



Ultra-Efficient Epitaxial Liftoff Solar Cells Exploiting Optical Confinement in the Wave Limit: Final Technical Report

By National Renewable Energy Laboratory (NREL)

Bibliogov, United States, 2012. Paperback. Book Condition: New. 246 x 189 mm. Language: English . Brand New Book ***** Print on Demand *****.This report describes work performed by the University of California during this subcontract. In this project, we pursued the epitaxial liftoff approach, which leaves a very clean substrate after use that can be readily reinserted into an epi-growth reactor. If, as many believe, the epi-growth step can be streamlined and reduced in cost, this would produce the highest possible performance cell, at a cost no higher than other thin-film technologies. We have found, as a number of other groups have, that the epitaxial liftoff process is vulnerable to microscopic cleavage cracks in the lifted-off films. The larger the area of the lifted-off epi-film, the greater the risk of microscopic cleavage cracks. Such cracks block the passage of electricity and are unacceptable in solar cells. This has restricted us to relatively small-area solar cells, which though they performed well, told us very little about scale-up. In the area of lifted-off films, a group in the Netherlands has recently published favorable results using a thin evaporated copper film as a mechanical support layer for the lifted-off GaAs. We have tested...



[READ ONLINE](#)
[2.18 MB]

Reviews

This publication can be really worth a go through, and a lot better than other. It is actually written in straightforward words and phrases instead of confusing. I discovered this pdf from my dad and I suggested this publication to learn.

-- **Jackeline Rippin**

A high quality book and also the font employed was intriguing to read. I was able to comprehend every thing out of this created e book. You won't really feel monotony at whenever you want of the time (that's what catalogues are for concerning should you check with me).

-- **Prof. Johnson Cole Sr.**