1. Record Nr. UNINA9910522915103321

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| Titolo | The Effects of Dust and Heat on Photovoltaic Modules: Impacts and Solutions / / edited by Amir Al-Ahmed, Inamuddin, Fahad A. Al-Sulaiman, Firoz Khan |
| Pubbl/distr/stampa | Cham : , : Springer International Publishing : , : Imprint : Springer, , 2022 |
| ISBN | 3-030-84635-0 |
| Edizione | [1st ed. 2022.] |
| Descrizione fisica | 1 online resource (318 pages) |
| Collana | Green Energy and Technology, , 1865-3537 |
| Disciplina | 621.381542<br>621.31244 |
| Soggetti | Energy policy<br>Energy and state<br>Coatings<br>Electric power distribution<br>Thermodynamics<br>Heat engineering<br>Heat transfer<br>Mass transfer<br>Energy Policy, Economics and Management<br>Energy Grids and Networks<br>Engineering Thermodynamics, Heat and Mass Transfer |
| Lingua di pubblicazione | Inglese |
| Formato | Materiale a stampa |
| Livello bibliografico | Monografia |
| Nota di contenuto | Dust Deposition on PV Modules and its Characteristics -- Organic Super Hydrophobic Coating for PV Modules -- Inorganic Super Hydrophobic Coating for PV Modules -- Surface Texturing for Super Hydrophobic Surface -- Super Hydrophilic Surface Coating For PV Modules -- Dust Properties and Characterization -- Heat Effect on Silicon PV Modules -- Cooling Approaches for Silicon PV Modules -- Thermoelectric Coupled Silicon PV Modules -- Water Cooling of PV Modules -- Carbon Based Materials for PV Cooling -- Heat Effect on the PV Encapsulation. |

Sommario/riassunto

This book discusses how to reduce the impact of dust and heat on photovoltaic systems. It presents the problems caused by both dust accumulation and heat on PV systems, as well as the solutions, in a collected piece of literature. The Effects of Dust and Heat on Photovoltaic Modules: Impacts and Solutions begins by discussing the properties of dust accumulation on PV modules. It then presents several solutions to this, such as hydrophobic coatings and surface texturing. The second half of the book is used to discuss the effects of heat on silicon PV modules, as well as various cooling approaches. These include water cooling and carbon-based materials. Due to the prevalence of PV systems in renewable energy, this book will be of interest to numerous students, researchers and practitioners. .