ECS (ELECTROCHEMICAL SOCIETY) 매뉴얼

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1. 출판사 소개

- **ECS - 전기화학회**
- **The Electrochemical Society**

  URL: http://www.ecsdl.org/

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

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2. ECS DIGITAL LIBRARY CONTENTS

- 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		

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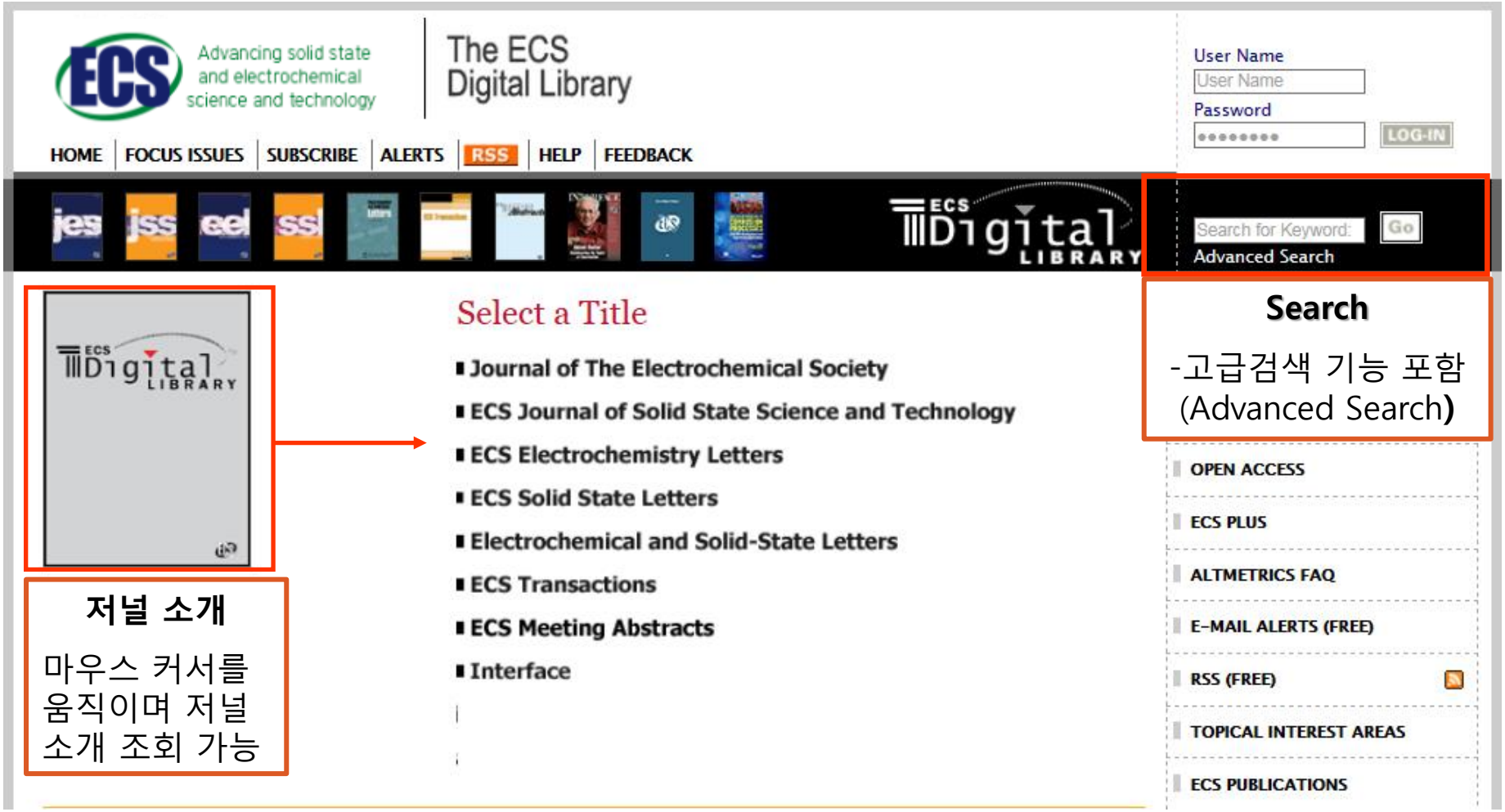

저널 소개

마우스 커서를 움직이며 저널 소개 조회 가능

Search

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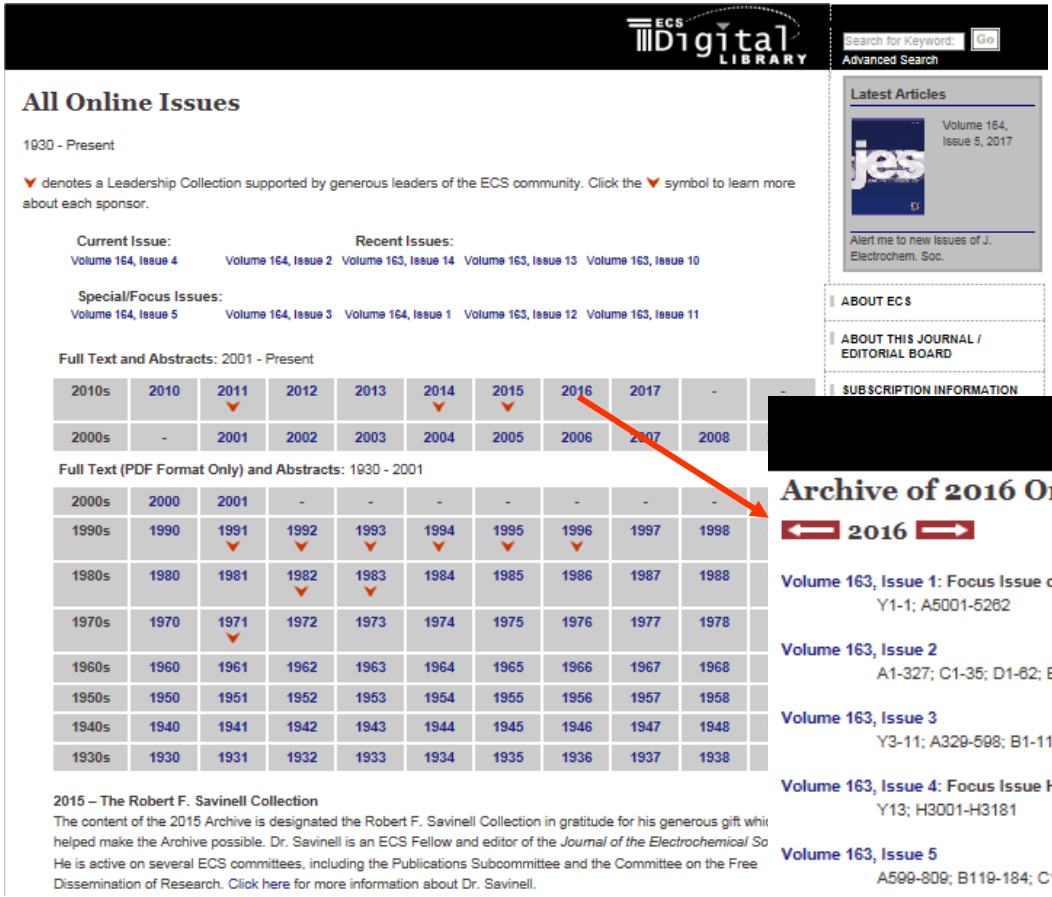
3. ECS DIGITAL LIBRARY 이용방법– ISSUE



ISSUE
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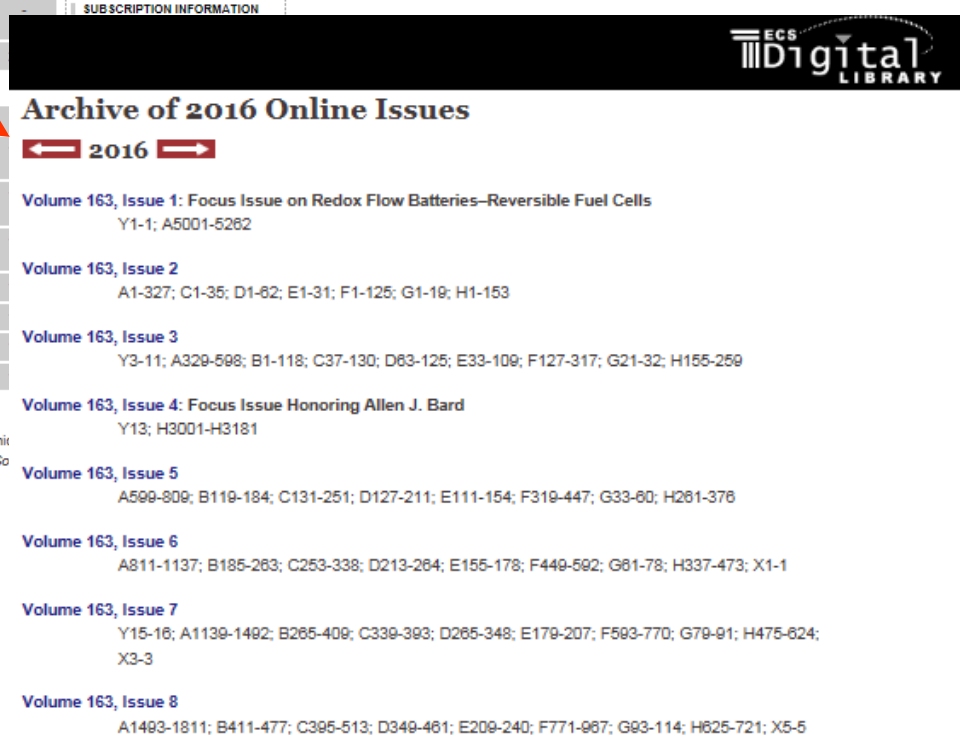
- 주요 ISSUE
- 연도별 ISSUE

전체 Volume 및 Issue 조회 가능



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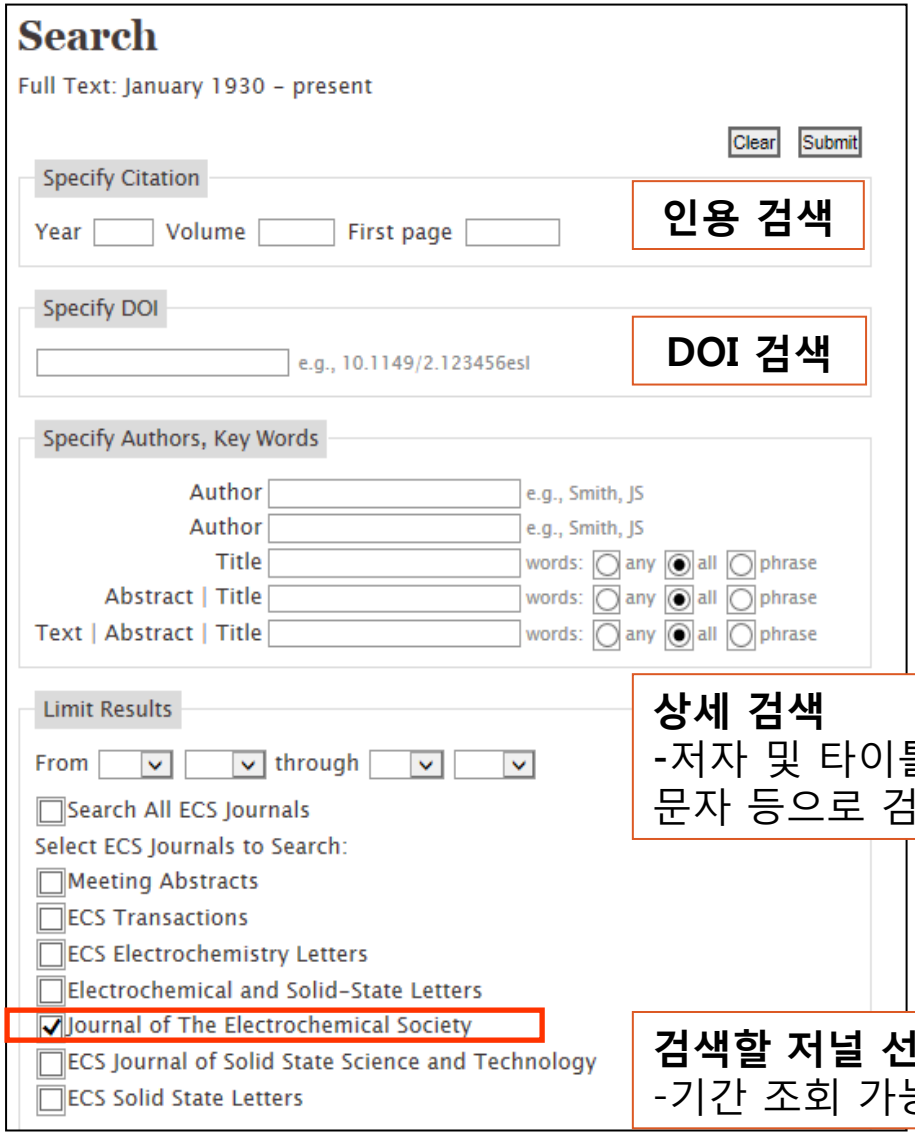

상세 검색
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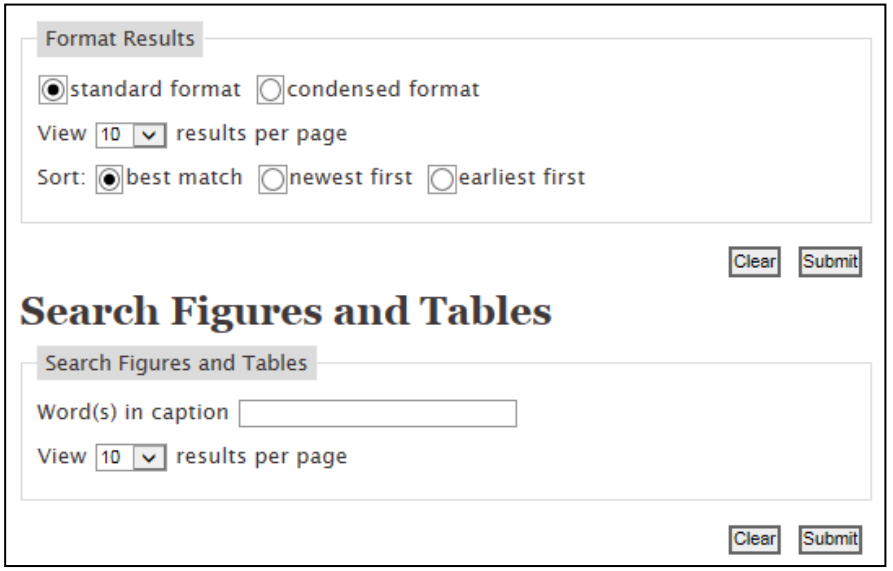

Format Results
-Stand 혹은 Condense 형식 및 조건 검색 가능

Search Figures and Tables
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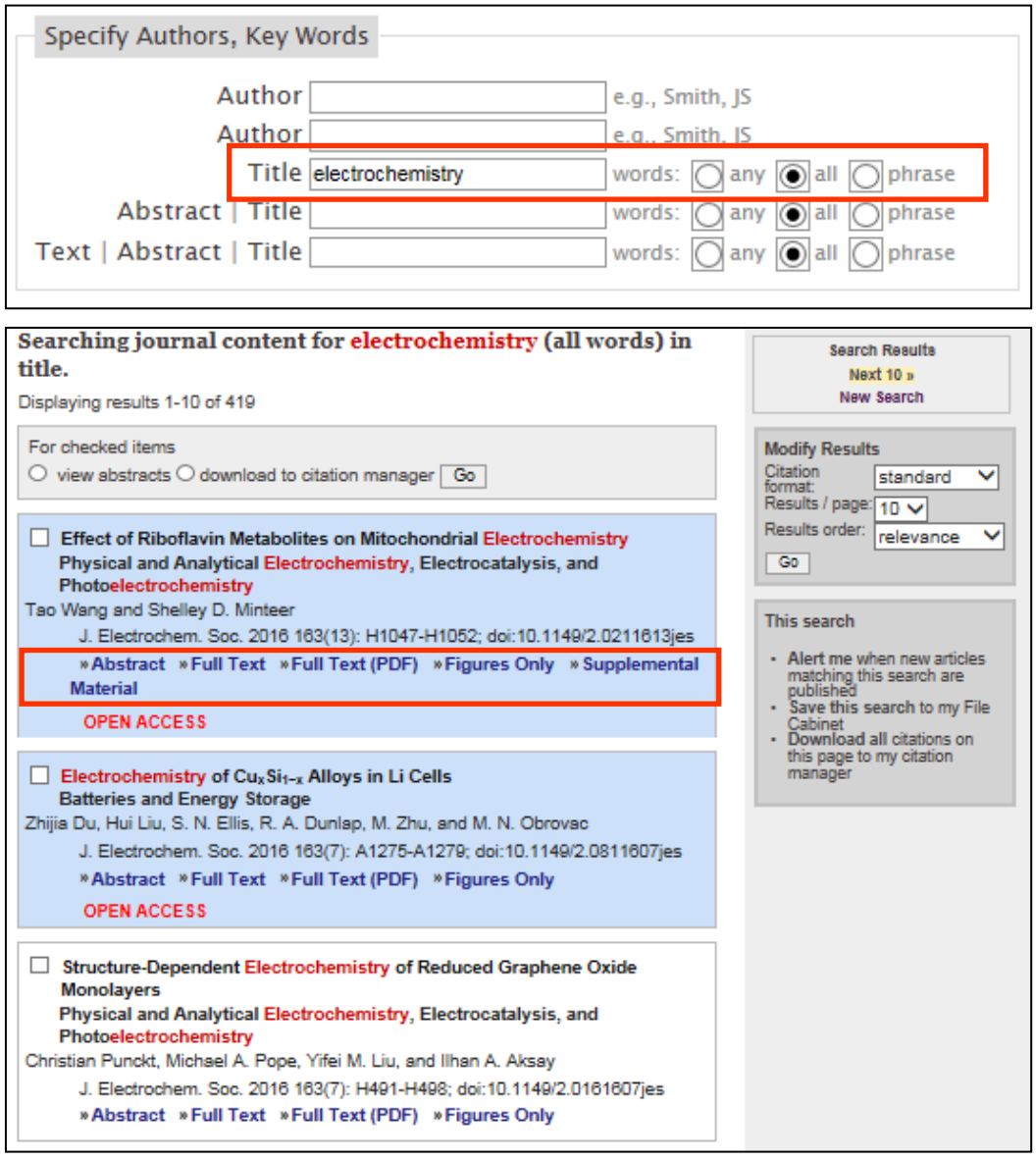

Search-> Key Word 로 검색해보기
Title-> 'Electrochemistry' 검색

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3. ECS DIGITAL LIBRARY 이용방법– SEARCH

Effect of Riboflavin Metabolites on Mitochondrial Electrochemistry

Tao Wang* and Shelley D. Minteer**,z

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

*Electrochemical Society Student Member.

**Electrochemical Society Fellow.

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This Article

OPEN ACCESS ARTICLE

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J. Electrochem. Soc. 2018 volume 165, Issue 13, H1047-H1052

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   A Critical Review of Thermal Issues in Lithium-Ion Batteries
   J. Electrochem. Soc. 2011 158(3): R1-R25; doi:10.1149/1.3515880
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   Natalia Macauley, Roger W. Lujan, Dusan Spernjak, 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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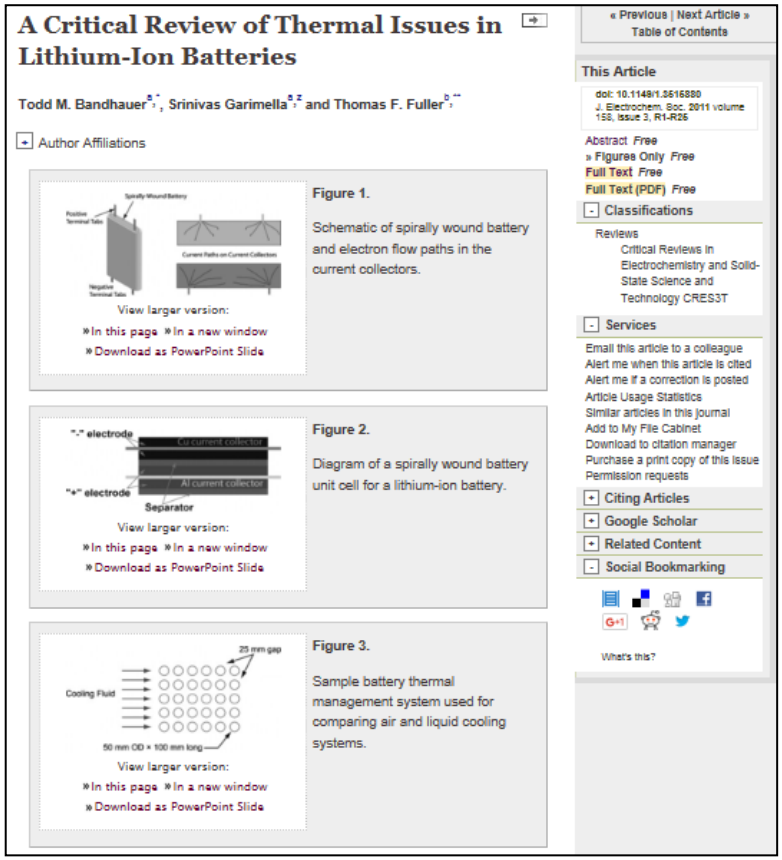

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Most-Cited Articles as of February 1, 2017 -- updated monthly

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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
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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
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