

## Light Induced Capacitance in Silicon and Perovskite Solar Cells: Dielectric, Chemical and Ionic Natures

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The device physics for silicon solar cells (SiSCs) robustly satisfy the experiments [1] while for the perovskite solar cells (PSCs) most of established paradigms collapse [2]. Here we tackle this scenario in the context of the light-induced capacitance responses extracted from these two major exponents in the field of photovoltaic research. Specifically we discuss the measurement and occurrence conditions for dielectric relaxation and recombination semiconductor regimes. The case of exponential light-induced capacitances and the concept of chemical capacitance are shown to manifest critically different between PSCs and SiSCs. The role of ionic migration in PSCs is also discussed.

### References

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