

1. Record Nr.	UNISA996503462703316
Autore	Stutzmann Martin (Martin)
Titolo	The Physics of Renewable Energy [[electronic resource] /] / by Martin Stutzmann, Christoph Csoklich
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2022
ISBN	3-031-17724-X
Edizione	[1st ed. 2022.]
Descrizione fisica	1 online resource (199 pages)
Collana	Graduate Texts in Physics, , 1868-4521
Disciplina	333.794
Soggetti	Energy policy Energy and state Electric power distribution Optical materials Energy storage Energy Policy, Economics and Management Energy Grids and Networks Optical Materials Mechanical and Thermal Energy Storage
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Energy – A Brief Introduction -- Forms of Energy and Their Density -- The Sun–Earth System -- Energy from Waves, Tides and Osmosis -- Wind Energy -- Thermal Energy -- Photosynthesis -- Photovoltaics -- Thermoelectrics.
Sommario/riassunto	This book provides a concise overview of the physical basics of different forms of renewable energy (water, waves, wind, solar, thermal, geothermal, biofuels), focusing on the physical limits for the efficiency and energy densities of different current technologies. It also discusses relevant aspects of materials science, physical chemistry, and biophysics. The book is based on the lecture notes of a course taught at TU München to undergraduate and graduate students of Applied Physics and related engineering disciplines. It provides material that can be taught in a one-semester course with 4 hours per week and includes a self-test section to enable students to check their

understanding.
