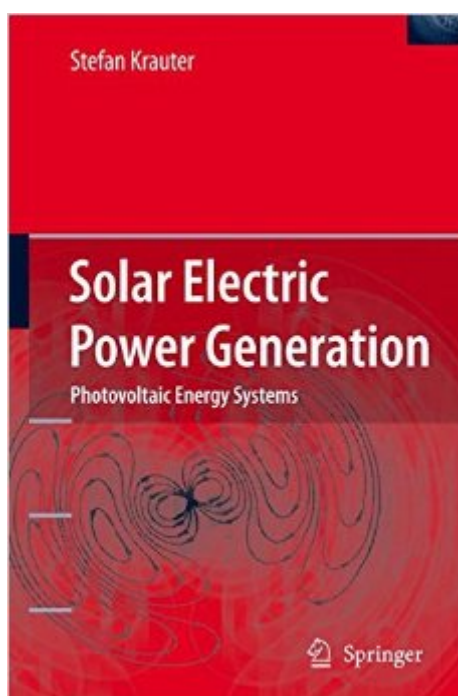


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# Solar Electric Power Generation - Photovoltaic Energy Systems: Modeling Of Optical And Thermal Performance, Electrical Yield, Energy Balance, Effect On Reduction Of Greenhouse Gas Emissions



## Synopsis

This book thoroughly examines the technical parameters of photovoltaic systems, and appraises their net energy balance from production, operation and maintenance, to recycling. Similar performance and yield analysis is applied to optical, thermal, and electrical parameters and interfaces. Professor Krauter demonstrates how accurate yield calculations, optimal system performance, and new prototypes aid in cost reduction. Examples, tables and figures are included.

## Book Information

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## Customer Reviews

This book explores the real potential of solar electric power generation in order to reduce CO2 emissions and prevent the planet from global warming. For this purpose the author analyses the entire energy balance of photovoltaic power plants during their life time from the production to the recycling - taking into account the whole system. He considers all optical interfaces and layers passed by the sunlight from the sun into the solar cell, thermal layout of any photovoltaic module and its heat transfer mechanisms, its related actual electrical properties, allowing an accurate calculation of yield and an optimization of system components, thus reducing costs for solar electricity. Different locations for production and installation of photovoltaic systems are also considered. The concluding message is: If applied in an intelligent way, global energy supply via photo-electric power generation is widely possible.

Finally someone wrote a book that also treats the interface from the solar cell to the operating conditions in a real environment. Very nice are also the LCAs (including energy (and CO2) payback via recycling) for different sites of application.

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