

---

# Materials Design and Electrodes Architecture for Batteries

---

## Editors:

### **R. Kostecki**

Lawrence Berkeley National Laboratory  
Berkeley, California, USA

### **S. Meng**

University of California, San Diego  
La Jolla, California, USA

### **N. Dudney**

Oak Ridge National Laboratory  
Knoxville, Tennessee, USA

## Sponsoring Division:



Published by

**The Electrochemical Society**

65 South Main Street, Building D  
Pennington, NJ 08534-2839, USA

tel 609 737 1902

fax 609 737 2743

[www.electrochem.org](http://www.electrochem.org)

**ecs**transactions™

**Vol. 33, No. 24**

---

Copyright 2011 by The Electrochemical Society.  
All rights reserved.

This book has been registered with Copyright Clearance Center.  
For further information, please contact the Copyright Clearance Center,  
Salem, Massachusetts.

Published by:

The Electrochemical Society  
65 South Main Street  
Pennington, New Jersey 08534-2839, USA

Telephone 609.737.1902  
Fax 609.737.2743  
e-mail: [ecs@electrochem.org](mailto:ecs@electrochem.org)  
Web: [www.electrochem.org](http://www.electrochem.org)

ISSN 1938-6737 (online)  
ISSN 1938-5862 (print)  
ISSN 2151-2051 (cd-rom)

ISBN 978-1-56677-880-0 (PDF)  
ISBN 978-1-60768-230-1 (Softcover)

Printed in the United States of America.

---

***ECS Transactions, Volume 33, Issue 24***  
Materials Design and Electrodes Architecture for Batteries

**Table of Contents**

<i>Preface</i>	<i>iii</i>
Nanostructured Lithium-Aluminum Alloy Electrodes for Lithium-Ion Batteries <i>N. Hudak and D. Huber</i>	1
Iron Oxide Nanotubes Incorporated with Fluoride Anions for Enhanced Li-Ion Intercalation <i>K. S. Raja and M. Misra</i>	15
Microstructure Reconstruction and Direct Evaluation of Li-Ion Battery Cathodes <i>F. Liu and N. Siddique</i>	25
Author Index	33