper could lead to a novel design of Si solar cells with improved efficiancy, by using a back-side reflector.

TOPICS + KEYWORDS: Solar Cells, Diffuse Reflector, Thin Film.