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Titolo	Thermal Energy Storage Using Phase Change Materials [[electronic resource]] : Fundamentals and Applications // by Amy S. Fleischer
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ISBN	3-319-20922-1
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Descrizione fisica	1 online resource (97 p.)
Collana	SpringerBriefs in Thermal Engineering and Applied Science, , 2193-2530
Disciplina	620.11296
Soggetti	Thermodynamics Heat engineering Heat transfer Mass transfer Energy storage Energy systems Engineering Thermodynamics, Heat and Mass Transfer Energy Storage Energy Systems
Lingua di pubblicazione	Inglese
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Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Introduction to Phase Change Materials -- Energy Storage Applications -- Types of PCMs and Their Selection -- PCM Design Issues -- Fundamental thermal Analysis.- Future Directions.
Sommario/riassunto	This book presents a comprehensive introduction to the use of solid liquid phase change materials to store significant amounts of energy in the latent heat of fusion. The proper selection of materials for different applications is covered in detail, as is the use of high conductivity additives to enhance thermal diffusivity. Dr. Fleischer explores how applications of PCMS have expanded over the past 10 years to include the development of high efficiency building materials to reduce heating and cooling needs, smart material design for clothing, portable electronic systems thermal management, solar thermal power plant design and many others. Additional future research directions and

challenges are also discussed.
