

Synopsis

Beginning with an overview and historical background of Copper Zinc Tin Sulphide (CZTS) technology, subsequent chapters cover properties of CZTS thin films, different preparation methods of CZTS thin films, a comparative study of CZTS and CIGS solar cell, computational approach, and future applications of CZTS thin film solar modules to both ground-mount and rooftop installation. The semiconducting compound (CZTS) is made up earth-abundant, low-cost and non-toxic elements, which make it an ideal candidate to replace Cu(In,Ga)Se₂ (CIGS) and CdTe solar cells which face material scarcity and toxicity issues. The device performance of CZTS-based thin film solar cells has been steadily improving over the past 20 years, and they have now reached near commercial efficiency levels (10%). These achievements prove that CZTS-based solar cells have the potential to be used for large-scale deployment of photovoltaics. With contributions from leading researchers from academia and industry, many of these authors have contributed to the improvement of its efficiency, and have rich experience in preparing a variety of semiconducting thin films for solar cells.

Book Information

Hardcover: 440 pages

Publisher: Wiley; 1 edition (February 23, 2015)

Language: English

ISBN-10: 111843787X

ISBN-13: 978-1118437872

Product Dimensions: 7 x 1.1 x 9.9 inches

Shipping Weight: 1.8 pounds (View shipping rates and policies)

Average Customer Review: Be the first to review this item

Best Sellers Rank: #1,940,236 in Books (See Top 100 in Books) #166 in Books > Engineering & Transportation > Engineering > Energy Production & Extraction > Alternative & Renewable > Solar #2963 in Books > Engineering & Transportation > Engineering > Materials & Material Science #9643 in Books > Engineering & Transportation > Engineering > Electrical & Electronics

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

Copper Zinc Tin Sulfide-Based Thin Film Solar Cells Solar Power: How to Save A LOT of Money the Easy Way (Solar Power, Save Money, Solar Energy, Solar, Sustainable Energy, Sustainable Homes, Sustainability) American Tin-Litho Toys: Including Ohio Art, Wolverine, Marx, Chein and More- A Collectors Guide to Identification, Pricing and History of American Tin-Lithographed Toys

Rin Tin Tin: The Life and the Legend Fluorescence Microscopy of Living Cells in Culture, Part A, Volume 29: Fluorescent Analogs, Labeling Cells, and Basic Microscopy (Methods in Cell Biology, Vol) (Vol 29) Solar Power: Proven Lessons How to Build Your Own Affordable Solar Power System: (Energy Independence, Lower Bills & Off Grid Living) (Self Reliance, Solar Energy) Solar Electricity Handbook - 2015 Edition: A simple, practical guide to solar energy - designing and installing solar PV systems. Solar Electricity Handbook - 2012 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 - 2013 Edition: A Simple Practical Guide to Solar Energy - Designing and Installing Photovoltaic Solar Electric Systems Zinc Catalysis: Applications in Organic Synthesis Semiconductors for Solar Cells (Artech House Optoelectronics Library) The Physics of Solar Cells (Properties of Semiconductor Materials) Walk Your Way To Weight Loss 2nd edition: The Ultimate Guide On How To Lose Weight, Burn Fat & Stay Thin With Walking (Weight Loss, Exercise, work out, ... stay thin, energy, fitness, healing) The Thin Book of Appreciative Inquiry (3rd Edition) (Thin Book Series) The Film Encyclopedia 7e: The Complete Guide to Film and the Film Industry Large-scale Production of Paper-based Li-ion Cells (PoliTO Springer Series) Thin-Film Optical Filters, Fourth Edition (Series in Optics and Optoelectronics) Thin-Film Deposition: Principles and Practice Solar PV Water Pumping: How to Build Solar PV Powered Water Pumping Systems for Deep Wells, Ponds, Creeks, Lakes, and Streams

[Dmca](#)