

# Fundamental Investigation of Silicon Anode in Lithium-Ion Cells



Filesize: 1.96 MB

## ***Reviews***

*An exceptional ebook and also the typeface applied was intriguing to read through. I have got read and i also am sure that i am going to likely to go through yet again once more in the foreseeable future. I discovered this pdf from my dad and i advised this ebook to find out.*  
*(Dr. Raven Ledner)*

## FUNDAMENTAL INVESTIGATION OF SILICON ANODE IN LITHIUM-ION CELLS

[DOWNLOAD](#)

To read **Fundamental Investigation of Silicon Anode in Lithium-Ion Cells** PDF, remember to follow the button beneath and download the ebook or get access to additional information which are have conjunction with FUNDAMENTAL INVESTIGATION OF SILICON ANODE IN LITHIUM-ION CELLS book.

Bibliogov, United States, 2013. Paperback. Book Condition: New. 246 x 189 mm. Language: English . Brand New Book \*\*\*\*\* Print on Demand \*\*\*\*\*.Silicon is a promising and attractive anode material to replace graphite for high capacity lithium ion cells since its theoretical capacity is 10 times of graphite and it is an abundant element on Earth. However, there are challenges associated with using silicon as Li-ion anode due to the significant first cycle irreversible capacity loss and subsequent rapid capacity fade during cycling. Understanding solid electrolyte interphase (SEI) formation along with the lithium ion insertion/de-insertion kinetics in silicon anodes will provide greater insight into overcoming these issues, thereby lead to better cycle performance. In this paper, cyclic voltammetry and electrochemical impedance spectroscopy are used to build a fundamental understanding of silicon anodes. The results show that it is difficult to form the SEI film on the surface of a Si anode during the first cycle; the lithium ion insertion and de-insertion kinetics for Si are sluggish, and the cell internal resistance changes with the state of lithiation after electrochemical cycling. These results are compared with those for extensively studied graphite anodes. The understanding gained from this study will help to design better Si anodes, and the combination of cyclic voltammetry with impedance spectroscopy provides a useful tool to evaluate the effectiveness of the design modifications on the Si anode performance.



[Read Fundamental Investigation of Silicon Anode in Lithium-Ion Cells Online](#)  
[Download PDF Fundamental Investigation of Silicon Anode in Lithium-Ion Cells](#)

## You May Also Like



[PDF] **Two Treatises: The Pearle of the Gospell, and the Pilgrims Profession to Which Is Added a Glasse for Gentlewomen to Dresse Themselves By. by Thomas Taylor Preacher of Gods Word to the Towne of Reding. (1624-1625)**

Follow the web link under to get "Two Treatises: The Pearle of the Gospell, and the Pilgrims Profession to Which Is Added a Glasse for Gentlewomen to Dresse Themselves By. by Thomas Taylor Preacher of Gods Word to the Towne of Reding. (1624-1625)" file.

[Read ePub »](#)



[PDF] **Two Treatises: The Pearle of the Gospell, and the Pilgrims Profession to Which Is Added a Glasse for Gentlewomen to Dresse Themselves By. by Thomas Taylor Preacher of Gods Word to the Towne of Reding. (1625)**

Follow the web link under to get "Two Treatises: The Pearle of the Gospell, and the Pilgrims Profession to Which Is Added a Glasse for Gentlewomen to Dresse Themselves By. by Thomas Taylor Preacher of Gods Word to the Towne of Reding. (1625)" file.

[Read ePub »](#)



[PDF] **Index to the Classified Subject Catalogue of the Buffalo Library; The Whole System Being Adopted from the Classification and Subject Index of Mr. Melvil Dewey, with Some Modifications .**

Follow the web link under to get "Index to the Classified Subject Catalogue of the Buffalo Library; The Whole System Being Adopted from the Classification and Subject Index of Mr. Melvil Dewey, with Some Modifications ." file.

[Read ePub »](#)



[PDF] **Kindergarten Culture in the Family and Kindergarten; A Complete Sketch of Froebel s System of Early Education, Adapted to American Institutions. for the Use of Mothers and Teachers**

Follow the web link under to get "Kindergarten Culture in the Family and Kindergarten; A Complete Sketch of Froebel s System of Early Education, Adapted to American Institutions. for the Use of Mothers and Teachers" file.

[Read ePub »](#)



[PDF] **A Kindergarten Manual for Jewish Religious Schools; Teacher s Text Book for Use in School and Home**

Follow the web link under to get "A Kindergarten Manual for Jewish Religious Schools; Teachers Text Book for Use in School and Home" file.

[Read ePub »](#)



[PDF] **Southern Educational Review Volume 3**

Follow the web link under to get "Southern Educational Review Volume 3" file.

[Read ePub »](#)