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## Two birds with one tool: using thermocompression for both metallic contact annealing and wafer bonding of GaAs solar cells

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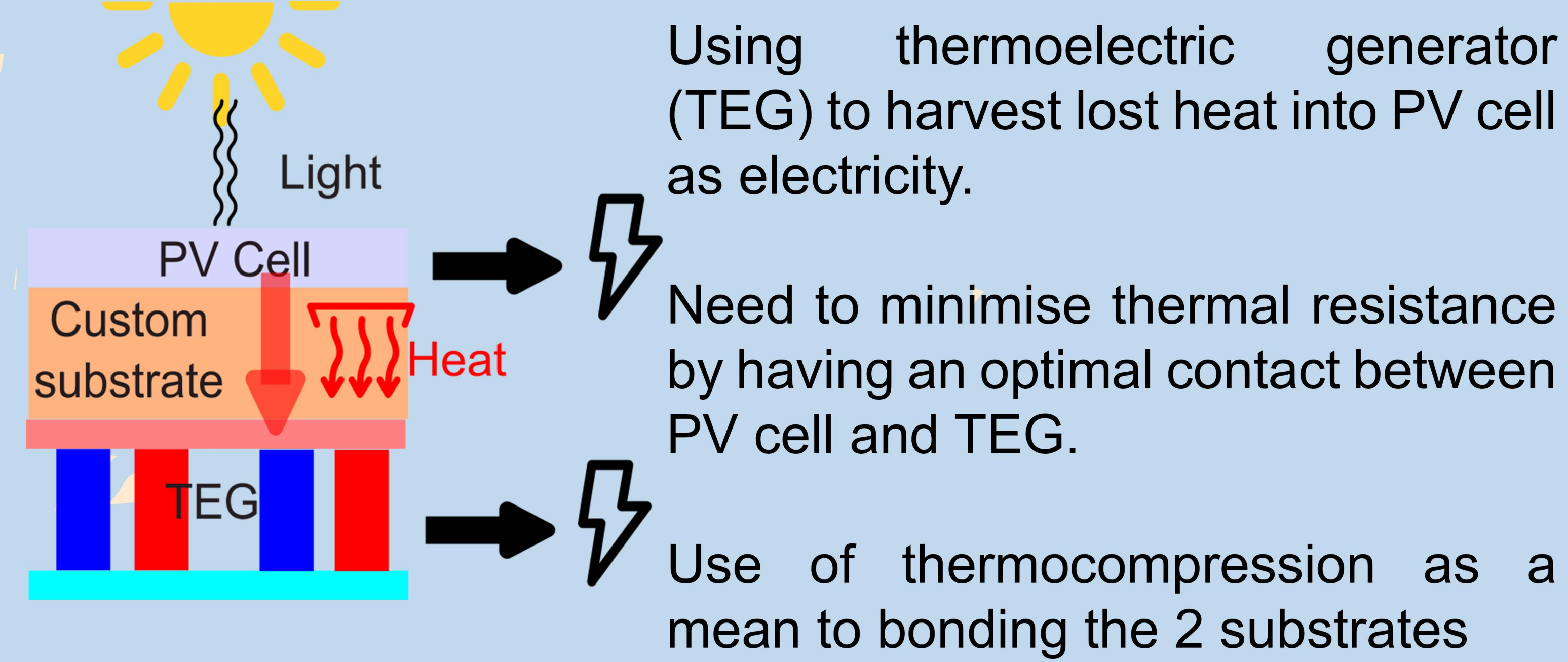


# Two birds with one tool: using thermocompression for both metallic contact annealing and wafer bonding of GaAs solar cells

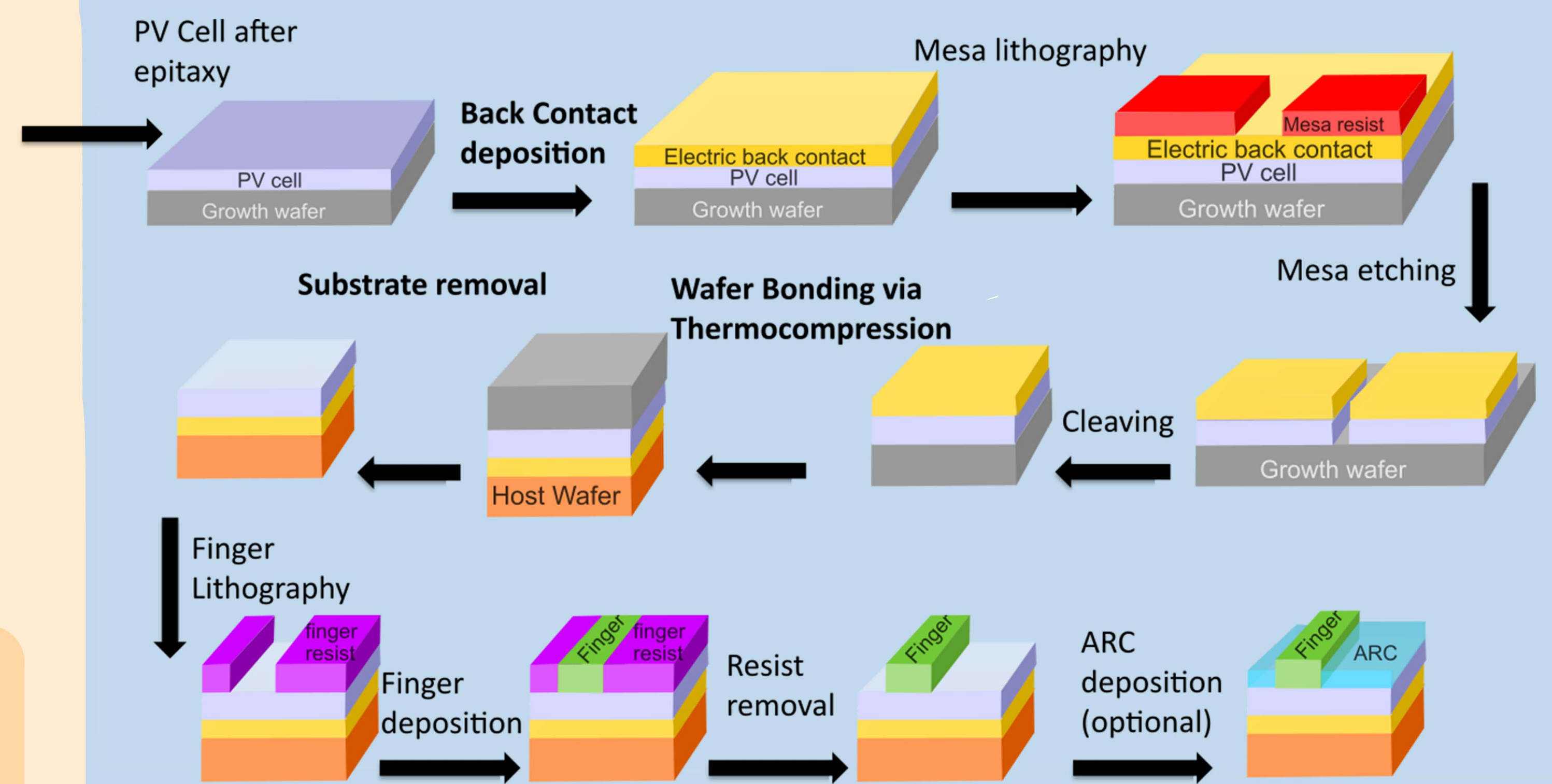
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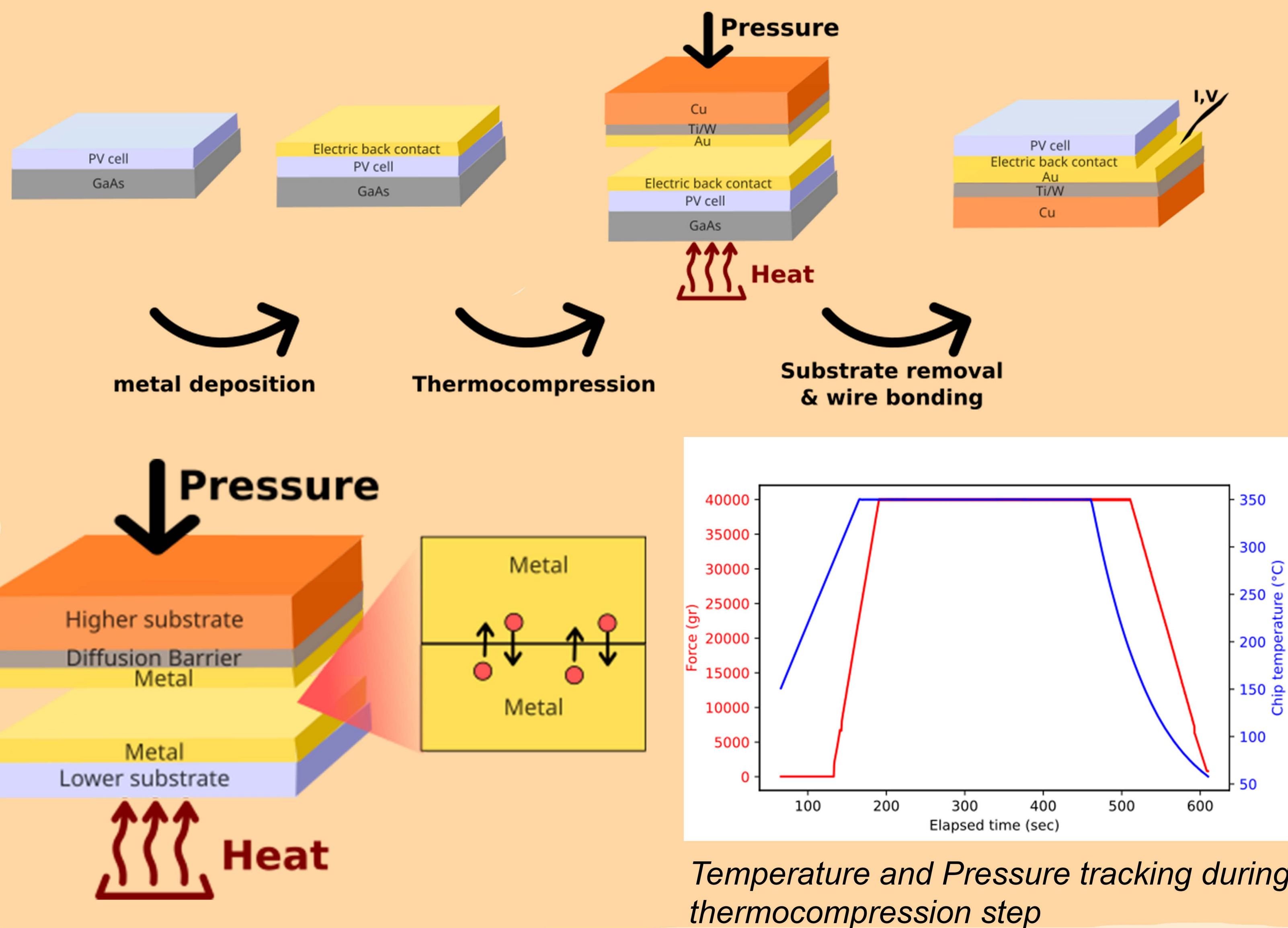
## Context



## The full process to transfer the cell onto the TEG



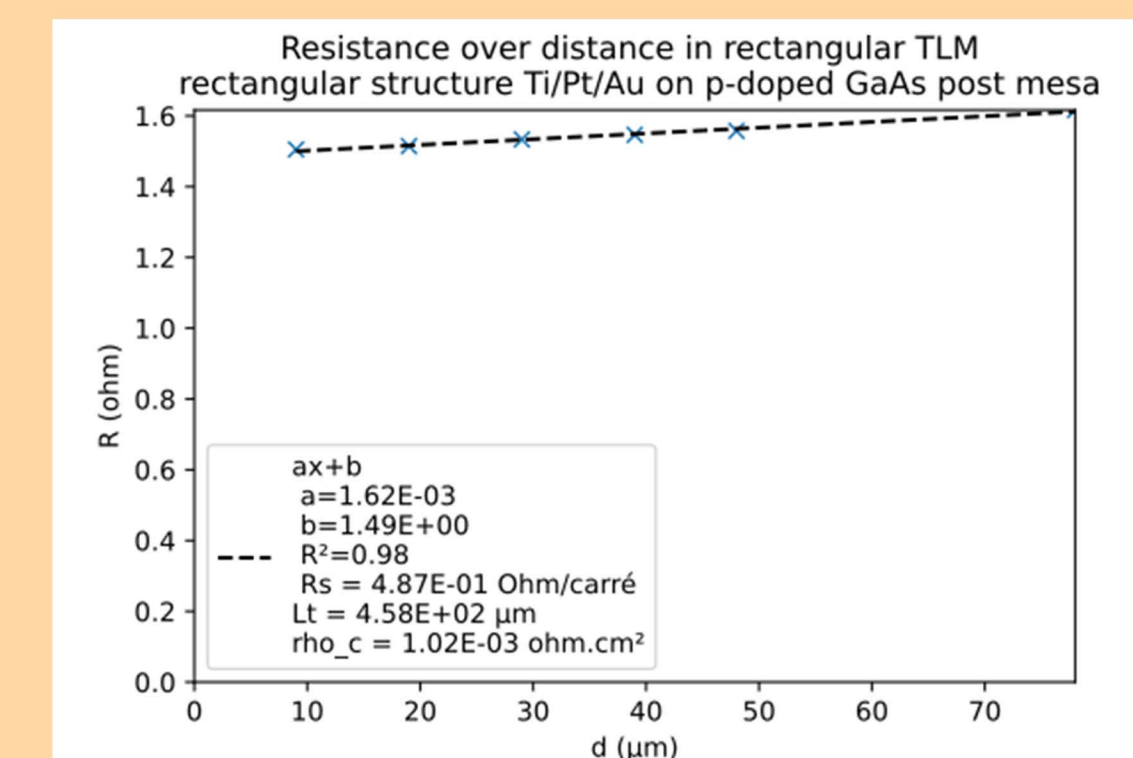
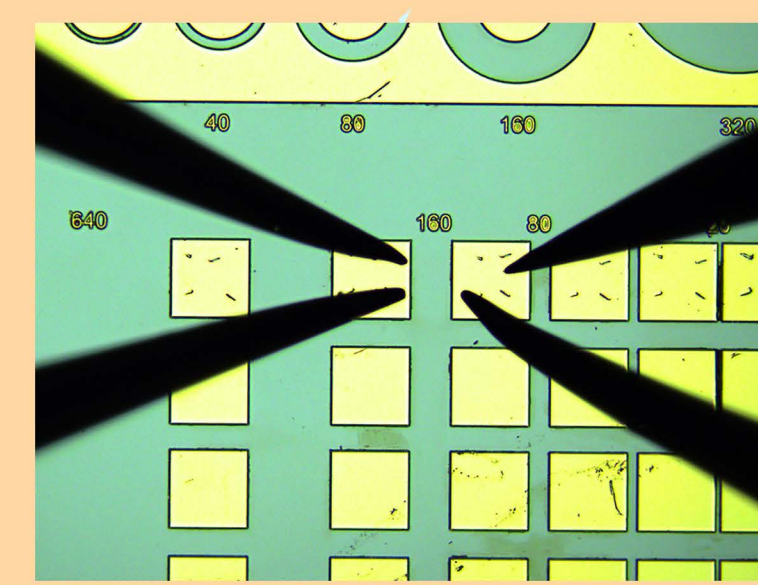
## Focus on the Thermocompression



## Electrical characterization

We use thermocompression to anneal the metal-semiconductor contact.

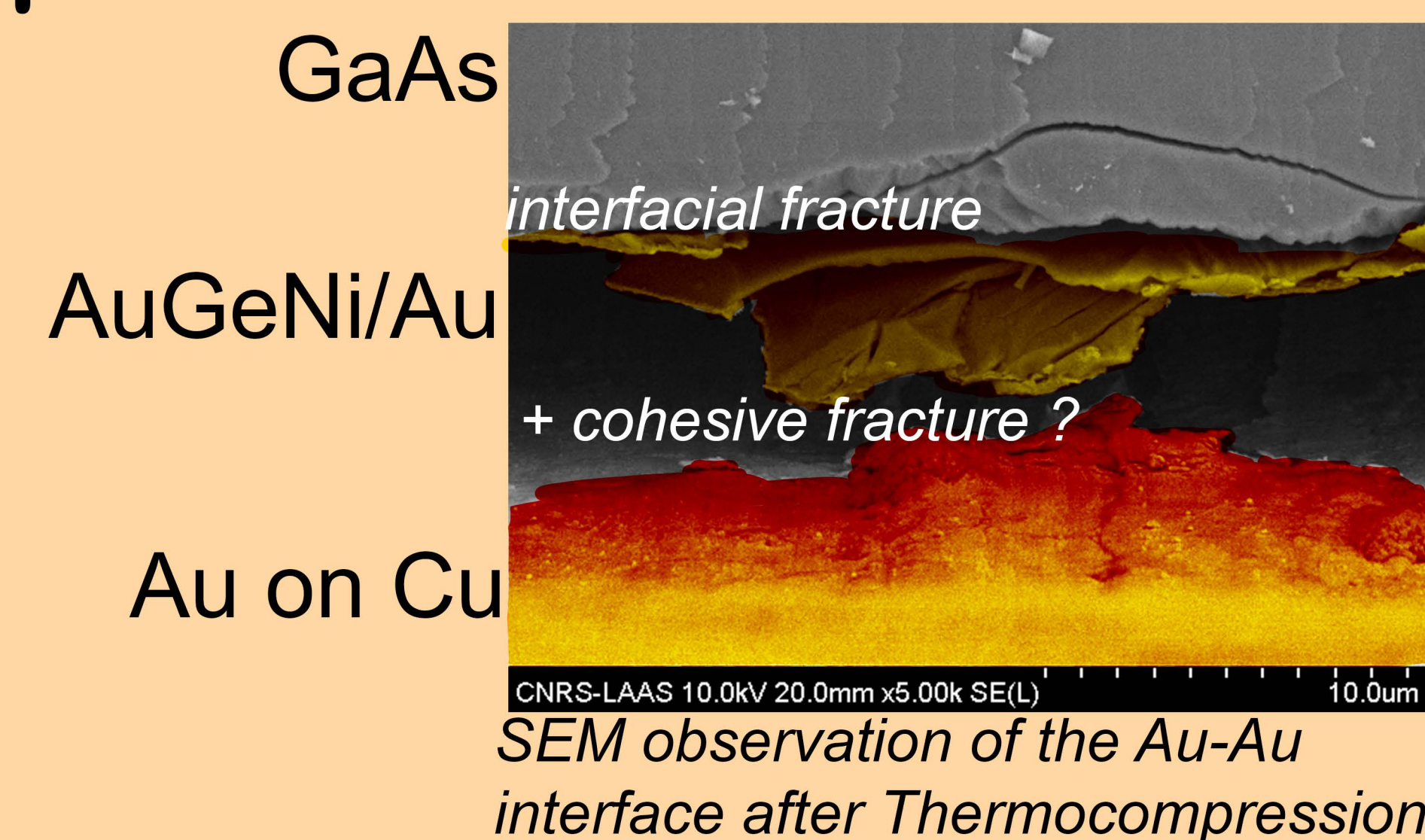
The thermic cycle of thermocompression is 30x longer than a classic annealing done via RTA and we also apply pressure on the substrate. Because of these differences from RTA, we use TLM structure to measure the quality of the annealing.



(left) Linear TLM structure with electrical probes

(right) Measured electrical resistance in function of inter-pad distance

## Adhesion problems at the Au-Au interface



Open question: How to characterize the thermal resistance of the interface?

## Towards a more complex interface

