Record Nr. UNINA9910760275703321 Autore Zhang Jun **Titolo** Carbon-Based Electrodes for High-Performance Sodium-Ion Batteries and Their Interfacial Electrochemistry [[electronic resource] /] / by Jun Zhang Singapore:,: Springer Nature Singapore:,: Imprint: Springer,, 2024 Pubbl/distr/stampa **ISBN** 981-9975-66-2 Edizione [1st ed. 2024.] Descrizione fisica 1 online resource (117 pages) Collana Springer Theses, Recognizing Outstanding Ph.D. Research, , 2190-5061 620.11 Disciplina 621.31242 Soggetti Electric batteries Materials Electrochemistry Nanotechnology Materials science **Batteries** Materials Science Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Nota di contenuto Introduction -- Experiment -- Folded-Graphene as an Ultrafast Cathode Material -- The Interplay of oxygen functional groups and folded texture in folded-graphene cathode -- Achieving efficient sodium storage on carbon anodes -- Evolution of the electronchemical interface with ether-based electrolytes -- Conclusion and perspective. This book focuses on the development of high-performance carbon Sommario/riassunto electrodes for sodium ion batteries (SIBs). By proposing foldedgraphene as the high-density cathode with excellent rate capability, it provides insight into the interplay between oxygen functional groups and folded texture. It also highlights the superiority of ether electrolytes matching with carbon anodes, which are shown to deliver largely improved electrochemical performance. The achievements presented offer a valuable contribution to the carbon-based electrodes

in SIBs.