Two-Dimensional Modeling of Interdigitated Back Contact Silicon Heterojunction Solar Cell

- **Objective**
  - High efficiency: cell > 24%, module > 20%
  - Low cost and low temperature deposition
- Combines features of two highest efficiency technologies
  - Silicon (a-Si/c-Si) Heterojunction (SHJ)
  - Interdigitated Back contact (IBC)

- Two-dimensional modeling is essential for development
Two-Dimensional Modeling of Interdigitated Back Contact Silicon Heterojunction Solar Cell

First simulation study on 2D heterojunction solar cells
Some modeling results
- Effect of front surface passivation
- Effect of strips dimension
- Light beam induced current (LBI C) line scan

Bottom view

Cross view

This poster

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