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# Microstructured Superhydrophobic Anti-reflection Films for Performance Improvement of Photovoltaic Devices

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## Abstract

Highly durable anti-reflection and superhydrophobic (AR-S) functional film as solar panel surface material is desirable to reduce the panel cleaning cost and boost the performance of energy generation. Herein, we fabricated flexible plastic AR-S films with three-dimensional (3-D) micro-pillar arrays by a facile hot embossing lithography process, which can be potentially used for different variety of photovoltaic devices. In this work, the AR-S films are integrated with commercial polycrystalline silicon solar cells for demonstration purpose. The AR-S film works as an effective medium to enhance photo

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