1. Record Nr. UNINA9910765481703321 Autore Arya Sandeep Titolo Solar Cells: Types and Applications / / by Sandeep Arya, Prerna Mahajan Singapore:,: Springer Nature Singapore:,: Imprint: Springer,, 2023 Pubbl/distr/stampa **ISBN** 981-9973-33-3 [1st ed. 2023.] Edizione Descrizione fisica 1 online resource (269 pages) Altri autori (Persone) MahajanPrerna Disciplina 537.622 Soggetti Semiconductors Photovoltaic power generation **Nanophotonics Plasmonics Physics Photonics** Optical engineering Nanoscience **Photovoltaics** Nanophotonics and Plasmonics Applied and Technical Physics Photonics and Optical Engineering **Nanophysics** Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia 1. Introduction to solar cells -- 2. Silicon based Solar Cells -- 3. CIGS Nota di contenuto based Solar Cells -- 4. Organic Solar Cells -- 5. Perovskite Solar Cells. Sommario/riassunto This book highlights developments in the field of solar cells. The chapters in this book address a wide range of topics including the spectrum of light received by solar cell devices, the basic functioning of a solar cell, and the evolution of solar cell technology during the last 50 years. It places particular emphasis on silicon solar cells, CIGS-based solar cells, organic solar cells, perovskite solar cells and hybrid solar

cells. The book describes in detail the fabrication processes employed

for different categories of solar cells. It also provides the

characterization techniques utilized in this sector to evaluate the performance of solar cells and the scope of this domain in the future. Overall, it presents the essential theoretical and practical concepts of solar cells in an easy-to-understand manner.