

# ECS (ELECTROCHEMICAL SOCIETY) 매뉴얼

신원데이터넷  
info@shinwon.co.kr

1. 출판사 소개
2. ECS Digital Library Contents
3. ECS Digital Library 이용방법

- ECS - 전기화학회
- The Electrochemical Society  
URL: <http://www.ecsdl.org/>

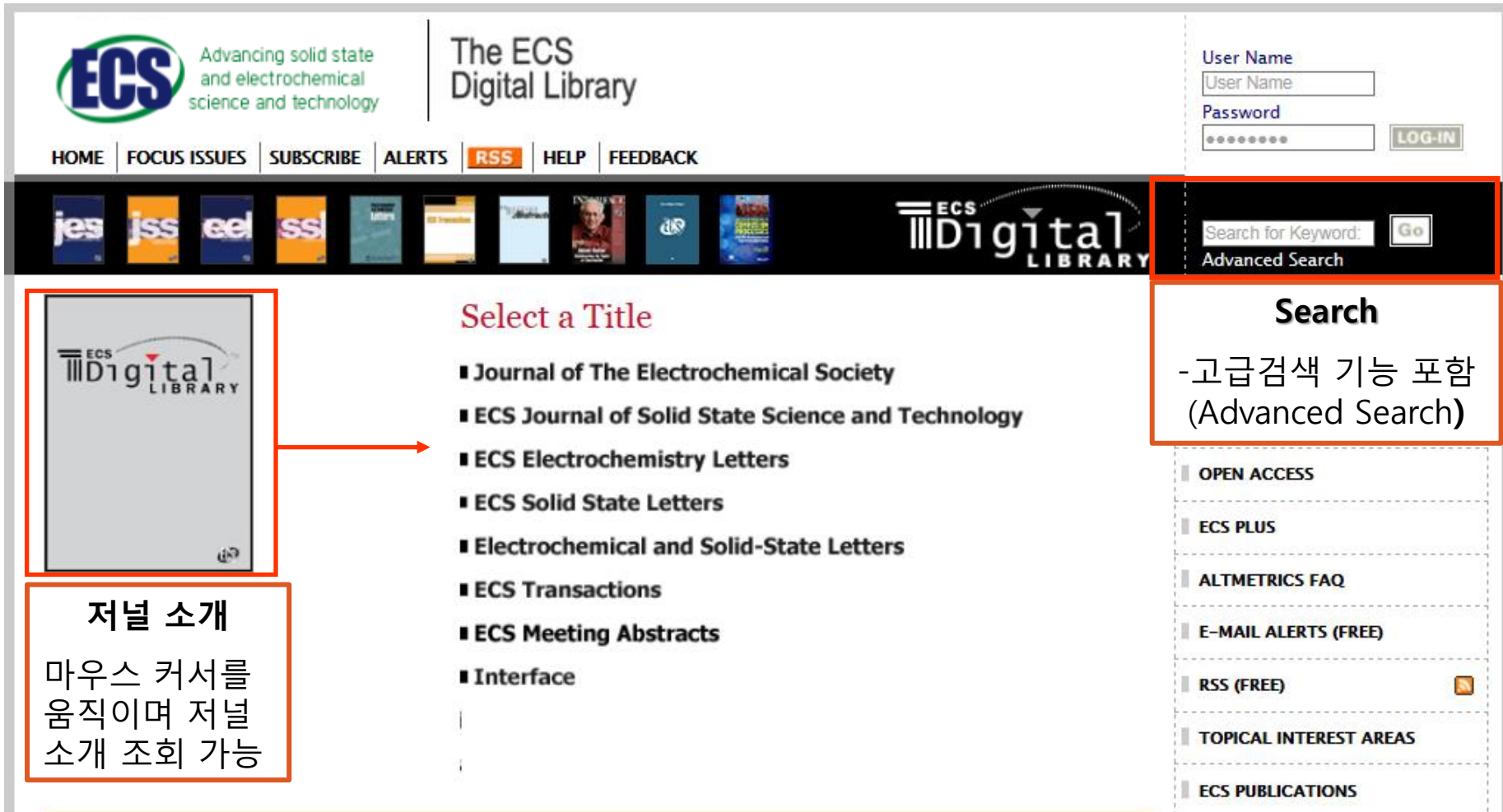


1902년에 설립된 ECS (The Electrochemical Society-전기화학회)는 전기화학분야 및 고체기술 주제분야의 국제적인 비영리, 교육 기관입니다.

1,000개 이상의 대학 및 기업이 구독하고 있으며, 13만 개 이상의 아티클과 초록을 제공하고 있습니다.

- The ECS Digital Library는 전기화학회(The Electrochemical Society)에서 제공하는 전자저널 및 ECS 개최 Meeting Abstract 등의 정보를 제공해 주는 포털 서비스입니다.
- 주제분야 : Solid-state and Electrochemical Science & Technology
- 제공 콘텐츠 :

Title	ISSN	Year
Journal of The Electrochemical Society	0013-4651	1930~현재
ECS Journal of Solid State Science and Technology	2162-8769	2012~현재
ECS Transactions	1938-5862	2005~현재
Electrochemical and Solid-State Letters	1099-0062	1998~현재
ECS Meeting Abstracts	1091-8213	2002~현재
Interface	1064-8208	1992~현재
ECS Proceedings Volumes, Monographs, ECS Solid State Letter, ECS Electrochemistry Letter		



The screenshot shows the ECS Digital Library main page. At the top left is the ECS logo with the tagline "Advancing solid state and electrochemical science and technology". To its right is the text "The ECS Digital Library". Below this is a navigation bar with links: HOME, FOCUS ISSUES, SUBSCRIBE, ALERTS, RSS (highlighted in orange), HELP, and FEEDBACK. On the right side, there is a login section with fields for "User Name" and "Password" and a "LOG-IN" button. Below the navigation bar is a row of journal covers. The "ECS Digital LIBRARY" logo is also present in the center. On the right, there is a search box with "Search for Keyword:" and a "Go" button, and a link to "Advanced Search".


**Annotations:**

- 저널 소개** (Journal Introduction): A box on the left containing the ECS Digital Library logo and the text "마우스 커서를 움직이며 저널 소개 조회 가능" (Possible to search for journal introduction by moving the mouse cursor). An orange arrow points from this box to the "Select a Title" list.
- Search** (Search): A box on the right containing the text "-고급검색 기능 포함 (Advanced Search)" (Includes advanced search function). This box highlights the search area on the page.

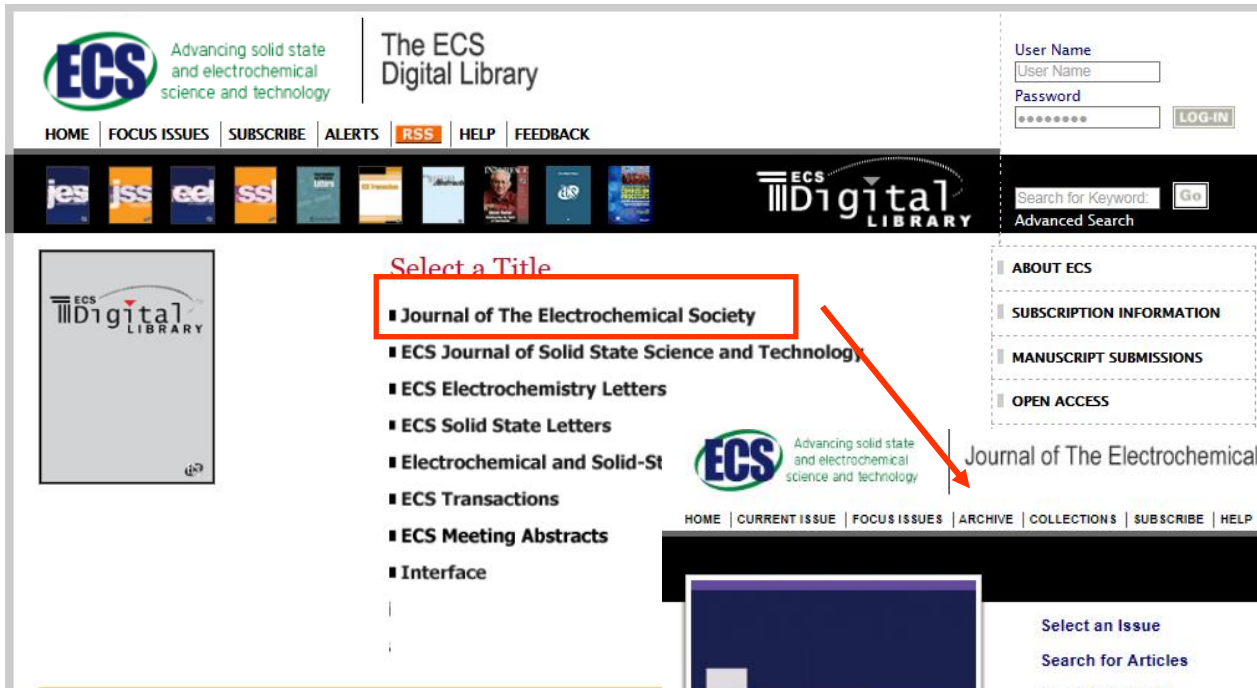
**Select a Title**

- Journal of The Electrochemical Society
- ECS Journal of Solid State Science and Technology
- ECS Electrochemistry Letters
- ECS Solid State Letters
- Electrochemical and Solid-State Letters
- ECS Transactions
- ECS Meeting Abstracts
- Interface

**Search**

- OPEN ACCESS
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- ALTMETRICS FAQ
- E-MAIL ALERTS (FREE)
- RSS (FREE) 
- TOPICAL INTEREST AREAS
- ECS PUBLICATIONS

# 3. ECS DIGITAL LIBRARY 이용방법- BROWSE

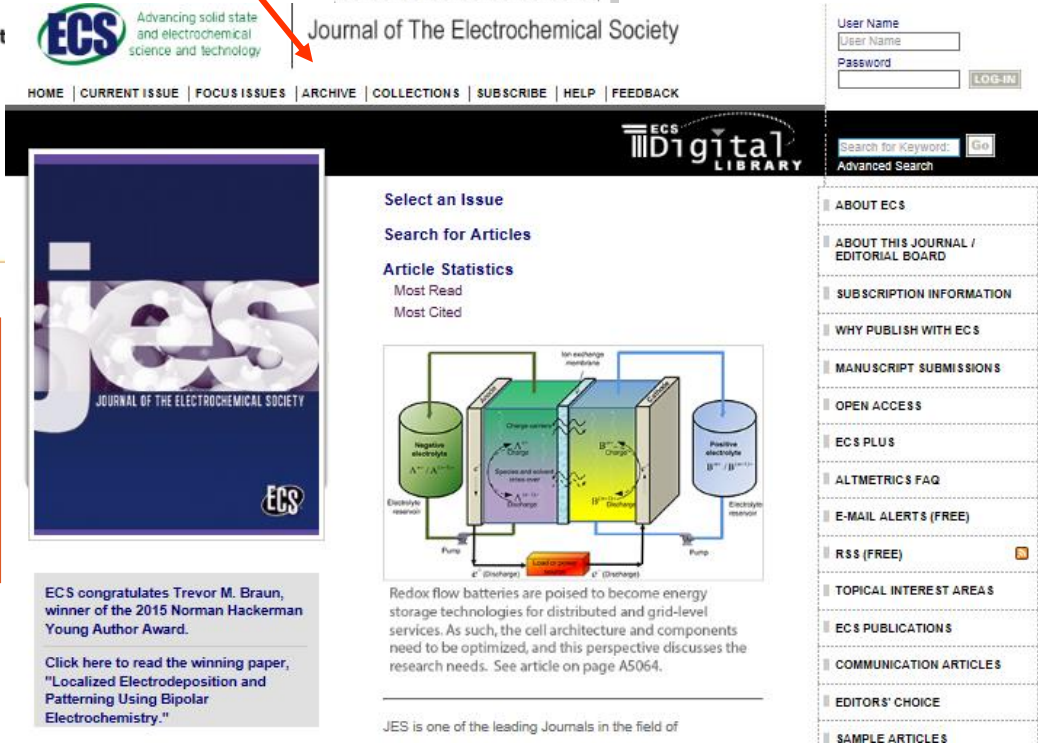


The screenshot shows the ECS Digital Library homepage. At the top left is the ECS logo with the tagline "Advancing solid state and electrochemical science and technology". The main header reads "The ECS Digital Library". Navigation links include HOME, FOCUS ISSUES, SUBSCRIBE, ALERTS, RSS, HELP, and FEEDBACK. A search bar is located on the right with fields for "User Name" and "Password", and a "LOG-IN" button. Below the navigation bar is a row of journal covers including JES, JSS, EEL, and SS. The main content area features a "Select a Title" section with a list of journals:
 

- Journal of The Electrochemical Society
- ECS Journal of Solid State Science and Technology
- ECS Electrochemistry Letters
- ECS Solid State Letters
- Electrochemical and Solid-State
- ECS Transactions
- ECS Meeting Abstracts
- Interface

 An orange arrow points from the first item to the "Journal of The Electrochemical Society" link. To the right, there is a sidebar with links for ABOUT ECS, SUBSCRIPTION INFORMATION, MANUSCRIPT SUBMISSIONS, and OPEN ACCESS.

- 저널별 Webpage**
- 저널 상세 소개
  - Issue 검색
  - 아티클 검색
  - 최근 아티클 및 인용아티클 소개



This screenshot shows the "Journal of The Electrochemical Society" page. The header includes the ECS logo and navigation links: HOME, CURRENT ISSUE, FOCUS ISSUES, ARCHIVE, COLLECTIONS, SUBSCRIBE, HELP, FEEDBACK. A search bar is present on the right. The main content area has a "Select an Issue" section and a "Search for Articles" section. Below that, there are "Article Statistics" for "Most Read" and "Most Cited". A large diagram of a redox flow battery is shown, with labels for "Negative electrolyte", "Positive electrolyte", "Ion exchange membrane", "Charge transfer", "Discharge", and "Pump". Below the diagram is a text block:
 

Redox flow batteries are poised to become energy storage technologies for distributed and grid-level services. As such, the cell architecture and components need to be optimized, and this perspective discusses the research needs. See article on page A5064.

ECS congratulates Trevor M. Braun, winner of the 2015 Norman Hackerman Young Author Award.

[Click here to read the winning paper, "Localized Electrodeposition and Patterning Using Bipolar Electrochemistry."](#)

JES is one of the leading Journals in the field of

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[Volume 164, Issue 5](#)   [Volume 164, Issue 3](#)   [Volume 164, Issue 1](#)   [Volume 163, Issue 12](#)   [Volume 163, Issue 11](#)

Full Text and Abstracts: 2001 - Present

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2000s	-	2001	2002	2003	2004	2005	2006	2007	2008

Full Text (PDF Format Only) and Abstracts: 1930 - 2001

2000s	2000	2001	-	-	-	-	-	-	-
1990s	1990	1991	1992	1993	1994	1995	1996	1997	1998
1980s	1980	1981	1982	1983	1984	1985	1986	1987	1988
1970s	1970	1971	1972	1973	1974	1975	1976	1977	1978
1960s	1960	1961	1962	1963	1964	1965	1966	1967	1968
1950s	1950	1951	1952	1953	1954	1955	1956	1957	1958
1940s	1940	1941	1942	1943	1944	1945	1946	1947	1948
1930s	1930	1931	1932	1933	1934	1935	1936	1937	1938

2015 – The Robert F. Savinell Collection  
 The content of the 2015 Archive is designated the Robert F. Savinell Collection in gratitude for his generous gift which helped make the Archive possible. Dr. Savinell is an ECS Fellow and editor of the *Journal of the Electrochemical Society*. He is active on several ECS committees, including the Publications Subcommittee and the Committee on the Free Dissemination of Research. [Click here](#) for more information about Dr. Savinell.

## ISSUE

- 최근 ISSUE
- 주요 ISSUE
- 연도별 ISSUE

전체 Volume 및 Issue 조회 가능

**ECS Digital LIBRARY**

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## Archive of 2016 Online Issues

← 2016 →

**Volume 163, Issue 1: Focus Issue on Redox Flow Batteries—Reversible Fuel Cells**  
 Y1-1; A5001-5262

**Volume 163, Issue 2**  
 A1-327; C1-35; D1-82; E1-31; F1-125; G1-19; H1-153

**Volume 163, Issue 3**  
 Y3-11; A329-598; B1-118; C37-130; D63-125; E33-109; F127-317; G21-32; H155-259

**Volume 163, Issue 4: Focus Issue Honoring Allen J. Bard**  
 Y13; H3001-H3181

**Volume 163, Issue 5**  
 A599-809; B119-184; C131-251; D127-211; E111-154; F319-447; G33-60; H261-376

**Volume 163, Issue 6**  
 A811-1137; B185-263; C253-338; D213-264; E155-178; F449-592; G61-78; H337-473; X1-1

**Volume 163, Issue 7**  
 Y15-16; A1139-1492; B265-409; C339-393; D265-348; E179-207; F593-770; G79-91; H475-624; X3-3

**Volume 163, Issue 8**  
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# 3. ECS DIGITAL LIBRARY 이용방법- SEARCH

## Search

Full Text: January 1930 - present

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Year  Volume  First page

인용 검색

### Specify DOI

e.g., 10.1149/2.123456esl

DOI 검색

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Author  e.g., Smith, JS

Title  words:  any  all  phrase

Abstract | Title  words:  any  all  phrase

Text | Abstract | Title  words:  any  all  phrase

### Limit Results

From   through

Search All ECS Journals

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Meeting Abstracts

ECS Transactions

ECS Electrochemistry Letters

Electrochemical and Solid-State Letters

Journal of The Electrochemical Society

ECS Journal of Solid State Science and Technology

ECS Solid State Letters

상세 검색

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### Search Figures and Tables

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준 선택



Specify Authors, Key Words

Author  e.g., Smith, JS

Author  e.g., Smith, JS

**Title  words:  any  all  phrase**

Abstract | Title  words:  any  all  phrase

Text | Abstract | Title  words:  any  all  phrase

**Search-> Key Word 로 검색해보기**  
 Title-> 'Electrochemistry' 검색

Searching journal content for **electrochemistry** (all words) in title.

Displaying results 1-10 of 419

For checked items  
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**Effect of Riboflavin Metabolites on Mitochondrial Electrochemistry Physical and Analytical Electrochemistry, Electrocatalysis, and Photoelectrochemistry**  
 Tao Wang and Shelley D. Minteer  
 J. Electrochem. Soc. 2016 163(13): H1047-H1052; doi:10.1149/2.0211613jes  
**» Abstract » Full Text » Full Text (PDF) » Figures Only » Supplemental Material**  
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**Electrochemistry of Cu<sub>x</sub>Si<sub>1-x</sub> Alloys in Li Cells Batteries and Energy Storage**  
 Zhijia Du, Hui Liu, S. N. Ellis, R. A. Dunlap, M. Zhu, and M. N. Obrovac  
 J. Electrochem. Soc. 2016 163(7): A1275-A1279; doi:10.1149/2.0811607jes  
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**Structure-Dependent Electrochemistry of Reduced Graphene Oxide Monolayers Physical and Analytical Electrochemistry, Electrocatalysis, and Photoelectrochemistry**  
 Christian Punckt, Michael A. Pope, Yifei M. Liu, and Ilhan A. Aksay  
 J. Electrochem. Soc. 2016 163(7): H491-H498; doi:10.1149/2.0161607jes  
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-조회된 419 논문 중 선택

## Abstract

-초록 보기

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-Full text 보기 및 PDF 다운로드

## Figures Only

-아티클의 이미지 보기 및 다운로드

## Supplemental Material

-추가 아티클 보기 및 다운로드

## Effect of Riboflavin Metabolites on Mitochondrial Electrochemistry

Tao Wang<sup>1</sup> and Shelley D. Minteer<sup>2,\*</sup>

Author Affiliations

Department of Chemistry, University of Utah, Salt Lake City, Utah 84112, USA

### Abstract

Mitochondrial deficiency is the cause of many diseases and the determination of changes in metabolic rates usually requires lysing of the mitochondria and isolating individual mitochondrial proteins. Alternatively, mitochondria can be immobilized on electrode surfaces to utilize electroanalytical evaluation of metabolic rates of intact mitochondria. However, the redox mechanisms are still poorly understood. In this paper, the riboflavin cycle of mitochondria is studied electrochemically and its impact on mitochondrial voltammetry is discussed. The inhibition mechanism of mitochondria by three different inhibitors (rotenone, carboxin, and permethrin) is discussed and it is found that the inhibition behavior observed electrochemically is due to not only ubiquinone, which is the electrochemical communicating species of mitochondrial electrochemistry. It is also shown that riboflavin derivatives interact with ubiquinone leading to a change in the intensity of ubiquinone voltammetry peaks. This interaction is affected by altering the choice of solvent used during the electrode preparation process. Finally, it is concluded that the observed voltammetry of mitochondrial inhibition is due to a change in riboflavin metabolism within the intact mitochondria immobilized on carbon electrodes.

Keywords

electroanalytical chemistry mitochondria mitochondrial inhibition  
riboflavin derivatives

### Footnotes

<sup>1</sup>Electrochemical Society Student Member.

<sup>2</sup>Electrochemical Society Fellow.

### Search -> Article

- Full Text PDF 다운로드 가능
- 저자 소속, 초록 보기, 보충 설명

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## Most-Read Articles during January 2017 -- updated monthly

Most-read rankings are recalculated at the beginning of the month and are based on full-text and pdf views.

### 1. Reviews - Critical Reviews in Electrochemistry and Solid-State Science and Technology CRES3T:

Todd M. Bandhauer, Srinivas Garimella, and Thomas F. Fuller

#### A Critical Review of Thermal Issues in Lithium-Ion Batteries

J. Electrochem. Soc. 2011 158(3): R1-R25; doi:10.1149/1.3515880

» Abstract » Full Text » Full Text (PDF) » Figures Only

### 2. Fuel Cells, Electrolyzers, and Energy Conversion:

Natalia Macauley, Roger W. Lujan, Dusan Spemjak, Daniel S. Hussey, David L. Jacobson, Karren More, Rodney L. Borup, and Rangachary Mukundan

#### Durability of Polymer Electrolyte Membrane Fuel Cells Operated at Subfreezing Temperatures

J. Electrochem. Soc. 2016 163(13): F1317-F1329; doi:10.1149/2.0191613jes

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### 3. Fuel Cells, Electrolyzers, and Energy Conversion:

Taylor R. Garrick, Thomas E. Moylan, Michael K. Carpenter, and Anusorn Kongkanand

#### Editors' Choice—Electrochemically Active Surface Area Measurement of Aged Pt Alloy Catalysts in PEM Fuel Cells by CO Stripping

J. Electrochem. Soc. 2017 164(2): F55-F59; doi:10.1149/2.0381702jes

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**A Critical Review of Thermal Issues in Lithium-Ion Batteries**

Todd M. Bandhauer<sup>1,\*</sup>, Srinivas Garimella<sup>2,3</sup> and Thomas F. Fuller<sup>2,4</sup>

» Author Affiliations

**Figure 1.**  
Schematic of spirally wound battery and electron flow paths in the current collectors.

**Figure 2.**  
Diagram of a spirally wound battery unit cell for a lithium-ion battery.

**Figure 3.**  
Sample battery thermal management system used for comparing air and liquid cooling systems.

» Previous | Next Article »  
Table of Contents

**This Article**  
doi: 10.1149/1.3515880  
J. Electrochem. Soc. 2011 volume 158, Issue 3, R1-R25

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## Most-Cited Articles as of February 1, 2017 -- updated monthly

Rankings based on citations to online articles from HighWire-hosted articles.

- 1. TECHNICAL PAPERS - Electrochemical Science and Technology:**  
A. K. Padhi, K. S. Nanjundaswamy, and J. B. Goodenough  
**Phospho-olivines as Positive-Electrode Materials for Rechargeable Lithium Batteries**  
J. Electrochem. Soc. 1997 144(4): 1188-1194; doi:10.1149/1.1837571  
[\\*Abstract](#) [\\*Full Text \(PDF\)](#)
- 2. ELECTROCHEMICAL SCIENCE AND TECHNOLOGY - TECHNICAL PAPERS:**  
T. E. Springer, T. A. Zawodzinski, and S. Gottesfeld  
**Polymer Electrolyte Fuel Cell Model**  
J. Electrochem. Soc. 1991 138(8): 2334-2342; doi:10.1149/1.2085971  
[\\*Abstract](#) [\\*Full Text \(PDF\)](#)
- 3. TECHNICAL PAPERS - Electrochemical Science and Technology:**  
Marc Doyle, Thomas F. Fuller, and John Newman  
**Modeling of Galvanostatic Charge and Discharge of the Lithium/Polymer/Insertion Cell**  
J. Electrochem. Soc. 1993 140(6): 1526-1533; doi:10.1149/1.2221597  
[\\*Abstract](#) [\\*Full Text \(PDF\)](#)
- 4. Articles:**  
T. P. Moffat, J. E. Bonevich, W. H. Huber, A. Stanishevsky, D. R. Kelly, G. R. Stafford, and D. Josell  
**Superconformal Electrodeposition of Copper in 500–90 nm Features**  
J. Electrochem. Soc. 2000 147(12): 4524-4535; doi:10.1149/1.1394096  
[\\*Abstract](#) [\\*Full Text \(PDF\)](#)

## Article Statistics-> Most Cited

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- 초록 보기
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