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PAVING THE WAY TOWARDS MOST EFFICIENT SOLAR CELL DEVELOPMENT

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ABSTRACT

This article provides a possible idea to increase the efficiency of a solar cell by avoiding much reflection of light from cell's surface. Natural photonic architectures, found in transparent wings of some insects may help us to design a surface with maximum transparency based on shape, size, and organization of comprised photonic architectures. Utilizing the explained fact, a surface with maximum transparency can be evolved and used as an antireflective for solar cells. Article deputizes the concept of light trapping and provides a valid statement regarding mimicry of the best available design from nature to enhance the efficiency of a solar cell.

KEYWORDS: Natural Photonic Architectures, Solar Cell, Transparent Wings, Light Trapping, Transmissivity