

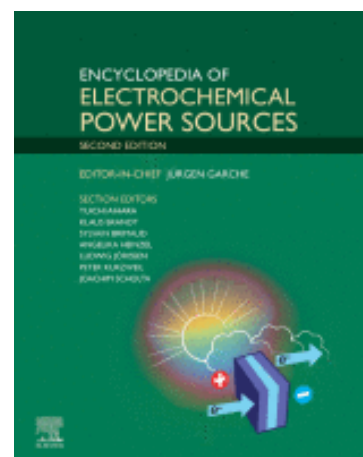
Encyclopedia of Electrochemical Power Sources, 2nd Edition

電化學電源百科全書 第二版

The most up-to-date and comprehensive resource for those working with batteries, fuel cells, electrolyzers, supercapacitors, photo-electrochemical cells, with a focus on sustainability and environmental impact.

《電化學電源百科全書》第二版是一套內容全面的七卷本，對於那些從事電池、燃料電池、電解槽、超級電容器和光電化學電池工作的人員來說，是一本重要的跨學科參考書。隨著人們越來越關注電化學電源對環境和經濟的影響，這項工作不僅鞏固了該領域的廣泛覆蓋範圍，而且還為專業人士和學生提供了最新文獻的入口。

自 2009 年第一版出版以來，電化學電源領域經歷了顯著的成長和發展。完全修訂的第二版捕捉了這些進步，提供了過去十年中所有科學、技術和經濟發展的最新資訊。本版依主題排列，深入探討了電池、燃料電池、電解槽、超級電容器和光電化學電池等關鍵領域。它探討了電極和電解質材料、結構設計、最佳化、新型材料的應用和性能分析的挑戰和進展。這項綜合資源專注於電化學電源的未來，是駕馭這一快速發展領域的重要工具。



Key features/ benefits

- Covers the main types of power sources, including their operating principles, systems, materials, and applications
- Serves as a primary source of information for electrochemists, materials scientists, energy technologists, and engineers
- Incorporates around 350 articles, with timely coverage of environmental and sustainability aspects
- Chapters feature elements such as key objective boxes, summaries, figures, references, cross-references etc., to help students, faculty and professionals alike
- 涵蓋電源的主要類型，包括其工作原理、系統、材料和應用
- 作為電化學家、材料科學家、能源技術專家和工程師的主要資訊來源
- 收錄 365 篇文章，及時報導環境與永續發展的內容
- 按主題排列，以方便主題導航和跨關鍵分支的領域輕鬆探索
- 遵循一致的結構和特色元素，例如關鍵目標框、摘要、圖表、參考文獻和交叉引用等，以幫助學生、教師和專業人士

What problem does this MRW solve?

This proposed book saves researchers time in navigating the extensive literature on electrochemical power sources by providing a structured and comprehensive summary of technology developments. It also addresses the lack of technical insights for practical applications and counters the exponential



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explosion in new review publications by offering a trusted reference work for researchers and students in the field.

Meet the Editor-in-Chief

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Important Areas of Coverage:

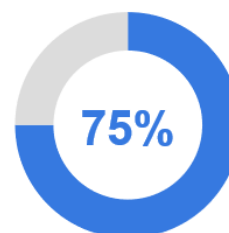
- Electrochemical Power Sources: Principles Materials & Components
- Primary and Secondary Batteries
- Capacitors
- Fuel Cells
- Fuels
- Photoelectrochemical Cells
- Safety
- Environmental



350
Chapters



>470
Authors/
contributors



new or revised
articles

New or substantially revised areas in this edition include:

- Lithium-ion Batteries and Technologies
- Supercapacitors; Flow Batteries; Fuel Cells
- Integration of Renewable Energy Systems
- Hydrogen Fuel Cells

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