

1. Record Nr.	UNINA9910467472803321
Autore	Xiong Rui
Titolo	Advanced battery management technologies for electric vehicles // Rui Xiong, Beijing Institute of Technology, China, Weixiang Shen, Swinburne University of Technology, Australia
Pubbl/distr/stampa	Hoboken, New Jersey ; ; Chichester, West Sussex, England : , : Wiley, , 2019
ISBN	1-119-48165-1 1-119-48167-8
Edizione	[1st edition]
Descrizione fisica	1 online resource (281 pages)
Collana	Automotive Series
Disciplina	629.25024
Soggetti	Electric vehicles - Batteries Electronic books.
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Sommario/riassunto	A comprehensive examination of advanced battery management technologies and practices in modern electric vehicles Policies surrounding energy sustainability and environmental impact have become of increasing interest to governments, industries, and the general public worldwide. Policies embracing strategies that reduce fossil fuel dependency and greenhouse gas emissions have driven the widespread adoption of electric vehicles (EVs), including hybrid electric vehicles (HEVs), pure electric vehicles (PEVs) and plug-in electric vehicles (PHEVs). Battery management systems (BMSs) are crucial components of such vehicles, protecting a battery system from operating outside its Safe Operating Area (SOA), monitoring its working conditions, calculating and reporting its states, and charging and balancing the battery system. Advanced Battery Management Technologies for Electric Vehicles is a compilation of contemporary model-based state estimation methods and battery charging and balancing techniques, providing readers with practical knowledge of both fundamental concepts and practical applications. This timely and highly-relevant text covers essential areas such as battery modeling

and battery state of charge, energy, health and power estimation methods. Clear and accurate background information, relevant case studies, chapter summaries, and reference citations help readers to fully comprehend each topic in a practical context. Offers up-to-date coverage of modern battery management technology and practice Provides case studies of real-world engineering applications Guides readers from electric vehicle fundamentals to advanced battery management topics Includes chapter introductions and summaries, case studies, and color charts, graphs, and illustrations Suitable for advanced undergraduate and graduate coursework, Advanced Battery Management Technologies for Electric Vehicles is equally valuable as a reference for professional researchers and engineers.
