



A METHOD FOR LAMINATION OF SOLAR CELLS

BACKGROUND

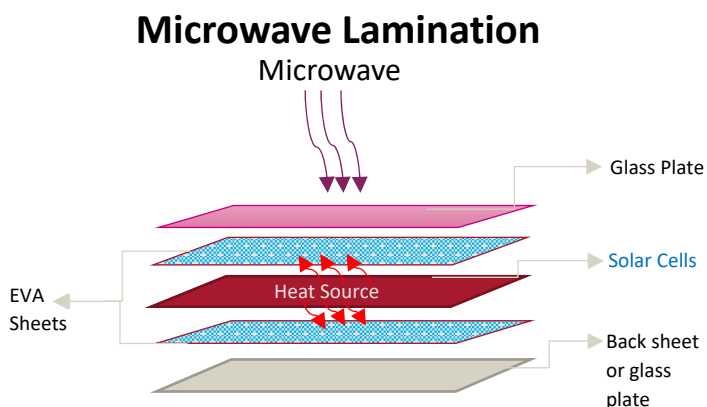
Lamination is one of the last steps in solar panel manufacturing. It protects solar cells from environmental factors such as moisture, oxygen and dirt. Lamination is done by heating thermoplastic EVA sheets between solar cells and glass panes. Since glass is a thermal insulator, heating the EVA sheets requires a long time and high energy; or in other words, the process is inefficient. The research team discovered an alternative way to achieve the same outcome by directly heating the solar cell for improved efficiency.

OUR SOLUTION

Our innovation describes a new process by which lamination heating is performed directly at the silicon solar cell, which is in contact with the EVA sheet, thereby transferring heat directly to the EVA sheets. Microwave radiation passes through the glass and the back sheet and is absorbed by the solar cell. We have found that solar cells heat up rapidly by absorbing microwave radiation and through our process, the EVA sheets are melted, making it an efficient process.

STAGE OF DEVELOPMENT

Proof of concept. A prototype is being developed.



FEATURES (over existing solutions)	BENEFITS
Faster than the existing lamination process	Compatible with in-line processing
Requires less energy	

APPLICATIONS

- ✓ PV module manufacturers

EXPERTISE AND CAPABILITIES

[Dr. Binesh Puthen Veettil](#)

Dr. David Payne

Dr. Mattias Juhl

Professor Darren Bagnall

INTELLECTUAL PROPERTY STATUS

Patent pending

PARTNERING OPPORTUNITY

We are seeking an industry partner for further development and commercialisation of this technology through a research collaboration or technology licence.

WOULD YOU LIKE TO KNOW MORE?

Email: ip@mq.edu.au

