

1. Record Nr.	UNINA9910688265003321
Titolo	Updates on Supercapacitors // Zoran Stevic, editor
Pubbl/distr/stampa	London : , : IntechOpen, , 2023
Descrizione fisica	1 online resource (104 pages)
Disciplina	621.315
Soggetti	Capacitors Supercapacitors
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	1. Supercapacitors: The Innovation of Energy Storage 108 -- 2. Carbon Nanomaterials Based Supercapacitors: Recent Trends 46 -- 3. Perspective Chapter: Graphene Based Nanocomposites for Supercapacitor Electrodes 88 -- 4. Review on Transition Metal Oxides and Their Composites for Energy Storage Application 56 -- 5. Supercapacitors: Fabrication Challenges and Trends 49.
Sommario/riassunto	Numerous teams and laboratories around the world are working on the development of supercapacitors, while their constantly improving performance is enabling wider use. The major challenges are to improve the parameters of supercapacitors, primarily energy density and operating voltage, as well as miniaturization, optimization, energy efficiency, economy and environmental acceptance. This book provides an overview of new supercapacitor techniques and technologies that are changing the present and future of electricity storage, with a particular emphasis on self-powering sensor and transmitter systems. The latest achievements in the production, modeling, characterization and applications of supercapacitors are considered. Modern materials supercapacitor production, which points to unsuspected application possibilities, is especially considered. Examples of transition metal oxides (TMOs) and fundamental carbon allotropes, including fullerenes, carbon nanotubes, and graphene-based nanocomposites for supercapacitor electrodes, are presented.