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Nota di contenuto	Metal nanoparticles decorated ZnO nanostructures based dye-sensitized solar cells -- Co-sensitization strategies for dye-sensitized solar cells -- Natural dye sensitized solar cells : strategies and measures -- Dye-sensitized solar cells employing gel polymer electrolytes -- Advantage of polymer electrolytes towards dye-sensitized solar cells -- Rational screening strategies for counter electrodes nanocomposite materials for efficient solar energy conversion -- A new insights on carbon based nanostructured counter electrode materials for dye-sensitized solar cells -- Highly stable and efficient inverted organic solar cells based on novel interfacial layers -- Fabrication of metal top electrode via solution based printing technique for efficient inverted organic solar cells -- Polymer solar cells : an energy technology for future -- Rational strategies of large-area perovskite solar cells : laboratory scale to industrial technology -- Hot electrons role in biomolecule based quantum dot hybrid solar cells.
Sommario/riassunto	An interdisciplinary guide to the newest solar cell technology for efficient renewable energy Rational Design of Solar Cells for Efficient Solar Energy Conversion explores the development of the most recent solar technology and materials used to manufacture solar cells in order

to achieve higher solar energy conversion efficiency. The text offers an interdisciplinary approach and combines information on dye-sensitized solar cells, organic solar cells, polymer solar cells, perovskite solar cells, and quantum dot solar cells. The text contains contributions from noted experts in the fields of chemistry, physics, materials science, and engineering. The authors review the development of components such as photoanodes, sensitizers, electrolytes, and photocathodes for high performance dye-sensitized solar cells. In addition, the text puts the focus on the design of material assemblies to achieve higher solar energy conversion. This important resource: Offers a comprehensive review of recent developments in solar cell technology Includes information on a variety of solar cell materials and devices, focusing on dye-sensitized solar cells Contains a thorough approach beginning with the fundamental material characterization and concluding with real-world device application. Presents content from researchers in multiple fields of study such as physicists, engineers, and material scientists Written for researchers, scientists, and engineers in university and industry laboratories, Rational Design of Solar Cells for Efficient Solar Energy Conversion offers a comprehensive review of the newest developments and applications of solar cells with contributions from a range of experts in various disciplines.
