Record Nr. UNINA9910437781103321 Autore Williamson Sheldon S Titolo Energy management strategies for electric and plug-in hybrid electric vehicles / / Sheldon S. Williamson Pubbl/distr/stampa New York:,: Springer,, 2013 **ISBN** 9781461477112 1-4614-7711-5 Edizione [1st ed. 2013.] Descrizione fisica 1 online resource (xvii, 253 pages) : illustrations (some color) Collana Gale eBooks Disciplina 388 541.37 621.042 621.317 Soggetti Electric vehicles Hybrid electric vehicles Electric automobiles - Technological innovations Motor vehicles - Energy conservation Electric batteries Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Description based upon print version of record. Nota di bibliografia Includes bibliographical references. Nota di contenuto Introduction -- Electric and Plug-in Hybrid Electric Vehicle Drivetrain Topologies -- EV and PHEV Energy Storage Systems -- Hybrid Electric and Fuel Cell Hybrid Electric Vehicles -- EV and PHEV Battery Technologies -- On-Board Power Electronic Battery Management -- EV and PHEV Battery Charging: Grid and Renewable Energy Interface --Power Electronic Converter Topologies for EV/PHEV Charging -- EVs and PHEVs for Smart Grid Applications -- EV and PHEV Well-to-Wheels (WTW) Efficiency Analysis. This book addresses the practical issues for commercialization of Sommario/riassunto current and future electric and plug-in hybrid electric vehicles (EVs/PHEVs). The volume focuses on power electronics and motor drives based solutions for both current as well as future EV/PHEV

technologies. Propulsion system requirements and motor sizing for EVs is also discussed, along with practical system sizing examples. PHEV

power system architectures are discussed in detail. Key EV battery technologies are explained as well as corresponding battery management issues are summarized. Advanced power electronic converter topologies for current and future charging infrastructures will also be discussed in detail. EV/PHEV interface with renewable energy is discussed in detail, with practical examples.