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| Nota di contenuto | Time to Shine: Applications of Solar Energy Technology; Contents; Summary; About this book; Terminology; Introduction: Solar Energy; The Incoming Solar Radiation; The Availability and Power Density Issue - Fossil vs. Solar Energy; The Need for Tracking; The Basic Solar Energy Heat Transfers; Heat Transfer - Experiment and Simulation; Solar Energy Heat Transfer Modes; Individual Transfers; Compound or Grouped Heat Transfer (CHT); Heat Capacity: Phase Change Materials (PCM), Heat Storage and "Thermal Mass"; Overall Heat Transfer; Solar Thermal Energy Product Requirements Selected Solar Thermal ApplicationsSolar Water Heaters (SWH); Solar Space Heating; Direct Gain; Windows and Glazings in Solar Space Heating; Active and Passive Solar Energy; Passive Solar Heating and Overheating; Purely Active Solar Heating; Large-Scale Glazed Solar Thermal Plants; Solar High Temperature Applications; Solar Tower Central Receiver Plants; Trough Plants; Dish Stirling; Solar Chimney Power Plants (CSP); Solar Thermal Pumps; Divers Applications; Cookers; Domestic Solar Cookers; Institutional Solar Cookers; Autoclave |

Sterilizers; Direct UV Pasteurizers; Solar Driers

Solar Thermal Energy - The "Software" Impacts; The Market; The Determination of Solar Food Mass and Cooking Time; Solar PV; PV - Basic Characteristics; Shading; The Temperature Effect; Electricity and Grids; PV Applications; Solar Air Planes; Solar Boats; Dedicated Power Supplies; "Plug" Power Supplies; PV Power Plants; Conclusions Beyond Solar; Case Studies; Solar Energy in a High-density Urban Environment; "Solar Casbah": Low-Cost Solar Energy Vision; An Up-market, High-Tech Vision; Solar Thermal vs. Solar PV: The Battle of the Water Heaters; The Evolving Grid;

Remarks on Energy Planning Solar for Existing Settlements

Sommario/riassunto

"Solar energy has been the "new" energy for a long time. As this technology becomes a larger and larger piece of the energy spectrum, it is increasingly important for engineers, scientists, managers, and other decision-makers to understand solar energy technology and its applications. This book, written in easy-to-understand language, with plentiful color photos and illustrations, is the perfect primer on solar energy for anyone working in the energy industry or just wants to learn more about solar energy technology. With a focus on its current uses in other countries, including developing countries, this book shows examples of actual and potential uses of solar energy right here in the USA. It presents an original view of solar energy technology, as well as tools for the understanding of consequences of energy-related decisions. Parts of this book draw to a large extent on the work of the Synopsis Institute in Lodeve (France), a leading research and development firm in the area of solar energy technology and its practical uses in our everyday lives"--
