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Descrizione fisica	1 online resource (XXVII, 963 p. 545 illus., 468 illus. in color.)
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Soggetti	Renewable energy resources Building construction Renewable and Green Energy Building Physics, HVAC
Lingua di pubblicazione	Inglese
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Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references at the end of each chapters.
Nota di contenuto	Energy savings solutions for five Hospitals in Europe -- Climate Adapted in NZEB Retrofitting for Residential Buildings -- Sustainable strategies for protecting and managing cultural heritage -- Buildings' Energy Flexibility -- Influence of Energy-roof on PV efficiency -- Life Cycle Performance Costing as an argument for Green Buildings and renewable energy applications -- A Comparative Study between PV Pumping Systems Using A PMDC Motor And An Induction Motor -- Development the Designed of a Drop-In Hydrogen Fueling station to support the Early Market Build Out of Hydrogen Infrastructure -- Sustainability of Higher Educational Buildings -- Effectiveness of Thermal Inertia in Southern Mediterranean Climates -- Thermal Habitability Monitoring in Housing for Low-Income Families in Extreme Warm, Dry Weather -- Multidisciplinary Energy Efficiency Think Tank for Supporting a Multilevel Governance Models in Energy Policies and Measures -- An Integrated Building Energy Management System -- The Normal Minimising Energy Use; The Abnormal Changing Habits -- Semi-Empirical Models for the Estimation of Global Solar Irradiance measurements in Morocco -- Assessing PV Module Degradation and the Potential Use of Greenhouse Roofs for Supplemental PV Power

Generation in Malta -- Revitalization and refurbishment of minor historical centers in the Mediterranean -- Building Envelope-Systems Integrated Models -- Lessons for Future Cities and Architecture -- Environmental Aspects of Green Building Design -- Thermal performance of vacuum glazing with tempered glass panes -- Energy Refurbishment Towards Nearly Zero Energy Terrace Houses, for the Mediterranean Region -- Geo-Climatic applicability of direct evaporative cooling in Italy -- Integrating deep offshore wind with pumped hydro storage in a central Mediterranean archipelago's electricity generation system -- Energy Choice to Support Carbon Dioxide Reduction -- A Study of Space Syntax and Sustainable Design in Chinese Vocational Education Parks -- Based on 3 Case Studies -- Micro-aeolic in residential districts -- Effects of Shadow on the Performance of Solar Photovoltaic -- Landform-reconstruction method of architecture form in cold areas -- Building integrated renewable energy systems, or rediscovering forgotten principles -- The possible shift between heating and cooling demand of buildings under climate change conditions -- Robustness of social houses in Ecuador facing global warming -- Performance Analysis and Parametric Studies of a Bi-fluid Type Photovoltaic/Thermal (PV/T) Solar Collector in Simultaneous Mode under Tropical Climate Conditions -- Bi-fluid Photovoltaic/Thermal PV/T Solar Collectors with Three Modes of Operation -- High Quality Calibration Accuracy for Smart Building Energy Efficiency Opportunities -- Liquid and Gas Biofuels from the Catalytic Reforming of Pyrolysis Bio-Oil In Supercritical Water -- Pyrolysis Bio-Oil Upgrading to Renewable Liquid Fuels by Catalytic hydrocracking -- Supporting Electro-mobility in Smart Cities Using Solar EV Charging Stations -- Exploitation of Wave Energy Potential in the Aegean Sea-Greece -- Energy performance of a renovated multi-family building in Sweden -- Building Thermal Exergy Analysis -- Light and Shadow -- Potential of Solar Electricity for Grid Connected Systems in Algeria -- Thermal Energy Recovery System Upgrading -- Mathematical Models for system planning in campus -- Urban sustainable development in Mediterranean areas. The case of Sestri Ponente, Genoa -- Development of Energy Devices Based on Photovoltaic Panels with Extra Consumer Properties -- Assessment of air flows in a school building with mechanical ventilation using passive tracer gas method -- School buildings: energetic and functional upgrades -- Evaluation of the Thermal Performance, Environmental Impact and Cost Effectiveness of an XLAM Component for Retrofitting in Existing Buildings -- Self-Awareness tools for renewable energy production in mixed-use urban tissues -- Renewable energy in Southern Morocco and Prospects -- Lessons for Future Cities and Architecture -- Analysis of Energy Performance of a High Performance Building in a Local Climatic Mediterranean Context. Skylight Optimization Design Based on Interior Ventilation in an Office Building in a Cold Region -- An environmental technological approach to building programming for school facilities -- Green-Smart-Sustainable Building Aspects and Innovations -- Soil-less Urban Temporary Agriculture as a strategy for brownfield sites requalification -- Solar Building Systems for the Mediterranean Area -- Spectral Variation of Energy Efficient Room Lighting -- The Housing Retrofit Market in Italy -- Passive cooling in Mediterranean Area for Bioclimatic and Zero Energy Architecture -- First Year Performance of a PV Plant in Jordan Compared to PV Plants in the Region -- Gauging the Effectiveness of a Resource Management Awareness Campaign on a Central Mediterranean Island -- The 'Reduce and Save' Project -- Heat and light intensity influence on (I-V) characterization of Cu₂S film/p- Si

heterojunction -- Utilization of Renewable Energy for the Processing of Seaweed -- New environmentally friendly chlorine-free solar-grade silicon production technologies -- Physical Properties of Pure and Fluorine Doped Tin Oxide Films Used as Transparent Conducting Oxide -- Socioeconomic, environmental and social impacts of a concentrated solar power energy project in northern Chile -- Learning Sustainability from the Arab Gulf Vernacular Architecture -- Transparent Conducting Oxides for Solar Cell Applications -- Solar driven cold storage units to reduce food waste -- An adaptive thermal comfort model for the Romanian climate -- A Whole-Building, Integrated Approach for Designing a High Performance, Net-Zero Energy and Net-Zero Water Building -- Dynamic simulation use for increasing the efficiency of solar cooling systems in Northern latitudes.

Sommario/riassunto

This book highlights scientific achievements in the key areas of sustainable electricity generation and green building technologies, as presented in the vital bi-annual World Renewable Energy Network's Med Green Forum. Renewable energy applications in power generation and sustainable development have particular importance in the Mediterranean region, with its rich natural resources and conducive climate, making it a perfect showcase to illustrate the viability of using renewable energy to satisfy all energy needs. The papers included in this work describe enabling policies and offer pathways to further develop a broad range of renewable energy technologies and applications in all sectors – for electricity production, heating and cooling, agricultural applications, water desalination, industrial applications and for the transport sector.
