

I CONNECT

MATERIALS, DEVICES & ENERGY DATA

ABOUT ME



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EDUCATION

Doctoral Researcher, UNSW Sydney



CURRENT ROLE

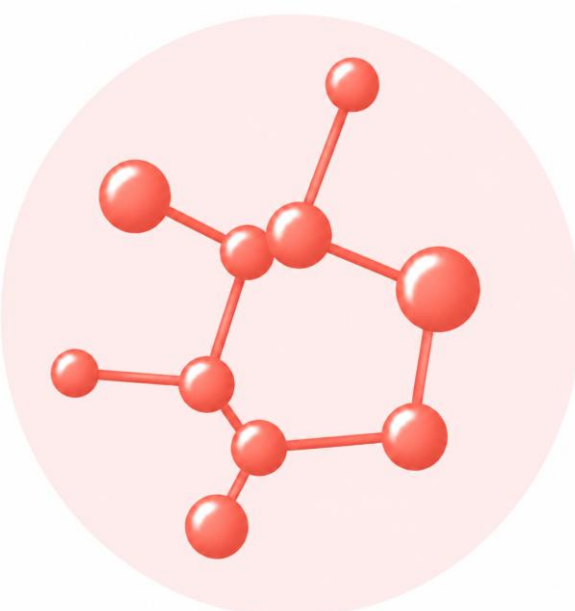
Associate Lecturer / Photovoltaics and Renewable Energy Engineering



INTERESTS

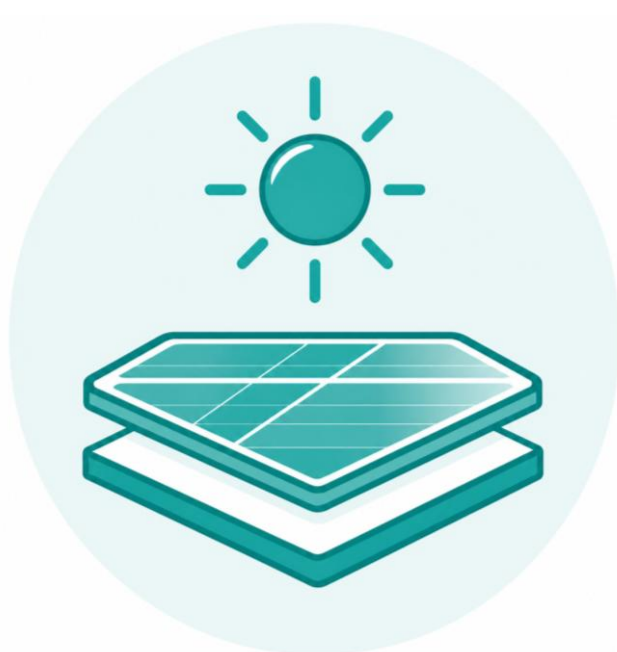
PV device & PV2X application

TCA MATERIALS



- Struggling in deposition one material on another?
- Novel material with high conductive & transparency for bonding.

TANDEM SOLAR CELLS



- Next generation PV?
- Tandem with higher power output & voltage

ELECTRICITY PRICE FORECASTING



- AI + Energy solution
- Physical + AI for higher accurate forecasting

SELECTED RESULTS

Materials



Showcasing research from Prof. Xiaojing Hao's laboratory, University of New South Wales, Sydney, Australia. A non-destructive UV Raman characterization platform to enable insight into the mechanism of reversible ultraviolet-induced degradation (UVID) in TOPCon solar cells. Schema: Prof. Xiaojing Hao's research group at UNSW Sydney focus on developing efficient, durable, and cost-effective solar PV technologies. In this work, they addressed the challenge of costly concerned UV-induced degradation (UVID) in Si solar cells by developing a novel characterization platform. Their non-destructive characterization can in situ monitor the microscopic material transformations during the UVID and recovery process, effectively unveiling the underlying mechanism of the reversible UVID in Si solar cells. This work provides guidance for the development of material-level testing protocols and supports the creation of effective UVID-mitigating strategies. Image reproduced by permission of Caixia Li from Energy Environ. Sci., 2026, 19, 1148.

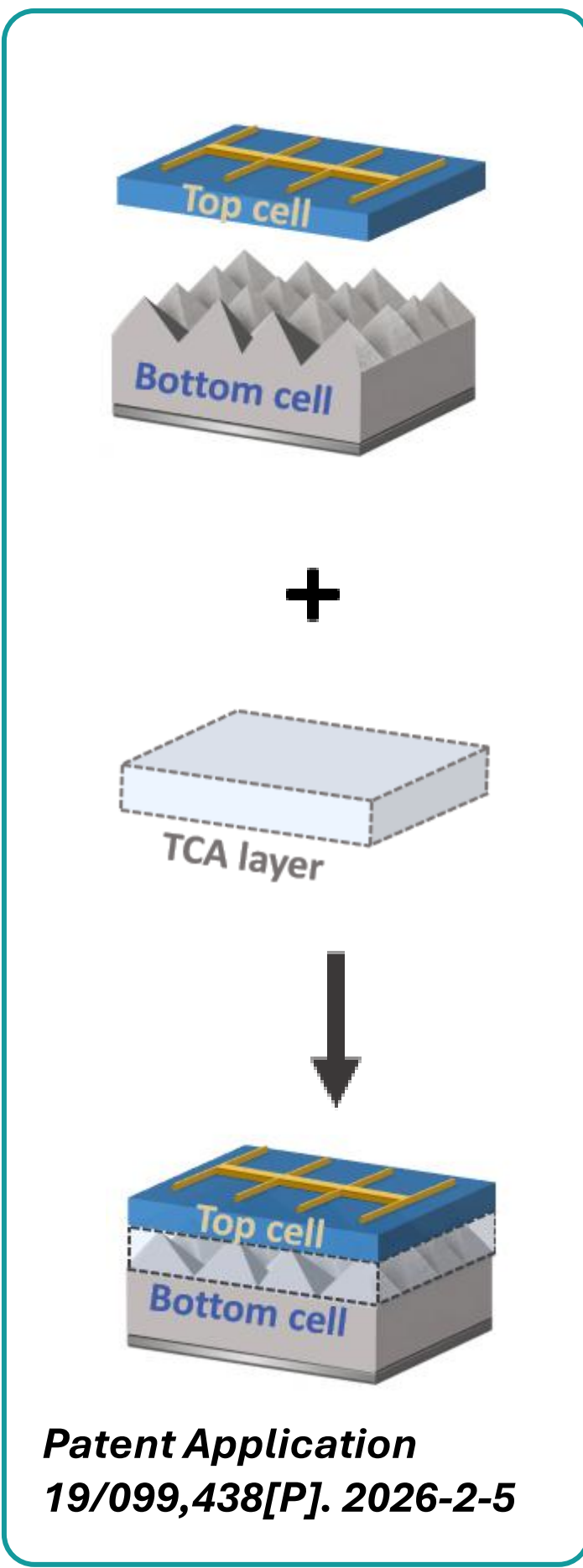


rscl/ees

PV device reliability & Mechanism
2026, EES, 19(4), 1148-1158.
2026, EES solar, Accepted.

Devices

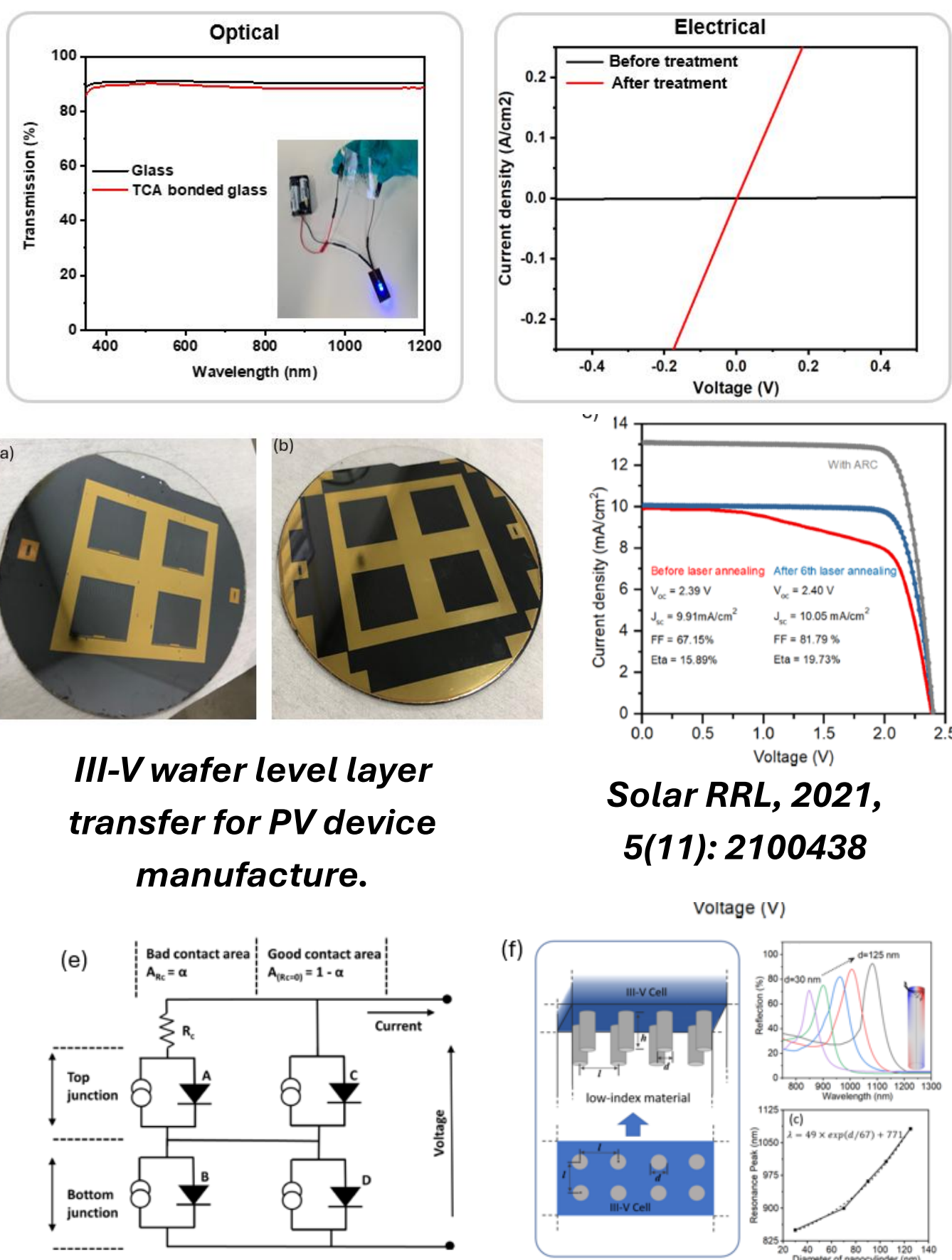
Tandem solar cells



Patent Application
19/099,438[P]. 2026-2-5

Other related work:
Advanced Materials, 2023, 35(42).
Energy and Environmental Science, 17(15), 5653-5665.

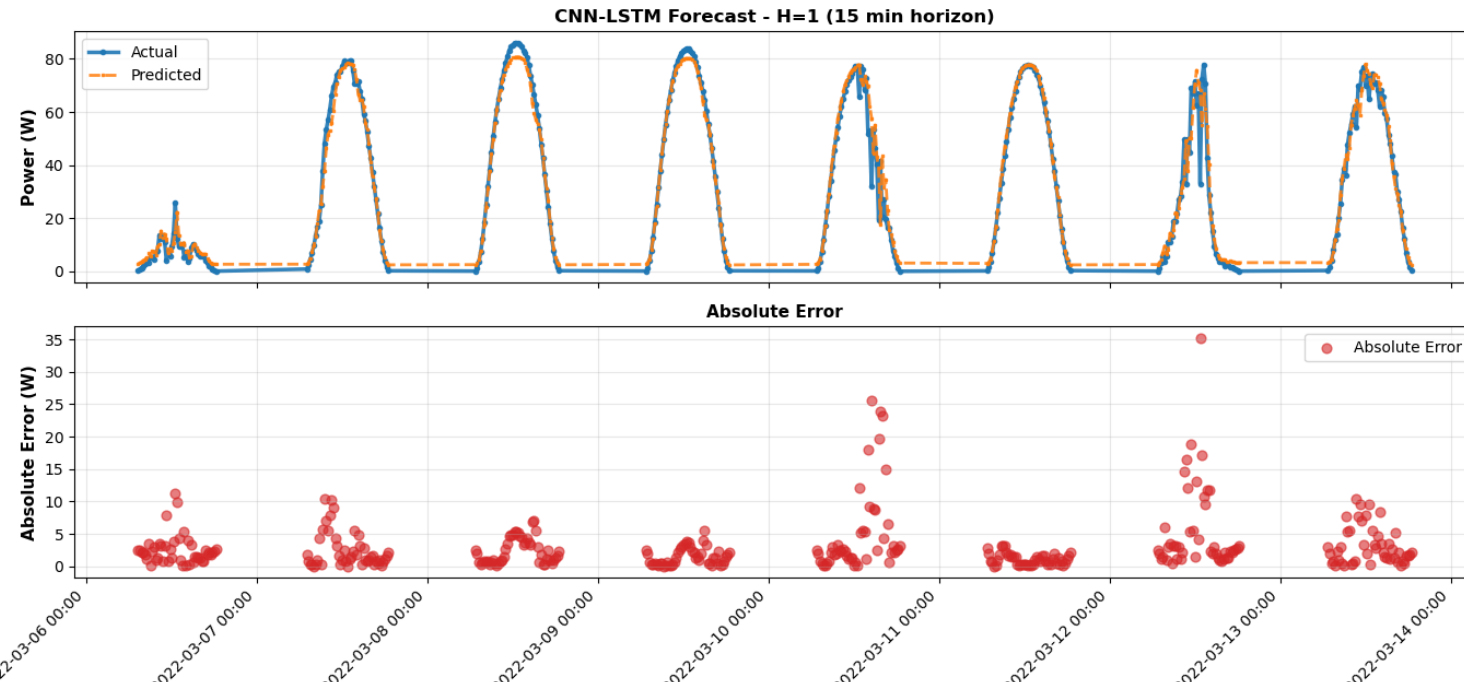
New Material



Optical & Electrical simulation work for III-V/Si Tandem solar cells [IJAP, 2023, 62(SK): SK1053.]

Energy system

Physical + AI for Electrical price forecasting



Li C, et al.[J]. Energy, 2025, 323: 135744

LOOKING FOR COLLABORATION

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QR / CONTACT



Organizers

