1. Record Nr. UNINA9910557548103321 Autore Lamedica Regina Titolo Modeling and Simulation of Electricity Systems for Transport and Energy Storage Pubbl/distr/stampa Basel, Switzerland, : MDPI - Multidisciplinary Digital Publishing Institute, 2021 1 online resource (122 p.) Descrizione fisica Soggetti History of engineering and technology Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia This book comprises five peer-reviewed articles covering original Sommario/riassunto research articles on the modeling and simulation of electricity systems for transport and energy storage. The topics include: 1 - Optimal siting and sizing methodology to design an energy storage system (ESS) for railway lines; 2 - Technical-economic comparison between a 3 kV DC railway and the use of trains with on-board storage systems; 3 - How to improve electrical feeding substations, by changing transformer technology and by installing dedicated high-power-oriented storage systems; 4 - Algorithm applied to a vehicle-to-grid (V2G) technology. 5 - Thermal investigation and optimization of an air-cooled lithium-ion

battery pack.