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Electronics and Energy Storage:

An online reading list from the IET Library



These eBooks and ejournals, available via the <u>IET Library</u>, have been selected on the subjects of electronics and energy storage. They cover topics such as batteries, circuits, and electric vehicles.



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- General Energy Storage

eBooks

Batteries



Rechargeable Organic Batteries : Materials, Mechanisms, and Prospects, Yongzhu Fu et al.

(2024). Rechargeable Organic Batteries is essential reading for electrochemists, materials scientists, organic chemists, physical chemists, and solid-state chemists working in the field.



Functional Materials for Next-generation Rechargeable Batteries, Jiangfeng Ni and Li Lu. (2021). This book starts with principles and fundamentals of lithium rechargeable batteries, followed by their designs and assembly, and then focuses on the recent progress in the development of advanced functional materials.



Sodium-Ion Batteries : Technologies and

<u>Applications, Ji Xiaobo et al. (2024)</u>. An essential resource for materials scientists, inorganic and physical chemists, and all other academics, researchers, and professionals who wish to stay on the cutting edge of energy technology.

Circuits



Mastering Analog Electronics : Unlocking the Power of Circuits and Semiconductors, Hubert Henry Ward (2025). A comprehensive guide to empower learners at every level with the knowledge and practical expertise necessary for a successful career in analogue electronics.



Simulation-based Labs for Circuit Analysis : Discovering Circuits with Multisim Live and Tinkercad, Massimo Mitolo. (2024). Delve into a virtual laboratory environment that replicates realworld circuit experiments allowing you to grasp complex concepts.



Substrate Integrated Suspended Line Circuits and Systems, Kaixue Ma and Yongqiang Wang. (2024). Featuring research on topics such as high-performance RF/microwave/mm-wave circuits and system, this book is designed for engineers and researchers.



<u>A Practical Introduction to Electrical Circuits, John</u> <u>E. Ayers. (2024).</u> Represents a fresh approach to the subject, which is compact and easy to use, yet offers a comprehensive description of the fundamentals.



Semiconductor Devices : Diodes, Transistors, Solar Cells, Charge Coupled Devices and Solid State Lasers, Amal Banerjee. (2024). This book examines in detail how a semiconductor device is designed and fabricated to satisfy best the requirements of the target application.



How Circuits Work : Amplifiers, Filters, Audio and Control Electronics, Stanislaw Raczynski. (2023). This book helps readers understand the basic concepts of electronic circuits.

<u>eJournals</u>

Electric Vehicles



Electric and Hybrid Vehicles, Tom Denton and Hayley Pells. (2024). This new edition contains extensively updated content, especially on batteries, charging and the high-voltage pathway. Includes all new case studies and new images, photos, and flow charts throughout.



Al Techniques for Renewable Source Integration and Battery Charging Methods in Electric Vehicle Applications, S. Angalaeswari. (2023). Covering key topics such as deep learning, artificial intelligence, and smart solar energy.

General Energy Storage



Energy Storage : Driving the Renewable Energy Transition, Efstathios E. Michaelides. (2025). Provides a thorough and holistic understanding of the operation and state of technology of all the energy storage options.



Ceramic Hydrogen Storage Materials : High Storage Density Candidates for Sustainable Green Energy, Navid Hosseinabadi. (2025). Demonstrates how ceramic nanostructures can be designed for high surface adsorption of hydrogen and function as hydrogen batteries.



Engineering Energy Storage, Jacob Joseph Lamb and Odne Stokke Burheim. (2025). Explains the engineering concepts of different energy technologies in a coherent manner, assessing existing energy storage systems across various metrics.



Handbook of Power Electronics in Autonomous and Electric Vehicles, Muhammad H. Rashid. (2024). Provides advanced knowledge on electric propulsion in electric vehicles, radars and sensors, and relevant aspects of energy storage and battery charging.



Battery Management Algorithm for Electric Vehicles, Rui Xiong. (2020). This book systematically introduces readers to the core algorithms of battery management system (BMS) for electric vehicles.

Energy Storage Technologies and Applications c.NICHAL NOT

Energy Storage Technologies and Applications, Michael C. Hoff. (2022). This book gives you a broad look at all different energy storage technologies, from the past and into the future and looks at the advantages and disadvantages of various technologies.



Smart Grids for Renewable Energy Systems, Electric Vehicles and Energy Storage Systems, Rajkumar Viral et al. (2022). This book covers analysis and modelling of the large-scale integration of renewable energy systems, electric vehicles, and energy storage systems.

eJournals

<u>European Transactions on Electrical Power</u> (publishes original research results on key advances in the generation, transmission, distribution, and conversion of electrical energy systems.)

<u>Circuits, Systems & Signal Processing</u> (coverage ranges from mathematical foundations to practical engineering design.)

<u>Electronics Letters</u> (an internationally renowned peer-reviewed rapid-communication journal, which publishes short original research papers every two weeks.)

<u>Journal of Mechatronics, Electrical Power & Vehicular</u> <u>Technology</u> (publishes original research papers, review articles and case studies focused on vehicular technology.)

<u>Electrical Materials and Applications</u> (includes research on advanced energy storage materials.)

<u>International Journal of Automotive Technology</u> (covers all aspects of the field including thermal engineering, flow, structural & modal analysis, and vehicular electronics.)