1. Record Nr. UNINA9910341851303321

Titolo	Handbook of Energy Storage [[electronic resource]] : Demand, Technologies, Integration / / edited by Michael Sterner, Ingo Stadler
Pubbl/distr/stampa	Berlin, Heidelberg : , : Springer Berlin Heidelberg : , : Imprint : Springer, , 2019
ISBN	3-662-55504-2
Edizione	[1st ed. 2019.]
Descrizione fisica	1 online resource (XIX, 821 p. 542 illus., 508 illus. in color.)
Disciplina	621.3126
Soggetti	Energy storage Electric power production Renewable energy sources Mechanical and Thermal Energy Storage Electrical Power Engineering Mechanical Power Engineering Renewable Energy
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	The importance of Energy Storage in Energy Supply -- The Demand of Energy Storage -- The Technologies of Energy Storage -- Integration and Application of Energy Storage Solutions.
Sommario/riassunto	The authors of this Handbook offer a comprehensive overview of the various aspects of energy storage. After explaining the importance and role of energy storage, they discuss the need for energy storage solutions with regard to providing electrical power, heat and fuel in light of the Energy Transition. The book’s main section presents various storage technologies in detail and weighs their respective advantages and disadvantages. Sections on sample practical applications and the integration of storage solutions across all energy sectors round out the book. A wealth of graphics and examples illustrate the broad field of energy storage, and are also available online. The book is based on the 2nd edition of the very successful German book Energiespeicher. It features a new chapter on legal considerations, new studies on storage needs, addresses Power-to-X

for the chemical industry, new Liquid Organic Hydrogen Carriers (LOHC) and potential-energy storage, and highlights the latest cost trends and battery applications. “Finally – a comprehensive book on the Energy Transition that is written in a style accessible to and inspiring for non-experts.” Franz Alt, journalist and book author “I can recommend this outstanding book to anyone who is truly interested in the future of our country. It strikingly shows: it won’t be easy, but we can do it.” Prof. Dr. Harald Lesch, physicist and television host.