### Scientific Achievement:

(A) Characterized inversion charge in HIT cells using a multi-probe approach that involves I-V and C-V measurements. Illustrated that many features of dark I-V correlate well with C-V measurements.

(B) Developed a comprehensive modeling framework, well calibrated with experimental results from literature, to understand / interpret perovskite-based solar cells and suggest further optimization schemes.

### Significance and Impact:

Item (A) above could lead to a more detailed understanding of HIT cell device physics.

Item (B) above provides a baseline theory for perovskite-based solar cells and indicates how much the efficiency could be improved.

### Research Details:

- Involves self-consistent simulation of Poisson and continuity equations.

### Publication(s):


### Contact(s):

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