



**UNSW**  
SYDNEY



# Advanced Defect Engineering for Ultra-High Efficiency Solar Cells

**Unravelling the defects grown during the processing of state-of-the-art silicon solar cells to ensure high quality and high efficiency.**

## Competitive advantage

- World-leaders in unravelling the physics of defects in high-efficiency devices
- Successfully developed a wide range of processes to remove defects in solar cells and improve their efficiency
- Processes that are tailored to the specific needs of the industry, and the wafers and ingots they use

## Impact

- Improving the efficiency of silicon solar cells by identifying defects and developing processes to reduce them.

## Successful applications

- Ring defect removals
- Metals gettering
- Defect hydrogenation
- Defect dissolution

## Capabilities and facilities

- Tabula rasa, oxygen precipitates dissolution
- Defect thermal deactivation
- Advanced intrinsic and extrinsic gettering
- Vacancy-defect dissociation
- Hydrogenation processes

## Our partners

- Industry leaders in monocrystalline silicon solar cell fabrication

## More Information

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