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| 1. Record Nr. | UNINA990004197010403321 |
| Autore | Olson, David R. |
| Titolo | The world on paper : the conceptual and cognitive implications of writing and reading / David R. Olson |
| Pubbl/distr/stampa | Cambridge : Cambridge University press, 1996 |
| ISBN | 0-521-57558-3 |
| Descrizione fisica | XIX, 318 p. : ill. ; 23 cm |
| Disciplina | 302.224 |
| Locazione | FLFBC |
| Collocazione | 302.2 OLS 1 |
| Lingua di pubblicazione | Inglese |
| Formato | Materiale a stampa |
| Livello bibliografico | Monografia |
| ----- | |
| 2. Record Nr. | UNINA9910794618303321 |
| Autore | Plett Gregory L |
| Titolo | Battery management systems [[electronic resource]] : volume I : battery modeling // Gregory L. Plett |
| Pubbl/distr/stampa | Boston, Mass., : Artech House, 2015 |
| ISBN | 1-5231-1698-6
1-63081-024-X |
| Descrizione fisica | 1 online resource (xi, 327 p.) : ill |
| Collana | Artech House power engineering series |
| Disciplina | 621.31242 |
| Soggetti | Electric batteries
Lithium cells - Mathematical models
Battery chargers - Mathematical models
Electric vehicles - Batteries
Lithium cells |
| Lingua di pubblicazione | Inglese |
| Formato | Materiale a stampa |
| Livello bibliografico | Monografia |

Nota di bibliografia

Includes bibliographical references.

Nota di contenuto

1. Battery Boot Camp -- 2. Equivalent-Circuit Models -- 3. Microscale Cell Models -- 4. Continuum-Scale Cell Models -- 5. State-Space Models and the Discrete-Time Realization Algorithm -- 6. Reduced-Order Models -- 7. Thermal Modeling.

Sommario/riassunto

Large-scale battery packs are needed in hybrid and electric vehicles, utilities grid backup and storage, and frequency-regulation applications. In order to maximize battery-pack safety, longevity, and performance, it is important to understand how battery cells work. This first of its kind new resource focuses on developing a mathematical understanding of how electrochemical (battery) cells work, both internally and externally. This comprehensive resource derives physics-based micro-scale model equations, then continuum-scale model equations, and finally reduced-order model equations. This book describes the commonly used equivalent-circuit type battery model and develops equations for superior physics-based models of lithium-ion cells at different length scales. This resource also presents a breakthrough technology called the discrete-time realization algorithm that automatically converts physics-based models into high-fidelity approximate reduced-order models.