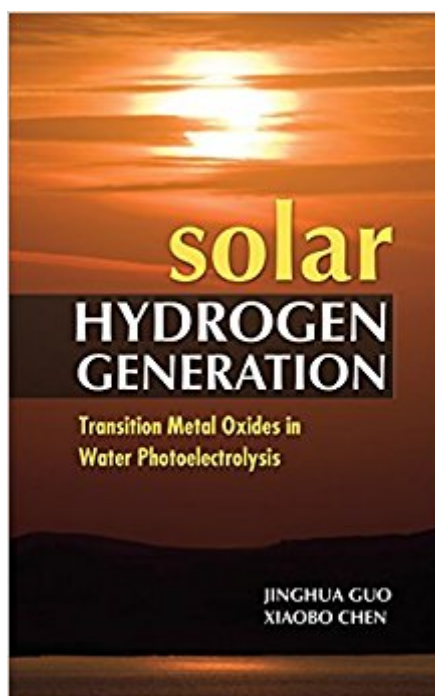




Ebook Directory
the best source of ebook

The book was found

Solar Hydrogen Generation: Transition Metal Oxides In Water Photoelectrolysis



Synopsis

State-of-the-art renewable energy science research and applications Solar Hydrogen Generation: Transition Metal Oxides in Water Photoelectrolysis provides expert techniques for extracting hydrogen from water using transition metal oxides as catalysts. The basic processes of electrochemistry and photocatalysis for hydrogen production are described along with photocatalytic reactions and semiconductor photocatalysts, particularly metal oxides. This in-depth guide illustrates the corresponding crystal structure vs. electronic structure and optical properties vs. light absorption of transition metal oxides. Impurity and doped photocatalysts, integrated organic and inorganic systems, surface and interface chemistry, and nanostructure and morphology in photocatalysis applications are all addressed. This comprehensive resource introduces soft x-ray absorption (XAS), soft x-ray emission spectroscopy (XES), and resonant inelastic soft x-ray scattering (RIXS), followed by a description of instrumentation. **COVERAGE INCLUDES:** * Hydrogen generation: electrochemistry and photoelectrolysis * Photocatalytic reactions, oxidation, and reduction * Transition metal oxides * Crystal structure and electronic structure * Optical properties and light absorption * Impurity, dopants, and defects * Surface and morphology * Soft x-ray spectroscopy and electronic structure

Book Information

Hardcover: 208 pages

Publisher: McGraw-Hill Education; 1 edition (January 20, 2012)

Language: English

ISBN-10: 1591405491

ISBN-13: 978-0071701266

ASIN: 0071701265

Product Dimensions: 5.8 x 0.8 x 9.7 inches

Shipping Weight: 14.1 ounces (View shipping rates and policies)

Average Customer Review: Be the first to review this item

Best Sellers Rank: #2,014,398 in Books (See Top 100 in Books) #100 in Books > Engineering & Transportation > Engineering > Chemical > Plant Design #174 in Books > Engineering & Transportation > Engineering > Energy Production & Extraction > Alternative & Renewable > Solar #1039 in Books > Textbooks > Engineering > Environmental Engineering

Customer Reviews

Jinghua Guo, Ph.D., is a staff scientist of Advanced Light Source at Lawrence Berkeley National

Laboratory. He was previously a faculty member at Uppsala University, Sweden. Dr. Guo is the author of more than 200 peer-reviewed scientific publications, an editor of the International Journal of Nanotechnology, guest editor for the Journal of Electron Spectroscopy and Related Phenomena, and a reviewer for scientific journals, including Physical Review Letters, Nature Chemistry, Nano Letters, and Journal of the American Chemical Society. Xiaobo Chen, Ph.D., is an assistant professor in the Department of Chemistry at the University of Missouri â “ Kansas City. He was previously a research scientist at Lawrence Berkeley National Laboratory and University of California â “ Berkeley. Dr. Chen has published 40 peer-reviewed scientific articles with more than 6,000 citations, holds three U.S. and international patents, is the chair for Materials Research Society Spring Meeting: Titanium Dioxide Nanomaterials in 2011 and 2012, and is a reviewer for many scientific journals, including Science, Journal of the American Chemical Society, and Advanced Materials.

[Download to continue reading...](#)

Solar Hydrogen Generation: Transition Metal Oxides in Water Photoelectrolysis Solar Power: The Ultimate Guide to Solar Power Energy and Lower Bills: (Off Grid Solar Power Systems, Home Solar Power System) (Living Off Grid, Wind And Solar Power Systems) Transition Metal Oxides: An Introduction to Their Electronic Structure and Properties (The International Series of Monographs on Chemistry) Pure Water: The Science of Water, Waves, Water Pollution, Water Treatment, Water Therapy and Water Ecology Solar Water Heating--Revised & Expanded Edition: A Comprehensive Guide to Solar Water and Space Heating Systems (Mother Earth News Wiser Living Series) Solar PV Water Pumping: How to Build Solar PV Powered Water Pumping Systems for Deep Wells, Ponds, Creeks, Lakes, and Streams DIY Solar Water Heating: Solar Water Heater Plans Metal-Ligand Multiple Bonds: The Chemistry of Transition Metal Complexes Containing Oxo, Nitrido, Imido, Alkylidene, or Alkylidyne Ligands Transition Metal Complexes as Drugs and Chemotherapeutic Agents (Catalysis by Metal Complexes) Build A Solar Hydrogen Fuel Cell System Solar Cooking: Different Types of Solar Cookers: The Pros and Cons of Different Types of Solar Cookers and What Will Work Best For You Solar Electricity Handbook: 2017 Edition: A simple, practical guide to solar energy ? designing and installing solar photovoltaic systems. Solar Electricity Handbook - 2015 Edition: A simple, practical guide to solar energy - designing and installing solar PV systems. Solar Electricity Handbook - 2013 Edition: A Simple Practical Guide to Solar Energy - Designing and Installing Photovoltaic Solar Electric Systems Solar Electricity Handbook - 2014 Edition: A Simple Practical Guide to Solar Energy - Designing and Installing Photovoltaic Solar Electric Systems DIY: How to make solar cell panels easily with no experience!: Master Making

Solar Panels Faster! (Master Solar Faster Book 1) Solar Electricity Handbook - 2012 Edition: A Simple Practical Guide to Solar Energy - Designing and Installing Photovoltaic Solar Electric Systems Heavy Metal Rhythm Guitar: The Essential Guide to Heavy Metal Rock Guitar (Learn Heavy Metal Guitar) (Volume 1) Off-Grid Living: How To Build Wind Turbine, Solar Panels And Micro Hydroelectric Generator To Power Up Your House: (Wind Power, Hydropower, Solar Energy, Power Generation) Fruit Infused Water - 80 Vitamin Water Recipes for Weight Loss, Health and Detox Cleanse (Vitamin Water, Fruit Infused Water, Natural Herbal Remedies, Detox Diet, Liver Cleanse)

[Contact Us](#)

[DMCA](#)

[Privacy](#)

[FAQ & Help](#)