

33rd Workshop on Crystalline Silicon Solar Cells & Modules: Materials and Processes



July 21st – July 24th, 2026

Breckenridge, Colorado

Sponsorship from:



CSSC



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Tuesday, July 21st

8:00 – 9:00 am Registration & Breakfast

9:00 – 9:30 am **Workshop Welcome and Introduction**
Ron Sinton (Sinton Instruments) and **Nathan Stoddard**
(Lehigh University)

Session 1: Characterization of Solar Cells, Modules, and Arrays

9:30 – 10:00 am **Yifu Shi** (Changzhou Fusion New Materials Company Ltd) –
Extracting contact recombination of industrial solar cell
metallisation from FFT analysis of photoluminescence images

10:00 – 10:30 am **Abby Meyer** (Aerospace Corporation) – Pixel by Pixel Spatial EL
Characterization for Silicon and Tandem Solar Cells

10:30 – 11:00 am Break

11:00 – 11:30 am **Tristan de La Beaujardiere** (Sinton Instruments) I Can See
Clearly Now... the Recombination Is Mapped: Combining
precision lifetime measurements and PL Imaging

11:30 – 12:00 pm **Beryl Weinschenker** – Drone-based EL

12:00 – 1:30 pm Lunch

Session 2: The Potential for Perovskites and X/Silicon Tandems

1:30 – 2:00 pm **Laura Schelhas** (NLR) – Assessing the Reliability of Metal
Halide Perovskite Solar Modules Through Accelerated Testing
and Field Deployment

2:00 – 2:30 pm **Dr. Hyunju Lee** (Meiji University) – Advances in
Interconnecting recombination layers for monolithic
Perovskite/Si tandem solar cells. *Co-authors include Yoshio
Ohshita (Toyota Technological Institute) and Atsushi Ogura
(Meiji Renewable Energy Laboratory and Meiji University)*

2:30 – 3:00 pm **Daniel Walter** (ANU) – Alternative top-cell materials for stable
silicon-based tandems

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3:00 – 3:30 pm Break

Session 3: Industrial Challenges in the US

3:30 – 4:00 pm **Vinodh Chandrasekaran** (Suniva, Inc.) – MES data driven process control and optimization in solar cell mass production

4:00 – 4:30 pm **TBD** (T1 Energy, Inc.)

4:30 – 5:00 pm **Kiersten Ralston** (Qcells North America)

6:30 – 8:00 pm **Welcome Reception with Dinner**
Sponsored by NLR

Wednesday, July 22nd

7:00 – 8:00 am Breakfast

Session 4: Scaling Silicon PV Production Towards the TW/year

8:00 – 8:30 am **Markus Beck** (RCT Solutions)- Lessons Learned from GWScale c-Si Ingot, Wafer, and PV Cell Manufacturing: From Design to Operations

8:30 – 9:00 am **Pirmin Preis** (ISC-Konstanz) – Technology Adoption in Crystalline Silicon PV Manufacturing: Regional Drivers and Trends

9:00 – 9:30 am **Xinyu Zhang** (Jinko Solar) Key Advances in Manufacturing Technologies and Product Outlook in the Silicon Photovoltaic Industry

9:30 – 10:00 am Break

10:00 – 10:30 am **Urvashi Bothra** (Delft University) – Liquid encapsulation of photovoltaic modules to enable circular design

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Session 5: *Poly-Silicon Production and Cz-Si Crystal Growth*

- 10:30 – 11:00 pm **Mike Pfund** (Advanced Material Solutions) – FBR vs. Siemens Polysilicon; Which Technology for Capacity Expansion?
- 11:00 – 11:30 am **Nicolas Enjalbert** (CEA-Liten) – Recent advances in bulk dopants for terrestrial and space silicon solar cells
- 11:30 – 12:00 pm **Talid Sinno** (University of Pennsylvania) – Physics-informed machine learning of vacancy-hydrogen interactions and clustering
- 12:00 – 1:30 pm Lunch

Free Afternoon to Enjoy Local Activities

- 6:30 – 8:30 pm **Poster Session and Reception**
Sponsored by Sinton Instruments

Thursday, July 23rd

- 7:00 – 8:00 am Breakfast

Session 6: *High-Efficiency Cell Development*

- 8:00 – 8:30 am **Yiğit Mert Kaplan** (ODTÜ-GÜNAM) – TOPCon Cell Processing Physics and Chemistry
- 8:30 – 9:00 am **Yevgeniya Larionova** (ISFH) – Solar Cells Exceeding 25% Efficiency and Upgrade to 26% Efficient POLO²IBC Solar Cells
- 9:00 – 9:30 am Break
- 9:30 – 10:00 am **Yifeng Chen** (Trina Solar) – Progress of High efficiency Si and Silicon-based Tandem Solar Cells for Terrestrial and Space Application in Trina Solar

