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Disciplina	696
Soggetti	Sustainable architecture Energy policy Buildings - Design and construction Materials Catalysis Force and energy Renewable energy sources Sustainable Architecture/Green Buildings Energy Policy, Economics and Management Building Construction and Design Materials for Energy and Catalysis Renewable Energy
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Includes index.
Nota di contenuto	Part I. Building with the sun – an everlasting energy source -- Chapter 1. A review of the significance and challenges of Building Integrated Photovoltaics -- Chapter 2. Design Opportunities and Building Integration of PV systems -- Chapter 3. Optimization of Performances and Reliability for Building Integrated Photovoltaic Systems (BIPV) -- Chapter 4. Inorganic, Colored Thin Films for Solar-Thermal Conversion in Sustainable Buildings -- Chapter 5. Capitalizing on Solar Energy in Romania and Improving the Thermal Comfort of Buildings with Solar Air Collectors -- PartII. Building with the nature -- Chapter 6. Parallel (Hi) Stories. A subjective approach to energy efficient design -- Chapter 7. Traditional Semi-Buried House -- Chapter 8. Using Agricultural By-

Products for Creating Innovative Products and Materials -- Part III. Case Studies -- Chapter 9. « Les conditions de nature sont retrouvées». The Tower of Shadow in Chandigarh and other Le Corbusier's masterpieces -- Chapter 10. Sustainability and Energy Efficiency Design in Hospital Buildings -- Chapter 11. Football Stadium – An Energy Efficient Building and a Source of Renewable Energy for the Community -- Chapter 12. Passive Design Strategies in Pursuit of Architectural Identity: the New ACT Student Center -- Chapter 13. Towards a Sustainable Refurbishment of the Hellenic Building Stock -- Chapter 14. Design Strategies for Green / Energy Efficient Building Design: An Apartment Building of Gaziantep Project -- Chapter 15. A Sustainable Approach Towards Energy Savings in the Cities of Romania. Bucharest – A Case Study -- Chapter 16. The Heat Island as a Result and Cause of Environmental and Social Degradation. Two Different Settlements in the Town of Afragola of the Metropolitan City of Naples -- Chapter 17. Settlement Scale Analysis Approach to Reach Nearly Zero Energy Communities.

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Sommario/riassunto

This book is the result of recent research that deals with the built environment and innovative materials, carried out by specialists working in universities and centers of research in different professional fields architecture, engineering, physics and in an area that spans from the Mediterranean Sea to the Persian Gulf, and from South Eastern Europe to the Middle East. This book takes the necessity of re-shaping the concept of building design in order to transform buildings from large scale energy consumers to energy savers and producers into consideration. The book is organized in two parts: theory and case studies. For the theoretical part, we chose from the wide range of sources that provide energy efficient materials and systems the two that seem to be endless: the sun and vegetation. Their use in building products represents a tool for specialists in the architectural design concept. The case-studies presented analyze different architectural programs, in different climates, from new buildings to rehabilitation approaches and from residential architecture to hospitals and sports arenas; each case emphasizes the interdisciplinarity of the building design activity in order to help readers gain a better understanding of the complex approach needed for energy efficient building design. Covers both theoretical aspects and practical design aspects Provides feedback on existing built examples Draws on actual experiences of scientists and designers that live and work in a territorial area that spans from the Mediterranean Sea to the Persian Gulf and from South Eastern Europe to the Middle East .

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