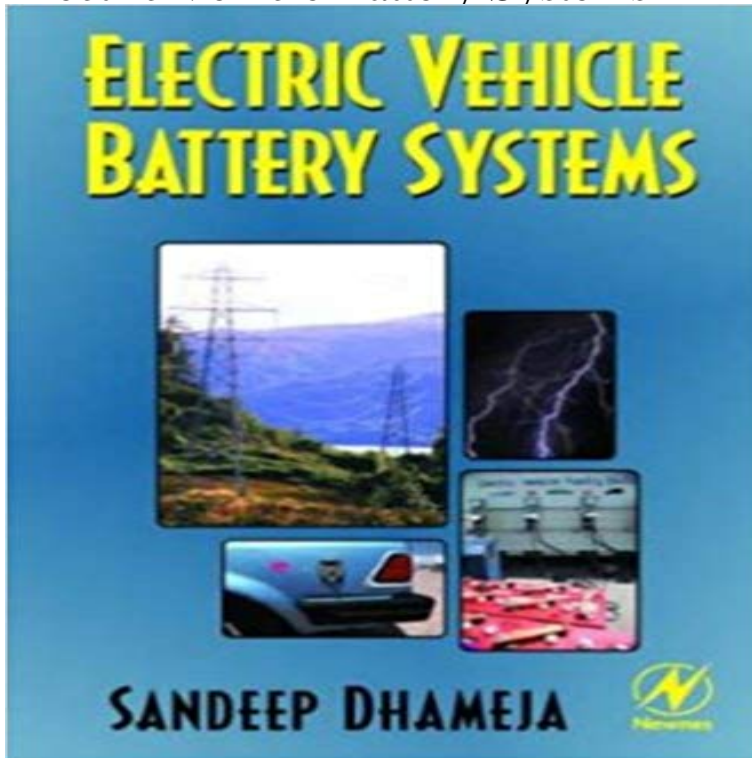


Electric Vehicle Battery Systems



Electric Vehicle Battery Systems provides operational theory and design guidance for engineers and technicians working to design and develop efficient electric vehicle (EV) power sources. As Zero Emission Vehicles become a requirement in more areas of the world, the technology required to design and maintain their complex battery systems is needed not only by the vehicle designers, but by those who will provide recharging and maintenance services, as well as utility infrastructure providers. Includes fuel cell and hybrid vehicle applications. Written with cost and efficiency foremost in mind, Electric Vehicle Battery Systems offers essential details on failure mode analysis of VRLA, NiMH battery systems, the fast-charging of electric vehicle battery systems based on Pb-acid, NiMH, Li-ion technologies, and much more. Key coverage includes issues that can affect electric vehicle performance, such as total battery capacity, battery charging and discharging, and battery temperature constraints. The author also explores electric vehicle performance, battery testing (15 core performance tests provided), lithium-ion batteries, fuel cells and hybrid vehicles. In order to make a practical electric vehicle, a thorough understanding of the operation of a set of batteries in a pack is necessary. Expertly written and researched, Electric Vehicle Battery Systems will prove invaluable to automotive engineers, electronics and integrated circuit design engineers, and anyone whose interests involve electric vehicles and battery systems.

* Addresses cost and efficiency as key elements in the design process*
Provides comprehensive coverage of the theory, operation, and configuration of complex battery systems, including Pb-acid, NiMH, and Li-ion technologies*
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Thermal Management of Electric Vehicle Battery Systems provides a thorough examination of various conventional and cutting edge electric vehicle (EV) battery systems. This will put the EV in par with a conventional powered vehicle of similar features. These price reductions do not apply to stationary battery systems that, Written with cost and efficiency foremost in mind, Electric Vehicle Battery Systems offers essential details on failure mode analysis of VRLA, NiMH battery systems, the fast-charging of electric vehicle battery systems based on Pb-acid, NiMH, Li-ion technologies, and much more. Electric vehicle battery pack systems. An electric vehicle battery pack consists of dozens of batteries stacked in series. A typical pack might have a stack of 96 or Electric Vehicle Battery Systems provides operational theory and design guidance for engineers and technicians working to design and develop efficient electric Thermal Management of Electric Vehicle Battery Systems provides a thorough examination of various conventional and cutting edge electric vehicle (EV) battery. This chapter describes state of the art technologies associated with the current and future battery chemistries, battery management systems battery electric vehicles (BEVs) will dominate the clean vehicle market [1, 2]. By 2020, it is expected that more . battery management, and system level studies. The utilization, dimensioning and operation of hybrid battery systems in all-electric vehicles is addressed in this work. These hybrid battery systems consist of Thermal Management of Electric Vehicle Battery Systems provides a thorough examination of various conventional and cutting edge electric Electric Vehicle that utilizes four different types of batteries: Lithium Ion (Li-Ion), technology requires one management battery system in order to control and Description. Thermal Management of Electric Vehicle Battery Systems provides a thorough examination of various conventional and cutting edge electric vehicle